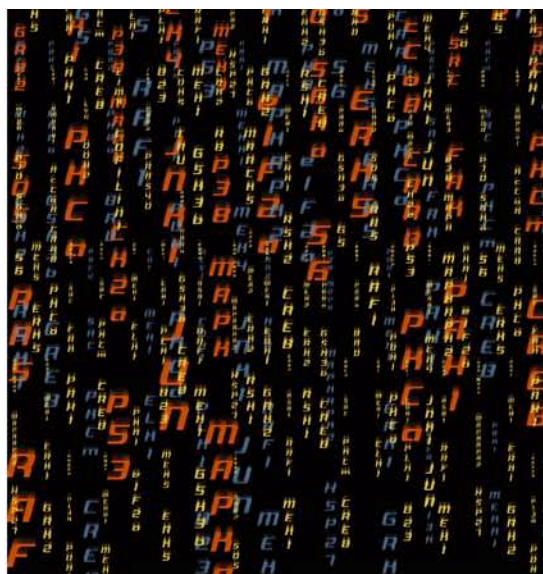


KiNET SERVICES

CUSTOMER INFORMATION PACKAGE

KiNET IS THE WORLD'S FIRST INTERNET ACCESSIBLE SUBSCRIPTION PROTEOMICS DATABASE OF ITS KIND WITH BUILT IN BIOINFORMATICS SEARCHING CAPABILITIES TO ASSIST CLIENTS IN THEIR CELL SIGNALLING RESEARCH. KiNET FEATURES OVER 200,000 MEASUREMENTS OF THE EXPRESSION LEVELS AND PHOSPHORYLATION STATES OF HUNDREDS OF SIGNAL TRANSDUCTION PROTEINS FROM OVER 6000 KINETWORKS™ MULTI-IMMUNOBLOTS OF HUNDREDS OF DIFFERENT CELL AND TISSUE LYSATES.



This information Package has been designed to assist you in using our KiNET quantitative functional proteomics databank. Access to mouse control data is free. Full and unlimited access requires an annual subscription. If after reviewing this information you have any questions about KiNET, please contact our Technical Service Representatives by calling toll free in North America 1-866-KINEXUS or (604) 822-9963 or by e-mail at "info@kinexus.ca". This information is regularly updated and available from our website at "www.kinexus.ca".



KiNET DATABANK INTRODUCTION

KiNET is the first Internet accessible subscription proteomics database of its kind. This powerful tool has built in bioinformatics searching capabilities for cell signalling research. Presently KiNET features over 200,000 measurements of the expression and phosphorylation states of hundreds of signal transduction proteins from over 6000 multi-immunoblots performed with control and treated tissue/cell samples. This highly unique data set has been generated in-house over the last 8 years by Kinexus in part through our Kinetworks™ immunoblotting services. Over 95% of the data in KiNET is unpublished and not available elsewhere.

KiNET empowers subscribers to generate data tables that are tailored to their specific cell signalling research questions. KiNET can be queried for the regulation of a target protein in hundreds of well defined experimental model systems. Alternatively, a tissue, cell line or specific treatment can be interrogated for changes in the expression and phosphorylation of hundreds of different proteins. All of the protein measurements deposited in KiNET were generated with the top 20% of over 3000 commercial antibodies that were independently tested and validated by Kinexus. Since all of the KiNET data was produced with the same reagents, methodology and equipment by our highly experienced scientists and technicians, the results are highly comparable.

With the availability of KiNET, our Kinetworks™ immunoblotting services have become even more powerful for cell signalling research, since our clients can now view their Kinetworks™ results in a much broader context. Our clients can correlate changes that they observe in particular target proteins of interest in their experimental model systems with hundreds of other cells and tissues. KiNET is also a useful tool to plan out future Kinetworks™ experiments to maximize the prospects of research success. Clients can preview the expression levels and phosphorylation states of specific proteins in similar experimental model systems to better select the subset of proteins they should investigate. KiNET may also be useful for validation of some of the findings from our Kinex™ antibody microarray services.

