

KINETWORKS™ SERVICES

Version 25JL1



**MULTI-IMMUNOBLOTTING ANALYSIS
CUSTOMER INFORMATION PACKAGE**

KINEXWORKS™

KINEXWORKS™



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KINETWORKS™ MULTI-IMMUNOBLOTTING

1. INTRODUCTION

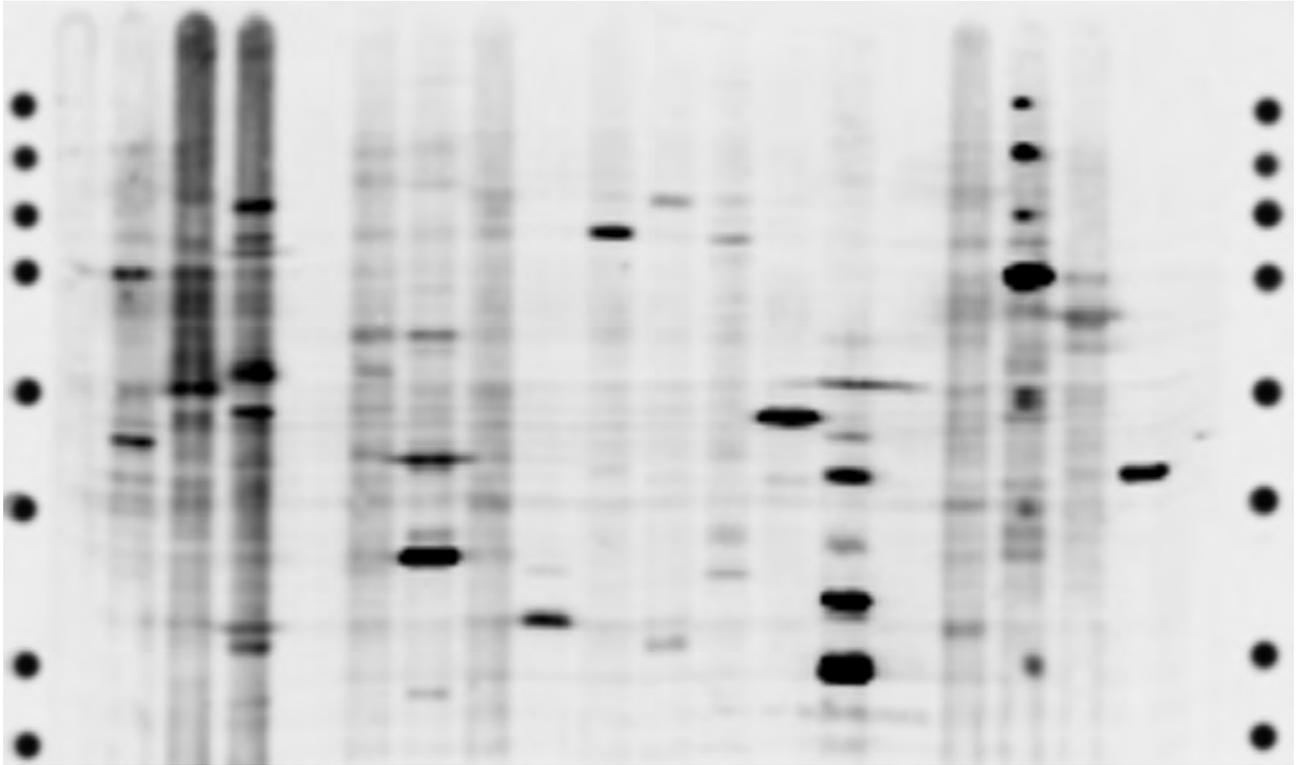
The Kinetworks™ signal transduction protein profiling services are a convenient, reliable and cost-effective solution using the gold standard of sodium dodecylsulphate polyacrylamide gel electrophoresis (SDS-PAGE) and Western blotting to assist scientists in the discovery of productive research leads. These services utilize a proprietary technology based on multi-immunoblotting that generates a unique identification pattern for each sample analyzed and can provide information about the quantitative expression level for each protein detected, its covalent modification, its subcellular location and the identification of protein-protein interactions. It is often highly accurate, since the detection of a target protein is based on its immunoreactivity and apparent molecular mass.

Originally, Kinexus undertook the in-house testing of more than 3,500 commercial antibodies to select the most potent and specific antibodies for detecting low abundance proteins over a wide range of model systems. In the last decade, we have also developed a suite of over 1,200 of our own pan- and phosphosite-specific rabbit polyclonal antibodies that have been rigorously characterized. The Kinetworks™ approach, which has been under development and field-tested for over 25 years, is faster and more sensitive for specific protein detection and offers greater versatility and reproducibility than many other proteomics methods. Presently, Kinexus can track more than 900 different cell signalling proteins, more than a thousand unique phosphosites and several hundred unknown cross-reactive proteins, and we plan to steadily increase the number of signalling proteins and phosphosites that we can monitor. Only our Kinex™ antibody microarray and macroarray services provide a cheaper alternative to profiling changes in protein expression and phosphorylation than our Kinetworks™ protein profiling, but the array approach is less accurate and generates a high degree of false positives and false negatives.

The Kinex™ KAM-2025 antibody microarray service tracks over 900 unique signalling proteins with 1,047 phosphosite-specific antibodies (for phosphorylation) and 980 pan-specific antibodies (for expression levels of these phosphoproteins) in duplicate for two samples on the same microarray slide. For more information about this service, please review the Kinex™ Customer Information Package available on-line from our website at https://www.kinexus.ca/services/microarrays/kam_2025. Our Kinetworks™ Custom Antibody Screen (KCPS) is the recommended route to validate interesting results that are generated from our Kinex™ microarray and macroarray services.

Kinexus currently offers 2 flexible custom screening services. The Kinetworks™ Custom (Multi-Antibody) Protein Screen (KCPS) that allows clients to choose *any* 18 antibodies of interest out of more than 1,200, which are

listed in Appendix B and mostly featured on the KAM-2025 antibody microarrays. These antibodies are also available for direct sale from Kinexus should clients wish to perform follow-up studies in their own laboratory. With this flexible KCPS service, we can also test antibodies that are supplied by our clients. For those antibodies from other vendors that are featured on the KAM-2025 antibody microarray, we can provide the names of these vendors and the catalogue numbers of their antibodies.



Example of a Kinetworks™ KCPS multi-blot with different antibodies used to probe each lane with same lysate sample.

For situation where clients wish to have multiple tissue/cell lysates tested side-by-side by the more traditional Western blotting approach, we offer our Kinetworks™ Custom (Multi-Sample) Screen (KCSS). This screen allows clients to choose a target protein targeted with an antibody in 8 to 14 different samples for comparison on the same immunoblot. This could be useful for time-course and dose-response experiments, and especially when biological replicates are necessary for statistical analyses.

Clients can compare and correlate their experimental results with our Kinetworks™ services with thousands of other Kinetworks™ analyses that Kinexus has performed over the last 26 years by querying our Products website at <https://kinexus-ca.myshopify.com/>.

IMPORTANT NOTICE – Our Kinetworks™ analyses of over 10,000 cell/tissue samples have revealed that there is a high degree of variability in the expression and phosphorylation levels of signal transduction proteins in diverse cell and tissue type that is treatment, species, organ, tissue and gender-dependent. All experimental results should be reproduced prior to publication in accordance with good laboratory practices. It should be appreciated that arrays use antibodies for capture of non-denatured proteins or fragmented peptides from these

proteins in the absence of strong detergents. By contrast, Western blotting uses proteins that are intact, but denatured with heat and sodium dodecylsulphate (SDS), so antibodies that work well for Western blotting may not perform similarly on microarrays and macroarrays. However, all of the antibody deployed in our arrays were pre-screen for their ability to recognize the intended target protein following SDS-PAGE and Western blotting.

Kinexus provides both qualitative and semi-quantitative analyses of the expression and phosphorylation states of protein kinases and cell signalling proteins in cell and tissue samples as part of the Kinetworks™ screening service. The qualitative analyses include TIFF files of the immunoblots that feature the detected target signalling proteins (see example of a Kinetworks™ immunoblot image below). The Kinetworks™ analysis has been specially optimized to better reveal band shifts in signalling proteins on SDS-PAGE gels that may arise from their phosphorylation. Typically, the phosphorylated versions of proteins migrate slower on SDS-PAGE gels. The quantitative analysis of the strength of the enhanced chemiluminescence signal for each target protein is provided in a Microsoft Excel spreadsheet. For multiple samples within the same profiles, Kinexus provides Comparison Reports for the target proteins and graphs the data against the control samples. The Kinetworks™ screening service is unmatched for the information that it provides about multiple kinase expressions and phosphorylations in a single assay. All the Kinetworks™ Screens have been optimized to perform well in human, mouse and rat model systems, but can also work for many protein targets in cow, pig, dog, rabbit, chicken, frog, sea star and other various model systems. You can contact a Customer Service Representative at info@kinexus.ca if you would like to view an example of what our Kinetworks™ Screens may look like in your particular model system. Many examples of specific antibody performance in diverse tissues and cells are provided on our Products website at <https://kinexus-ca.myshopify.com/>.

A large body of information and instruction is provided with the Kinetworks™ Services Customer Information Package. Your careful review of this package will ensure that we can offer the highest level of quality in providing our unique proteomics services to you. We have requested a lot of information from you regarding the preparation of your cell/tissue lysate samples so that we may include this with your Kinetworks™ results in the KiNET databank for the benefit of other scientists in the future. For these rights, we have discounted our standard charges by 25% with our Non-Confidential Pricing. You should find that the proper entry of information into the various forms provided by Kinexus will also be useful for your own reference at a later date when you receive your Kinetworks™ results. Should you have any questions or concerns, we would be pleased to hear from you. Thank you in advance for letting Kinexus become one of your research partners.

2. QUANTITY OF LYSATE REQUIRED

The following section description is based on the use of standard homogenizing buffer components to preserve phosphorylation of proteins and reduce their degradation by endogenous protein phosphatases and proteases. However, if cell and tissue samples are to only be analyzed by SDS-PAGE and Western blotting, we recommend that the cells or tissues be homogenized with an equal weight of 2X concentrated standard SDS-PAGE sample buffer. In our hands, this works best to retaining the phosphorylation status of proteins. However, it is very difficult to quantify the amount of protein present in such samples, because SDS strongly interferes with standard protein assays such as the Lowry and Bradford methods. If this is performed, pilot runs of the lysate samples should be carried out to ensure even loading of protein in each well of the SDS-PAGE gel. The

homogenization in 2X SDS-PAGE sample buffer and subsequently centrifugation should be undertaken as described below.

Ideally, the Kinetworks™ KCPS Multi-Antibody Screen (1 sample/18 antibodies) requires 500 µg of crude cell/tissue lysate, while the KCSS Multi-Sample Screen (8 samples/1 antibody) requires 50 µg for each sample submitted. The final protein concentration in SDS-PAGE sample buffer should be 1 mg/ml, although a range of **0.6 - 2.0 mg/ml** is acceptable. If your concentration is higher or lower, please speak to our customer service representatives.

The cell pellet or tissue should be homogenized in the following ice-cold lysis buffer:

1. 20 mM MOPS, pH 7.0 (any other buffer at this pH could be substituted);
2. 2 mM EGTA (to bind calcium);
3. 5 mM EDTA (to bind magnesium and manganese);
4. 30 mM sodium fluoride (to inhibit protein-serine phosphatases);
5. 60 mM β-glycerophosphate, pH 7.2 (to inhibit protein-serine phosphatases);
6. 20 mM sodium pyrophosphate (to inhibit protein-serine phosphatases);
7. 1 mM sodium orthovanadate (to inhibit protein-tyrosine phosphatases);
8. 1% Triton X-100 (can be substituted with 1% Nonidet P-40)*

***Important Note:** *Do not add if you intend to first prepare a cytosolic fraction.*

9. 1 mM phenylmethylsulfonylfluoride (to inhibit proteases);
10. 3 mM benzamidine (to inhibit proteases);
11. 5 µM pepstatin A (to inhibit proteases);
12. 10 µM leupeptin (to inhibit proteases);
13. 1 mM dithiothreitol (to reduce disulphide linkages)

The final pH of the homogenizing buffer should be adjusted to 7.2. Please note that Kinexus is willing to send an aliquot of our lysis buffer for a fee to any customer who provides a courier account number to charge for the shipping costs. Our lysis buffer contains components 1-7, including phosphatase inhibitors (components 4-7) but *no protease inhibitors* (components 9-12). Clients must add their own protease inhibitors to the lysis buffer immediately before use. For convenience, they may choose to use the Roche Complete Mini inhibitor cocktail tablet with the addition of pepstatin A as opposed to individual protease inhibitors.

Total cellular fractionation: For quantitation of total cellular levels of cell signalling proteins, lysis and homogenization should be performed in the presence of a non-ionic detergent. We recommend the use of 1% Triton X-100 or 1% Nonidet P40, but comparable detergents are acceptable.

Subcellular fractionation: Detergents should be omitted from the homogenization buffer if the subcellular distribution of cell signalling proteins is to be examined. If a particulate-solubilized fraction is to be analyzed, a microsomal pellet should be obtained following the initial homogenization and ultracentrifugation in the absence of detergent and subsequent removal of the cytosolic supernatant. In this instance, the cytosolic extract should be removed and the microsomal pellet should then be resuspended in the homogenization buffer containing 1% Triton X-100 or 1% Nonidet P-40 and subjected to homogenization and ultracentrifugation once again. The resulting detergent-solubilized microsomal fraction should be removed and immediately assayed for its protein

concentration. Important things to remember are that the cells or tissues should be processed quickly at 4°C or less. Homogenization should not be performed in too large a volume to obtain lysates at the concentration required. The detergent-soluble fraction should be obtained as quickly as possible after the cells or tissues are homogenized. **Sonication is required and cannot be omitted.** The highest centrifugal forces available should be used to generate the detergent-soluble fraction. The supernatants should be frozen as quickly as possible if a protein assay cannot be performed immediately.

3. PREPARATION OF CELL LYSATES

A. Adherent Cells

1. Remove medium from culture dishes containing about 1×10^7 to 2×10^7 cells;
2. Rinse the cells twice with ice-cold PBS to remove medium residue (serum must be completely removed from cells); remove as much PBS as possible after the last rinse;
3. Add 200 μ l ice-cold lysis buffer to 150 mm culture dish per sample (more lysis buffer can be added if cells are concentrated), or add 100 μ l ice-cold lysis buffer to 100 mm culture dish;
4. Scrape the cells in lysis buffer, collect the cell suspension from the dishes and transfer it into a 1.5-ml microcentrifuge tube;
5. Sonicate four times for 10 seconds each time with 10-15 second intervals on ice to rupture the cells and to shear nuclear DNA.

This is a crucial step and cannot be omitted;

6. Centrifuge the homogenate at 90,000 x g or more for 30 min at 4°C in a Beckman Table Top TL-100 ultracentrifuge or Beckman Airfuge;
7. Transfer the resulting supernatant fraction to a 1.5-ml microcentrifuge tube;
8. Assay sample for protein concentration using a commercial Bradford assay reagent (available from Bio-Rad) or using the standard protocol of Bradford (*Bradford, M.M. (1976) A rapid and sensitive method for quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. Anal. Biochem. 72:248-254*). Bovine serum albumin (BSA) should be used as the protein standard.
Make sure that the protein concentration is determined before the addition of SDS-PAGE Sample Buffer.

B. Suspension Cells

1. Place medium containing cells in appropriate sized tube and spin at 500 x g for 2 minutes at 4°C in a swinging bucket benchtop centrifuge. Remove as much medium from the cell pellet as possible without disrupting cells;
2. Wash the pellet by gently resuspending the cells in ice-cold PBS, followed by centrifugation as above. Repeat once to ensure complete removal of serum;
3. Remove as much PBS as possible after the last wash;
4. Add 200 μ l ice-cold lysis buffer per sample (more lysis buffer can be added if the number of cells is high);

5. Sonicate four times for 10 seconds each time with 10-15 second intervals on ice to rupture the cells and to shear nuclear DNA. **This step is crucial and cannot be omitted;**
6. Centrifuge the homogenate at 90,000 x g or more for 30 min at 4°C in a Beckman Table Top TL-100 ultracentrifuge or Beckman Airfuge;
7. Transfer the resulting supernatant fraction to a 1.5-ml microcentrifuge tube;
8. Assay sample for protein concentration using a commercial Bradford assay reagent (available from Bio-Rad) or using the standard protocol of Bradford (*Bradford, M.M. (1976) A rapid and sensitive method for quantitation of microgram quantities of protein utilizing the principle of protein-dye binding Anal. Biochem. 72:248-254*). Bovine serum albumin (BSA) should be used as the protein standard. **Make sure that the protein concentration is determined before the addition of SDS-PAGE Sample Buffer.**

4. PREPARATION OF CELL PELLETS

For an additional fee of \$200 per sample, Kinexus will process your cell pellets into a lysate for processing with any of our Kinetworks™ screens. To prepare your cell pellets for shipping to Kinexus, please follow steps 1-4 below and label the tubes containing your pellets accordingly. Cell pellets must be shipped on dry ice. Clients may need to prepare as much as 2×10^7 cells to ensure sufficient quantity.

A. Adherent cells:

1. Remove the medium and rinse the cells in dish with ice-cold PBS once;
2. Detach cells with trypsin as one does in passaging cells, followed by the addition of equal volume of medium;
3. Collect cells in a 15-ml conical tube and centrifuge at 500 x g for 2 minutes at 4°C in a swinging bucket benchtop centrifuge;
4. **Wash the pellet twice with ice-cold PBS thoroughly** (The presence of serum from medium could skew the protein assay); **Remove as much PBS as possible** (The presence of liquid residue dilutes the sample and may also result in the damage of cells during the freezing process);
5. Freeze the pellet for shipping. **Pellet must be shipped on dry ice.**

B. Suspension cells:

Simply follow steps 1-3 in the Section 3B and freeze the cell pellet immediately. **Pellets must be shipped on dry ice at the expense of the client.**

5. TISSUE PREPARATION

1. Use 1 ml of lysis buffer per 250 mg wet weight of the chopped tissue;
2. Rinse the tissue pieces in ice-cold PBS three times to remove blood contaminants;
3. Homogenize the tissue on ice with 15 strokes of a glass dounce (or 3 times for 15 seconds each time with a Brinkman Polytron Homogenizer or with a French Press as alternatives);

4. Sonicate the homogenate 4 times for 10 seconds on ice each time to shear nuclear DNA. **This step is crucial and cannot be omitted;**
5. Centrifuge the homogenate at 90,000 x g or more for 30 min at 4°C in a Beckman Table Top TL-100 ultracentrifuge or Beckman Airfuge;
6. Transfer the resulting supernatant fraction to a new tube and subject it to a protein assay using a commercial Bradford assay (available from Bio-Rad) or using the standard protocol of Bradford (*Bradford, M.M. (1976) A rapid and sensitive method for quantitation of microgram quantities of protein utilizing the principle of protein-dye binding Anal. Biochem. 72:248-254*). Bovine serum albumin (BSA) should be used as the protein standard. **Make sure that the protein concentration is determined before the addition of SDS-PAGE Sample Buffer.**

6. SAMPLE BUFFER PREPARATION

We recommend the final composition of SDS-PAGE Sample Buffer in the sample be: 31.25 mM Tris-HCl (pH 6.8), 1% SDS (w/v), 12.5% glycerol (v/v), 0.02% bromophenol blue (w/v), and 1.25 % β -mercaptoethanol. The cell/tissue samples should be boiled for four (4) min at 100°C in the SDS-PAGE Sample Buffer. (See Appendix A for detailed instructions on preparing the Sample Buffer). Please note that Kinexus is willing to send customers an aliquot of Sample Buffer (but without the β -mercaptoethanol) for a small fee. If this option is of interest, please contact a customer services representative for details.

7. PREPARATION FOR STORAGE AND SHIPPING OF SAMPLES

The final protein concentration of the cell/tissue samples should be **1 mg/ml** in SDS-PAGE Sample Buffer as specified by Laemmli (*Laemmli, U.K. (1970) Cleavage of structural proteins during the assembly of the head of bacteriophage T4. Nature 227:680-684*). For all screens, the minimum acceptable protein concentration of the cell/tissue samples in the SDS-PAGE Sample Buffer is **0.6 mg/ml** and the maximum concentration is **2.0 mg/ml**. Please record the actual concentration and volume of each sample on the Sample Description Form (Box B of KW-NSDF or KW-CSDF).

For all standard screens, at least 500 μ g (*i.e.*, 500 μ l of 1 mg/ml protein) of boiled cell/tissue extract protein in the SDS-PAGE Sample Buffer should be aliquoted into a 1.5-ml Eppendorf *screw cap* vial. For the Custom Screens, the KCPS Multi-Antibody Screen also requires **at least** 500 μ g of cell/tissue lysate, while the KCSS Multi-Sample Screen requires **at least** 50 μ g per sample. There should be one vial per sample for each screen requested, except for the KCSS Multi-Sample Custom Screen, which can have up to 8 different samples. The vials should be clearly labeled with an indelible marker with a unique identification number (recorded on the Sample Description Form), **parafilm**, and then put into a secondary support container such as a 50-ml conical centrifuge tube to provide extra protection to prevent accidental leakage during shipping. It is not necessary to refrigerate or freeze the samples during shipping once they are in SDS-PAGE Sample Buffer.

8. SHIPPING INFORMATION

The aforementioned procedure has been designed to reduce the use of shipping materials and courier costs, and to ensure that your precious samples arrive in a safe and stable form at our laboratory facilities. Clients are responsible for all shipping costs by courier. The sample vials should be sent to the address listed below. The samples may be shipped at room temperature if they are in SDS-PAGE Sample Buffer, but delivery on dry ice is acceptable. We recommend shipping through Federal Express Courier. However, for dry ice shipments coming from outside of North America, the preferred choice is World Courier. Ship your samples to the following address:

Kinetworks™ Screening Services
Kinexus Bioinformatics Corporation
Suite 1, 8755 Ash Street
Vancouver, B.C. Canada V6P 6T3
Telephone: (604) 323-2547

Please ensure 3 copies of a signed commercial invoice accompany your shipment which specifies your samples are non hazardous and non infectious. Since the samples are not for resale, the value of your shipment should be priced at approximately \$1.00 per sample in order to avoid paying additional duties and taxes on entry into Canada. It is also highly recommended that customers email their Federal Express airway bill number and the date of departure to info@kinexus.ca so we can track your shipment in transit and ensure it arrives in a timely manner. We will send a confirmation email once your shipment arrives at our facility.

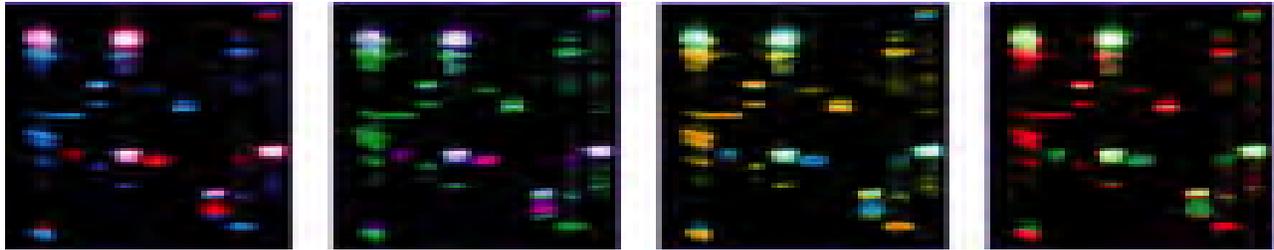
9. PRICING INFORMATION

Kinexus offers the Kinetworks™ services at two different pricing levels depending on the level of confidentiality required for your samples. At the Confidential Pricing level, the cost of our KCPS Custom Multi-Antibody Screen custom screening service is US \$1061 per sample, and US \$999 for each KCSS Custom Multi-Sample Screen custom screen ordered. At this pricing level, only the species needs to be disclosed. To receive a 25% discount off the regular price, or pay US \$849 per sample for each KCPS Custom Multi-Antibody Screen custom screen ordered and US \$749 for each KCSS Custom Multi-Sample Screen custom screen ordered, Kinexus requires the Client Supplied Non-Confidential Sample Description Form (KW-NSDF) be completed in full (Sections A-K) including species, organ, tissue, cell, cell state, fractionation, perturbation, and treatment for each sample being analyzed. For volume discounts or quotations for large orders, please contact the Director of Sales & Marketing at 1-866-KINEXUS (option 2 on the telephone directory) or email sales@kinexus.ca.

10. FOLLOW-UP SERVICES

Kinexus offers several auxiliary services to complement your Kinetworks™ data including a drawing service to obtain presentation-ready Microsoft PowerPoint slides or publication-ready figures (e.g., colored overlays of

immunoblot images or bar graphs of the quantified results of Kinetworks™ analyses). The differential regulation of detected proteins can be visualized in various colour combinations as presented below. Clients can also visit the Kinexus website and use the tables that list the target proteins to Internet sites with more detailed information about these proteins. Once the results are confirmed by Western blotting, clients can correlate their data with hundreds of other data points from hundreds of different model systems using our KiNET-AM database (www.kinet-am.ca). For more information about any of these services, please contact one of our customer service representatives at info@kinexus.ca.



Examples of different colour overlay possibilities of two Kinetworks™ multi-blots.