At the academic individual user rate of US \$998, and the corporate individual user rate of US \$1998, an annual subscription to KiNET costs much less than most other databases that feature only annotated data from the published scientific literature. Site licenses for multi-users to KiNET are also available to companies. With an annual subscription, users have unlimited access to KiNET over the Internet. Furthermore, based on the annual accumulation of Kinetworks™ data, we expect the KiNET databank to grow by at least 20% over the next year. Moreover, we will be adding additional special features and capabilities to KiNET in the near future. This will include data from our Kinex™ antibody microarray services. We will also be launching our Knowledge Bank, which will include consolidated data from the scientific literature and Kinexus for detailed information about protein kinases, protein phosphatases and phospho-sites.

As a community service, Kinexus permits free access to all of the mouse control data contained within KiNET. To get started with KiNET, simply go to the following website link <http://www.kinexus.ca/kinet> and register as a free user. The free user access is an excellent opportunity for researchers to get a sense of how KiNET actually works and performs. For full access, follow the posted instructions and apply on-line at the KiNET site. Part of the requirement for full access is completion of a KiNET License Agreement, which is included with this KiNET Customer Information Package. The KiNET Users Guide is also appended to the end of this package. If you have any questions about this or any of our other proteomics services please contact our Technical Service representatives by calling free in North America 1-866-KINEXUS or 1-604-822-9963 or by e-mail at info@kinexus.ca.

We would like to acknowledge that the KiNET software has been under development in partnership with Visual Knowledge/Upstream Biosciences with the generous support of the National Research Council of Canada's Industrial Research Assistance Program.



KINET™ LICENSE AGREEMENT
12 Month Subscription

KINEXUS AGREEMENT NO.

This Subscription Agreement is entered into effective as of the Effective Date by and between Kinexus Binformatix Corporation (“**Kinexus**”), a Canadian corporation with a principal place of business at Suite 402, 6190 Agronomy Road, Vancouver, British Columbia, Canada, V6T 1Z3 **AND** the corporation or other entity (“**Customer**”) having the following name and business or institution address: _____

R E C I T A L S

WHEREAS, Customer desires to have access to the Kinexus proteomics database KiNET; and

WHEREAS, Kinexus desires to provide KiNET to the Customer subject to the terms and conditions of this Agreement;

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 Customer agree as follows:

1. DEFINITIONS

- 1.1 “Authorized Site” means any academic, non-profit research institute, government agency, or corporate office and sites meeting the criteria for use from which the Customer will access and use KiNET, further set forth in Exhibit A.
- 1.1 “Authorized User” shall mean any employee of Customer listed in Exhibit A.
- 1.1 “End User” means an individual scientist who is working for or with a commercial organization of any kind (“Corporate End User”), or a self-contained unit within a University or public or government research institution performing non-commercial research and development activities (“Academic End User”).
- 1.1 “KiNET” shall mean a unique, copyright-protected extensive gathering of information, technical data, know-how and/or content that is proprietary to Kinexus and the rendition of such into usable forms and formats and other components as provided by Kinexus, including software and database tools.
- 1.1 “Database Tools” shall mean Kinexus proprietary tools or any third-party product licensed to Kinexus which enables Kinexus to provide access of KiNET to Customer.
- 1.1 “Internal Purposes” means use by Customer, or research and development activities in collaboration with commercial or non-commercial Third Party entities, provided that in the case of a of a collaboration with a third- party commercial entity, said commercial entity is licensed to access KiNET.

- 1.1 “Licensed Marks” means those trademarks, trade names and/or service marks owned by Kinexus and associated with the subject matter of this Agreement, Such marks include but at not limited to Kinexus, KiNET, Kinetworks and Kinex.
- 1.1 “Third Party” means any person or entity other than Customer, Authorized User(s) or Kinexus.

1. LIMITED LICENSE GRANT

Subject to the terms and conditions of this Agreement, Kinexus hereby grants Customer a limited, revocable, non-exclusive, non-transferable, non-sub licensable license to access and use KiNET and any applicable KiNET Database tools required for such access and use, solely for internal purposes only by itself and Authorized User(s). Access to KiNET shall be via the Internet and exclude any download of KiNET by the Customer. Such access and use shall begin on _____, 2007 and end on _____, 2008 (*“Subscription term”*) for a period of twelve months. After the initial term, the contract will be automatically extended for another 12-month period unless notified otherwise. The contract can be terminated by either party with a minimum of a 1 month notice prior to the expiration of the 12-month term.