11. FORMS TO BE COMPLETED

All customers are required to complete the following forms for each order placed:

- A. Kinexus Service Agreement - Customers are required to complete and sign our standard Kinexus Service Agreement before their first order can be processed. Unless otherwise specified, this Agreement is valid for all future orders with a standard term of 10 years.
- B. Service Order Form (KW-SOF). The Service Order Form (SOF) allows us to track all of the various services to be used within an order.
- C. Service Identification Form – Customers should choose one or more of following forms that is applicable: Kinetworks™ Custom KCPS Screen Service Identification Form (KCPS-SIF); Kinetworks™ Custom KCSS Screen Service Identification Form (KCSS-SIF). The Service Identification Form (SIF) permits us to determine how many samples and antibodies are to be used for a particular analysis.
- D. Sample Description Form – Customers should choose one or both of the following forms that is applicable: Non-Confidential Sample Description Form (KW-NSDF); Confidential Sample Description Form (KW-CSDF). If clients also wish to have their own antibodies utilized in our services, they must complete a Client Supplied Antibody Description Form (KW-CADF). The Sample Description Forms (SDF's) allow us to determine the nature of the cell/tissue lysates to be analyzed.
- E. Airway Bill (if samples are to be delivered by courier).
- F. Commercial Invoice (required for all customers located outside of Canada). Dry-ice and non-refrigerated delivery forms are provided.

Contact Kinexus at info@kinexus.ca should clients wish to obtain MS-Word versions of these forms that they can submit.

All orders should have as a minimum: 1 SOF, 1 SIF, and 1 SDF form completed, along with a courier airway bill and commercial invoice. A new Kinexus Service Agreement is not necessary if the client has previously placed an order with Kinexus and submitted a signed Kinexus Service Agreement at that time.

FOR ALL CUSTOMERS

A. Kinexus Service Agreement

A Kinexus Service Agreement is required to be signed before the first order can be processed.

- This Agreement is required to be signed and dated by an authorized representative, typically a Senior Officer, Senior Scientist, or Principal Investigator, before the first order can be processed, but does not have to be signed again for repeat orders. The Kinexus Service Agreement is typically valid for 10 years. If you require changes or modifications to be made to our standard Service Agreement, please email us at sales@kinexus.ca to request a Microsoft Word version of the document so your requested changes can be made directly into the Agreement and emailed to us for our final approval.

B. Service Order Form (KW-SOF)

Please ensure:

- Shipping address and contact name and numbers are specified.
- Billing information is completed as outlined in Section D the Sample Identification Form.
- Any promotional vouchers or quotations are listed in the billing sections.
- Include a Purchase Order, Visa or MasterCard number for payment.
- The form is signed and dated.

C. Service Identification Forms

Custom Kinetworks™ KCPS Screen Service Identification Form (KCPS-SIF)

For each sample submitted, please ensure the following:

- No less than 500 µg of protein is provided for each sample when the KCPS screen requested.
- In Section A, the customer must assign a unique Client Screen Identification Name to correlate the proteins to be analyzed for each sample submitted.
- In Section B, for each lane indicate which Kinexus antibody is to be used by providing the ID Code from the Table of Antibody Targets provided in Appendix B. If the customer wishes to substitute a Kinexus antibody with one or more antibodies of their own, they must indicate this and enter the name they have chosen for this antibody from Box B of a Client Supplied Antibody Description Form (KW-CADF). A separate KW-CADF form should be completed for each antibody.
- For Section C, your sample(s) are identified by completion of Client Supplied Non-Confidential (KW-NSDF) or Confidential (KW-CSDF) Sample Description Forms. Make sure that the Client ID Number in Box A of these forms, matched the Client ID Number in Box A of the KW-SIF form.

- In Section C, if your sample has been previously analyzed with the Kinex™ KAM antibody microarray services, please provide the original Kinexus Order Number for this in order to qualify for a 15% discount off of our regular pricing.
- In Section D, the level of confidentiality is indicated for correct pricing.
- The form is certified correct and signed and dated.

Custom Kinetworks™ KCSS Screen Service Identification Form (KCSS-SIF)

For the samples submitted, please ensure the following:

- No less than 50 µg of protein is provided for each of the 8 samples in the KCSS screen.
- In Section A, the customer must assign a unique Client Screen Identification Name to correlate the proteins to be analyzed for each sample submitted.
- In Section B, for each lane indicate which cell/tissue lysate sample is to be used by providing the client name you have chosen for this sample from Box B of Client Supplied Non-Confidential (KW-NSDF) or Confidential (KW-CSDF) Sample Description Forms. A separate KW-NSDF or KW-CADF form should be completed for each Sample. Up to 8 samples can be listed on a KCSS-SIF form if they are used in the same Kinetworks™ screen blot.
- For Section C, probing antibodies are identified by providing the Kinexus ID Code from the Table of Antibody Targets provided in Appendix B. If the customer wishes to substitute a Kinexus antibody with one or more antibodies of their own, they must indicate this and enter the name they have chosen for this antibody from Box B of a Client Supplied Antibody Description Form (KW-CADF). A separate KW-CADF form should be completed for each antibody.
- In Section D, the level of confidentiality and number of antibodies is indicated for correct pricing.
- The form is certified correct and signed and dated.

D. Sample and Antibody Description Forms

Client Supplied Non-confidential Sample Description Form (KW-NSDF)

Client Supplied Confidential Sample Description Form (KW-CSDF)

For the cell/tissue lysate samples submitted, please ensure the following:

- Each sample tube is labeled and properly identified on the form in Section B, including final concentration and volume.
- In Section A, the customer must enter the unique Client Screen Identification Name from Box A of the Service Identification Forms (KCPS-SIF or KCSS-SIF) to match the sample to the particular Kinetworks™ service to be used to analyze this sample. Also provide the name of the type of Kinetworks™ (e.g., KCPS, KCSS).
- Your sample is described by completion of Client Supplied Non-Confidential (KW-NSDF) or Confidential (KW-CSDF) Sample Description Forms by checking the appropriate boxes and entering the appropriate information requested in Sections A-K for Non-confidential samples and Sections A-C for Confidential samples.
- The form is certified correct and signed and dated.

- Note that the information provided on this form will be shared with thousands of other scientists in the future with the Non-confidentiality pricing. In the spirit of collegiality, please be as accurate as possible in completing the KW-NSDF form in order not to handicap their research efforts should they desire to follow up on your Kinetworks™ results.

Client Supplied Antibody Description Form (KW-CADF)

For the antibody samples submitted, please ensure the following:

- Each antibody sample tube is labeled and properly identified on the form in Section B, including final concentration and volume and recommended dilution of the antibody for Western blotting.
- In Section A, the customer must enter the unique Client Screen Identification Name from Box A of the Service Identification Forms (KCPS-SIF or KCSS-SIF) to match the antibody to the particular Kinetworks™ service to be used to analyze with this antibody. Also provide the name of the type of Kinetworks™ (*i.e.*, KCPS or KCSS).
- Your sample is described by completion of Client Supplied Antibody Description Form (KW-CADF) by checking the appropriate boxes and entering the appropriate information requested in Sections A-F for Non-confidential samples and Sections A-C for Confidential samples.
- In Section F, you may use the single amino acid or other standard abbreviations for the amino acid residues starting from the N-terminus of the peptide. If an amino acid is covalently modified (*e.g.*, phosphorylation), please indicate this.
- The form is certified correct and signed and dated.

E. Airway bill for Federal Express or any other preferred courier

Complete a Federal Express airway bill and specify:

- FedEx priority overnight delivery.
- The samples may be sent in a FedEx letter and at room temperature if they are boiling in SDS-Sample Buffer.
- **Do not specify Saturday delivery or hold at FedEx Location.**
- Telephone 1-800-GO-FEDEX or visit them online at www.fedex.com or www.fedex.ca to schedule a pick up or complete your forms.
- For shipments coming from within Canada or the United States, please ship any day from Monday to Thursday. Do not ship on Friday.
- For international shipments coming from outside of North American, the best day to ship is on Monday to ensure arrival in Canada for delivery later the same week.
- It is recommended that customers e-mail the date of your shipment and the Federal Express Airway Bill number to Kinexus at info@kinexus.ca to ensure we can track your package should it get held up in Canadian Customs.
- For any customer located outside of Canada, 3 copies of a commercial invoice is required to accompany your shipment (see below).

FOR INTERNATIONAL CUSTOMERS ONLY

F. Commercial Invoice (not required by Canadian customers)

Please complete the appropriate (non-refrigerated or dry-ice shipment) attached commercial invoice with the following information:

- Date of exportation.
- Shipper/Exporter name, address, phone number.
- Country of export/Country of origin.
- Federal Express or other courier airway bill number.
- Number, type and total weight of package(s).
- Total declared value of shipment (number of samples x \$1.00 per sample) and please specify currency.
- Date, name, signature, and title of authorized person.

Include three (3) copies of the commercial invoice with the airway bill.

NOTE: Do not change the value of your shipment to more than \$1.00 per sample (or \$100 total value) as this will prompt the custom brokers to charge Kinexus with a duty and GST fee on your package. Since the samples are processed internally and not returned to the customer or resold, there is no real commercial value.

The international air waybill is required for all international shipments between Canada and the rest of the world. It is also your customs declaration, which can possibly be used to clear your shipment through customs at the destination. The customs clearance process begins with the description of the air waybill. If the description is too vague or missing, customs authorities may select the shipment for further inspection. All customs paperwork, such as the commercial invoice, must have detailed commodity descriptions. A detailed description on the air waybill and other customs documentation will help speed up the clearance time and reduce your delivery time. In the event that Kinexus must travel to Canada Customs to retrieve a sample package due to inadequate completion of the commercial invoice, then additional charges may apply. **Please advise us when you have shipped your samples so that we can track it.**



Form: KW-SOF

SERVICE ORDER FORM

KINEXUS ORDER NUMBER

CUSTOMER INFORMATION REPEAT CUSTOMER OR NEW CUSTOMER

Dr. Mr. Ms.

Name of Authorized Representative or Principal Investigator

Title/Position

Company Name or Institute

Department

Street Address

City State or Province Country Zip or Postal Code

Email Address (Area Code) Telephone Number (Area Code) Facsimile Number

Contact Person (if different from Authorized Representative) Email Address (Area Code) Telephone Number

KINETWORKS™ REPORTS

RESULTS SENT BY EMAIL TO: AUTHORIZED REPRESENTATIVE/INVESTIGATOR AND/OR CONTACT PERSON

BILLING INFORMATION

Services offered for Kinetworks™ Standard or Custom Screens

PRICE PER SAMPLE - Refer to Section D of the Antibody Identification Forms:	<i>All prices in U.S. Funds</i>
<i>Custom Screen: KCPS 1.0 (18 antibodies with 1 lysate sample per screen)</i>	
Number of Kinetworks™ screens – 1 sample, Non-confidential _____ @ \$849 U.S. per screen + \$ _____	
Number of Kinetworks™ screens – 1 sample, Confidential _____ @ \$1061 U.S. per screen + \$ _____	
*Special pricing applies only if the sample has been previously analyzed with a KAM or KSAM antibody microarray.	
<i>Custom Screen: KCSS 1.0 (1 antibody per screen & up to 8 lysate samples)</i>	
Number of Kinetworks™ screens – 1 antibody, Non-confidential _____ @ \$749 U.S. per screen + \$ _____	
Number of Kinetworks™ screens – 1 antibody, Confidential _____ @ \$999 U.S. per screen + \$ _____	
Total number of samples submitted with this order: _____	SUBTOTAL = \$ _____
Apply a 15% discount to this subtotal if the lysate samples have previously been analyzed by KInexus with the Kinex™ KAM antibody microarray or macroarray services	- \$ _____
	SUBTOTAL = \$ _____
<i>Quotation or Reference Number:</i> _____	- \$ _____
	TOTAL COST FOR THIS ORDER = \$ _____
FOR CANADIAN CUSTOMERS ONLY:	
<i>Add an additional 7% to the above total for GST (No. 893907329 RT0001):</i> + \$ _____	= \$ _____
	TOTAL AMOUNT PAYABLE IN U.S FUNDS

PAYMENT METHOD

PURCHASE ORDER ACCEPTED FROM COMPANIES AND INSTITUTES WITH APPROVED CREDIT. P.O. NUMBER: _____

VISA OR MASTERCARD

Print Cardholder Name Card Number Expires (M/Y) CVV Cardholder Signature

BILLING INFORMATION SEND INVOICE TO CUSTOMER AT ABOVE ADDRESS OR SEND INVOICE TO ACCOUNTS PAYABLE CONTACT:

Dr. Mr. Ms.

Accounts Payable Contact Name

Company Name or Institute

Street Address

City

State or Province Country Zip or Postal Code (Area Code) Telephone Number

AUTHORIZATION

CUSTOMER HAS READ THE KINEXUS SERVICE AGREEMENT AND AGREES TO BE BOUND BY THE TERMS AND CONDITIONS:

Print Name of Authorized Representative or Principal Investigator Authorized Signature Date (m/d/y)

How did you originally hear about the Kinetworks™ Services? Direct Mail Email Web Site Advertisement Referral Conference or Trade Show Other



Form: **KCPS-SIF**

**CUSTOM KINETWORKS™ KCPS SCREEN
SERVICE IDENTIFICATION FORM**

Subject to terms of the Kinexus Service Agreement

KINEXUS ORDER NUMBER

NAME: _____ **COMPANY/INSTITUTE:** _____
(Authorized Representative or Principal Investigator)

CUSTOM KINETWORKS™ SCREENING SERVICE REQUESTED: (WITH CLIENT LYSATES AND KINEXUS ANTIBODIES)

Clients have the option of choosing antibodies provided by Kinexus or their own antibodies, or any combination thereof. Please refer to Appendix B for the selection of any eighteen (18) antibodies from the in-house inventory of antibodies available from Kinexus for immunoblotting analysis. For each selected antibody, provide the appropriate ID codes from Appendix B as well as the names of the protein targets (and phospho-sites sites if applicable). Clients may also provide their own antibodies for this immunoblotting service if they fully disclose on accompanying KW-CADF forms the nature of the probing antibodies (including immunogen sequence, the animal species in which the antibody was produced as well as manufacturer's name and catalogue number if it is commercially sourced). If clients are selecting antibodies for validation of results from a previous Kinex™ antibody microarray analysis, they are eligible for a 15% discount if they provide the previous Kinexus Order Number. Please check the appropriate tick boxes.

<p>CUSTOM SERVICE REQUESTED: KCPS Custom Multi-Antibody (18) and Single (1) Sample Screen 500 µg protein for each cell or tissue lysate is required</p>	<p>KINEXUS ID NUMBER <i>(Bar Code Identification Number)</i> For Kinexus Internal Use Only.</p>	<p>A. CLIENT SCREEN ID NAME: Customer ID: _____ <i>Provide ID name of your choice for your reference and for use in Box A of "Client-Supplied Sample Description" (KW-NSDF, KW-CSDF) and "Client-Supplied Antibody Description (KW-CADF) forms.</i></p>																																																																																																																																																																																				
<p>B. ANTIBODY SELECTION: <i>Antibodies should be listed in the order that you want them to be used to probe the SDS-PAGE gel from left to right. For Kinexus supplied antibodies, record the appropriate ID codes from Appendix B. To reduce the risk of error, please also provide the abbreviated name of the protein target of the antibody and, if applicable, the desired phosphorylation site. If you are using this service to follow up on previous Kinex™ or Kinetworks™ data, use the ID Code provided with the results of your previous order or contact our Technical Services Representatives. If clients wish to include antibodies of their own, please provide the client name for each antibody that has been entered into Box B from the completed and attached "Client-Supplied Antibody Description" (KW-CADF) forms. Kinexus may change the order of these antibodies to improve the accuracy of detection if deemed necessary.</i></p>		<p>C. SAMPLE IDENTIFICATION: <i>For a client supplied sample, please complete a "Client-Supplied Non-confidential Sample Description Form" (KW-NSDF) or a "Client-Supplied Confidential Sample Description Form" (KW-CSDF). 500 ug of cell or tissue lysate protein are required for the KCPS screen.</i></p> <p><i>If this sample has been analyzed before on a Kinex™ KAM or KSAM antibody microarray, please also provide the previous Kinexus Order Number in order to qualify for a 15% discount off of our regular pricing. It is important if you are using this service to follow up on previous Kinex™ or Kinetworks™ data, that you use the ID Codes in Section B that were provided with the results of your previous order or you should contact our Technical Services Representatives.</i></p> <p>Kinexus Order Number _____ Previous Kinex™ Analysis: _____ Previous Kinetworks™ Analysis: _____</p>																																																																																																																																																																																				
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">Lane 1.</td> <td style="width:15%;"><input type="checkbox"/> Kinexus ID Code: _____</td> <td style="width:35%;">Protein name: _____</td> <td style="width:15%;">Phospho-site: _____</td> <td style="width:30%;"></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 2.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 3.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 4.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 5.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 6.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 7.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 8.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 9.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 10.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 11.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 12.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 13.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> <tr> <td>Lane 14.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: 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<td></td> </tr> <tr> <td>Lane 18.</td> <td><input type="checkbox"/> Kinexus ID Code: _____</td> <td>Protein name: _____</td> <td>Phospho-site: _____</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> Client supplied.</td> <td>Client name for antibody _____</td> <td></td> <td></td> </tr> </table>		Lane 1.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 2.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 3.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 4.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 5.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 6.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 7.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 8.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 9.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 10.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	Client name for antibody _____			Lane 11.	<input type="checkbox"/> Kinexus ID Code: _____	Protein name: _____	Phospho-site: _____			<input type="checkbox"/> Client supplied.	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Name of person completing this form

Signature

Date (m/d/y)



KINEXUS

Form: KW-NSDF

CLIENT SUPPLIED
NON-CONFIDENTIAL SAMPLE DESCRIPTION FORM

Subject to terms of the Kinexus IHC Service Agreement

KINEXUS ORDER NUMBER

NAME: COMPANY/INSTITUTE: (Authorized Representative or Principal Investigator)

Non-Confidential Services Requested and Sample Details:

Please refer to the "Kinetworks™ Sample Preparation Protocol" for details on preparing your samples. Clients are required to complete all Sections A-K to qualify for the Non-Confidential pricing level with the Custom Kinetworks™ services.

Form sections A through K containing various checkboxes and input fields for client information, species, tissues, cell state, fractionation, perturbation, and treatments.

I hereby certify that all the sample information provided in this order is correct and accurate to the best of my knowledge. To qualify for the non-confidential pricing level, I agree that all Sections A-K must be completed in full otherwise the confidential pricing level will be applied.

Name of person completing this form

Signature

Date (m/d/y)



KINEXUS

CLIENT-SUPPLIED ANTIBODY DESCRIPTION FORM

Subject to terms of the Kinexus Service Agreement

Form: **KW-CADF**

KINEXUS ORDER NUMBER

NAME: _____ **COMPANY/INSTITUTE:** _____
(Authorized Representative or Principal Investigator)

CUSTOM KINETWORKS™ SCREENING SERVICE REQUESTED: (WITH CLIENT ANTIBODIES)

Clients have the option of using their own antibodies for Kinetworks™ analysis if they fully describe the nature of the probing antibodies (including immunogen sequence, the animal species in which the antibody was produced as well as manufacturer's name and catalogue number if it is commercially sourced). Please note that in the event that clients do not wish to disclose the source or nature of the antibodies that they are providing, then Confidential Pricing must apply. Clients must still complete Sections A to C for Confidential analyses. Please check the appropriate tick boxes.

<p>A. CLIENT SCREEN ID NAME + KINETWORKS™ SCREEN NAME:</p> <p>CLIENT ID: _____ KINETWORKS™ <input type="checkbox"/> KCPS SCREEN <input type="checkbox"/> KCSS</p> <p><i>Use the Client Screen ID Name that you entered in Box A on the "Custom Kinetworks™ KCPS Screen Identification Form" (KCPS-SIF) or "Custom Kinetworks™ KCSS Screen Identification Form" (KCSS-SIF)</i></p>	<p>B. ANTIBODY IDENTIFICATION:</p> <p>Client Name for Antibody: _____</p> <p>Concentration: _____ Volume: _____</p> <p>Recommended dilution for Western blotting: _____</p> <p><i>Clients should provide at least enough antibody for making 500 µl of antibody solution at the desired titre per KCPS blot lane, and 5 ml of antibody solution of the desired titre of antibody per KCSS whole blot.</i></p>
<p>C. SPECIES OF ANTIBODY ORIGIN AND TYPE:</p> <p><input type="checkbox"/> Rabbit <input type="checkbox"/> Monoclonal <input type="checkbox"/> Mouse <input type="checkbox"/> Polyclonal <input type="checkbox"/> Goat <input type="checkbox"/> Human <input type="checkbox"/> Other – Provide common name: _____</p>	<p>KINEXUS ID NUMBER (FOR INTERNAL USE ONLY) <i>(Bar Code Identification Number)</i></p> <p>D. COMMERCIAL SOURCE OF ANTIBODY (if applicable)</p> <p>Supplier Name: _____ Supplier Catalog Number: _____ Supplier Lot Number: _____</p>
<p>E. IMMUNOGEN INFORMATION:</p> <p>Species of origin of protein or peptide sequence: _____</p> <p>Protein: <input type="checkbox"/> Yes Target protein name (and phosphosite location if appropriate): _____</p> <p>Peptide: <input type="checkbox"/> Yes <i>If yes, please go to Box F and provide the amino acid sequence of the immunizing peptide if it is known</i></p>	<p>F. AMINO ACID SEQUENCE OF IMMUNOGEN</p> <p>_____ _____ _____</p>

<p>A. CLIENT SCREEN ID NAME + KINETWORKS™ SCREEN NAME:</p> <p>CLIENT ID: _____ KINETWORKS™ <input type="checkbox"/> KCPS SCREEN <input type="checkbox"/> KCSS</p> <p><i>Use the Client Screen ID Name that you entered in Box A on the "Custom Kinetworks™ KCPS Screen Identification Form" (KCPS-SIF) or "Custom Kinetworks™ KCSS Screen Identification Form" (KCSS-SIF)</i></p>	<p>B. ANTIBODY IDENTIFICATION:</p> <p>Client Name for Antibody: _____</p> <p>Concentration: _____ Volume: _____</p> <p>Recommended dilution for Western blotting: _____</p> <p><i>Clients should provide at least enough antibody for making 500 µl of antibody solution at the desired titre per KCPS blot lane, and 5 ml of antibody solution of the desired titre of antibody per KCSS whole blot.</i></p>
<p>C. SPECIES OF ANTIBODY ORIGIN AND TYPE:</p> <p><input type="checkbox"/> Rabbit <input type="checkbox"/> Monoclonal <input type="checkbox"/> Mouse <input type="checkbox"/> Polyclonal <input type="checkbox"/> Goat <input type="checkbox"/> Human <input type="checkbox"/> Other – Provide common name: _____</p>	<p>KINEXUS ID NUMBER (FOR INTERNAL USE ONLY) <i>(Bar Code Identification Number)</i></p> <p>D. COMMERCIAL SOURCE OF ANTIBODY (if applicable)</p> <p>Supplier Name: _____ Supplier Catalog Number: _____ Supplier Lot Number: _____</p>
<p>E. IMMUNOGEN INFORMATION:</p> <p>Species of origin of protein or peptide sequence: _____</p> <p>Protein: <input type="checkbox"/> Yes Target protein name (and phosphosite location if appropriate): _____</p> <p>Peptide: <input type="checkbox"/> Yes <i>If yes, please go to Box F and provide the amino acid sequence of the immunizing peptide if it is known</i></p>	<p>F. AMINO ACID SEQUENCE OF IMMUNOGEN</p> <p>_____ _____ _____</p>

I hereby certify that all of the information about cell/tissue samples and antibodies that I provided in this order is correct and accurate to the best of my knowledge.

Name of person completing this form Signature Date (m/d/y)

COMMERCIAL INVOICE

DATE OF EXPORTATION	EXPORT REFERENCES <i>(not required)</i>
SHIPPER/EXPORTER	CONSIGNEE Kinexus Bioinformatics Corporation Suite 1, 8755 Ash Street Vancouver, B.C. Canada V6P 6T3 Telephone: (604) 323-2547 Ext. 1 or 10 Facsimile: (604) 323-2548 Email: info@kinexus.ca
COUNTRY OF EXPORT	TERMS OF SALE Not for resale, sample for analysis
COUNTRY OF ORIGIN	PURPOSE Research and development
COUNTRY OF ULTIMATE DESTINATION Canada	EXPORTING CARRIER
INTERNATIONAL AIR WAYBILL NUMBER Courier Number:	

NO. OF PKGS	TYPE OF PACKAGING	QUANTITY OF SAMPLES	COMPLETE AND ACCURATE COMMODITY DESCRIPTION	UNIT VALUE
	<input type="checkbox"/> FedEx Letter <input type="checkbox"/> FedEx Pak <input type="checkbox"/> Box <input type="checkbox"/> Other	<i>Total number of 1.5 ml Eppendorf tubes:</i>	Non hazardous, non infectious protein samples packaged in 1.5 ml tubes for research and development testing purposes. Samples are not for resale and there is no commercial value.	\$1.00 <i>per sample</i>
TOTAL NO. OF PACKAGES		TOTAL WEIGHT OF PACKAGES		TOTAL DECLARED VALUE \$

These commodities were exported from the Country indicated above in accordance with the Export Administration Regulations and are licensed for the ultimate designation shown. It is hereby certified that this commercial invoice shows the actual price of the goods described, that no other invoice has been or will be issued for these goods, and that all particulars are true and correct.