3. DELIVERY AND CONTRACT TERM

The Customer shall receive online access to KiNET upon receipt of payment in full along with completion of this Agreement and registration on-line at www.kinexus.ca/kinet (or any other site as may be changed from time to time). KiNET is regarded as being delivered when the fax or email has been released by Kinexus to the Customer and the successful transmission is confirmed by the fax or email sending report. Kinexus retains the right to change passwords on a regular or emergency basis. The Customer will be notified in the event the password requires modification.

4. RESTRICTION ON USE

- 4.1 Kinexus retains all rights, titles, and interest to KiNET.
- 4.2 The Customer shall not at any time:
- 4.2.1 Sell, reproduce, disclose or otherwise make KiNET available to any Third Party, in whole or in part and in any form (electronic, magnetic, optical, paper or otherwise), without the express prior written consent of Kinexus.
 - 4.2.1 Use or permit the use, in whole or in part, of KiNET as a basis or a component of a database for a Third Party.
 - 4.2.1 Transfer, have transferred, or permit to be transferred, manually or electronically, in whole or in part, KiNET without the express prior written consent of Kinexus.
 - 4.2.1 Use KiNET on behalf of any Third Parties.
 - 4.2.1 Use KiNET for any purpose not contemplated by the terms of this Agreement.
- 4.2 Automatic or manual download, copying or reproduction of KiNET in whole or in part, is expressly prohibited.
- 4.2 Passwords are assigned to Authorized Users only and are not to be given to anyone else. An Authorized User may use the password to access KiNET from another location such as from home or when travelling, provided they advise Kinexus of the reason and change in their IP address.
- 4.2 Customer specifically acknowledges and agrees that each of the terms and conditions of this Section 4 are material and failure of Customer to comply with these terms and conditions shall constitute sufficient cause for Kinexus to terminate this Agreement immediately upon written notice.

- 4.2 Feedback. Customer agrees to provide feedback regarding the use of KiNET to the Kinexus Sales & Marketing staff by direct contact or by email at sales@kinexus.ca from time to time.

4. FEES

- 4.1 Kinexus will invoice Customer and the Customer shall pay a license fee for the initial term as a lump sum payment in the amount described on the KiNET Service Order Form. The fee for KiNET for a single academic user is US \$998 and for a single corporate user is US \$1996 and is non-refundable once access has been granted. To obtain a discount or promotion off the regular fees for KiNET, including discounts for multiple users, the KiNET Service Order form must reference an official quotation. Customer agrees that the fees set forth in the quotation shall be considered confidential information.
- 4.1 The fee for KiNET shall be due upon receipt of the invoice and includes all updates to the database as made from time to time. Kinexus is entitled to revise the amount of the license fee for respective extension periods, and will issue the invoice for the extension period 1 month prior to the expiry of the current 12 month terms. The amount is due upon receipt of invoice. If the Customer does not wish to subsequently renew their License Agreement, they can terminate the Agreement with notice to Kinexus prior to the expiration date set forth in Section 2, and their access to KiNET will terminate on same expiration date.

4. DISCLAIMER OF WARRANTY

KiNET IS PROVIDED “AS IS” AND WITHOUT WARRANTY OF ANY KIND. KINEXUS DOES NOT WARRANT, GUARANTEE OR MAKE ANY REPRESENTATIONS REGARDING THE USE OF THE RESULTS OF KINET OR ANY ACCOMPANYING MATERIALS IN TERMS OF THE COMPLETENESS, CURRENTNESS OR ACCURACY OF ANY INFORMATION CONTAINED THEREIN, OR THAT THE USE OF KINET OR ANY MATERIALS WILL MEET INSTITUTION’S NEEDS OR THAT USE WILL BE UNINTERRUPTED OR ERROR FREE. KINEXUS DISCLAIMS ANY AND ALL WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT.

4. LIMITATION OF LIABILITY

IN NO EVENT WILL KINEXUS OR ITS DIRECTORS, OFFICERS, EMPLOYEES, OR AFFILIATES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES (INCLUDING DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, AND THE LIKE) ARISING OUT OF THE USE OR THE INABILITY TO USE KINET, EVEN IF INSTITUTION OR AN AUTHORIZED REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. KINEXUS’ ENTIRE LIABILITY TO INSTITUTION AND INSTITUTION’S EXCLUSIVE REMEDY REGARDING THIS AGREEMENT SHALL BE LIMITED TO ONE DOLLAR (\$1.00).

4. COPYRIGHT: TRADEMARK LICENSE

- 8.1 Ownership. Customer acknowledges that Kinexus owns all rights, title and interest, including patent, copyright, trade secret, trade name, trademark and other proprietary rights, in and to KiNET, and any corrections, bug fixes, enhancements, updates or other modifications, including custom modifications, to KiNET, whether made by Kinexus or any other Third Party.

- 8.1 Security. Customer shall take such precautions and observe such procedures necessary to protect the security of KiNET. In doing so, Customer shall exercise at least the same level of care as exercised for its confidential and proprietary material, and in no event less than a reasonable standard of care.
- 8.1 Publications. Subject to Sections 8.5, Customer agrees to provide acknowledgement in any presentation or publication which reports research activities that used KiNET in whole or in part, such acknowledgment to include citation to the original source used via KiNET and an acknowledgment to Kinexus.
- 8.1 Websites. Subject to Sections 8.5, Customer agrees to provide acknowledgement and notice in any website which reports research activities that used KiNET or reports any data extracted or developed from KiNET acknowledging the database used and Kinexus.
- 8.1 Trademark License Grant Subject to the terms and conditions herein, Kinexus hereby grants Customer for the term of this Agreement a revocable, non-transferable, non-assignable, non-sub licensable, non-exclusive and royalty-free license to use the license marks solely for and in connection with the acknowledgment and notice requirements set forth in Sections 8.3 and 8.4 above.
- 8.1 Compliance. Customer shall cause the appropriate designation “TM” or the registration symbol “[®]” to be placed adjacent to the License Marks in connection with the use thereof and to indicate such additional information as Licensor shall reasonably specify from time to time concerning the licenses rights under which Customer uses the Licensed Marks. Customer shall place the appropriate notice on all printed or electronic materials on which the Licensed Marks are trademarks and/or service marks of Kinexus.

9. TERMINATION

- 9.1 The license granted in Section 2 shall automatically be renewed at the conclusion of the access term unless terminated earlier by Kinexus or terminated by Customer as provided herein.
- 9.2 In the event that Kinexus reasonably believes in its sole discretion that Customer has breached the provisions of this Agreement, Kinexus may immediately suspend the license granted in section 2; such suspension shall be followed promptly with written notice to Customer vial email, facsimile, standard or overnight mail to the address provided herein. If Customer, within such thirty (30) day period, demonstrates to Kinexus’ reasonable satisfaction that no breach existed or that such breach has been rectified, then Kinexus will reinstate the license granted in Section 2 immediately upon such determination. However, if Customer, within thirty (30) days of such written notice, fails to demonstrate in writing either that there was no breach or that such breach has been rectified to Kinexus’ reasonable satisfaction, Kinexus may terminate this Agreement and all licenses granted hereunder immediately without any further notice.
- 9.3 Kinexus may terminate this Agreement with or without cause upon two (2) months written notice to Customer, or in the event of a material breach by Customer, upon thirty (30) days written notice to Customer.
- 9.4 In the event of termination by the Customer, no pro-rated fees are refundable for the remaining period of the subscription.
- 9.5 Upon termination or expiration of this Agreement, the licenses granted hereunder shall terminate immediately. Section 1, 4, 6, 7, 8, 9 and 10 shall survive termination or expiration of the Agreement.