SIGNATURE AND STATUS OF AUTHORIZED PERSON

<i>Print Name</i>	<i>Title</i>
<i>Authorized Signature</i>	<i>Date (month/day/year)</i>

INCLUDE THREE (3) COPIES OF THIS INVOICE WITH YOUR SHIPMENT

COMMERCIAL INVOICE

DATE OF EXPORTATION	EXPORT REFERENCES
SHIPPER/EXPORTER	CONSIGNEE Kinexus Bioinformatics Corporation Suite 1 8755 Ash Street Vancouver, B.C. Canada V6P 6T3 Telephone: (604) 323-2547 Local 11 Facsimile: (604) 232-2548 Email: info@kinexus.ca
COUNTRY OF EXPORT	TERMS OF SALE Not for resale, frozen sample for analysis
COUNTRY OF ORIGIN	PURPOSE Research and development
COUNTRY OF ULTIMATE DESTINATION Canada	EXPORTING CARRIER
INTERNATIONAL AIR WAYBILL NUMBER	
Courier Name: _____ Number: _____	

NO. OF PKGS	TYPE OF PACKAGING	QUANTITY OF SAMPLES	COMPLETE AND ACCURATE COMMODITY DESCRIPTION	UNIT VALUE
	<input type="checkbox"/> FedEx Letter <input type="checkbox"/> FedEx Pak <input type="checkbox"/> Box <input type="checkbox"/> Other	<i>Total number of 1.5 ml Eppendorf tubes:</i>	Non-hazardous, non-infectious protein lysate for research and development diagnostic purposes. Samples are not for resale and there is no commercial value. Samples are packaged on Dry Ice, Class 9, UN 1845, Group 3 (____ X ____ kgs).	\$1.00 <i>per sample</i>
TOTAL NO. OF PACKAGES		TOTAL WEIGHT OF PACKAGES		TOTAL DECLARED VALUE
				\$

These commodities were exported from the Country indicated above in accordance with the Export Administration Regulations and are licensed for the ultimate designation shown. It is hereby certified that this commercial invoice shows the actual price of the goods described, that no other invoice has been or will be issued for these goods, and that all particulars are true and correct.

SIGNATURE AND STATUS OF AUTHORIZED PERSON

Print Name	Title
Authorized Signature	Date (month/day/year)

INCLUDE THREE (3) COPIES OF THIS INVOICE WITH YOUR SHIPMENT



PROTEOMICS SERVICES AGREEMENT

SERVICE AGREEMENT NO.

2025-

This Proteomics Services Agreement (the "Agreement") is entered into effective as of the Effective Date by and between Kinexus Bioinformatics Corporation ("Kinexus"), a Canadian corporation with a principal place of business at Suite 1, 8755 Ash Street, Vancouver, British Columbia, Canada, V6P 6T3 **AND** the corporation or other entity ("**Customer**") having the following name and business or institution address:

RECITALS

WHEREAS Kinexus is a bioinformatics company employing proprietary proteomics and bioinformatics services to create and interpret data to map protein signalling networks and compile databases with this knowledge to enable disease biomarker and therapeutics discovery.

WHEREAS the Customer desires to have Kinexus perform standard and/or customized proteomics services with materials and/or information provided by the Customer.

WHEREAS Kinexus is willing to provide these proteomics services under the terms and conditions set forth herein.

THEREFORE, in consideration of the premises and covenants and agreements contained herein, and other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, Kinexus and the Customer agree as follows:

1. DEFINITIONS

1.1 "Academic Collaborator" means a principal investigator, employed at a university or other not-for-profit academic research institution.

1.2 "Affiliate" means any corporation or other entity that directly or indirectly controls, is controlled by or is under common control with a party to this Agreement. A corporation or other entity shall be regarded as in control of another corporation or entity if it owns or directly or indirectly controls more than fifty percent (50%) of the outstanding voting stock or other ownership interest of the other corporation or entity.

1.3 "Corporate Partner" means any Third Party which enters into an agreement with the Customer or its Affiliates involving the grant to such Third Party of rights for the development or commercialization of a

product that was discovered, identified, selected, characterized or determined to have therapeutic or diagnostic use through use of the Proteomics Analyses provided to the Customer pursuant to this Agreement.

1.4 "Confidential Information" means any information or data received by a party (the "Receiving Party") from the other party (the "Disclosing Party") in connection with the performance of this Agreement that, if disclosed in writing, is marked or otherwise identified by the Disclosing Party as confidential or, if disclosed orally is identified in writing by the Disclosing Party as confidential within ten (10) days following the disclosure. Confidential Information shall not include any information or data that the Receiving Party can demonstrate:

- (a) was generally available to the public before its disclosure to the Receiving Party or became generally available to the public after its disclosure to the Receiving Party, provided that such information or data did not become generally available to the public by means of an unauthorized act or omission of the Receiving Party;
- (b) was already in the possession of the Receiving Party before its disclosure under this Agreement, as demonstrated by Receiving Party's written records, provided that such information or data was not obtained directly or indirectly from the Disclosing Party under an obligation of confidentiality;
- (c) was disclosed to the Receiving Party, whether before or after its disclosure under this Agreement, by a Third Party, provided that such information or data was not obtained directly or indirectly from the Disclosing Party under an obligation of confidentiality; or
- (d) was independently developed or discovered by employees or agents of the Receiving Party without any use of Confidential Information of the Disclosing Party as demonstrated by Receiving Party's written records.

All of the Proteomics Services technologies provided by Kinexus will be deemed to have been identified as proprietary and considered the Confidential Information of Kinexus.

1.5 "Contact" means the contact person of the Customer that is designated on the Service Order Forms, who is deemed to have the authority to deliver Samples, Service Order Forms, Service Information Forms, and Sample Description Forms to Kinexus, on behalf of the Customer, under this Agreement.

1.6 "Proteomics Analyses" means one or more of the custom and standard proteomics services offered by Kinexus that may permit the identification and/or quantification of proteins, their phosphorylation states, their interactions with proteins, peptides, and other compounds, and the regulation of their functional activities by these agents.

1.7 "Proteomics Products" means the products of the custom proteomics services offered by Kinexus to biologically manufacture one or more proteins or designer peptides by chemical synthesis.

1.8 "Sample" means a lysate or semi-purified fraction from cells and tissues, a protein, and/or a compound provided to Kinexus by the Customer, which the Customer has prepared and shipped in a manner that it can be properly used by Kinexus for the Proteomics Analyses. Samples for Proteomics Analyses may also be provided by Kinexus at the request of the Customer.

1.9 "Sample Description Form" means the Kinexus form to be completed by the Customer to provide information on the nature of each Sample submitted for the Proteomics Analyses. It is included in the Proteomics

Services Customer Information Package that is incorporated into this Agreement by reference, and may be amended from time to time as updated on the Kinexus website.

1.10 "Antibody" means the immunoglobulin reagent that permits detection of a target protein or phosphorylation site.

1.11 "Antibody Description Form" means the Kinexus form to be completed by the Customer to provide information on the nature of each Antibody submitted by the Customer for the Proteomics Analyses. It is included in the Proteomics Services Customer Information Package with this Agreement, and may be amended from time to time as updated on the Kinexus website.

1.12 "Service Order Form" means the Kinexus form to be completed by the Customer to provide Kinexus with the Customer's contact and billing information for the Proteomics Analyses or Proteomics Products. This form indicates the level of confidentiality requested by the Customer. It is included in the Proteomics Services Customer Information Package with this Agreement, and may be amended from time to time as updated on the Kinexus website.

1.13 "Service Information Form" means the Kinexus form to be completed by the Customer to provide Kinexus with a specific listing of the Samples to be tested for the Proteomics Analysis or a specific description of the Proteomics Products that are requested. It is included in the Proteomics Services Customer Information Package with this Agreement, and may be amended from time to time as updated on the Kinexus website.

1.14 "Report" means the underlying raw data and the report provided to the Customer hereunder consisting of the Proteomic Analyses of Samples, including, but not limited to tables of the experimental results. For Proteomics Products, the Report may include raw data confirming the composition and purity of the Proteomics Products.

1.15 "Field of Use" means use by Kinexus and its Affiliates and Academic Collaborators of data from the Report for research and commercial purposes relating to the creation and interpretation of knowledge about the composition, architecture and operation of cell signalling networks, improving its Proteomics Services, and the compilation of databases that may become accessible to Third Parties on-line over the Internet.

1.16 "Third Party" means any entity other than Kinexus', Kinexus' Affiliates, the Customer and the Customer's Affiliates.

1.17 "Effective Date" means the date of the last signature on this Agreement.

2. REQUEST FOR AND DELIVERY OF PROTEOMICS SERVICES

2.1 Request for Proteomics Services. From time to time, over the Term of this Agreement (as defined in Section 6.1 herein), the Customer can engage Kinexus to provide its Proteomics Analyses or Proteomics Products. After submission of a quotation from Kinexus to the Customer, by delivery to Kinexus of a Service Order Form, a Service Information Form and a Sample Description Form with Samples as appropriate, the Customer hereby requests and authorizes Kinexus to perform those Proteomics Services stated in the Services Order Form and deliver the results of these services to the Customer, pursuant to the terms and conditions in this Agreement. In the case of Customer requested Proteomics Analyses, this would include the delivery of a Report. In the case of

Customer requested Proteomics Products, this would include the delivery of the Proteomics Products and a Report.

2.2 Representation and Warranty. The Customer represents and warrants that: (a) it has all right and authority to provide the Sample to Kinexus for analysis under the terms and conditions of this Agreement, (b) it collected the Sample lawfully and with all necessary consents and approvals, and (c) that the collection, use and disclosure of the Sample to Kinexus pursuant to this Agreement will not violate the rights of any Third Party.

2.3 Delivery Conditions for Customer Sample. The Customer shall be responsible for making shipping arrangements to deliver Samples to Kinexus. The Customer shall also be responsible for complying with all applicable laws and regulations (including but not limited to customs requirements and relevant handling procedures and protocols) and obtaining any and all permits, forms or permissions that may be required by all regulatory authorities to ship and deliver the Sample; to Kinexus and for Kinexus to accept delivery of the Sample.

2.4 Processing and Delivery of Report and Proteomics Products. Subject to the terms of this Agreement, Kinexus shall analyze Samples with the Customer-specified Proteomics Services or produce Customer-specified Proteomics Products, and deliver a Report to the Customer as requested on the Service Order Form and Service Information Form.

2.5 Quality of Samples for Proteomics Analyses. Kinexus shall not deliver a Report on any Sample that Kinexus, in its sole discretion, reasonably believes has been prepared and delivered in a manner that would compromise its ability to provide a reliable result. Under such a circumstance, the Sample will be destroyed by Kinexus after fourteen (14) days notification by e-mail to the Customer or at the request of the Customer prior to the scheduled destruction of the Sample, it will be returned to the Customer provided that the Customer agrees to reimburse Kinexus for the courier costs for its delivery.

3. PAYMENTS

3.1 Payments for Proteomics Services. For each Proteomics Analyses and Proteomics Product requested under this Agreement, the Customer shall pay to Kinexus a fee in accordance with the amount specified on the Service Order Form and the Service Identification Form for the requested service, which may be amended from time to time as updated on Kinexus' website. This amount will be the same amount that was specified on the formal quotation issued by Kinexus to the Customer. In the absence of a formal quotation, the pricing will be based on the pricing specified in the latest versions of the Customer Information Packages for Proteomics Services that are downloadable from the Kinexus website (www.kinexus.ca). The category of pricing depends on the level of requested confidentiality for analysis:

- (a) Non-Confidential Proteomics Analyses. If the Samples are provided by the Customer, then all of the Sample information on the Client Supplied **Non-Confidential** Sample Description Form is completed and **is not** designated as Confidential Information on the Service Identification Form. If Antibodies are supplied by the Customer, then all of the Antibody information on the Client Supplied Antibody Description Form (see example in Appendix) must be completed and **is not** designated as Confidential Information on the Service Identification Form.
- (b) Confidential Proteomics Analyses. If the Samples are provided by the Customer, then all of the Sample information on the Client Supplied **Confidential** Sample Description Form must be completed and **is** designated as Confidential Information on the Service Identification Form.

3.2 The Customer shall issue a purchase order or provide a charge account at the time the Customer sample arrives at Kinexus' offices at Suite 1, 8755 Ash Street, Vancouver, British Columbia, Canada, V6P 6T3. Kinexus will invoice Customer when the Proteomics Analyses or Proteomics Products are complete and delivered to Customer. Payment terms are net 30 days from date of invoice.

3.3 Interest on Late Payments. Any overdue payments by the Customer to Kinexus under this Agreement shall bear interest, to the extent permitted by applicable law at 18% per annum, calculated on the total number of days payment is delinquent; provided, however, that interest shall not accrue pursuant to this Section 3.3 on any amounts payable under this Agreement with respect to which payment is disputed in good faith; provided, further that interest shall accrue pursuant to this Section 3.3 once such dispute has been resolved if payment is not made promptly thereafter.

4. INTELLECTUAL PROPERTY RIGHTS

4.1 Ownership of Sample Information. The Customer owns all rights to the Sample information provided to Kinexus. For Non-Confidential Proteomics Analyses and after 1 year from completion of the contracted work, the Customer grants Kinexus a non-exclusive, royalty-free fully paid up worldwide perpetual license to use, copy, publish, compile, display, communicate, modify, translate and otherwise exploit (and authorize Third Parties to do any of the foregoing) to use the information on the Client Supplied **Non-Confidential** Sample Description Form in the Field of Use, provided that the Customer's identity is not linked to, or otherwise disclosed with respect to, such data.

4.2 Ownership of Report. The Customer shall own the data in the Report. For Non-Confidential Proteomics Analyses and after 1 year from completion of the contracted work, the Customer grants Kinexus a non-exclusive, royalty-free fully paid up worldwide perpetual license to use, copy, publish, compile, display, communicate, modify, translate and otherwise exploit (and authorize Third Parties to do any of the foregoing) data from the Report in the Field of Use.

4.3 Confidentiality of Sample Information. Kinexus will have no rights with respect to the Confidential Sample information until the Sample information is published or otherwise enters the public domain. Thereafter, Kinexus can use the results of the Proteomics Analyses of the Customer Samples for its internal research and development programs.

4.4 Ownership of Proteomics Products. The Customer owns the Proteomics Products that have been delivered to the Customer in the amounts specified in the Service Order Form and the Service Information Form. Kinexus owns any excess Proteomics Products and may dispose of these in its best interests.

4.5 Ownership of New Intellectual Property.

- (a) The Customer shall own and have rights to all inventions, discoveries, improvements, know-how, technical information, data or other technology discovered, conceived, made, developed and/or reduced to practice through the use of the data in the Report and Proteomics Products solely by employees of the Customer or jointly with its Affiliates;

- (b) Kinexus shall own and have rights to all inventions, discoveries, improvements, know-how, technical information, data or other technology discovered, conceived, made, developed and/or reduced to practice through the use of the data in the Report and Proteomics Products solely by employees of Kinexus or jointly with its Affiliates.

4.6 Non-Exclusive License to Preserve Kinexus Proteomics Services Freedom of Operation. In the event one or more claims of an issued patent arising from the use of a Report by the Customer, its Affiliates, Academic Collaborators or Corporate Partners, which would, absent a license from the Customer or its Affiliates, prevent Kinexus from using or permitting others to use the standard Kinexus Proteomics Services or any data therein, then the Customer and/or its Affiliates (as applicable) shall grant to Kinexus a non-exclusive, royalty-free fully-paid up perpetual license, including the right to grant sublicenses, under any such patent claim to use and permit others to use the Proteomics Services.

5. CONFIDENTIALITY

5.1 Confidentiality. Each Receiving Party shall treat the Confidential Information of the Disclosing Party as strictly confidential and (a) take reasonable precautions to protect such Confidential Information (including, without limitation, all precautions such as the Receiving Party employs with respect to its own confidential information), (b) not disclose or make available to any Third Party such Confidential Information without the express prior written consent of the Disclosing Party and (c) use such Confidential Information only for purposes specifically authorized under this Agreement. Each Receiving Party may disclose Confidential Information of the Disclosing Party to its officers, directors, employees, consultants, Affiliates and agents, and to licensees or prospective licensees of its rights to any invention, on a need-to-know basis and on the condition that such employees, Affiliates, agents, licensees and prospective licensees are obligated to maintain the confidentiality of the Confidential Information in a manner no less restrictive than the terms and conditions of this Section 5. Each Receiving Party may disclose Confidential Information of the Disclosing Party pursuant to a demand issued by a court or governmental agency or as otherwise required by law, provided, however, that the Receiving Party notifies the Disclosing Party promptly upon receipt thereof, giving the Disclosing Party sufficient advance notice to permit it to seek a protective order or other similar order with respect to such Confidential Information, and provided, further, that the Receiving Party furnishes only that portion of the Confidential Information of the Disclosing Party that it is advised by counsel is legally required whether or not a protective order or other similar order is obtained by the Disclosing Party.

5.2 Publication. The Customer may publish and/or present the Report, abstracts or manuscripts generated utilizing the Report, and any data and/or results generated by the Customer utilizing the Report. The Customer is encouraged to disclose in scientific publications any Proteomics Analyses that were performed by Kinexus and any Proteomics Products were produced by Kinexus that meaningfully contributed to the described work. Please refer to “Kinexus Bioinformatics Corporation (Vancouver, Canada).” For all Samples submitted for analysis and identified as Non-Confidential by the Customer, Kinexus will not use, copy, publish, compile, display, communicate, modify, or translate the Sample Information or the data from the Report for a period of 365 days (12 months) following the return of the Report to the Customer. At any time, the Customer may opt to pay the difference in price between the Non-Confidential pricing level to the Confidential pricing level for each applicable Sample, to ensure the confidentiality status of such sample is changed.

5.3 Confidential Sample Information. All parties agree that the term of confidentiality pertaining to that Sample information will expire when the Sample information is published or otherwise enters public domain through no fault of Kinexus.

5.4 Use of Customer Name. Except as expressly provided in Section 9.5, no right or license is granted hereunder by Customer for Kinexus to use the Customer's name in relation to data from a Report to a Third Party.

6. TERM AND TERMINATION

6.1 Term. The term of this Agreement ("Term") shall commence on the Effective Date and shall remain in effect for ten (10) years or until the termination of this Agreement pursuant to the terms hereof.

6.2 Early Termination. Each party shall have the right to terminate this Agreement at any time prior to Kinexus' delivery of a Report or Proteomics Product to the Customer hereunder, upon ten (10) business days written notice to the other party, if such party reasonably determines that the production, or use of such Sample infringes intellectual property rights of any Third Party, and the Customer elects not to obtain a license under the necessary Third Party intellectual property rights at its sole expense. If this Agreement is terminated by either party pursuant to this Section 6.2, neither party shall have any obligation to the other with respect to payments under this Agreement regarding the Sample or Proteomics Product at issue.

Kinexus shall have the right to terminate any Service Order Form for any Proteomics Services upon ten (10) business days written notice to the Customer, upon the identification of a technical difficulty related to the Sample or Proteomics Product which would prevent it from delivering the Report or Proteomics Product using reasonable efforts. If Kinexus terminates a work order as a result of a technical difficulty related to a Customer Sample that is the fault of Kinexus, Kinexus shall provide for the reanalysis of the same number of problematic Customer Samples for the Proteomics Analyses at the original agreed upon price without any additional expenses incurred by the Customer, or Kinexus shall repay any prepayment fee paid by the Customer for such a Customer Sample and neither party shall have any further obligation to the other with respect to that Customer Sample.

If Kinexus terminates a Service Order Form for Proteomics Analyses as a result of a technical difficulty related to the Customer Sample (including insufficient material or other problems associated with the quality of the Sample) that is the fault of the Customer, then Kinexus shall provide for the reanalysis of the problematic Customer Samples at the original agreed upon price without any additional expenses incurred by the Customer, provided Kinexus completes the full Proteomics Analyses for all Samples. For any subsequent resubmission of Customer Samples for Proteomics Analyses due to technical difficulty that is again the fault of the Customer, Kinexus shall provide for the reanalysis of the problematic Customer Samples at an additional charge per sample at a price mutually agreed by the Customer and Kinexus. If the Customer elects not to resubmit Samples for Proteomics Analyses, then the Customer will pay Kinexus an amount equivalent to 50% of the quoted price for the work performed by Kinexus to this point.

6.3 Events of Default. An event of default (an "Event of Default") shall be deemed to occur upon a material breach of this Agreement by a party (including, without limitation, any breach of the provisions of Section 5) if the breaching party fails to remedy such breach within thirty (30) days after written notice thereof by the non-breaching party.

6.4 Effect of an Event of Default.

- (a) Remedies Available to Kinexus. If an Event of Default occurs relating to a material breach by the Customer, then Kinexus shall have the right, at its option exercisable in its sole discretion, in addition to any other rights or remedies available to it at law or in equity, to immediately terminate this Agreement upon notice thereof to the Customer, in which case the Customer shall return to Kinexus, or, upon Kinexus' written instruction, destroy any Report, Proteomics Products, and all information, other materials

or documentation provided or made available by Kinexus pursuant to this Agreement, and any copies thereof (including electronic copies).

- (b) Remedies Available to the Customer. If an Event of Default occurs relating to a material breach by Kinexus, then the Customer shall have the right, at its option exercisable in its sole discretion, in addition to any other rights or remedies available to it at law or in equity and subject to the limitations set forth in Section 7, to terminate this Agreement upon notice thereof to Kinexus.

6.5 Effect of Expiration or Termination of Agreement. The expiration or termination of this Agreement shall not relieve the parties of any obligation accruing prior to such expiration or termination. Kinexus will not be required to continue custom proteomics analyses on a Sample after termination, and the Customer will be required to pay for work done prior to termination. The provisions of Sections 4, 5, 6, 7, 8, and 9 hereof shall survive any expiration or termination of this Agreement.

7. DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY

7.1 Disclaimer of Warranties. THE PROTEOMICS SERVICES ARE BEING SUPPLIED TO CUSTOMER WITH NO EXPRESS, IMPLIED, STATUTORY OR OTHER WARRANTIES, REPRESENTATIONS, CONDITIONS OR GUARANTEES, INCLUDING THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND DURABILITY. WITHOUT LIMITING THE FOREGOING, KINEXUS MAKES NO REPRESENTATION OR WARRANTY THAT THE USE OF THE REPORT, ANY PROTEOMICS PRODUCTS OR THE DATA THEREIN OR THE PERFORMANCE OF THIS AGREEMENT WILL NOT INFRINGE ANY INTELLECTUAL PROPERTY OR OTHER RIGHTS OF ANY THIRD PARTY.

7.2 Limitation of Liability. Kinexus shall not be liable for any use by the Customer, its Affiliates, Corporate Partners, or Academic Collaborators of the Report and any Proteomics Products or any loss, claim, damage or liability, of whatever kind or nature, which may arise from or in connection with the use of the Report or the data therein, and any Proteomics Products. NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT OR OTHERWISE TO THE CONTRARY, NEITHER KINEXUS NOR CUSTOMER WILL BE LIABLE TO EACH OTHER WITH RESPECT TO ANY MATTER ARISING UNDER THIS AGREEMENT UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR (I) ANY PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOST PROFITS OR (II) COST OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES. WITHOUT IN ANY WAY LIMITING THE FOREGOING, KINEXUS SHALL NOT, IN ANY EVENT, HAVE ANY LIABILITY WHATSOEVER IN CONNECTION WITH THIS AGREEMENT IN EXCESS OF AN AMOUNT EQUAL TO THE FEES PAID TO KINEXUS BY CUSTOMER HEREUNDER IN RESPECT OF THE PROTEOMICS SERVICES AT ISSUE.

8. INDEMNIFICATION

Except to the extent prohibited by law, the Customer shall assume all liability for, and shall defend, indemnify and hold Kinexus, its Affiliates and their respective directors, officers, employees and agents harmless from, all claims, losses, damages or expenses (including reasonable attorneys' fees) arising directly or indirectly as a result of: (a) the use of the Report or the data therein and any Proteomics Products by the Customer or its Affiliates, Corporate Partners or Academic Collaborators, or (b) the breach, untruthfulness or inaccuracy of any of the Customer's representations and warranties in this Agreement.

9. MISCELLANEOUS

9.1 Entire Agreement. The Appendices to this Agreement, together with all terms and conditions contained within this Agreement constitute the entire understanding between the parties with respect to the subject matter hereof and, with respect to any conflicting terms from prior agreements between the parties, supersedes and cancels such conflicting sections from all previous registrations, agreements, commitments and writings in respect thereof. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by both parties hereto.

9.2 Assignment and Waiver. This Agreement may not be assigned or otherwise transferred by either party without the written consent of the other party, such consent will not be unreasonably withheld. Notwithstanding the foregoing, Kinexus may, without such consent, assign its rights and obligations under this Agreement (a) to any Affiliate or (b) to a Third Party in connection with a merger, consolidation or sale of such portion of its assets that includes rights under this Agreement provided, however, that Kinexus' rights and obligations under this Agreement shall be assumed by its successor in interest in any such transaction. In the event of such a transaction with Third Party, notwithstanding the other provisions of this Agreement, the intellectual property rights of such Third Party shall not be subject to the licenses granted by Kinexus under this Agreement. Any purported assignment in violation of the provisions of this Section 9.2 shall be void. Any permitted assignee shall assume all obligations of its assignor under this Agreement. The waiver by either party hereto of any right hereunder or the failure to perform or of a breach by the other party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by said other party whether of a similar nature or otherwise.