10. GENERAL PROVISIONS

- 10.1 Severability. If any term or condition is found by a court or administrative agency to be invalid or unenforceable, the remaining terms and conditions shall remain in full force and effect and shall be enforceable to the maximum extent permitted by law.
- 10.2 Governing Law; Consent to Personal Jurisdiction. This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia, without regard to the conflicts of law principles thereof. Customer hereby expressly consents to the personal jurisdiction of the state and federal courts of British Columbia for any lawsuit or action filed there against Customer by KiNET arising from or relating to this Agreement.
- 10.3 Injunctive Relief. A breach by the Customer of any proprietary rights of the provisions of this Agreement may cause Kinexus irreparable damage, for which the award of damages would not be adequate compensation. Consequently, Kinexus may institute an action to enjoin the breaching party from any and all acts in violation of those provisions, which remedy will be cumulative and exclusive, and Kinexus may seek the entry of any injunction enjoining any breach or threatened breach of those provisions, in addition to any other relief to which Kinexus may be entitled at law or in equity.
- 10.4 Indemnity. Customer shall defend, indemnify and hold Kinexus harmless from and against any and all losses, liabilities, damages, demands, suits and related costs and expenses that Kinexus may incur or suffer arising out of, resulting from or related to any breach of the Agreement by Customer or its agent, or any act or omission or failure of Customer or its agent to perform any of the representations, warranties or agreements contained herein.
- 10.5 Successors and Assigns. This Agreement shall be binding upon and for the benefit of Customer's successors and assigns, provided, however, that this Agreement may not be assigned by Customer without the prior written consent of Kinexus.
- 10.6 Entire Agreement. This Agreement constitutes the entire understanding of the parties with respect to the matters referred to herein and supersedes all prior negotiations, commitments and understandings with respect thereto. No variation or modification of the Agreement or waiver of any terms or provisions hereof shall be deemed valid unless in writing and signed by authorized representatives of both parties.

11. EXECUTION

By signing this Agreement, the Customer certifies they are an Authorized End User according to the aforementioned definition and that they accept this License Agreement in full. Kinexus' willingness to license access of KiNET to Customer is expressly conditional on acceptance of all terms in this 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: _____

Title: _____

Date signed: _____

KINEXUS BIOINFORMATICS CORPORATION

Per: _____
Signature of Dr. Steven Pelech

Dr. Steven Pelech

President and Chief Scientific Officer

Date signed: _____



EXHIBIT A

AUTHORIZED SITE FOR SINGLE END USER

Name of institution: _____

Department: _____

Address: _____

Customer:

Name: _____

Address: _____

Phone: _____

Fax: _____

E-mail: _____

Stable IP addresses *: _____

** To find out your IP address, go to the following site: **<http://whatismyipaddress.com/>***

KiNET User Guide

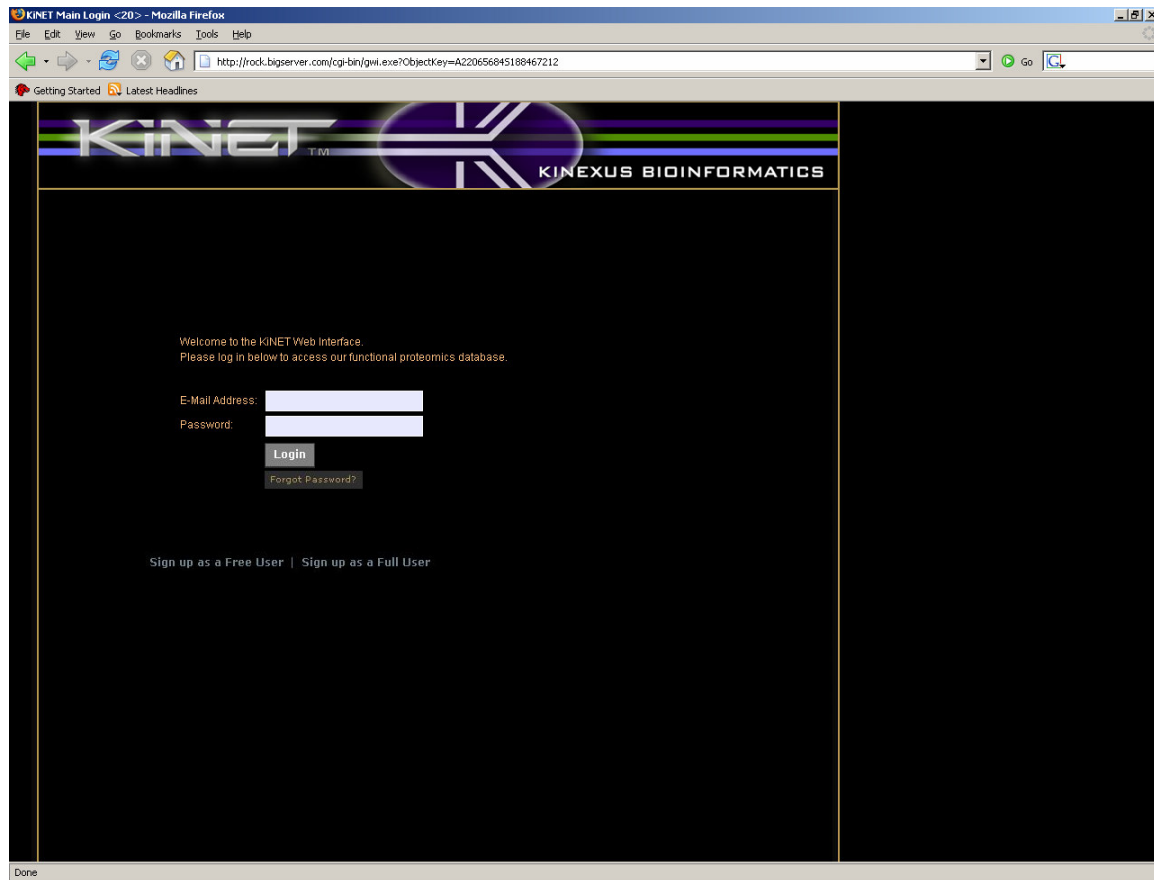


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Application Overview

The KiNET application allows both paid and free subscribers easy access to the experimental data from KiNETWORKS screens. Users can not only view this data in traditional reports; they can also analyze and compare the data to discover new relationships using the large collection of proteomic data.

KiNET currently has 2 basic user types; the free (restricted) user, and the full (paid) user. The free user has access to the entire functional application, but can only see a limited set of data. This set of data is usually limited to a single organism, and possibly only control data for the various treatments. The full user can see the entire functional application as well as all of the available data. Subscriptions are generally purchased on an annual basis.

Homepage

After logging into the application the users see the KiNET homepage. The workspace is a point of entry to all main areas of the application. The Home, Logout, Contact us, FAQ and Help buttons will also appear on each page. Users can navigate to the five main areas of the Kinexus data: Protein Target, Protein Comparison, Treatment, Model System, Kinetworks Screen and Order. There are also two others buttons: one to link to the future PhosphoNET application and the other leading to the “Change password” area.

The homepage will also display the current Kinetworks statistics (number of Protein Measurements, Protein Bands, Treatments, Immunoblots, Samples and Orders).

KiNET T.M. **KINEXUS BIOINFORMATICS**

[HOME](#) [LOGOUT](#) [DEFINITIONS](#) [FAQ](#) [HELP](#)