9.3 Force Majeure. Neither party shall be held liable or responsible to the other party nor be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any obligation under this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected party, including but not limited to fire, floods, embargoes, war, acts of war (whether war is declared or not), insurrections, riots, civil commotions, strikes, lockouts or other labor or supply disturbances, acts of God or acts, omissions or delays in acting by any governmental authority or the other party; provided, however, that the party so affected shall use reasonable commercial efforts to avoid or remove such causes of nonperformance, and shall continue performance hereunder with reasonable dispatch whenever such causes are removed. Either party shall provide the other party with prompt written notice of any delay or failure to perform that occurs by reason of force majeure. The parties shall mutually seek a resolution of the delay or the failure to perform as noted above.

9.4 Notices. Any consent, notice, or report required or permitted to be given or made under this Agreement by one of the notification parties hereto to the other shall be in writing, delivered personally, by email or by facsimile (and promptly confirmed by telephone, personal delivery or courier) or courier, postage prepaid (where applicable), addressed to such other party at its address indicated below, or to such other address as the addressee shall have last furnished in writing to the addressor and shall be effective upon receipt by the addressee.

If to Kinexus:

Kinexus Bioinformatics Corporation
Suite 1, 8755 Ash Street
Vancouver, British Columbia, Canada V6P 6T3
Attention: Dr. Steven Pelech
President & C.S.O.

Telephone: (604) 323-2547 extension 10
Facsimile: (604) 323-2548

If to the Customer:

To the Customer at the address designated at the front of this Agreement and to the attention of the duly authorized representative signing this Agreement.

9.5 Publicity. Except as required by law, the terms of this Agreement shall be treated as Confidential Information and shall not be disclosed to anyone (except for the parties' respective directors, officers, employees, consultants, agents and attorneys assisting in the review and negotiation of this Agreement and/or who have a need to know the terms of this Agreement) without the written consent of the other party, such consent which will not be unreasonably withheld. Notwithstanding the foregoing, (a) Kinexus may, without such consent, publicly announce the execution of this Agreement with the Customer and may reference the Customer as a Kinexus client.

9.6 No Partnership. It is expressly agreed that the relationship between Kinexus and the Customer shall not constitute a partnership, joint venture or agency. Neither Kinexus nor the Customer shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other, without the prior consent of the other party to do so.

9.7 Applicable Law. This Agreement shall be governed by, construed, interpreted and enforced in accordance with, the laws of the province of British Columbia and the laws of Canada, without reference to conflict of laws principles.

9.8 Dispute Resolution.

- (a) The parties hereby agree that they will attempt in good faith to resolve any controversy or claim arising out of or relating to this Agreement promptly by negotiations. If a controversy or claim should arise hereunder, the matter shall be referred to an individual designated by the Chief Executive Officer or President of Kinexus and an individual designated by the Chief Executive Officer (or the equivalent position) of the Customer (the "Representatives"). If the matter has not been resolved within twenty-one (21) days of the first meeting of the Representatives of the parties (which period may be extended by mutual agreement) concerning such matter, subject to rights to injunctive relief and specific performance, and unless otherwise specifically provided for herein, any controversy or claim arising out of or relating to this Agreement, or the breach thereof, will be settled as set forth in Section 9.8(b).
- (b) All disputes arising in connection with this Agreement that are not resolved pursuant to Section 9.8(a) above shall be finally settled in Vancouver, British Columbia, by a single arbitrator appointed pursuant to the provisions of the *Commercial Arbitration Act* (British Columbia). Notwithstanding the above, either party has the right to bring an action in a court of competent jurisdiction against the other party for (i) any breach of such other party's duties of confidentiality pursuant to Section 5 of this Agreement; (ii) any infringement of its proprietary rights by the other party; and (iii) for interim protection such as, by way of example, an interim injunction. Judgment upon the arbitrator's award may be entered in any court of competent jurisdiction. The award of the arbitrator may include compensatory damages against either party, but under no circumstances will the arbitrator be authorized to, nor shall he/she, award punitive, consequential or incidental damages against either party. The parties agree not to institute any litigation or proceedings against each other in connection with this Agreement except as provided in this Section 9.8.

9.9 Severability. Each party hereby agrees that it does not intend to violate any public policy, statutory or common laws, rules, regulations, treaty or decision of any government agency or executive body thereof of any country or community or association of countries. Should one or more provisions of this Agreement be or become invalid, the parties hereto shall substitute, by mutual consent, valid provisions for such invalid provisions which valid provisions in their economic effect are sufficiently similar to the invalid provisions that it can be reasonably assumed that the parties would have entered into this Agreement with such valid provisions. In case such valid provisions cannot be agreed upon, the invalidity of one or several provisions of this Agreement shall not affect the validity of this Agreement as a whole, unless the invalid provisions are of such essential importance to this Agreement that it is to be reasonably assumed that the parties would not have entered into this Agreement without the invalid provisions.

9.10 Counterparts. This Agreement may be executed in counterparts, each of which when executed and delivered is an original, but both of which together shall constitute one and the same instrument.

9.11 Fax Delivery. This Agreement may be executed by the parties and transmitted by facsimile or electronically as a portable document format (pdf) file or similar electronic file and if so executed and transmitted this Agreement will be for all purposes as effective as if the parties had delivered an executed original Agreement.

IN WITNESS WHEREOF, the parties have caused their duly authorized officer to execute and deliver this Agreement as of the Effective Date.

Printed Name of Institute or Company

Per: _____
Signature of Authorized Representative

Name: _____
Printed Name of Authorized Representative

Title: _____
Printed Title of Authorized Representative

Date signed: _____

KINEXUS BIOINFORMATICS CORPORATION

Per: _____
Signature of Dr. Steven Pelech

Dr. Steven Pelech

President and Chief Scientific Officer

Date signed: _____



Appendix A

KINETWORKS™ SAMPLE BUFFER PROTOCOL

SPECIFICATIONS

Reagent	Volume of Stock	[4X Sample Buffer]
100 % Glycerol	5.00 ml	50 %
1 M Tris-HCl, pH 6.8	1.25 ml	125 mM
20 % SDS	2.00 ml	4 %
1% Bromophenol blue	0.80 ml	0.08 %
Distilled Water	0.45 ml	-
*β-mercaptoethanol	0.50 ml	5 %
Total Volume	10.00 ml	

INSTRUCTIONS FOR USE

1) Prepare 4X SDS-PAGE Sample Buffer

Prepare the 4X SDS-PAGE Sample Buffer according to the specifications described above (the volume can be adjusted as required). The SDS-PAGE Sample Buffer can be stored at ambient temperature for up to 1 year but for best results, do not store 4X SDS-PAGE Sample Buffer with the β-mercaptoethanol.

2) Adding Reducing Agent

Add 50 μl of β-mercaptoethanol per 950 μl of 4X SDS-PAGE Sample Buffer for a final concentration of 5% β-mercaptoethanol in the 4X stock. Add the * β-mercaptoethanol to the 4X SDS-PAGE Sample Buffer just before mixing with the protein Sample.

3) Sample Dilution Ratio: 1 part 4X SDS-PAGE Sample Buffer to 3 parts Sample

The volume of 4X SDS-PAGE Sample Buffer to add is 25% of the total final volume.

The KPSS-1.3, 10.1, 11.0 and 12.1 require at least 500 μg of protein. More protein is desirable if possible in case of unforeseen problems. Based on the formula ($C_1V_1 = C_2V_2$), at a protein concentration of 1.85 mg/ml, 270 μl of protein is required to obtain 500 μg with the addition of 125 μl of 4X SDS-PAGE Sample Buffer and 105 μl of phosphate-buffered saline (PBS) or Lysis Buffer, for a total volume of 500 μl (see Example 1).

Screen	Example 1	Example 2
Protein required (μg)	500 μg @ 1 mg/ml	750 μg @ 1 mg/ml
Sample concentration	1.85 mg/ml	2.80 mg/ml
Volume required	270 μl	268 μl
4X Sample Buffer	125 μl	188 μl
PBS or Lysis Buffer	105 μl	294 μl
Total Volume	500 μl	750 μl

For all screens, the lowest protein concentration acceptable of the cell/tissue samples in SDS-PAGE Sample Buffer is 0.6 mg/ml and the maximum protein concentration is 2.0 mg/ml

Prepare samples by heating in a boiling water bath for 4 minutes at 100 °C. The sample should be shipped in a 1.5-ml Eppendorf screw cap vial, clearly labeled with an indelible marker for its identification, and parafilm to prevent accidental opening or leaking.

Appendix B

Listing of antibodies available for sale from Kinexus



www.kinexus.ca

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute	Vesicle Protein	Antibody Name	Kinexus Antibody Code
14-3-3 (KCIP-1)	Pan	P31946										●					14-3-3-pan-1	NN441-2
14-3-3 (KCIP-1)	Pan	P31946										●					14-3-3-pan-2	NN441-3
14-3-3-F	Pan	Q04917										●					14-3-3-F-2	NN450-1
14-3-3-G	Pan	P61981										●					14-3-3-G-2	NN453-2
14-3-3-S	Pan	P31947										●					14-3-3-S-1	NN454-1
14-3-3-S	Pan	P31947										●					14-3-3-S-2	NN454-2
14-3-3-T	Pan	P27348										●					14-3-3-T-1	NN455-1
14-3-3-T	Pan	P27348										●					14-3-3-T-2	NN455-2
14-3-3-Z	Pan	P63104										●					14-3-3-Z-2	NN001-3
14-3-3b	Pan	P31946										●					14-3-3-B-1	NN452-1
14-3-3b	Pan	P31946										●					14-3-3-B-2	NN452-2
14-3-3e	Pan	P62258										●					14-3-3-E-1	NN451-1
14-3-3e	Pan	P62258										●					14-3-3-E-CT	NN451-3
4E-BP1 (PHAS1)	T37+T46	Q13541					●										4E-BP1-pT37+pT46	PN550
A6 (Twintilin-1)	Y309	Q12792	DSK									●					A6-pY309	PK501
A6r (Twintilin-2)	Y309	Q6IBS0	DSK									●					A6r-pY309	PK502
AAK1	S637+Pan	Q2M2I8	PSTK														AAK1-pS637	PK503
Abl (Abl1)	Pan	P00519	PYK														Abl1	NK001-2
Abl (Abl1)	Pan	P00519	PYK														Abl1-3	NK001-4
Abl (Abl1)	Pan	P00519	PYK														Abl1-2	NK001-6
Abl (Abl1)	Y139	P00519	PYK														Abl1-pY139	PK504
Abl (Abl1)	Y226	P00519	PYK														Abl1-pY226	PK505
Abl (Abl1)	Y257	P00519	PYK														Abl1-pY257	PK506
Abl (Abl1)	Y264	P00519	PYK														Abl1-pY264	PK507
Abl (Abl1)	Y393+T394	P00519	PYK														Abl1-pY393+pT394	PK873
Abl (Abl1)	Y413	P00519	PYK														Abl1-pY413	PK896
Abl (Abl1)	Y469	P00519	PYK														Abl1-pY469	PK508
ACACA (ACC1; S29)	S29	Q13085							●								ACC1-pS29	PN733
ACACA (ACC1; S80)	S80	Q13085							●								ACACA-pS80	PN863
ACACB (ACC2) T1342	T1342	O00763							●								ACC2-pT1342	PN734
AChE	Y164	P22303							●								AChE-pY164	PN931
ACK1 (TNK2) Y284	Y284	Q07912	PYK														ACK1-pY284	PK511
ACK1 (TNK2) Y518	Y518	Q07912	PYK														ACK1-pY518	PK512
ACK1 (TNK2) Y859+Y860	Y859+Y860	Q07912	PYK														ACK1-pY859+pY860	PK513
ACLY	S455	P53396							●								ACLY-pS455	PN735
ACLY	Y682	P53396							●								ACLY-pY682	PN686
ACO1 IREB1) S711+Pan	S711+Pan	P21399							●								ACO1-pS711	PN736
ACO1 IREB1) S806	S806	P21399							●								ACO1-pS806	PN737
ACP1	Y132+Y133	P24666		PSTP													ACP1-pY132+pY133	PN687
ACTB (beta-Y53)	Y53	P60709											●				ACTB-pY53	PN501
ACTB (beta-Y294)	Y294	P60709											●				ACTB-pY294	PN500
ACTN1	Y246	P12814											●				ACTN1-pY246	PN502
ADD1 (Adducin-S726)	S726	Q9UEY8											●				ADD1-pS726	PN807
ADD1 (Adducin-T724+S726)	T724+S726	Q9UEY8											●				ADD1-	PN866
ADD1 (Adducin-Y35)	Y35	Q9UEY8											●				ADD1-pY35	PN867
ADD1 (Adducin-Y550)	Y550	Q9UEY8											●				ADD1-pY550	PN868
ADRB2	S355+S356	P07550				●											ADRB2-pS355+pS356	PN784
AGTR1 (AT1) S335+T336	S335+T336	P30556				●											AGTR1-pS335+pT336	PN785

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute Vesicle Protein	Antibody Name	Kinexus Antibody Code
AKAP5	T227	P24588										●				AKAP5-pT227	PN1019
AKAP12	S627+S629	Q02952										●				AKAP12-pS627+pS	PN1009
AKAP12	S696	Q02952										●				AKAP12-pS696	PN933
AKAP12	T469	Q02952										●				AKAP12-pT469	PN1018
Akt1 (PKBa)	Pan	P31749	PSTK													Akt1-2	NK129-4
Akt1 (PKBa)	Pan	P31749	PSTK													Akt1-3	NK129-5
Akt1 (PKBa)	Pan	P31749	PSTK													Akt1-1	NK129-3
Akt1 (PKBa)	T308	P31749	PSTK													Akt1-pT308	PK515
Akt1 (PKBa)	Y315	P31749	PSTK													Akt1-pY315	PK516
Akt1 (PKBa)	Y326	P31749	PSTK													Akt1-pY326	PK517
Akt1 (PKBa)	T443	P31749	PSTK													Akt1-pT443	PK973
Akt1 (PKBa)	S473	P31749	PSTK													Akt1-pS473	PK869
Akt1 (PKBa)	S473	P31749	PSTK													Akt1-pS473	PK958
Akt2 (PKBb)	Pan	P31751	PSTK													Akt2-1	NK130-4
Akt2 (PKBb)	Pan	P31751	PSTK													PKB2-PCT (Akt2-4)	NK130-5
Akt2 (PKBb)	Pan	P31751	PSTK													Akt2-2	NK130-8
Akt2 (PKBb)	Pan	P31751	PSTK													Akt2-3	NK130-9
Akt3 (PKBg)	Pan	Q9Y243	PSTK													Akt3-2	NK131-3
ALK	Pan	Q9UM73	PYK			●										ALK-AKCD	NK003-2
ALK	Pan	Q9UM73	PYK			●										ALK-BKCD	NK003-3
ALK	Y1092	Q9UM73	PYK			●										ALK-pY1092	PK518
ALK	Y1096	Q9UM73	PYK			●										ALK-pY1096	PK519
ALK	Y1507	Q9UM73	PYK			●										ALK-pY1507	PK520
ALOX5 (5-LO)	S272	P09917							●							ALOX5-pS272	PN738
ALS2 (ALS2CR6)	S483	Q96Q42														ALS2-pS483	PN869
ALS2 (ALS2CR6)	S492	Q96Q42														ALS2-pS492	PN870
AML1 (RUNX1)	T273	Q01196			●											AML1-pT273	PN568
AML2 (RUNX3)	T231	Q13761			●											AML2-pT231	PN569
AMPKa1	Pan	Q13131	PSTK													AMPKa1-AKCD	NK259-1
AMPKa1	Pan	Q13131	PSTK													AMPKa1-NT	NK259-2
AMPKa1	T172	Q13131	PSTK													AMPK-pT172 (actu	PK897
AMPKa1	T183+S184	Q13131	PSTK													AMPKa1-pT183+pS	PK521
AMPKa1	T490	Q13131	PSTK													AMPKa1-pT490	PK918
AMPKa2	Pan	P54646	PSTK													AMPKa2-AKCD2	NK260-1
AMPKa2	Pan	P54646	PSTK													AMPKa2-AKCD1	NK260-2
AMPKa2	S377	P54646	PSTK													AMPKa2-pS377	PK522
AMPKa2	Y436	P54646	PSTK													AMPKa2-pY436	PK919
ANAX11	Y482	P50995												●		ANXA11-pY482	PN871
ANKRD3	S438+Pan	P57078	PSTK													ANKRD3-pS438	PK523
ANXA1	Y207	P04083												●		ANXA1-pY207	PN503
ANXA2	Y238	P07355												●		ANXA2-pY238	PN504
AP2B1 (ADTB2)	Y276	P63010												●		AP2B1-pY276	PN934
AP2M1 (AP-2 mu	T156	Q96CW										●				AP2M1-pT156	PN935
AP3B1	S276	O00203														AP3B1-pS276	PN936
AP3B2	S272	Q13367														AP3B2-pS272	PN937
APC	S2129	P25054										●				APC-pS2129	PN739
APP (A4; ABPP;	Pan	P05067			● ●					●						APP-2	NN192-3
APP (A4; ABPP;	T743	P05067			● ●					●						APP-pT743	PN808
APP (A4; ABPP;	Y757	P05067			● ●					●						APP-pY757	PN809
AR	S310	P10275			● ●											AR-pS308	PN571
AR	S96	P10275			● ●											AR-pS94	PN570

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute Vesicle Protein	Antibody Name	Kinexus Antibody Code
Arg (Abl2)	Pan	P42684	PYK													Abl2-1	NK238-1
Arg (Abl2)	Y439	P42684	PYK													Abl2-pY439	PK509
Arg (Abl2)	Y439+T440	P42684	PYK													Abl2-pY439+pT440	PK510
ARID1A	S363	O14497			●											ARID1A-pS363	PN740
ARID1A	Y1506	O14497														ARID1A-pY1506	PN864
ARRB1	S412															ARRB1-pS412	PN1031
ASK1 (MAP3K5)	S1033	Q99683	PSTK													ASK1-pS1033	PK524
ASK1 (MAP3K5)	T1326	Q99683	PSTK													ASK1-pT1326	PK920
ASK1 (MAP3K5)	T838	Q99683	PSTK													ASK1-pT838	PK525
ASS1	T174+S180	P00966							●							ASS1-pT174+pS180	PN741
ATASE (PPAT)	T356	Q06203							●							ATASE-pT356	PN742
ATF2 (CRE-BP1)	T69+T71	P15336			●											ATF2-pT69+pT71	PN552
ATF2 (CRE-BP1)	T69+T71	P15336			●											ATF2-pT69+pT71	PN572
ATM	Pan	Q13315	PSTK													ATM-2	NK230-1
ATM	Pan	Q13315	PSTK													ATM-1	NK230-2
ATM	Pan	Q13315	PSTK													ATM-3	NK230-3
ATM	S1981	Q13315	PSTK													ATM-pS1981	PK526
ATM	Y2969	Q13315	PSTK													ATM-pY2969	PK527
ATR	Pan	Q13535	PSTK													ATR-3	NK237-2
ATR	Pan	Q13535	PSTK													ATR-4	NK237-3
ATR	S435+S436	Q13535	PSTK													ATR-pS435+pS436	PK528
AurKA (Aurora A;)	Pan	O14965	PSTK													AurKA-1	NK008-3
AurKA (Aurora A;)	Pan	O14965	PSTK													AurKA-2	NK008-4
AurKA (Aurora A;)	Pan	O14965	PSTK													AurKA-3	NK008-5
AurKA (Aurora A;)	T287+T288	O14965	PSTK													AurKA-pT287+pT288	PK529
AurKB (AurB;)	Pan	Q96GD4	PSTK													AurKB-1	NK193-2
AurKB (AurB;)	Pan	Q96GD4	PSTK													AurKB-2	NK193-3
AurKB (AurB;)	Pan	Q96GD4	PSTK													AurKB-3	NK193-4
AurKB (AurB;)	S227	Q96GD4	PSTK													AurKB-pS227	PK530
AurKB (AurB;)	T232	Q96GD4	PSTK													AurKB-pT232	PK531
AurKC (Aurora C;)	Pan	Q9UQB9	PSTK													AurKC-1	NK009-2
AurKC (Aurora C;)	Pan	Q9UQB9	PSTK													AurKC-2	NK009-3
AurKC (Aurora C;)	S193	Q9UQB9	PSTK													AurKC-pS193	PK532
AVPR1A	T378+S380	P37288			●											AVPR1A-pT378+pS380	PN787
Axl (UFO)	Pan	P30530	PYK		●											Axl-AKCD	NK010-2
Axl (UFO)	Y702+Y703	P30530	PYK		●											Axl-pY702+pY703	PK533
Axl (UFO)	Y779	P30530	PYK		●											AXL-pY779	PK898
B-Myb (MYBL2)	T487	P10244			●											B-Myb -pT487	PN573
BCKD (BCKDK)	Pan	O14874	PSTK													BCKD-1	NK257-1
BCKD (BCKDK)	Pan	O14874	PSTK													BCKD-2	NK257-2
BCKD (BCKDK)	Pan	O14874	PSTK													BCKD-3	NK257-3
BCKDHA	S337+Pan	P12694							●							BCKDHA-pS337	PN810
Bcl2	S70+Pan	P10415								●						Bcl-2-pS70	PN811
BCLAF1	S512	Q9NYF8			●											BCLAF1-pS512	PN574
Bcr	Y177	P11274	PSTK													Bcr-pY177	PK538
Bcr	Y591	P11274	PSTK													Bcr-pY591	PK539
Bcr	Y644	P11274	PSTK													Bcr-pY644	PK540
BKR2	S366+T369	P30411			●											BKR2-pS366+pT369	PN788
BLK	Y187	P51451	PYK													BLK-pY187	PK541
BLK	Y188	P51451	PYK													BLK-pY188	PK542
BLK	Y389	P51451	PYK													BLK-pY389	PK543

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute Vesicle Protein	Antibody Name	Kinexus Antibody Code
BMPR2 (BMPR-)	S375	Q13873			●											BMPR2-pS375	PK544
Bmx (Etk)	Y40	P51813	PYK													Bmx-Y40	PK545
BRCA1	T509	P38398			●											BRCA1-pT509	PN690
BRCA2	S70	P51587										●				BRCA2-pS70	PN789
BRD2	S37	P25440	PSTK													BRD2-pS37	PK546
BRK	S446+Y447	Q13882	PYK													BRK-pS446+pY447	PK547
BRK	Y342	Q13882	PYK													BRK-pY342	PK548
BRSK1	T205	Q8TDC3	PSTK													BRSK1-pT189	PK549
Btk	Y223+Y225	Q06187	PYK													Btk-pY223+pY225	PK550
Btk	Y551	Q06187	PYK													Btk-pY551	PK551
BUBR1 (BUB1B)	S670+Pan	O60566	PSTK													BUB1B-pS670	PK552
C-EBP-alpha	T226+T230	P49715			●											C-EBPa-pT226+pT230	PN575
CACNB1	T499	Q02641				●										CACNB1-pT499	PN938
CACNG3	Pan	O60359				●										TARP3-Pan (CACN	NN456
CAD	S1859	P27708						●								CAD-pS1859	PN691
CaMK1a	T177	Q14012	PSTK													CaMK1a-pT177	PK553
CaMK1a	Y235	Q14012	PSTK													CAMK1a-pY235	PK874
CaMK1d	T180	Q8IU85	PSTK													CaMK1d-pT180	PK554
CaMK2a	T286	Q9UQM	PSTK													CaMK2a-pT286	PK555
CaMK2a	Y230	Q9UQM	PSTK													CaMK2A-pY230	PK875
CAMK2b	Pan	Q13554	PSTK													CaMK2b-PAD	NK018-3
CAMK2d	Pan	Q13557	PSTK													CaMK2d-NT	NK019-3
CaMK4	Pan	Q16566	PSTK													CaMPK4-NT (CaMK4-NT)	NK021-1
CaMK4	Pan	Q16566	PSTK													CaMK4-CT (CaMK4-CT)	NK021-2
CaMK4	T200	Q16566	PSTK													CaMK4-pT200	PK556
CaMKK1	Pan	Q8N5S9	PSTK													CaMKK1 (CaMKK1)	NK022
CaMKK1	S74	Q8N5S9	PSTK													CaMKK1-pS74	PK557
Cas-L	Y166+Pan	Q14511										●				Cas-L-pY166	PN505
Cbl	Y674	P22681										●				CBL-pY674	PN743
CBS	S227+Pan	P35520						●								CBS-pS227	PN744
CD45 (PTPRC)	Y1216	P08575		PYP	●											CD45-pY1216	PP527
CDC25A	Pan	P30304		DSP												CDC25A-1	NP038-1
CDC25A	Pan	P30304		DSP												CDC25A-2	NP038-2
CDC25A	Pan	P30304		DSP												CDC25A-3	NP038-3
CDC25B	Pan	P30305		DSP												CDC25B-3	NP002-2
CDC25B	Pan	P30305		DSP												CDC25B-1	NP002-3
CDC25C	Pan	P30307		DSP												CDC25C-2	NP003-2
CDC25C	Pan	P30307		DSP												CDC25C-3	NP003-3
CDC5L	T385	Q99459			●											CDC5L-pT385	PN576
CDC7	T376	O00311	PSTK													CDC7-pT376	PK558
CDK1 (CDC2)	Pan	P06493	PSTK													CDC2-CT (CDK1-1)	NK025-4
CDK1 (CDC2)	Pan	P06493	PSTK													CDK1-X	NK025-7
CDK1 (CDC2)	T14	P06493	PSTK													CDK1-pT14	PK559
CDK1 (CDC2)	T14+Y15	P06493	PSTK													CDK1-pT14+pY15	PK560
CDK1 (CDC2)	T161	P06493	PSTK													CDK1-pT161	PK561
CDK1 (CDC2)	Y15	P06493	PSTK													CDK1-pY15	PK562
CDK1 (CDC2)	Y19	P06493	PSTK													CDK1-pY19	PK563
CDK10	Pan	Q15131	PSTK													CDK10-ANT	NK033-2
CDK10	Pan	Q15131	PSTK													CDK10-CT	NK033-3
CDK10	T196	Q15131	PSTK													CDK10-pT196	PK564
CDK11A	T583	Q9UQ88	PSTK													CDK11A-pT583	PK565