Search by

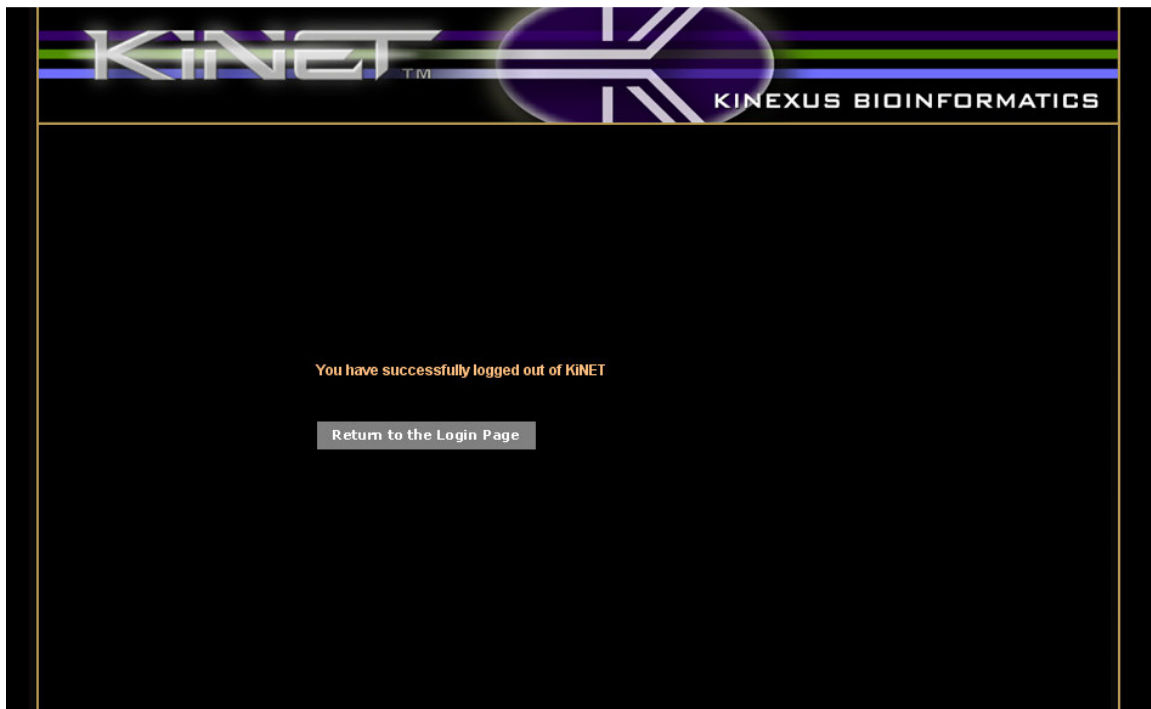
PROTEIN TARGET	Welcome to your KiNET workspace, Bob Smith	
PROTEIN COMPARISON	Search data, perform analysis, and generate reports using the navigation buttons.	
TREATMENT	KiNET Statistics	
MODEL SYSTEM	Number of Protein Measurements:	59972
KINETWORKS™ SCREEN	Number of Protein Bands:	1401
ORDER NUMBER	Number of Treatments:	877
PhosphoNET	Number of Immunoblots:	2855
	Number of Samples:	2814
	Number of Orders:	400
Change Password		

Home

This button that appears on every page of the application allows the user currently logged in to go back to the entry point of the site at any time.

Logout

This button helps the users log out of KiNET and ends their session in the application. By using that button the users end up on the page shown below. If the user wishes to login in again, click the button that will return them to the login page (seen on the cover of this manual).