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CDK12 (Cdc2L7;	S383+S385	Q9NYV4	PSTK													CDK12-pS383+pS3	PK566
CDK12 (Cdc2L7;	T893	Q9NYV4	PSTK													CDK12-pT893	PK567
CDK14	Pan	O94921	PSTK													PFTAIRE1-ANT	NK287-1
CDK15	Pan	Q96Q40	PSTK													PFTAIRE2-ANT	NK004-2
CDK15	Pan	Q96Q40	PSTK													PFTAIRE2-CT	NK004-3
CDK15	Y114	Q96Q40	PSTK													PFTAIRE2-pY114	PK957
CDK2	T160	P24941	PSTK													CDK2-pT160	PK568
CDK4	T172	P11802	PSTK													CDK4-pT172	PK569
CDK5	Pan	Q00535	PSTK													CDK5-1	NK028-2
CDK5	S159+Pan	Q00535	PSTK													CDK5-pS159	PK899
CDK5	Y15	Q00535	PSTK													CDK5-pY15	PK570
CDK6	Y13	Q00534	PSTK													CDK6-pY13	PK571
CDK6	Y24	Q00534	PSTK													CDK6-pY24	PK572
CDK7 (MO15)	Pan	P50613	PSTK													CDK7 (CDK7-1)	NK030-1
CDK7 (MO15)	T170	P50613	PSTK													CDK7-pT170	PK573
CDK8	Pan	P49336	PSTK													CDK8-NT (CDK8-1)	NK031-4
CDK9	S347	P50750	PSTK													CDK9-pS347	PK574
CDK9	T186	P50750	PSTK													CDK9-pT186	PK575
CDKL1	Pan	Q00532	PSTK													CDKL1-1 (KKIALRE	NK199
CDKL2	Pan	Q92772	PSTK													CDKL2-CT	NK261-1
CDKL3	Pan	Q8IVW4	PSTK													CDKL3-BCT	NK262-1
CDKL5	Y171	O76039	PSTK													CDKL5-pY171	PK576
CDKN2A	Pan	P42771	PSTK													CDKN2A-Pan-1	PN693
CDKN2A (p16;	Pan	P42771	PSTK													CDKN2A-Pan-2	PN694
CHAK1 (TRPM7)	S1504	Q96QT4				● ●										ChaK1-pS1504	PK921
Chk1 (CHEK1)	S280	O14757	PSTK													Chk1-pS280	PK577
Chk1 (CHEK1)	S317	O14757	PSTK													Chk1-pS317	PK578
Chk1 (CHEK1)	S345	O14757	PSTK													Chk1-pS345	PK579
Chk2 (CHEK2)	T383	O96017	PSTK													Chk2-pT383	PK580
Chk2 (CHEK2)	T68	O96017	PSTK													Chk2-pT68	PK581
CHMP2B	S199	Q9UQN														CHMP2B-pS199	PN872
CHRM1	S451+T455	P11229				●										CHRM1-pS451+pT	PN790
CHRNA9	Y374	Q9UGM				●										CHRNA9-pY374	PN939
CHRNA9	Y430	Q9UGM				●										CHRNA9-pY430	PN940
CK1d (CSNK1D)	S370	P48730	PSTK													CK1d-pS370	PK922
CK1d (CSNK1D)	T176	P48730	PSTK													CK1d-pT176	PK923
CK1d (CSNK1D)	T347	P48730	PSTK													CK1d-pT347	PK924
CK2a1	Pan	P68400	PSTK													CK2a1-ANT	NK041-2
CK2a1	pY188	P68400	PSTK													CK2a-pY188	PK962
CK2a1	S194+pY196	P68400	PSTK													CK2a-pS194+pY19	PK963
CK2a1	Y255	P68400	PSTK													CK2a-pY255	PK582
CK2a1	T360+pS366	P68400	PSTK													CK2a-pT360+pS36	PK964
CLK1	S337	P49759	PSTK													CLK1-pS337	PK583
CLK1	S337+T338	P49759	PSTK													CLK1-pS337+pT33	PK584
CLTC	Y634	Q00610													●	CLTC-pY634	PN941
CNR2	S335+S336	P34972				●										CNR2-pS335+pS33	PN792
CNTN1	Y742	Q12860														CNTN1-pY742	PN942
Cofilin 1 (CFL1)	S3	P23528													●	CFL1-pS3	PN812
Cofilin 1 (CFL1)	Y140	P23529													●	CFL1-pY140	PN813
COT (MAP3K8;	Pan	P41279	PSTK													COT-CT (COT-2)	NK042-2
COT (MAP3K8;	Pan	P41279	PSTK													COT (COT-1)	NK042-1

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COT (MAP3K8;	T290	P41279	PSTK														COT-pT290	PK956
COT (MAP3K8;	S334	P41279	PSTK														COT-pS334	PK585
COX2	Y446	P35354							●								COX2-pY446	PN695
CPD	Pan	O75976						●									CPD-3	NN462-3
CREB1	S133	P16220			●												CREB-pS133	PN553
CREB1	S129+S133	P16220			●												CREB1-pS129+pS1	PN577
CRMP2	Y499	Q16555											●				CRMP2-pY499	PN944
CRMP2	T509	Q16555											●				CRMP2-pT509	PN814
CRMP2	T514	Q16555											●				CRMP2-pT514	PN943
CSF1R (Fms)	Pan	P07333	PYK		●												CSF1R -1	NK234-3
CSF1R (Fms)	Pan	P07333	PYK		●												CSF1R -3	NK234-4
CSF1R (Fms)	Pan	P07333	PYK		●												CSF1R-2	NK234-2
CSF1R (Fms)	Y699	P07333	PYK		●												CSF1R-pY699	PK587
CSF1R (Fms)	S807+Y809	P07333	PYK		●												CSF1R-pS807+pY8	PK586
CSF1R (Fms)	Y809	P07333	PYK		●												CSF1R-pY809	PK588
Csk	Y184	P41240	PYK		●												Csk-pY184	PK589
CTMP	S379																CTMP-pS379	PN1011
CTNNB1	S33+S37	P35222			●								●				CTNNB1-pS33+pS3	PN816
CTNNB1	Y489	P35222			●								●				CTNNB1-pY489	PN745
CTNNB1	S552	P35222			●								●				CTNNB1-pS552	PN945
CTNNB1	Y654	P35222			●								●				CTNNB1-pY654	PN579
CTNNB1	S675	P35222			●								●				CTNNB1-pS675	PN946
CUX1 (CUTL1)	S1270	P39880			●												CUX1-pS1270	PN580
DAG1	T790	Q14118											●				DAG1-pT790	PN947
DARPP32	Y74	Q9UD71		PSTP-													DARPP32-pY74	PN794
DARPP32	T75	Q9UD71		PSTP-													DARPP32-pT75	PN818
DCK (dCK)	S74+Pan	P27707							●								DCK-pS74	PN696
DCTN1	S105+T108	Q14203															DCTN1-	PN873
DCTN1	S541	Q14203															DCTN1-pS541	PN874
DCTN1	T1152+S11	Q14203															DCTN1-	PN875
DDR1	Pan	Q08345	PYK		●												DDR1-BCT	NK263-1
DDR1	Y796+Y797	Q08345	PYK		●												DDR1-pY796+pY79	PK591
DDR1	Y797	Q08345	PYK		●												DDR1-pY797	PK592
DDR2 (Tyro10)	Y736	Q16832	PYK		●												DDR2-pY736	PK593
DDR2 (Tyro10)	Y740	Q16832	PYK		●												DDR2-pY740	PK594
DLG1 (SAP97)	Y760	Q12959											●				Dlg1-pY760	PN948
DLG1 (SAP97)	Y784	Q12959											●				Dlg1-pY784	PN949
DLG4 (PSD95)	S73	P78352											●				PSD95-pS73	PN900
DLG4 (PSD95)	Y240	P78352											●				PSD95-pY240	PN901
DLG4 (PSD95)	S295	P78352											●				PSD95-pS295	PN846
DLGAP4	S15																DLGAP4-pS15	PN1022
DLK (DA PK;	S269	Q12852	PSTK														DAPK-pS269	PK590
DLK (DA PK;	S308+Pan	Q12852	PSTK														DAPK1-pS308	PK900
DMPK1 (DMPK)	Pan	Q09013	PSTK														DMPK1-AKCD	NK264-1
DMPK2 (MRCK-	Pan	Q6DT37	PSTK														DMPK2-NT	NK265-1
DNAPK	Pan	P78527	PSTK														PRKDC-1 (DNAPK)	NK048-4
DNAPK	Pan	P78527	PSTK														PRKDC-3 (DNAPK)	NK048-6
DNAPK	Pan	P78527	PSTK														PRKDC-4 (DNAPK)	NK048-7
DNAPK	Pan	P78527	PSTK														PRKDC-2 (DNAPK)	NK048-5
DNAPK	Y883	P78527	PSTK														DNAPK-pY883	PK596
DNAPK	S2056	P78527	PSTK														DNA-PK-pS2056	PK925

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DNAPK	T2609	P78527	PSTK														DNAPK-pT2609	PK595
DNM2	Y597	P50570														●	DNM2-pY597	PN951
DNM2	S764	P50570														●	DNM2-pS764	PN950
DNMT3A	S105	Q9Y6K1															DNMT3A-pS105	PN746
DOK3	Y398	Q7L591															Dok3-pY398	PN508
DOK7	Y395	Q18PE1															DOK7-pY395	PN952
DOK7	Y405	Q18PE1															DOK7-pY405	PN953
DOR1	T358+T361	P41143			●												DOR1-pT358+pT361	PN795
DPYD	S766+T768	Q12882							●								DPYD-pS766+pT768	PN747
DTNA	T504	Q9Y4J8															DTNA-pT504	PN954
DUSP1 (MKP1);	Pan	P28562		DSP													DUSP1-3 (MKP-1)	NP006-3
DUSP1 (MKP1);	Pan	P28562		DSP													DUSP1-1 (MKP-1)	NP006-4
DUSP1 (MKP1)	Pan	P28562		DSP													DUSP1-2 (MKP-1)	NP006-2
DUSP2 (PAC1)	Pan	Q05923		DSP													DUSP2-2	NP008-3
DUSP2 (PAC1)	Pan	Q05923		DSP													DUSP2-3	NP008-4
DUSP2 (PAC1)	Pan	Q05923		DSP													DUSP2-1	NP008-2
DUSP3 (VHR)	Pan	P51452		DSP													DUSP3-2	NP030-3
DUSP3 (VHR)	Pan	P51452		DSP													DUSP3-3	NP030-4
DUSP3 (VHR)	Pan	P51452		DSP													DUSP3-1	NP030-2
DUSP4 (MKP2);	Pan	Q13115		DSP													DUSP4-2	NP007-3
DUSP4 (MKP2);	Pan	Q13115		DSP													DUSP4-3	NP007-4
DUSP4 (MKP2);	Pan	Q13115		DSP													DUSP4-1	NP007-2
DUSP5	Pan	Q16690		DSP													DUSP5-2	NP039-2
DUSP5	Pan	Q16690		DSP													DUSP5-3	NP039-3
DUSP5	Pan	Q16690		DSP													DUSP5-1	NP039-1
DUSP6	Pan	Q16828		DSP													DUSP6-2	NP040-2
DUSP6	Pan	Q16828		DSP													DUSP6-3	NP040-3
DUSP6	Pan	Q16828		DSP													DUSP6-1	NP040-1
DUSP7	Pan	Q16829		DSP													DUSP7-2	NP041-2
DUSP7	Pan	Q16829		DSP													DUSP7-3	NP041-3
DUSP7	Pan	Q16829		DSP													DUSP7-1	NP041-1
DUSP8	Pan	Q13202		DSP													DUSP8-3	NP042-3
DUSP8	Pan	Q13202		DSP													DUSP8-1	NP042-1
DUSP9	Pan	Q99956		DSP													DUSP9-3	NP043-3
DUSP9	Pan	Q99956		DSP													DUSP9-1	NP043-1
DUSP9	Pan	Q99956		DSP													DUSP9-2	NP043-2
DUSP10 (MKP5)	Pan	Q9Y6W6		DSP													DUSP10-2	NP047-2
DUSP10 (MKP5)	Pan	Q9Y6W6		DSP													DUSP10-1	NP047-1
DUSP11	Pan	O75319		DSP													DUSP11-2	NP048-2
DUSP11	Pan	O75319		DSP													DUSP11-3	NP048-3
DUSP11	Pan	O75319		DSP													DUSP11-1	NP048-1
DUSP12	Pan	Q9UNI6		DSP													DUSP12-2	NP046-2
DUSP12	Pan	Q9UNI6		DSP													DUSP12-3	NP046-3
DUSP12	Pan	Q9UNI6		DSP													DUSP12-1	NP046-1
Dvl1	S93	O14640															Dvl1-pS93	PN955
DYRK1A	Y321	Q13627	DSK														DYRK1A-pY321	PK597
DYRK2	Pan	Q92630	DSK														DYRK2-ANT	NK266-1
DYRK2	Y382	Q92630	DSK														DYRK2-pY382	PK598
EEF1A1	Y141	P68104					●										EEF1A1-pY141	PN509
EEF2	T57	P13639					●										EEF2-pT57	PN555
EGFR (ErbB1)	Pan	P00533	PYK		●												EGFR-1	NK052-5

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EGFR (ErbB1)	Pan	P00533	PYK		●											EGFR-2	NK052-6
EGFR (ErbB1)	Pan	P00533	PYK		●											EGFR-3	NK052-4
EGFR (ErbB1)	Pan	P00533	PYK		●											EGFR-4	NK052-7
EGFR (ErbB1)	Pan	P00533	PYK		●											EGFR-5	NK052-8
EGFR (ErbB1)	Y869	P00533	PYK		●											EGFR-pY869	PK602
EGFR (ErbB1)	Y998	P00533	PYK		●											EGFR-pY998	PK603
EGFR (ErbB1)	Y1069	P00533	PYK		●											EGFR-pY1069	PK599
EGFR (ErbB1)	Y1110	P00533	PYK		●											EGFR-pY1110	PK600
EGFR (ErbB1)	Y1172	P00533	PYK		●											EGFR-pY1172	PK601
eIF2a	S52+Pan	Q9BY44					●									eIF2α-pS52	PN820
EIF2AK3 (PERK;)	S555	Q9NZJ5	PSTK													EIF2AK3-pS555	PK926
EIF2AK3 (PERK;)	S715	Q9NZJ5	PSTK													EIF2AK3-pS715	PK927
EIF2AK3 (PERK;)	T982	Q9NZJ5	PSTK													EIF2AK3-pT982	PK604
eIF4B	S504	P23588					●									eIF4B-pS504	PN819
eIF4E	S209	P06730					●									eIF4E-pS209	PN956
eIF4G1	T205+T207	Q04637					●									eIF4G1-pT205+pT207	PN1008
eIF4G1	S1185+S1186	Q04637					●									eIF4G1-pS1185+pS1186	PN1004
Elk1	S324+Pan	P19419			●											Elk1-pS324	PN581
EML4	Y226	Q9HC35											●			EML4-pY226	PN510
ENO1 (NNE)	Y44	P06733							●							ENO1-pY44	PN511
ENO2 (ENOG)	Y25	P09104							●							ENO2-pY25	PN512
EP300 (p300)	S2279	Q09472														EP300-pS2279	PN748
EphA1	Y599	P21709	PYK		●											EphA1-pY599	PK928
EphA1	Y781	P21709	PYK		●											EphA1-pY781	PK605
EphA2	Y588	P29317	PYK		●											EphA2-pY588	PK606
EphA3	Y779	P29320	PYK		●											EphA3-pY779	PK608
EphA4	Y602	P54764	PYK		●											EphA4-pY602	PK929
EphA4	Y602	P54764	PYK		●											EphA4-pY602	PK930
EphA4	Y779	P54764	PYK		●											EphA4-pY779	PK931
EphB1	Y594	P54762	PYK		●											EphB1-pY594	PK609
EphB2	Pan	P29323	PYK		●											EphB2-BKCD	NK267-1
EphB2	Pan	P29323	PYK		●											EphB2-PCT	NK267-2
EphB2	Y780	P29323	PYK		●											EphB2-pY780	PK610
ERa (ESR1; ER-α)	S167	P03372			●											ERa-pS167	PN583
ErbB2 (Neu;)	Pan	P04626	PYK		●											ErbB2-1	NK054-4
ErbB2 (Neu;)	Pan	P04626	PYK		●											ErbB2-2	NK054-5
ErbB2 (Neu;)	Pan	P04626	PYK		●											ErbB2-3	NK054-6
ErbB2 (Neu;)	Pan	P04626	PYK		●											ErbB2-4	NK054-7
ErbB2 (Neu;)	Y735	P04626	PYK		●											ErbB2-pY735	PK614
ErbB2 (Neu;)	Y877	P04626	PYK		●											ErbB2-pY877	PK615
ErbB2 (Neu;)	Y1248	P04626	PYK		●											ErbB2-pY1248	PK613
ERBB2IP (Erbin)	Y1104	Q96RT1										●				ERBB2IP-pY1104	PN513
ErbB3 (HER3)	Pan	P21860	PYK		●											ErbB3-1	NK231-2
ErbB3 (HER3)	Pan	P21860	PYK		●											ErbB3-2	NK231-3
ErbB3 (HER3)	Y1289	P21860	PYK		●											ErbB3-pY1289	PK616
ErbB3 (HER3)	Y1307	P21860	PYK		●											ErbB3-pY1307	PK617
ErbB3 (HER3)	Y1328	P21860	PYK		●											ErbB3-pY1328	PK618
ErbB4 (HER4)	Pan	Q15303	PYK		●											ErbB4-1	NK235-1
ErbB4 (HER4)	Pan	Q15303	PYK		●											ErbB4-3	NK235-3
ErbB4 (HER4)	Y733	Q15303	PYK		●											ErbB4-pY733	PK619
ErbB4 (HER4)	Y875	Q15303	PYK		●											ErbB4-pY875	PK620

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute Vesicle Protein	Antibody Name	Kinexus Antibody Code
ERF	T526	P50548			●											ERF-pT526	PN584
ERK1 (MAPK3)	Pan	P27361	PSTK													ERK1-1	NK055-1
ERK1 (MAPK3)	Pan	P27361	PSTK													ERK1-2	NK055-2
ERK1 (MAPK3)	Pan	P27361	PSTK													ERK1-3	NK055-3
ERK1 (MAPK3)	Pan	P27361	PSTK													Erk1-III (ERK1-5)	NK055-5
ERK1 (MAPK3)	Pan	P27361	PSTK													ERK1-NT (ERK1-4)	NK055-4
ERK1 (MAPK3)	Pan	P27361	PSTK													Erk1-NT (ERK1-6)	NK055-6
ERK1 (MAPK3)	Pan	P28482	PSTK													ERK1-I	NK055-7
ERK1 (MAPK3)	Pan	P28482	PSTK													ERK2-1	NK056-2
ERK1 (MAPK3)	Pan	P28482	PSTK													ERK2-2	NK056-3
ERK1 (MAPK3)	Pan	P28482	PSTK													ERK2-3	NK056-4
ERK1 (MAPK3)	T202	P27361	PSTK													ERK1-pT202	PK967
ERK1 (MAPK3)	Y204	P27361	PSTK													ERK1-pY204	PK864
ERK1 (MAPK3)	T207	P27361	PSTK													ERK1-pT207	PK950
ERK1 (MAPK3)	T207	P27361	PSTK													ERK1-pT207	PK865
ERK1 (MAPK3)	S265	P27361	PSTK													ERK1-pS265	PK878
ERK1 (MAPK3)	S283	P27361	PSTK													ERK1-pS283	PK879
ERK1 (MAPK3)	T202+Y204	P27361	PSTK													ERK1-pT202+pY20	PK621
ERK1 (MAPK3)	Y204+T207	P27361	PSTK													ERK1-pY204+pT20	PK866
ERK1 (MAPK3)	Y263+S266	P28482	PSTK													ERK2-pY263+S266	PK880
ERK2 (MAPK1)	T185+Y187	P28482	PSTK													ERK2-pT185+pY18	PK622
ERK3 (MAPK6)	S189	Q16659	PSTK													ERK3-pS189	PK623
ERK4 (MAPK4)	S186	P31152	PSTK													ERK4-pS186	PK624
ERK5 (MAPK7;)	Pan	Q13164	PSTK													ERK5-5 (Erk5 -PNT	NK206-1
ERK5 (MAPK7;)	Pan	Q13164	PSTK													ERK5-2	NK206-4
ERK5 (MAPK7;)	T219	Q13164	PSTK													ERK5-pT219	PK968
ERK5 (MAPK7;)	T219+Y221	Q13164	PSTK													ERK5-pT219+pY22	PK625
ERK5 (MAPK7;)	Y221	Q13164	PSTK													ERK5-pY221	PK626
ESRRA (ERR1)	S19+S22	P11474			● ●											ESRRA-pS19+pS22	PN585
ESYT1	Y822	Q9BSJ8												●		ESYT1-pY822	PN514
Ets-1	S282	P14921			●											Ets-1-pS282	PN586
ETV6 (Tel)	S22	P41212			●											ETV6-pS22	PN587
FAK (PTK2)	Y397	Q05397	PYK													FAK-pY397	PK627
FAK (PTK2)	Y576+Y577	Q05397	PYK													FAK-pY576+pY577	PK628
FAK (PTK2)	Y577	Q05397	PYK													FAK-pY577	PK629
FASN (FAS)	Y45	P49327							●							FASN-pY45	PN749
FASN (FAS)	S207	P49327							●							FASN-pS207	PN698
FBPase (FBP1)	S88	P09467							●							FBPase-pS88	PN750
FBPase 2 (FBP2)	Y216	O00757							●							FBPase2-pY216	PN700
FBPase 2 (FBP2)	Y259	O00757							●							FBPase2-pY259	PN751
Fer (TYK3)	Y402	P16591	PYK													FER-pY402	PK630
Fes	Y713	P07332	PYK													FES-pY713	PK632
Fes	Y713+S716	P07332	PYK													FES-pY713+pS716	PK633
FGFR1 (FLT2)	Pan	P11362	PYK		●											FGFR1-1	NK062-2
FGFR1 (FLT2)	Pan	P11362	PYK		●											FGFR1-3	NK062-3
FGFR1 (FLT2)	Y653+Y654	P11362	PYK		●											FGFR1-pY653+pY6	PK634
FGFR2 (BEK)	Pan	P21802	PYK		●											FGFR2-1	NK063-3
FGFR2 (BEK)	Pan	P21802	PYK		●											FGFR2-2	NK063-4
FGFR2 (BEK)	Pan	P21802	PYK		●											FGFR2-3	NK063-2
FGFR2 (BEK)	Y656+Y657	P21802	PYK		●											FGFR2-pY656+pY6	PK635
FGFR3	Pan	P22607	PYK		●											FGFR3-1	NK236-1

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FGFR3	Pan	P22607	PYK		●											FGFR3-2	NK236-2
FGFR3	Pan	P22607	PYK		●											FGFR3-3	NK236-3
FGFR3	Y647+Y648	P22607	PYK		●											FGFR3-pY647+pY648	PK637
FGFR3	Y647+Y648	P22607	PYK		●											FGFR3-pY647+pY648	PK636
FGFR4	Pan	P22455	PYK		●											FGFR4-2	NK239-1
FGFR4	Pan	P22455	PYK		●											FGFR4-4	NK239-3
Fgr	Pan	P09769	PYK													Fgr-ANT	NK268-1
Fgr	Y208+Y209	P09769	PYK													FGR-pY208+pY209	PK638
Fgr	Y412	P09769	PYK													FGR-pY412	PK639
FLT3 (STK1;	Pan	P36888	PYK		●											Flt3-1	NK240-1
FLT3 (STK1;	Pan	P36888	PYK		●											Flt3-2	NK240-2
Fos	T232	P01100			●											Fos-pT232	PN588
Fos	S362+S363	P01100			●											Fos-pS362+pS363	PN589
FOXK1	S441+S445	P85037			●											FOXK1-pS441+pS445	PN590
FOXK2	S424+S428	Q01167			●											FOXK2-pS424+pS428	PN591
FOXM1	T611	Q08050			●											FOXM1-pT611	PN592
FOXO1A (FKHR;	S256	Q12778			●											FOXO1-pS256	PN593
FOXO1A (FKHR;	S329	Q12778			●											FOXO1-pS329	PN595
FOXO1A (FKHR;	S319+Pan	Q12778			●											FOXO1-pS319	PN594
FOXO3	T32	O43524			●											FOXO3-pT32	PN596
FOXO3	S253	O43524			●											FOXO3-pS253	PN821
FOXO3	S294	O43524			●											FOXO3-pS294	PN597
FRA1	S265	P15407			●											FRA1-pS265	PN599
Frk	Pan	P42685	PYK													Frk-ANT	NK269-1
Frk	Pan	P42685	PYK													Frk-NT	NK269-2
Frk	Y387	P42685	PYK													Frk-pY387	PK641
Frk	Y497	P42685	PYK													Frk-pY497	PK642
FUS	S277	P35637														FUS-pS277	PN876
FUS	S340	P35637														FUS -pS340	PN877
FUS	Y468	P35637														FUS-pY468	PN878
Fused (STK36)	S159	Q9NRP7	PSTK													Fused-pS159	PK643
Fyn	Pan	P06241	PYK													Fyn-ANT	NK065-2
Fyn	T12	P06241	PYK													Fyn-pT12	PK901
Fyn	Y213+Y214	P06241	PYK													Fyn-pY213+pY214	PK644
Fyn	Y420	P06241	PYK													Fyn-pY420	PK881
Fyn	Y531	P06241	PYK													Fyn-pY531	PK645
G6PD	Y401	P11413							●							G6PD-pY401	PN515
G6PD	Y503+Y507	P11413							●							G6PD-pY503+pY507	PN701
GABBR1 (GABA	T873	Q9UBS5			●											GABBR1-pT873	PN796
GABPA	S303	Q06546			●											GABPA-pS303	PN957
GABPA	Y380+Y381	Q06546			●											GABPA-pY380+pY381	PN958
GABPB1	Y364	Q06547			●											GABPB1-pY364	PN959
GAP43	S142+T144															GAP43-pS142+pT144	PN1026
GATA3	S369	P23771			●											GATA3-pS369	PN702
GATAD2B	T120+S122	Q8WXI9			●											GATAD2B-pT120+pS122	PN600
GCK	S411+Pan	P35557							●							GCK-pS411	PK893
GCK (MAP4K2)	S170	Q12851	PSTK													GCK-pS170	PK646
GCLC	S5+S8	P48506														GCLC-pS5+pS8	PN752
GCN2 (EIF2AK4)	T667	Q9P2K8	PSTK													EIF2AK4-pT667	PK877
GFAP	Pan	P14136											●			GFAP-CT	NN260-3
GFAP	S133	P14136											●			GFAP-pS13	PN932

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GIT1	Y545	Q9Y2X7														GIT1-pY545	PN517
GluR1	S849	P42261			●											GluR1-pS849	PN822
GluR2	Y876	P42262			●											GluR2-pY876	PN823
GR (NR3C1)	S226+Pan	P04150			●	●										GR-pS226	PN601
GRK2 (BARK1;	Y356	P25098	PSTK													BARK1-Y356	PK537
GRK2 (BARK1;	S670	P25098	PSTK													BARK1-pS670	PK536
Grp170 (HYOU1;	Pan	Q9Y4L1								●						GRP170-1	NN265-3
GSK3a	Pan	P49840	PSTK													GSK3a-BKCD	NK069-3
GSK3a	T19+S21	P49840	PSTK													GSK3a-pT19+pS21	PK648
GSK3a	S278+Y279	P49840	PSTK													GSK3a-pS278+pY279	PK647
GSK3a	Y279	P49840	PSTK													GSK3a-pY279	PK882
GSK3a	Y284+Y285	P49840	PSTK													GSK3a-pY284+pY285	PK650
GSK3b	Pan	P49841	PSTK													GSK3b-ANT	NK270-3
GSK3b	Pan	P49841	PSTK													GSK3b-XI (GSK3b-ANT)	NK070
GSK3b	T43	P49841	PSTK													GSK3b-pT43	PK933
GSK3b	T275+T277	P49841	PSTK													GSK3b-pT275+pT277	PK883
GSK3b	T390	P49841	PSTK													GSK3b-pT390	PK932
GTF2F1	S385+T389	P35269			●											GTF2F1-pS385+pT389	PK651
GTF2I	S412	P78347			●											GTF2I-pS412	PN602
GUK1	Y53	Q16774							●							GUK1-pY53	PK652
GYS1	S641+S645	P13807							●							GYS1-pS641+pS645	PN703
H2AFX (H2AX;	S140	P16104														H2AX-pS140	PN824
H3F3A	S10	P84243														HIST1H3A-pS10	PN826
HBS1L	Y56+Y58	Q9Y450			●											HBS1L-pY56+pY58	PN603
HCA59	Y147	Q9NZ63														HCA59-pY147	PN518
HCFC1	S1507	P51610			●											HCFC1-pS1507	PN604
Hck	Pan	P08631	PYK													Hck-ANT	NK271-1
HDAC4	S632	P56524														HDAC4-pS632	PN825
HePTP (PTPN7)	S44	P35236		PYP												HePTP-pS44	PP500
HePTP (PTPN7)	S143	P35236		PYP												HePTP-pS143	PP528
HGK (MAP4K4;	Pan	O95819	PSTK													HGK-NT	NK300-1
HGK (MAP4K4;	T187	O95819	PSTK													HGK-pT187	PK653
HGS (Hrs)	Y216	O14964	PYK													HGS-pY216	PN519
HIPK1	Y352	Q86Z02	PSTK													HIPK1-pY352	PK654
HIPK2	Pan	Q9H2X6	PSTK													HIPK2-BCT	NK272-1
HMGA1	S36+T39	P17096			●											HMGA1-pS36+pT39	PN605
HMGA1	T53	P17096			●											HMGA1-pT53	PN606
HMGB1	S35+S39	P09429			●											HMGB1-pS35+pS39	PN607
HMGCR	S872	P04035							●							HMGCR-pS872	PN705
HMGCS1	S495	Q01581							●							HMGCS1-pS495	PN754
HNF4A	S167	P41235			●											HNF4A-pS167	PN608
HNRNPA1	Y347	P09651														HNRNPA1-pY347	PN880
HOMER1	S315	Q86YM7														HOMER1-pS315	PN1020
HOMER3	S120	Q9NSC5														HOMER3-pS120	PN1017
HRAS (H-Ras)	Pan	P01112														HRAS-Pan	NN281-3
HRAS (H-Ras)	Y157	P01112														HRAS-pY157	PN755
HRI (HCR;	S258	Q9BQI3	PSTK													EIF2AK1-pS258	PK876
HSF1	S303+S307	Q00613			●											HSF1-pS303+pS307	PN609
HSP90AB1	Y484	P08238								●						HSP90AB1-pY484	PN520
Huntingtin (HTT)	S13+S16+	P42858											●			HTT-pS13+pS16	PN827
Huntingtin (HTT)	S417+S419	P42858											●			HTT-pS417+pS419	PN828

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JAK3	Y980+Y981	P52333	PYK													JAK3-pY980+pY981	PK669
JNK1 (MAPK8;	Pan	P45983	PSTK													JNK1-1	NK217-2
JNK1 (MAPK8;	Pan	P45983	PSTK													JNK1-2	NK217-3
JNK1 (MAPK8;	T183	P45983	PSTK													JNK1-pT183	PK969
JNK1 (MAPK8;	Y185	P45983	PSTK													JNK1-pY185	PK670
JNK2 (MAPK9)	Pan	P45984	PSTK													JNK2-1	NK189-2
JNK2 (MAPK9)	Pan	P45984	PSTK													JNK2-2	NK189-3
JNK2 (MAPK9)	Pan	P45984	PSTK													JNK2-3	NK189-4
JNK2 (MAPK9)	Pan	P45984	PSTK													JNK2-4 (SAPKa/b)	NK196
JNK2 (MAPK9)	T183+Y185	P45984	PSTK													JNK2-pT183+pY185	PK902
JNK3 (MAPK10)	Pan	P53779	PSTK													JNK3-3	NK197-4
JNK3 (MAPK10)	Pan	P53779	PSTK													JNK3-4 (SAPKb-NT)	NK197
JNK3 (MAPK10)	Pan	P53779	PSTK													JNK3-1	NK197-2
Jun (c-Jun)	S63	P05412			●											Jun-pS63	PN557
Jun (c-Jun)	S73	P05412			●											Jun-pS73	PN612
Jun (c-Jun)	T239	P05412			●											Jun-pT239	PN613
Jun (c-Jun)	S243	P05412			●											Jun-pS243	PN614
KCC2 (SLC12A5)	S963	Q9H2X9												●		Kv4.2-pS963	PN832
KHS1 (MAP4K5;	Pan	Q9Y4K4	PSTK													KHS1-ANT	NK089-2
KHS1 (MAP4K5;	S174	Q9Y4K4	PSTK													KHS1-pS174	PK671
KIF5A	S155	Q12840														KIF5A-pS155	PN881
KIF5A	S176	Q12840														KIF5A-pS176	PN882
Kit	Pan	P10721	PYK		●											KIT-1	NK241-1
Kit	Pan	P10721	PYK		●											KIT-2	NK241-2
Kit	Y721	P10721	PYK		●											Kit-pY721	PK885
Kit	S821+Y823	P10721	PYK		●											Kit-pS821+pY823	PK674
Kit	Y936	P10721	PYK		●											Kit-pY936	PK673
KMT2C	S4267	Q8NEZ4														KMT2C-pS4267	PN798
KOR-1 (MSL-1)	Y369	P41145			●											KOR1-pY369	PN799
KRAS (K-Ras;	Pan	P01116														KRAS-Pan	NN281-2
KRAS (K-Ras;	S181	P01116														KRas-pS181	PN862
Ksr1	S406	Q8IVT5	PSTK													Ksr1-pS406	PK675
Ksr2	S490	Q6VAB6	PSTK													Ksr2-pS490	PK676
Kv4.2	T602+T607	Q9NZV8				●										Kv4.2-pT602+pT607	PN833
L1CAM (CD171)	T1172	P32004												●		L1CAM-pT1172	PN961
L1CAM (CD171)	Y1176	P32004												●		L1CAM-pY1176	PN962
LASS2	T346+S348	Q96G23														LASS2-pT346+pS348	PN1005
LATS1	Pan	O95835	PSTK													LATS1-CT	NK091-2
LATS1	S464	O95835	PSTK													LATS1-pS464	PK677
LATS1	S909	O95835	PSTK													LATS1-pS909	PK678
LATS2 (KPM)	Pan	Q9NRM	PSTK													LATS2-CT	NK092-2
LATS2 (KPM)	Pan	Q9NRM	PSTK													LATS2-ANT	NK092-1
Lck	Y192	P06239	PYK													Lck-pY192	PK679
Lck	Y263+Y264	P06239	PYK													Lck-pY263+pY264	PK680
LEF1	T155+Pan	Q9UJU2			●											LEF1-pT155	PN616
LIMK1	T508	P53667	PSTK													LIMK1-pT508	PK681
LKB1 (STK11;	Pan	Q15831	PSTK													LKB1-2	NK227-3
LKB1 (STK11;	Pan	Q15831	PSTK													LKB1-3	NK227-4
LKB1 (STK11;	Pan	Q15831	PSTK													LKB1 (STK11)	NK227-1
LKB1 (STK11;	Pan	Q15831	PSTK													LKB1-1	NK227-2
LKB1 (STK11;	S31	Q15831	PSTK													LKB1 (STK11)-pS31	PK682

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LKB1 (STK11;	S428	Q15831	PSTK														LKB1 (STK11)-pS428	PK683
LMNA	T19+S22	P02545											●				LMNA-pT19+S22	PN966
LMNA	S301	P02545											●				LMNA-pS301	PN963
LMNA	S458	P02545											●				LMNA-pS458	PN965
LMR2 (LMTK2;	S1450	Q8IWU2	PSTK														LMR2-pS1450	PK684
LOK	S191	O94804	PSTK														LOK-pS191 (PK685)	PK685-2
LOK	S191	O94804	PSTK														LOK-pS191	PK685
LOK	T952	O94804	PSTK														LOK-pT952	PK686
LRP4 (LRP10;	S1887	O75096			●												LRP4-pS1887	PN967
LRRK2 (PARK8)	S935	Q5S007	PSTK														LRRK2-pS935	PK905
LRRK2 (PARK8)	S935	Q5S007	PSTK														LRRK2-pS955	PK935
LRRK2 (PARK8)	S973	Q5S007	PSTK														LRRK2-pS973	PK936
LRRK2 (PARK8)	T1410	Q5S007	PSTK														LRRK2-pT1410	PK937
LRRK2 (PARK8)	T1503	Q5S007	PSTK														LRRK2-pT1503	PK938
LRRK2 (PARK8)	T2031+S20	Q5S007	PSTK														LRRK2-	PK939
LTB4R	T308+S310	Q15722			●												LTB4R-pT308+pS310	PN800
LTK	Y672	P29376			●												LTK-pY672	PK687
Lyn	Pan	P07948	PYK														Lyn-ANT	NK095-2
Lyn	Y508	P07948	PYK														Lyn-pY508	PK688
MAFG	S124+Pan	O15525			●												MAFG-pS124	PN617
MAK	T157	P20794	PSTK														MAK-pT157	PK689
MAP2	S1782	P11137											●				MAP2-pS1782	PN835
MAPKAPK2	T222	P49137	PSTK														MAPKAPK2-pT222	PK690
MAPKAPK2	Y225+T226	P49137	PSTK														MAPKAPK2-pY225	PK691
MAPKAPK3	Y76	Q16644	PSTK														MAPKAPK3-pY76	PK692
MAPKAPK5	T186	Q8IW41	PSTK														MAPKAPK5-pT186	PK693
MARCKS	S27+S29																MARCKS-pS27+pS29	PN1023
MARK1	Pan	Q9P0L2	PSTK														MARK1-ANT	NK098-2
MARK1	T215	Q9P0L2	PSTK														MARK1-pT215	PK694
MARK1	T215	Q9P0L2	PSTK														MARK1-pT215	PK695
MARK2	Pan	Q7KZI7	PSTK														MARK2-BCT	NK275-2
MARK2	Pan	Q7KZI7	PSTK														MARK2-ANT	NK275-1
MARK3	Pan	P27448	PSTK														MARK3-BCT	NK276-2
MARK3	Pan	P27448	PSTK														MARK3-ANT	NK276-1
MARK3	T507	P27448	PSTK														MARK3-pT530	PK697
MARK4	Pan	Q96L34	PSTK														MARK4-NT	NK277-2
MARK4	Pan	Q96L34	PSTK														MARK4-ANT	NK277-1
MAT1A	T341	Q00266							●								MAT1A-pT341	PN759
MATR3	T130	P43243															MATR3-pT150	PN887
MATR3	S188	P43243															MATR3-pS188	PN883
MATR3	S248+Y250	P43243															MATR3-	PN884
MATR3	S533	P43243															MATR3-pS533	PN885
MATR3	S596+S598	P43243															MATR3-	PN886
MBP	Y203	P02686											●				MBP-pY203	PN968
MBP	T229+T232	P02686															MBP-pT229+pT232	PN1024
MBP	T232	P02686											●				MBP-pT232	PN558
MCM2	Y137+S139	P49736			●												MCM2-pY137+pS139	PN620
MEF2A	T108	Q02078			●												MEF2A-pT108	PN622
MEF2C	S396	Q06413			●												MEF2C-pS396	PN623
MEF2D	S121	Q14814			●												MEF2D-pS121	PN624
MEF2D	S180	Q14814			●												MEF2D-pS180	PN625

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute Vesicle Protein	Antibody Name	Kinexus Antibody Code
MEK1 (MAP2K1;	Pan	Q02750	DSK													MEK1-1	NK099-8
MEK1 (MAP2K1;	Pan	Q02750	DSK													MEK1-3 (MEK1-7)	NK099-7
MEK1 (MAP2K1;	Pan	Q02750	DSK													MEK1-CT	NK099-2
MEK1 (MAP2K1;	Pan	Q02750	DSK													MEK1-5 (MEK1-XI)	NK099-3
MEK1 (MAP2K1;	Pan	Q02750	DSK													MEK1-6 (MEK1-CT)	NK099-4
MEK1 (MAP2K1;	S222+Pan	Q02750	DSK													MEK1-pS222	PK698
MEK2 (MAP2K2;	Pan	P36507	DSK													MEK2-1	NK100-5
MEK2 (MAP2K2;	Pan	P36507	DSK													MEK2-2	NK100-4
MEK2 (MAP2K2;	Pan	P36507	DSK													MEK2-3	NK100-6
MEK5 (MAP2K5;	Pan	Q13163	DSK													MEK5-2	NK104-4
MEK5 (MAP2K5;	Pan	Q13163	DSK													MEK5-3	NK104-5
MEK5 (MAP2K5;	Pan	Q13163	DSK													MEK5-PNT (MEK5-	NK104-2
MEK5 (MAP2K5;	Pan	Q13163	DSK													MEK5-1	NK104-3
MEK5 (MAP2K5;	S311	Q13163	DSK													MEK5-pS311	PK699
MEKK1	Pan	Q13233	PSTK													MEKK-NT (MEKK1-	NK107-3
MEKK2	Pan	Q9Y2U5	PSTK													MEKK2-1	NK108-3
MEKK2	Pan	Q9Y2U5	PSTK													MEKK2-2	NK108-4
MEKK2	Pan	Q9Y2U5	PSTK													MEKK2-3	NK108-5
MEKK2	S239+Pan	Q9Y2U5	PSTK													MEKK2-pS239	PK700
MEKK6	Pan	O95382	PSTK													MEKK6-2	NK225-2
MEKK6	Pan	O95382	PSTK													MEKK6-3	NK225-3
MEKK6	Pan	O95382	PSTK													MEKK6-1	NK225-4
MELK	Pan	Q14680	PSTK													MELK-2	NK229-3
MELK	Pan	Q14680	PSTK													MELK-1	NK229-2
MELK	Y438	Q14680	PSTK													MELK-pY438	PK701
MERTK (MER)	Y749	Q12866	PYK								●					MERTK-pY749	PK702
MERTK (MER)	Y749+Y753	Q12866	PYK								●					MERTK-pY749+pY	PK703
MERTK (MER)	Y753	Q12866	PYK								●					MERTK-pY753	PK704
Met (HGF)	Pan	P08581	PYK								●					Met-2	NK110-3
Met (HGF)	Pan	P08581	PYK								●					Met-3	NK110-4
Met (HGF)	Pan	P08581	PYK								●					Met-1	NK110-2
Met (HGF)	Y1003	P08581	PYK								●					Met-pY1003	PK708
Met (HGF)	Y1230+Pan	P08581	PYK								●					Met-pY1230	PK709
Met (HGF)	Y1234	P08581	PYK								●					Met-pY1234	PK710
Met (HGF)	S1236	P08581	PYK								●					Met-pS1236	PK705
Met (HGF)	Y1234+Y12	P08581	PYK								●					Met-pY1234+pY123	PK711
Met (HGF)	Y1234+Y12	P08581	PYK								●					Met -	PK712
Met (HGF)	T1355+Y13	P08581	PYK								●					Met-pT1355+pY135	PK707
Met (HGF)	T1241	P08581	PYK								●					Met-pT1241	PK706
MITF	S414	O75030									●					MITF-pS414	PN626
MKK3 (MAP2K3;	Pan	P46734	DSK													MKK3-1	NK101-4
MKK3 (MAP2K3;	Pan	P46734	DSK													MKK3-2	NK101-5
MKK3 (MAP2K3;	Pan	P46734	DSK													MKK3-3	NK101-6
MKK3 (MAP2K3;	S218	P46734	DSK													MKK3-pS218	PK713
MKK3 (MAP2K3;	Y230	P46734	DSK													MKK3-pY230	PK714
MKK4 (MAP2K4;	Pan	P45985	DSK													MKK4-1	NK103-4
MKK4 (MAP2K4;	Pan	P45985	DSK													MKK4-2	NK103-5
MKK4 (MAP2K4;	Pan	P45985	DSK													MKK4-3	NK103-6
MKK4 (MAP2K4;	S257	P45985	DSK													MKK4-pS257	PK715
MKK4 (MAP2K4;	S80+Pan	P45985	DSK													MKK4-pS80	PK716
MKK6 (MAP2K6;	Pan	P52564	DSK													MKK6-2	NK105-4

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MKK6 (MAP2K6;	Pan	P52564	DSK													MKK6-4	NK105-5
MKK6 (MAP2K6;	Pan	P52564	DSK													MKK6-1	NK105-3
MKK7 (MAP2K7;	Pan	O14733	DSK													MKK7-2	NK106-4
MKK7 (MAP2K7;	Pan	O14733	DSK													MKK7-3	NK106-5
MKK7 (MAP2K7;	T275	O14733	DSK													MKK7-pT275	PK717
MLK1 (MAP3K9)	Pan	P80192	PSTK													MLK1-CT	NK278-1
MLK3	S281	Q16584	PSTK													MLK3-pS281	PK718
MLK3	T277+S281	Q16584	PSTK													MLK3-pT277+pS28	PK870
MLK4	Pan	Q5TCX8	PSTK													MLK4-CT	NK280-1
MLL	S2196	Q03164														MLL-pS2196	PN801
MLTK	T161+T162	Q9NYL2	PSTK													MLTK-pT161+pT16	PK719
MOK (RAGE)	Pan	Q9UQ07	PSTK													MOK-AKCD	NK281-1
MOK (RAGE)	Y167	Q9UQ07	PSTK													MOK-pY167	PK721
MOK (RAGE)	T159+Y161	Q9UQ07	PSTK													MOK-pT159+pY161	PK720
MOR1 (mu opioid	T372+S377	P35372				●										MOR1-pT372+pS37	PN802
Mos	Pan	P00540	PSTK													Mos (Mos-1)	NK112
Mos	Y263	P00540	PSTK													Mos-pY263	PK722
MPL	Y591	P40238				●										MPL-pY591	PN760
MRCKa (PK428)	Pan	Q5VT25	PSTK													MRCKa-AKCD	NK282-1
MRLC1	T19+S20	P24844											●			MRLC1-pT19+pS20	PN836
MSH6	S14	P52701								●						MSH6-pS14	PN708
MSK1	S212	O75582	PSTK													MSK1-pS212	PK723
MSK2	T194+S196	O75676	PSTK													MSK2-pT194+pS19	PK868
MSK2	T687	O75676	PSTK													MSK2-pT687	PK725
MST1 (STK4;	T183	Q13043	PSTK													MST1-pT183	PK871
MST3 (STK24)	T184+Pan	Q9Y6E0	PSTK													MST3-pT184	PK727
MST3 (STK24)	T190	Q9Y6E0	PSTK													MST3-pT190	PK728
mTOR (FRAP)	Pan	P42345	PSTK													mTOR-2	NK116-4
mTOR (FRAP)	Pan	P42345	PSTK													mTOR-3	NK116-3
mTOR (FRAP)	Pan	P42345	PSTK													mTOR-1	NK116-5
mTOR (FRAP)	S2448	P42345	PSTK													mTOR-pS2448	PK729
mTOR (FRAP)	S2478+S24	P42345	PSTK													mTOR-pS2478+pS:	PK730
MuSK	Y554	O15146	PYK			●										MuSK-pY554	PK953
MuSK	Y756	O15146	PYK			●										MUSK-pY756	PK872
Myb	S532+Pan	P10242				●										Myb-pS532	PN627
Myc (c-Myc)	T58+S62	P01106				●										Myc-pT58+pS62	PN628
MYT1 (PLPB1)	S143	Q99640	PSTK													MYT1-pS143	PK887
Nav1.2	S568	Q99250				●										Nav1.2-pS568	PN837
NCAM1 (CD56)	S784	P13591												●		NCAM1-pS784	PN969
NCOA3 (SRC-3)	S867	Q9Y6Q9				●										NCoA3-pS867	PN629
NDR1 (NDR;	S281+T282	Q15208	PSTK													NDR1-pS281+pT28	PK731
Nek1	S1052	Q96PY6	PSTK													NEK1-pS1052	PK940
Nek2	T170+S171	P51955	PSTK													Nek2-pT170+pS171	PK733
Nek2	S171	P51955	PSTK													Nek2-pS171	PK732
Nek6	S206	Q9HC98	PSTK													Nek6-pS206	PK734
Nek7	T191+S195	Q8TDX7	PSTK													Nek7-pT191+pS195	PK735
NF-H (NEFH)	Pan	P12036												●		NF-H-CT	NN583-1
NF-H (NEFH)	S532	P12036												●		NFH-pS532	PN970
NF-H (NEFH)	S606	P12036												●		NFH-pS606	PN971
NF-H (NEFH)	S648	P12036												●		NFH-pS648	PN972
NF-L (NEFL)	Pan	P07196												●		NF-L-CT	NN582-1

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NF-M (NEFM)	Y320	P07197											●				NF-M-pY320	PN894
NF-M (NEFM)	S620	P07197											●				NF-M-pS620	PN893
NF1	Y2577	P21359															NF1-pY2577	PN761
NF2	S518	P35240											●				NF2-pS518	PN709
NFAT1	S217+S221	Q13469			●												NFAT1-pS217+pS2	PN630
NFAT3 (NFATc4)	S213+S217	Q14934			●												NFAT3-pS213+pS2	PN631
NFAT5	T135	O94916			●												NFAT5-pT135	PN632
NFKB1	S903+S907	P19838			●												NFKB1-pS903+pS9	PN634
NGFR	T293	P08138				●											NGFR-pT293	PN973
NLK	T298	Q9UBE8	PSTK														NLK-pT298	PK736
NMDAR2A	Y943	Q12879								●							NMDAR2A-pY943	PN838
NMDAR2A	Y943	Q12879								●							NMDAR2A-pY943	PN710
NMDAR2A	Y1325	Q12879								●							NMDAR2A-pY1325	PN839
NOLC1	T607+T610	Q14978			●												NOLC1-pT607+pT6	PN635
NOS1 (nNos)	S746	P29475							●								NOS1-pS746	PN762
NOS2	Y151	P35228							●								NOS2-pY151	PN763
NOS2	S745+Pan	P35228							●								NOS2-pS745	PN711
NOS3 (eNOS)	T1175+S11	P29474							●								NOS3-pT1175+pS1	PN712
NPM1 (B23)	S4	P06748															NPM-pS4	PN975
NPM1 (B23)	T199	P06748															NPM-pT199	PN976
NR1 (NMDAR1)	S897	Q05586			●	●											NR1-pS897	PN841
NR2B (GRIN2B)	S281	Q13224			●	●											NR2B-pS281	PN1027
NR2B (GRIN2B)	Y1474	Q13224			●	●											NR2B-pY1474	PN843
NRAS (N-Ras)	S40	P01111															NRF2-pS40	PN842
NRP1 (CD304)	Pan	O14786			●												NRP1[343-356]	NN604-2
NRP1 (CD304)	Pan	O14786			●												NRP1[293-309]	NN604-1
NuaK1	T211	O60285	PSTK														NuaK1-pT211	PK737
Nur77	S351+Pan	P22736			●												Nur77-pS351	PN636
Obscn	Pan	Q5VST9	PSTK														Obscn-2	NK247-2
Obscn	Pan	Q5VST9	PSTK														Obscn-3	NK247-3
Obscn	Pan	Q5VST9	PSTK														Obscn-1	NK247-1
ODC1	T93	P11926							●								ODC1-pT93	PN766
OPTN	S177	Q96CV9															OPTN-pS177	PN895
OPTN	S342	Q96CV9															OPTN-pS342	PN896
OPTN	S526+S528	Q96CV9															OPTN-	PN897
OSBP (Oxysterol-)	S240	P22059												●			OSBP-pS240	PN844
OSBP (Oxysterol-)	S379+S382	P22059												●			OSBP-pS379+pS38	PN1006
OSR1 (OXSR1)	T185	O95747	PSTK														OSR1-pT185	PK738
P2RY1 (P2Y)	S352+S354	P47900			●												P2RY1-pS352+pS3	PN803
p38a MAPK	Pan	Q15759	PSTK														p38a-2	NK120-8
p38a MAPK	Pan	Q16539	PSTK														p38HOG-NT (p38a-	NK120-10
p38a MAPK	T180+Y182	Q16539	PSTK														p38a-pT180+pY182	PK739
p38a MAPK	T180+Y182	Q15759	PSTK														p38a-pT180+pY182	PK740
p38a MAPK	Y182	Q15759	PSTK														p38-pY182	PK959
p38b MAPK	Pan	Q15759	PSTK														p38b-2	NK248-2
p38b MAPK	Pan	Q15759	PSTK														p38b-1	NK248-1
p38b MAPK	T180+Y182	Q15759	PSTK														p38b-pT180+pY182	PK741
p38d MAPK	Pan	O15264	PSTK														p38d-2	NK121-3
p38d MAPK	Pan	O15264	PSTK														p38d-3	NK121-4
p38d MAPK	Pan	O15264	PSTK														p38d-1	NK121-2
p38d MAPK	T180	O15264	PSTK														p38d-pT180	PK966

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p38d MAPK	T180+Y182	Q15759	PSTK													p38d-pT180+pY182	PK742
p38d MAPK	T180+Y182	O15264	PSTK													p38d-pT180+pY182	PK960
p38d MAPK	Y182	O15264	PSTK													p38d-pY182	PK743
p38d MAPK	S261+T265	O15264	PSTK													p38d-pS261+pT265	PK888
p38g MAPK	Pan	P53778	PSTK													p38g-1	NK059-3
p38g MAPK	Pan	P53778	PSTK													p38g-2	NK059-4
p38g MAPK	Pan	P53778	PSTK													p38g-3	NK059-5
p70S6K (S6Ka;)	Pan	P23443	PSTK													p70S6K-1 (S6K-PN	NK223-2
p70S6K (S6Ka;)	Pan	P23443	PSTK													S6K-III	NK223-4
p70S6K (S6Ka;)	T252	P23443	PSTK													p70S6K-pT252	PK744
p70S6K (S6Ka;)	T412	P23443	PSTK													p70S6K-pT412	PK745
p70S6K (S6Ka;)	T444+S447	P23443	PSTK													p70S6K-pT444+pS	PK746
p70S6Kb	S423	Q9UBS0	PSTK													p70S6KB-pS423	PK747
p73 (TRP73)	Y99	O15350			●											TP73-pY99	PN861
PAH	S16	P00439							●							PAH-pS16	PN713
PAK1 (PAKa)	Pan	Q13153	PSTK													PAK1-NT (PAK1-1)	NK122-2
PAK1 (PAKa)	S144	Q13153	PSTK													PAK1-pS144	PK748
PAK1 (PAKa)	T423	Q13153	PSTK													PAK1-pT423	PK749
PAK2 (PAKg)	Pan	Q13177	PSTK													PAK2-1 (PAK2-NT)	NK200
PAK2 (PAKg)	Y130	Q13177	PSTK													PAK2-pY130	PK751
PAK2 (PAKg)	S141	Q13177	PSTK													PAK2-pS141	PK750
PAK4	S474	O96013	PSTK													PAK4-pS474	PK752
PAK5 (PAK7)	Pan	Q9P286	PSTK													PAK5-APBD	NK190-3
PAK5 (PAK7)	S602	Q9P286	PSTK													PAK5-pS602	PK753
PAK6	Pan	Q9NQU	PSTK													PAK6-APBD	NK124-2
PBK (TOPK)	Y74	Q96KB5	PSTK													PBK-pY74	PK754
PBK (TOPK)	Y272	Q96KB5	PSTK													PBK-pY272	PK889
PBRM1	S303+Pan	Q86U86			●											PBRM1-pS303	PN767
PCK1	S118	P35558							●							PCK1-pS118	PN768
PCTAIRE1	Y176	Q00536	PSTK													PCTK1-pY176	PK755
PCTK2	Pan	Q00537	PSTK													PCTK2-ANT	NK285-1
PCTK2	S180	Q00537	PSTK													PCTK2-pS180	PK756
PCTK3	Pan	Q07002	PSTK													PCTK3-ANT	NK286-1
PCYT1A	Pan	P49585							●							PCYT1A-PNT	NN606-1
PCYT1A	S329+S331	P49585							●							PCYT1A-pS329+pS	PN561
PCYT1A	T342+S343	P49585							●							PCYT1A-pT342+pS	PN547
PCYT1A	Y359+S362	P49585							●							PCYT1A-pY359+pS	PN548
PCYT1B (CCTB)	Pan	Q9Y5K3							●							PCYT1B-PNT	NN605-1
PCYT1B (CCTB)	S315+S319	Q9Y5K3							●							PCYT1B-pS315+pS	PN546
PDGFRA	Pan	P16234	PYK			●										PDGFRA-2	NK242-2
PDGFRA	Pan	P16234	PYK			●										PDGFRA-1	NK242-1
PDGFRA	Y762	P16234	PYK			●										PDGFRA-pY762	PK758
PDGFRA	Y768	P16234	PYK			●										PDGFRA-pY768	PK759
PDGFRA	S847+Y849	P16234	PYK			●										PDGFRA-pS847+p	PK757
PDGFRB	Pan	P09619	PYK			●										PDGFRB-4	NK243-3
PDGFRB	Pan	P09619	PYK			●										PDGFRB-2	NK243-1
PDK1 (PDHK1)	Pan	Q15118	PSTK													PDK1-3	NN179-2
PDK1 (PDHK1)	Pan	Q15118	PSTK													PDK1-2	NN179-1
PDK1 (PDPK1)	S241	O15530	PSTK													PDK1-pS241	PK760
PDK2 (PDHK2;)	Pan	Q15119	PSTK													PDK2-3	NN180-2
PDK2 (PDHK2;)	Pan	Q15119	PSTK													PDK2-1	NN180-1

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PDK3 (PDHK3)	Pan	Q15120	PSTK														PDK3-1	NN181-1
PDK3 (PDHK3)	Pan	Q15120	PSTK														PDK3-3	NN181-2
PDK4 (PDHK4)	Pan	Q16654	PSTK														PDK4-3	NN178-3
PDK4 (PDHK4)	Pan	Q16654	PSTK														PDK4-1	NN178-2
PDLIM5 (LIM)	Y251	Q96HC4										●					PDLIM5-pY251	PN522
PECAM-1	Y713	P16284												●			PECAM-1-pY713	PN523
PFKFB3	S461	Q16875							●								PFKFB3-pS461	PN715
PFKFB3	S467	Q16875							●								PFKFB3-pS467	PN769
PFKL	S775	P17858							●								PFKL-pS775	PN770
PFKP	S386	Q01813							●								PFKP-pS386	PN716
PFKP	Y651+Pan	Q01813							●								PFKP-pY651	PN771
PFN1	Y60	P07737											●				PFN1-pY60	PN898
PGK1	Y196	P00558							●								PGK1-pY196	PN525
PHLPP1	Pan	O60346		PSTP													PHLPP1-Pan	NP049-1
PHLPP1	Y1712+Y17	O60346		PSTP													PHLPP1-pY1712+p	PP529
PHLPP2	Pan	Q6ZVD8		PSTP													PHLPP2-Pan	NP050-1
PIK3CA	Y317	P42336	PI-K														PIK3CA-pY317	PK894
PIK3R1 (PI3K)	Y467	P27986	PI-K-														PIK3R1-pY467	PN526
PIK3R1 (PI3K)	Y580	P27986	PI-K-														PIK3R1-pY580	PN527
Pim1	Pan	P11309	PSTK														Pim1-III	NK258-1
Pim1	Pan	P11309	PSTK														Pim1-BKCD	NK258-2
Pim2	Pan	Q9P1W9	PSTK														Pim2-CT	NK288-2
Pim2	Pan	Q9P1W9	PSTK														Pim2-BKCD	NK288-1
Pim2	T195	Q9P1W9	PSTK														Pim2-pT195	PK761
Pim3	Pan	Q86V86	PSTK														Pim3-ANT	NK289-1
PINK1 (BRPK)	S228	Q9BXM7	PSTK														PINK1-pS228	PK906
PINK1 (BRPK)	T257	Q9BXM7	PSTK														PINK1-pT257	PK942
PINK1 (BRPK)	T313	Q9BXM7	PSTK														PINK1-pT313	PK907
PINK1 (BRPK)	S402	Q9BXM7	PSTK														PINK1-pS402	PK908
PIP5K	S307	Q9Y2I7	PSTK														PIP5K-pS307	PK762
PKCa (PRKCA)	Pan	P17252	PSTK														PKCa-1 (PKC-III)	NK201
PKCa (PRKCA)	Y195	P17252	PSTK														PKCa-pY195	PK764
PKCa (PRKCA)	S226+T228	P17252	PSTK														PKCa-	PK944
PKCa (PRKCA)	T497	P17252	PSTK														PKCa-pT497	PK763
PKCa (PRKCA)	T638	P17252	PSTK														PKCa-pT638	PK909
PKCb (PRKCB1)	Pan	P05771	PSTK														PKCb (PKCb-1)	NK133-2
PKCb (PRKCB1)	T500	P05771	PSTK														PKCb-pT500	PK766
PKCb (PRKCB1)	S661	P05771	PSTK														PKCb-pS661	PK765
PKCd (PRKCD)	Y313	Q05655	PSTK														PKCd-pY313	PK768
PKCd (PRKCD)	T507	Q05655	PSTK														PKCd-pT507	PK767
PKCt (PRKCQ;)	S320	Q04759	PSTK														PKCq-pS320	PK972
PKCt (PRKCQ;)	Y545	Q04759	PSTK														PKCq-pY545	PK773
PKCt (PRKCQ;)	S662	Q04759	PSTK														PKCq-pS662	PK971
PKCt (PRKCQ;)	S685	Q04759	PSTK														PKCq-pS685	PK961
PKCt (PRKCQ;)	S695	Q04759	PSTK														PKCq-pS695	PK772
PKCz (PRKCZ)	S262+Y263	Q05513	PSTK														PKCz-pS262+pY26	PK774
PKCz (PRKCZ)	T410	Q05513	PSTK														PKCz-pT410	PK775
PKD1 (PRKCM;)	S205	Q15139	PSTK														PKCm-pS205	PK770
PKD1 (PRKCM;)	S738+S742	Q15139	PSTK														PKCm-pS738+pS74	PK771
PKD1 (PRKCM;)	S910	Q15139	PSTK														PRKD1-pS910	PK912
PKD2 (PRKD2)	S197+S198	Q9BZL6	PSTK														PRKD2-pS197+pS1	PK784

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PKD3 (PRKCN)	Pan	O94806	PSTK													PKD3-BKCD	NK139-2
PKG1a	Pan	Q13976	PSTK													PKG1-BKCD	NK202-2
PKG1a	Pan	Q13976	PSTK													PKG1a-1 (PKG1a-M)	NK202
PKG1a	T515+T517	Q13976	PSTK													PKG1-pT515+pT517	PK776
PKG1a	T517	Q13976	PSTK													PKG1-pT517 (PK776)	PK776-2
PKG2 (PRKG2)	Pan	Q13237	PSTK													PKG2-BKCD	NK290-2
PKG2 (PRKG2)	Pan	Q13237	PSTK													PKG2-AcNMP2	NK290-1
PKM2	S37	P14618							●							PKM2-pS37	PN718
PKM2	Y105	P14618							●							PKM2-pY105	PN772
PKM2	Y148	P14618							●							PKM2-pY148	PN717
PKM2	Y370	P14618							●							PKM2-pY370	PN773
PKM2	Y390	P14618							●							PKM2-pY390	PN529
PKN1 (PRK1)	T774	Q16512	PSTK													PRK1-pT774	PK781
PKN2 (PRK2)	Pan	Q16513	PSTK													PKN2-BKCD	NK149-3
PKR1 (PRKR; PKR1 (PRKR; T446+Pan	T446+Pan	P19525	PSTK													PKR1-pT446	PK777
PKR1 (PRKR; T451	T451	P19525	PSTK													PKR-pT451	PK910
PLCB3	S1105	Q01970							●							PLCB3-pS1105	PN719
PLCE1	S1096+T11	Q9P212							●							PLCE1-pS1096+pT11	PN721
PLCG1	Y771+Y775	P19174							●							PLCG1-pY771+pY775	PN774
PLCG1	Y783	P19174							●							PLCG1-pY783	PN530
PLCG1	Y977	P19174							●							PLCG1-pY977	PN722
PLCG2 (PLC R)	Y753	P16885							●							PLCG2-pY753	PN723
PLCG2 (PLC R)	Y759	P16885							●							PLCG2-pY759	PN775
PLCG2 (PLC R)	Y759	P16885							●							PLCG2-pY759	PN531
PLCG2 (PLC R)	Y1217	P16885							●							PLCG2-pY1217	PN776
Pik1 (PLK)	Pan	P53350	PSTK													Pik1-BKCD	NK145-2
Pik1 (PLK)	T210	P53350	PSTK													Pik1-pT210	PK778
Pik1 (PLK)	Y217	P53350	PSTK													Pik1-pY217	PK779
Pik3 (CNK; FNK)	Pan	Q9H4B4	PSTK													Pik3-AKCD	NK147-2
Pik4 (SAK; SAK)	Pan	O00444	PSTK													Pik4-MID	NK291-1
Pik4 (SAK; T170	T170	O00444	PSTK													Pik4-pT170	PK780
PML	S518+Pan	P29590														PML-pS518	PN641
POU2F1	S385	P14859														POU2F1-pS385	PN643
PPARg-1	S112	P37231														PPARg-1-pS112	PN644
PPFIBP1	S599+S601	Q86W92										●				PPFIBP1-pS599+pS601	PN777
PPP1CA	Y306	P62136	PSTP													PPP1CA-pY306	PP542
PPP1CA	Y134+Y137	P62136	PSTP													PPP1CA-pY134+pY137	PP541
PPP1CB	Y306	P62140	PSTP													PPP1CB-pY306	PP530
PPP1CB	T316	P62140	PSTP													PPP1CB-pT316	PP502
PPP1R11 (HCG)	Y64	O60927	PSTPR													PPP1R11-pY64	PN532
PPP1R12A	Y496	O14974	PSTPR													PPP1R12A-pY496	PP543
PPP1R12A	Y766	O14974	PSTPR													PPP1R12A-pY766	PP544
PPP1R12B	T646	O60237	PSTPR													PPP1R12B-pT646	PP503
PPP1R14B (PHI-1)	Y29	Q96C90	PSTPR													PPP1R14B-pY29	PP546
PPP1R14B (PHI-1)	T57	Q96C90	PSTPR													PPP1R14B-pT57	PP545
PPP1R16A	Y434	Q96I34	PSTPR													PPP1R16A-pY434	PP547
PPP1R1A (I-1; T35	T35	Q13522	PSTPR													PPP1R1A-pT35	PP548
PPP1R1B	S45+S46	Q9UD71	PSTPR													PPP1R1B-pS45+pS46	PP558
PPP2CA	Y284	P67775	PSTP													PPP2CA-pY284	PP549
PPP2CA	Y307	P67775	PSTP													PPP2CA-pY307	PP504
PPP2CB	T304	P62714	PSTP													PPP2CB-pT304	PP505

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PPP2R4 (PP2A)	Y223	Q15257		PSTP												PPP2R4-pY223	PP550
PPP2R5D	Y580	Q14738		PSTP												PPP2R5D-pY580	PP551
PPP2R5E	Y99	Q16537		PSTP												PPP2R5E-pY99	PP552
PPP3CA	S469	Q08209		PSTP												PPP3CA-pS469	PP557
PPP3CC	S463+Pan	P48454		PSTP												PPP3CC-pS463	PP506
PPP5C (PP5C;	Y119	P53041		PSTP												PPP5C-pY119	PP507
PPP6C	Y261	O00743		PSTP												PPP6C-pY261	PP553
PPPM1A	Y362	P35813		PSTP												PPPM1A-pY362	PP508
PPPM1B	Y367	O75688		PSTP												PPM1B-pY367	PP540
PRKACA/B	T196+T198	P17612	PSTK													PRKACA-pT196+p	PK782
PRKX	Pan	P51817	PSTK													PRKX-CT	NK292-1
PRKX	T201+T203	P51817	PSTK													PRKX-p T201+pT20	PK785
PRKY	Pan	O43930	PSTK													PRKY-ANT	NK293-1
PRMT5	T634	O14744														PRMT5-pT634	PN549
PRP4K (PRP4;	Y849	Q13523	PSTK													PRP4K-pY849	PK786
PSEN1	T354	P49768						●								PSEN1-pT354	PN977
PTEN	Pan	P60484		PI-P												PTEN-1	NP023-3
PTEN	Pan	P60484		PI-P												PTEN-2	NP023-4
PTEN	Pan	P60484		PI-P												PTEN-3	NP023-5
PTEN	Y315	P60484		PI-P												PTEN-pY315	PP531
PTEN	Y336	P60484		PI-P												PTEN-pY336	PP556
PTPN1 (PTP1B)	Y46	P18031		PYP												PTP1B-pY46	PP533
PTPN1 (PTP1B)	S50	P18031		PYP												PTP1B-pS50	PP509
PTPN1 (PTP1B)	Y66	P18031		PYP												PTP1B-pY66	PP510
PTPN1 (PTP1B)	Y20+Pan	P18031		PYP												PTP1B-pY20	PP532
PTPN2 (TC-PTP)	S304	P17706		PYP												PTPN2-pS304	PP515
PTPN3 (PTP-H1)	S357+S359	P26045		PYP												PTPN3-pS357+pS3	PP519
PTPN6 (PTP1C;	Y564	P29350		PYP												PTPN6-pY564	PP538
PTPN11	Y62	Q06124		PYP												PTPN11-pY62	PP512
PTPN11	Y546	Q06124		PYP												PTPN11-pY546	PP534
PTPN11	Y584	Q06124		PYP												PTPN11-pY584	PP535
PTPN12 (PTP-	S39	Q05209		PYP												PTPN12-pS39	PP513
PTPN12 (PTP-	S435	Q05209		PYP												PTPN12-pS435	PP536
PTPN14	S486+Pan	Q15678		PYP												PTPN14-pS486	PP514
PTPN21	S637	Q16825		PYP												PTPN21-pS637	PP516
PTPN22	Y499	Q9Y2R2		PYP												PTPN22-pY499	PP517
PTPN23 (HD-	Y1165	Q9H3S7		PYP												PTPN23-pY1165	PP518
PTPN23 (HD-	Y1229	Q9H3S7		PYP												PTPN23-pY1229	PP537
PTPRA (PTP-	Y798	P18433		PYP												PTPRA-pY798	PP521
PTPRB (PTP-	Y1981	P23467		PYP												PTPRB-pY1981	PP522
PTPRE (PTP-	Y696	P23469		PYP												PTPRE-pY696	PP554
PTPRF (LAR)	Y1621	P10586		PYP												PTPRF-pY1621	PP523
PTPRK (PTP-	Y858	Q15262		PYP												PTPRK-pY858	PP539
PTPRK (PTP-	Y916	Q15262		PYP												PTPRK-pY916	PP524
PTPRM	Y929	P28827		PYP												PTPRM-pY929	PP526
PTRF	Y308	Q6NZI2			●											PTRF-pY308	PN646
PTRF	Y308	Q6NZI2			●											PTRF-pY308	PN533
PU.1	S146	P17947			●											PU.1-pS146	PN647
PYK2 (PTK2B;	Y402	Q14289	PYK													PYK2-pY402	PK788
PYK2 (PTK2B;	Y402	Q14289	PYK													PYK2-pY402	PK787
PYK2 (PTK2B;	Y579+Y580	Q14289	PYK													PYK2-pY579+pY58	PK789

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute	Vesicle Protein	Antibody Name	Kinexus Antibody Code
Raf-A (ARaf)	Pan	P10398	PSTK														ARaf-2	NK205-3
Raf-A (ARaf)	Pan	P10398	PSTK														ARaf-3	NK205-4
Raf-A (ARaf)	Pan	P10398	PSTK														ARaf-1	NK205-5
Raf-A (ARaf)	Y302	P10398	PSTK														A-Raf-pY302	PK500
Raf-B (B-Raf;	Pan	P15056	PSTK														BRaf-3	NK156-4
Raf-B (B-Raf;	Pan	P15056	PSTK														BRaf-2	NK156-6
Raf-B (B-Raf;	S446+S447	P15056	PSTK														B-Raf-pS446+pS447	PK534
Raf-B (B-Raf;	S729	P15056	PSTK														B-Raf-pS729	PK535
Raf1 (c-Raf;	Pan	P04049	PSTK														Raf1-1	NK155-5
Raf1 (c-Raf;	Pan	P04049	PSTK														Raf1-3	NK155-7
Raf1 (c-Raf;	Pan	P04049	PSTK														Raf1-6	NK155-8
Raf1 (c-Raf;	Pan	P04049	PSTK														Raf1-CT	NK155-9
Raf1 (c-Raf;	Pan	P04049	PSTK														RAF1-III (Raf1-4)	NK155-2
Raf1 (c-Raf;	Pan	P04049	PSTK														Raf1-2	NK155-6
Raf1 (c-Raf;	S259	P04049	PSTK														Raf1-pS259	PK790
Raf1 (c-Raf;	S296	P04049	PSTK														Raf1-pS296	PK791
Raf1 (c-Raf;	S301+T303	P04049	PSTK														Raf1-pS301+pT303	PK792
Raf1 (c-Raf;	S338	P04049	PSTK														Raf1-pS338	PK913
Raf1 (c-Raf;	Y340+Y341	P04049	PSTK														Raf1-pY340+pY341	PK914
RARA	S77	P10276			●	●											RARA-pS77	PN648
Rb (RB1)	S249+T252	P06400										●					RB1-pS249+pT252	PN724
Rb (RB1)	T373	P06400										●					RB-pT373	PN978
Rb (RB1)	S807+S811	P06400										●					RB-pS807+pS811	PN847
RBM9iso6	T7	O43251			●							●					RBM9-pT7	PN649
RDBP	S89+T91	P18615			●												RDBP-pS89+pT91	PN650
Ret (GDNF)	Pan	P07949	PYK		●												Ret-2	NK244-2
Ret (GDNF)	Pan	P07949	PYK		●												Ret-3	NK244-3
Ret (GDNF)	Pan	P07949	PYK		●												Ret-1	NK244-1
Ret (GDNF)	Y905	P07949	PYK		●												Ret-pY905	PK793
Ret (GDNF)	Y1062	P07949	PYK		●												Ret-pY1062	PK915
Rictor	S21	Q6R327										●					Rictor-pS21	PN979
Rictor	T1135	Q6R327										●					Rictor-pT1135	PN980
RIOK1	Y466	Q9BRS2	PSTK														RIOK1-pY466	PK794
RIOK2	S332+S335	Q9BVS4	PSTK														RIOK2-pS332+pS335	PK890
RIPK1 (RIP;	S166	Q13546	PSTK														RIPK1-pS166	PK945
RIPK1 (RIP;	S320	Q13546	PSTK														RIPK1-pS320	PK946
RIPK1 (RIP;	Y384	Q13546	PSTK														RIPK1-pY384	PK795
RIPK2 (RICK;	S176	O43353	PSTK														RIPK2-pS176	PK796
RIPK2 (RICK;	Y381	O43353	PSTK														RIPK2-pY381	PK797
ROCK1 (ROKb)	T233	Q13464	PSTK														ROCK1-pT233	PK947
ROCK1 (ROKb)	Y913	Q13464	PSTK														ROCK1-pY913	PK798
ROCK2 (ROKa)	Y722	O75116	PSTK														ROCK2-pY722	PK799
Ron (RONa;	Pan	Q04912	PYK		●												Ron-2	NK161-3
Ron (RONa;	Pan	Q04912	PYK		●												Ron-3	NK161-4
Ron (RONa;	Pan	Q04912	PYK		●												Ron-1	NK161-2
Ron (RONa;	Y1238	Q04912	PYK		●												Ron-pY1238	PK800
Ron (RONa;	Y1238+Y12	Q04912	PYK		●												Ron-pY1238 +pY12	PK801
ROR2 (RON2)	Y645+Y646	Q01974	PYK		●												ROR2-pY645+pY646	PK802
RORA	S35	P35398			●	●											RORA-pS35	PN651
Ros (ROS1)	Pan	P08922	PYK		●												Ros-2	NK163-3
Ros (ROS1)	Pan	P08922	PYK		●												Ros-3	NK163-4

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Ros (ROS1)	Pan	P08922	PYK				●										Ros-1	NK163-2
Ros (ROS1)	Y2114+Y21	P08922	PYK				●										Ros-pY2114+pY21	PK803
RPS6	S235+S236	P62753					●										RPS6-pS235+pS23	PN685
RPS6	S235+S236	P62753					●										RPS6-pS235+pS23	PN559
RPS6	S240+S244																RPS6-pS240+pS24	PN1025
RPTOR (RAPTOR)	T706	Q8N122										●					RPTOR-pT706	PN982
RPTOR (RAPTOR)	S859+S863	Q8N122										●					RPTOR-pS859+pS	PN981
RSK1	Pan	Q15418	PSTK														RSK1-CT	NK164-3
RSK1	Y220+S221	Q15418	PSTK														RSK1-pY220+pS22	PK807
RSK1	S221	Q15418	PSTK														RSK1-pS221	PK804
RSK1	S380	Q15418	PSTK														RSK1-pS380	PK805
RSK1	T573	Q15418	PSTK														RSK1-pT573	PK806
RSK2	Pan	P51812	PSTK														RSK2-PCT	NK165-3
RSK3	Y217+S218	Q15349	PSTK														RSK3-pY217+pS21	PK808
RTN4 (NOGO)	S107	Q9NQC															RTN4-pS107	PN983
RUNX1 (AML1)	S276+Pan	Q01196				●											RUNX1-pS276	PN778
RXRa	S260	P19793				●	●										RXRa-pS260	PN652
S100A9 (CAGB; SAA2)	Pan	P06702													●		S100A9-3	NN459-3
SAA2	Pan	P0DJ19								●							SAA2-3	NN460-3
SAC3 (FIG4)	Y631	Q92562							●								SAC3-pY631	PN984
SAP97	T657																SAP97-pT657	PN1021
SARS-CoV2-1a	Pan																SARS-CoV2_1a:15	NNCOV2-1
SARS-CoV2-1a	Pan																SARS-CoV2_1a:73	NNCOV2-1
SARS-CoV2-1a	Pan																SARS-CoV2_1a:87	NNCOV2-1
SARS-CoV2-1b	Pan																SARS-CoV2_1b:56	NNCOV2-1
SARS-CoV2-1b	Pan																SARS-CoV2_1b:60	NNCOV2-1
SARS-CoV2-1b	Pan																SARS-CoV2_1b:67	NNCOV2-1
SARS-CoV2-Mem	Pan																SARS-CoV2_M:3-2	NNCOV2M-1
SARSCoV2-Nucle	Pan																SARSCoV2-N-156	NNCOV2N
SARS-CoV2-Spike	Pan																SARS-CoV-2-	NNCOV2S-1
SARS-CoV2-Spike	Pan																SARS-CoV-2-	NNCOV2S-2
SARS-CoV2-Spike	Pan																SARS-CoV2_S:41-5	NNCOV2S-3
SARS-CoV2-Spike	Pan																SARS-CoV2_S:193	NNCOV2S-4
SARS-CoV2-Spike	Pan																SARS-CoV2_S:333	NNCOV2S-5
SARS-CoV2-Spike	Pan																SARS-CoV2_S:450	NNCOV2S-6
SARS-CoV2-Spike	Pan																SARS-CoV2_S:480	NNCOV2S-7
SARS-CoV2-Spike	Pan																SARS-CoV2_S:566	NNCOV2S-9
SARSCoV2-Spike	Pan																SARSCoV2-S:574-5	NNCOV2S-1
SARSCoV2-Spike	Pan																SARSCoV2-S:643-6	NNCOV2S-1
SARS-CoV2-Spike	Pan																SARS-CoV2_S:829	NNCOV2S-1
SARSCoV2-Spike	Pan																SARSCoV2-S:895-9	NNCOV2S-1
SARS-CoV2-Spike	Pan																SARS-CoV2_S:1159	NNCOV2S-1
SATB1	S38	Q01826				●											SATB1-pS38	PN653
SCYL1	S754	Q96KG9	PSTK														SCYL1-pS754	PK809
SETD2	S2080+S20	Q9BYW2															SETD2-pS2080+pS	PN779
SGK1	Pan	O00141	PSTK														SGK1-NT	NK294-1
SgK223	Y413	Q86YV5	PSTK														Sgk223-pY413	PK810
SgK269 (PEAK1)	Y635	Q9H792	PSTK														SgK269-pY635	PK811
SgK288 (ANKK1)	Pan	Q8NFD2	PSTK														SgK288-ANT	NK295-1
SGK3 (CISK; SGK3)	Pan	Q96BR1	PSTK														SGK3-2	NK170-4
SGK3 (CISK; SGK3)	Pan	Q96BR1	PSTK														SGK3-1	NK170-3

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute	Vesicle Protein	Antibody Name	Kinexus Antibody Code
SH2BP1	T925	Q6PD62			●												SH2BP1-pT925	PN654
Shc1 (Shc)	Y427	P29353										●					Shc1-pY427	PN986
Shc1 (Shc)	Y349+Y350	P29353										●					Shc1-pY349+pY350	PN985
Shc3	Y406	Q92529										●					Shc3-pY406	PN987
Shc4	Y424	Q6S5L8										●					Shc4-pY424	PN988
SHIP1 (INPP5D)	Pan	Q92835		PI-P													SHIP1-2	NP044-2
SHIP1 (INPP5D)	Pan	Q92835		PI-P													SHIP1-3	NP044-3
SHIP1 (INPP5D)	Pan	Q92835		PI-P													SHIP1-1	NP044-1
SHIP1 (INPP5D)	Y187	Q92835		PI-P													SHIP1-pY187	PN560
SHIP2 (INPPL1)	Pan	O15357		PI-P													SHIP2-2	NP045-2
SHIP2 (INPPL1)	Pan	O15357		PI-P													SHIP2-3	NP045-3
SHIP2 (INPPL1)	Pan	O15357		PI-P													SHIP2-1	NP045-1
SHIP2 (INPPL1)	Y886	O15357		PI-P													SHIP2-pY886	PN534
SIK (SNF1LK)	Pan	P57059	PSTK														SNF1LK-2 (SIK-1)	NK251-2
SIK (SNF1LK)	Pan	P57059	PSTK														SNF1LK-3 (SIK-1)	NK251-3
SIK (SNF1LK)	Pan	P57059	PSTK														SNF1LK-1 (SIK-1)	NK251-1
SIK (SNF1LK)	T182	P57059	PSTK														SIK-pT182	PK812
SIK2 (QIK)	Pan	Q9H0K1	PSTK														SIK2-2	NK249-2
SIK2 (QIK)	Pan	Q9H0K1	PSTK														SIK2-3	NK249-3
SIK2 (QIK)	Pan	Q9H0K1	PSTK														SIK2-1	NK249-1
SIK2 (QIK)	S358	Q9H0K1	PSTK														SIK2-pS358	PK813
SIK3 (QSK)	Pan	Q9Y2K2	PSTK														SIK3-2	NK250-2
SIK3 (QSK)	Pan	Q9Y2K2	PSTK														SIK3-3	NK250-3
SIK3 (QSK)	Pan	Q9Y2K2	PSTK														SIK3-1	NK250-1
SIK3 (QSK)	T163	Q9Y2K2	PSTK														SIK3-pT163	PK814
SIK3 (QSK)	T411	Q9Y2K2	PSTK														SIK3-pT411	PK815
SIN3A	S832+Pan	Q96ST3			●												SIN3A-pS832	PN655
SIT	Y90	Q9Y3P8										●					SIT-pY90	PN535
SIT	Y95	Q9Y3P8										●					SIT-pY95	PN536
SLC2A1 (GLUT-1)	T478	P11166												●			SLC2A1-pT478	PN989
SLK	S189	Q9H2G2	PSTK														SLK-pS189	PK816
Smad3	T8+Pan	P84022			●												Smad3-pT8	PN658
Smad4	Y513	Q13485			●												SMAD4-pY513	PN725
SMARCA4	S610+S613	P51532			●												SMARCA4-pS610+	PN726
SMARCB1	T134	Q12824			●												SMARCB1-pT134	PN727
SMG1	Pan	Q96Q15	PYK														SMG1-2	NK233-1
SMG1	Pan	Q96Q15	PYK														SMG1-3	NK233-3
SMG1	Pan	Q96Q15	PYK														SMG1-1	NK233-2
SNAP25	S28+T29	P60880													●		SNAP25-pS28+pT29	PN1003
SNAP25	T138	P60880													●		SNAP25-pT138	PN991
SNAP25	S187	P60880													●		SNAP25-pS187	PN990
SNCA (a-)	Y39	P37840											●				SNCA-pY39	PN850
SNCA (a-)	S129+Pan	P37840											●				SNCA-pS129	PN849
SND1	Y908	Q7KZF4			●												SND1-pY908	PN661
snRNP70	Y126	P08621															snRNP70-pY126	PN537
SOCS7	Y561	O14512			●												SOCS7-pY561	PN728
SOD1 (hSod1)	T40	P00441								●							SOD1 -pT40	PN905
SOD1 (hSod1)	S99	P00441								●							SOD1 -pS99	PN904
SOD1 (hSod1)	S108	P00441								●							SOD1 -pS108	PN903
SOX9	S181+Pan	P48436			●												SOX9-pS181	PN662
SP4	S770	Q02446			●												SP4-pS770	PN851

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute	Vesicle Protein	Antibody Name	Kinexus Antibody Code	
SPG11	S1955	Q96JI7															SPG11-pS1955	PN906	
SPG11	S1961	Q96JI7															SPG11-pS1961	PN907	
SPT5	T791	O00267			●												SPT5-pT791	PN663	
SQSTM1	T269+S272	Q13501										●					SQSTM1-	PN909	
SQSTM1	T339+S342	Q13501										●					SQSTM1-	PN910	
SQSTM1	S403	Q13501										●					SQSTM1-pS403	PN908	
Src	Y419	P12931	PYK														Src-pY419	PK818	
Src	Y419	P12931	PYK														Src-pY419 (PK818)	PK818-2	
Src	Y530	P12931	PYK														Src-pY530	PK948	
SRF	S224	P11831			●												SRF-pS224	PN664	
SRPK1	S222	Q96SB4	PSTK														SRPK1-pS222	PK819	
SRPK1	S587	Q96SB4	PSTK														SRPK1-pS587	PK891	
SRPK2	Pan	P78362	PSTK														SRPK2-IKCD	NK296-1	
SSTR2	S341+S343	P30874			●												SSTR2-pS341+pS343	PN804	
STAG2	Y433	Q8N3U4															STAG2-pY433	PN729	
STAM2	Y374	O75886										●					STAM2-pY374	PN538	
STAT1	Y701	P42224			●												STAT1-pY701	PN666	
STAT1	S727+Pan	P42224			●												STAT1-pS727	PN667	
STAT2	Y690	P52630			●												STAT2-pY690	PN668	
STAT3	Y705+T708	P40763			●												STAT3-pY705+pT708	PN539	
STAT3	S727	P40763			●												STAT3-pS727	PN669	
STAT4	Y693	Q14765			●												STAT4-pY693	PN670	
STAT5A	Y694	P42229			●												STAT5A-pY694	PN671	
STAT5A	S780	P42229			●												STAT5A-pS780	PN672	
STAT6	Y641	P42226			●												STAT6-pY641	PN673	
STLK3 (DCHT)	T231	Q9UEW8	PSTK														STLK3-pT231	PK916	
STLK6 (ALS2CR2)	S304+S306	Q9C0K7	PSTK														STLK6-	PN911	
STX1B	S14	P61266														●	STX1B-pS14	PN852	
STXBP1 (HUNC1)	S313	P61764															●	STXBP1-pS313	PN992
STXBP1 (HUNC1)	Y473	P61764															●	STXBP1-pY473	PN994
STXBP1 (HUNC1)	T574	P61764															●	STXBP1-pT574	PN993
Syk	Y323	P43405	PYK														Syk-pY323	PK821	
Syk	Y525+Y526	P43405	PYK														Syk-pY525+pY526	PK823	
SYN1 (Synapsin)	S605	P17600															●	SYN1-pS605	PN854
SYNJ1 (INPP5G)	Y784+Y786	O43426															●	SYNJ1-pY784+pY786	PN996
SYNJ1 (INPP5G)	S1084	O43426															●	SYNJ1-pS1084	PN995
SYT1 (SVP65)	T129	P21579															●	SYT1-pT129	PN997
SYT1 (SVP65)	Y312	P21579															●	SYT1-pY312	PN998
SYT1 (SVP65)	Y381	P21579															●	SYT1-pY381	PN999
TAK1 (MAP3K7)	Pan	O43318	PSTK															TAK1-CT (TAK1-4)	NK175-3
TAK1 (MAP3K7)	T184+T187	O43318	PSTK															TAK1-pT184+pT187	PK825
TAK1 (MAP3K7)	S439	O43318	PSTK															TAK1-pS439	PK824
TAO1 (TAOK1)	S181	Q7L7X3	PSTK															TAO1-pS181	PK826
TAO1 (TAOK1)	Y309	Q7L7X3	PSTK															TAO1-pY309	PK827
TAO3 (JIK,	Pan	Q9H2K8	PSTK															TAOK3-AKCD	NK087-2
TARDBP	S409+S410	Q13148			●													TARDBP-pS409+pS410	PN674
Tau (MAPT)	T498	P10636															●	Tau -pT498	PN855
Tau (MAPT)	S515+S516	P10636															●	Tau-pS515+pS516	PN856
Tau (MAPT)	T529+T534	P10636															●	Tau-pT529+pT534	PN857
Tau (MAPT)	S713+Pan	P10636															●	Tau-pS713	PN858
TBC1D7	Y14	Q9P0N9																TBC1D7-pY14	PN540

Target Protein Name	Pan-specific or P-Site	Human UniProt ID	Protein Kinase	Protein Phosphatase	Transcription Receptor	Ion Channel	Protein Synthesis	Protein Degradation	Metabolic	Stress Protein	Apoptosis	Adapter/ Scaffold	Cytoskeletal	Cell Adhesion	Ca/ Lipid / Solute Vesicle Protein	Antibody Name	Kinexus Antibody Code
TBK1 (IKKd)	S172	Q9UHD2	PSTK													TBK1-pS172	PK828
TBK1 (IKKd)	S716	Q9UHD2	PSTK													TBK1-pS716	PK949
TBXA2R	S329+S331	P21731			●											TBXA2R-pS329+pS331	PN805
TDP-43 (TADBP)	S48	Q13148														TDP-43 -pS48	PN914
TDP-43 (TADBP)	S403+S404	Q13148														TDP-43 -	PN913
Tec	Y519	P42680	PYK													TEC-pY519	PK829
TERF1	T371	P54274			●											TERF1-pT371	PN675
TGM2	Y369	P21980														TGM2-pY369	PN541
THRAP3	S253	Q9Y2W1			●											THRAP3-pS253	PN676
TIE2 (TEK)	Y897	Q02763	PYK		●											TIE2-pY897	PK830
TIE2 (TEK)	Y992	Q02763	PYK		●											TIE2-pY992	PK831
TLN1	Y70	Q9Y490											●			TLN1-pY70	PN542
TNK1	Y277	Q13470	PYK													TNK1-pY277	PK832
TORC2 (CRTC2)	S433	Q53ET0			●											TORC2-pS433	PN677
TP53 (p53)	S6+S9	P04637			●											p53-pS6+pS9	PN637
TP53 (p53)	S15	P04637			●											p53-pS15	PN859
TP53 (p53)	T18+S20	P04637			●											p53-pT18+pS20	PN638
TP53 (p53)	S392	P04637			●											p53-pS392	PN640
TP53BP1	T1056	Q12888			●											TP53BP1-pT1056	PN678
TPH1	T225+S228	P17752							●							TPH1-pT225+pS228	PN780
TRHR	S364+T365	P34981			●											TRHR-pS364+pT365	PN806
TRIM28 (TIF1B)	Y458	Q13263	PSTK		●											TRIM28-pY458	PK834
TRIM28 (TIF1B)	Y517	Q13263	PSTK		●											TRIM28-pY517	PK835
TRIM33 (TIF1G)	S1119	Q9UPN9	PSTK		●											TRIM33-pS1119	PK836
TrkA (NGFR; NTRK1)	Y680+Y681	P04629	PYK		●											TrkA-pY680+pY681	PK837
TrkB (NTRK2)	Y516	Q16620	PYK		●											TrkB-pY516	PK838
TrkB (NTRK2)	Y702	Q16620	PYK		●											TrkB-pY702	PK839
TrkB (NTRK2)	Y706+Y707	Q16620	PYK		●											TrkB-pY706+pY707	PK917
TrkC (NTRK3)	Y709+Y710	Q16288	PYK		●											TrkC-pY709+pY710	PK840
TRRAP	Pan	Q9Y4A5	PSTK													TRRAP	NK232
TRRAP	Pan	Q9Y4A5	PSTK													TRRAP-2	NK232-3
TSC1	S505	Q92574										●				TSC1-pS505	PN781
TSSK3	T168	Q96PN8	PSTK													TSSK3-pT168	PK841
TTBK1	Pan	Q5TCY1	PSTK													TTBK1-CT	NK306-1
TTBK1	Pan	Q5TCY1	PSTK													TTBK1-NT	NK306-2
TTBK1	T186	Q5TCY1	PSTK													TTBK1-pT186	PK955
TTBK2	Pan	Q6IQ55	PSTK													TTBK2-CT	NK307-2
TTK (MPS1)	S677	P33981	DSK													TTK-pS677	PK842
TUBA4A	Y103	P68366											●			TUBA4A-pY103	PN915
TUBA4A	Y210	P68366											●			TUBA4A-pY210	PN916
TXK	Y420	P42681	PYK													TXK-pY420	PK844
TYK2	Pan	P29597	PYK													TYK2-1	NK181-3
TYK2	Pan	P29597	PYK													TYK2-2	NK181-4
TYK2	Pan	P29597	PYK													TYK2-3	NK181-5
Tyro3	Y681	Q06418	PYK		●											Tyro3-pY681	PK847
Tyro3	Y685+Y686	Q06418	PYK		●											Tyro3-pY685+pY686	PK848
UBF	T201	P17480			●											UBF-pT201	PN680
UBF	S484	P17480			●											UBF-pS484	PN679
UBQLN2	T128	Q9UHD9						●								UBQLN2-pT128	PN920
UBQLN2	S222	Q9UHD9						●								UBQLN2-pS222	PN918
UBQLN2	S256	Q9UHD9						●								UBQLN2-pS256	PN919

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UGDH	Y352	O60701							●								UGDH-pY352	PN782
UTRN	Y3197	P46939															UTRN-pY3197	PN1000
VACAMKL	Y245	Q8NCB2	PSTK														VACAMKL-pY245	PK892
VAMP1	S63	P23763															● VAMP1-pS63	PN1001
VAMP4	S30	O75379															● VAMP4-pS30	PN1002
VAPB	T46	O95292															● VAPB-pT46	PN924
VAPB	T150	O95292															● VAPB-pT150	PN922
VAPB	T164	O95292															● VAPB-pT164	PN923
VAPB	S206	O95292															● VAPB-pS206	PN921
VAV1 (Vav)	Y826	P15498															VAV1-pY826	PN543
VCP	S37	P55072								●							VCP-pS37	PN925
VCP	T56	P55072								●							VCP-pT56	PN929
VCP	T316	P55072								●							VCP-pT316	PN927
VCP	T509	P55072								●							VCP-pT509	PN928
VCP	S702	P55072								●							VCP-pS702	PN926
VCP	T761	P55072								●							VCP-pT761	PN930
VCP	Y805	P55072								●							VCP-pY805	PN1007
VEGFR1 (Fit1)	Pan	P17948	PYK														VEGFR1-1	NK226-2
VEGFR1 (Fit1)	Pan	P17948	PYK														VEGFR1-2	NK226-1
VEGFR1 (Fit1)	Y1048	P17948	PYK														VEGFR1-pY1048	PK850
VEGFR1 (Fit1)	Y1053	P17948	PYK														VEGFR1-pY1053	PK851
VEGFR2 (KDR)	Pan	P35968	PYK														VEGFR2-2	NK245-2
VEGFR2 (KDR)	Pan	P35968	PYK														VEGFR2-3	NK245-3
VEGFR2 (KDR)	Pan	P35968	PYK														VEGFR2-1	NK245-1
VEGFR2 (KDR)	Y1054	P35968	PYK														VEGFR2-pY1054	PK852
VEGFR3 (Fit4)	Pan	P35916	PYK														VGFR3-2	NK064-3
VEGFR3 (Fit4)	Pan	P35916	PYK														VGFR3-1	NK064-2
VEGFR3 (Fit4)	Y1068	P35916	PYK														VEGFR3-pY1068	PK853
VHL	S111	P40337							●								VHL-pS111	PN783
VIM (Vimentin)	Y117	P08670															VIM-pY117	PN544
WASP	Y291	P42768															WASP-pY291	PN545
Wee1	S642	P30291	DSK														Wee1-pS642	PK854
WNK1	Pan	Q9H4A3	PSTK														WNK1-2	NK252-2
WNK1	Pan	Q9H4A3	PSTK														WNK1-3	NK252-3
WNK1	Pan	Q9H4A3	PSTK														WNK1-1	NK252-1
WNK1	T60	Q9H4A3	PSTK														WNK1-pT60	PK856
WNK1	S382+Pan	Q9H4A3	PSTK														WNK1-pS382	PK855
WNK1	T2245	Q9H4A3	PSTK														WNK1-pT2245	PK857
WNK2	Pan	Q9Y3S1	PSTK														WNK2-2	NK253-2
WNK2	Pan	Q9Y3S1	PSTK														WNK2-3	NK253-3
WNK2	Pan	Q9Y3S1	PSTK														WNK2-1	NK253-1
WNK3	Pan	Q9BYP7	PSTK														WNK3-1	NK254-1
WNK4	Pan	Q96J92	PSTK														WNK4-3	NK255-3
WNK4	Pan	Q96J92	PSTK														WNK4-1	NK255-1
WT1	S365	P19544															WT1-pS365	PN732
YAP1	S109	P46937															YAP1-pS109	PN681
YAP1	T119	P46937															YAP1-pT119	PN682
YAP1	S127	P46937															YAP1-pS127	PN683
Yes	Y222+Y223	P07947	PYK														Yes-pY222+pY223	PK858
YLPM1	S561	P49750															YLPM1-pS561	PN684
YSK1 (STK25;	T174	O00506	PSTK														YSK1-pT174	PK859

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YSK4	Pan	Q56UN5	PSTK														YSK4-2	NK256-2
YSK4	Pan	Q56UN5	PSTK														YSK4-3	NK256-3
YSK4	Pan	Q56UN5	PSTK														YSK4-1	NK256-1
ZAP70	Y248	P43403	PYK														ZAP70-pY248	PK860
ZAP70	Y292	P43403	PYK														ZAP70-pY292	PK861
ZAP70	Y319	P43403	PYK														ZAP70-pY319	PK862
ZAP70	Y492+Y493	P43403	PYK														ZAP70-pY492+pY4	PK863
ZC2 (TNIK; GK)	Pan	Q9UKE5	PSTK														ZC2-CT	NK301-1