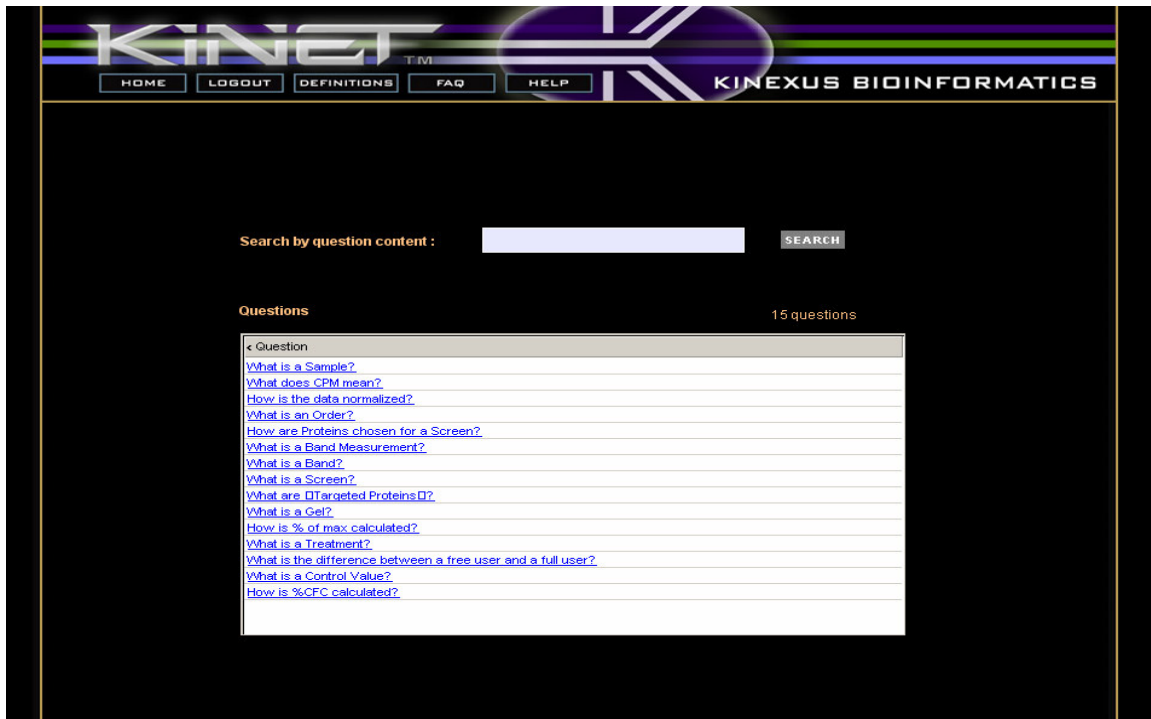
Contact us

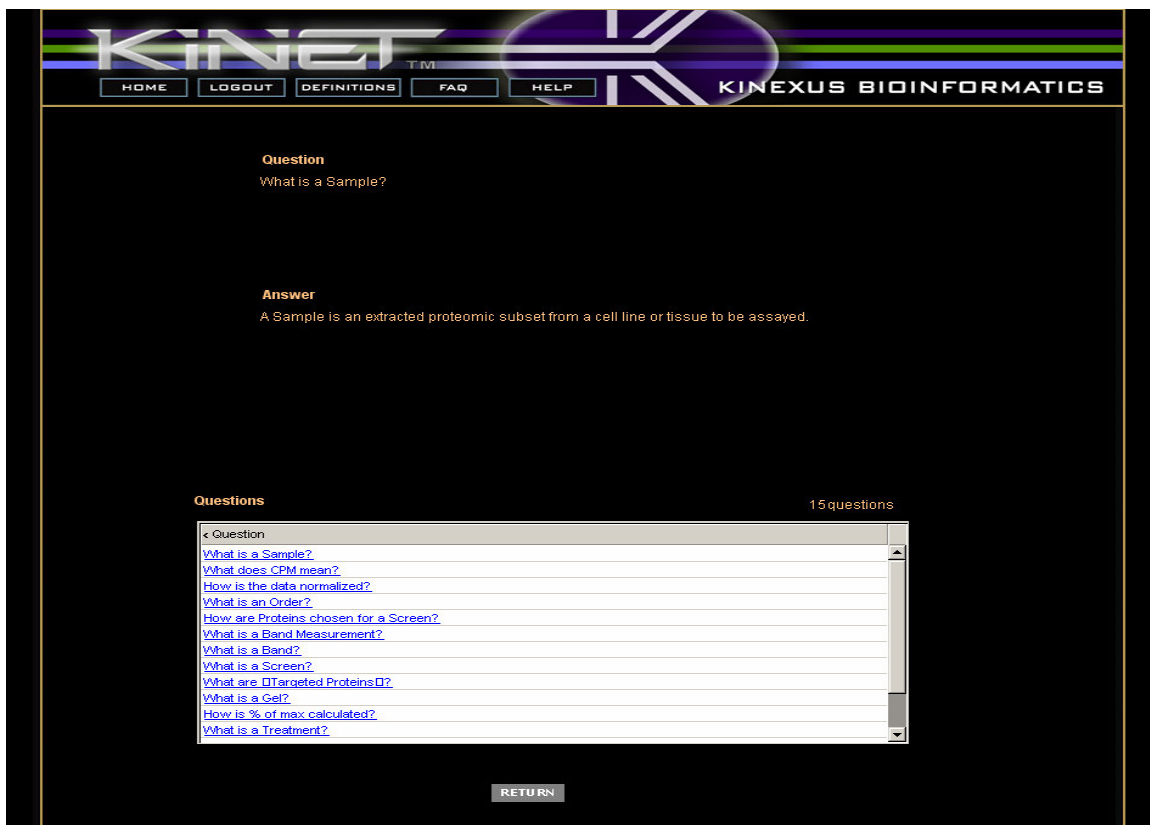
This button allows the users to email Kinexus for information about KiNET. It opens the email software installed on the computer being used and set the email to be sent. Currently the email goes to info@kinexus.ca and has the subject “Information request or suggestion for KiNET”.

FAQ

By using the FAQ button, the users bring up the 'Frequently Asked Questions' page as shown below. The input field at the left of the search button, allow them to enter any term they are looking for in the list of FAQs. The search brings back in the report below all the questions that contains the term that was searched for.

To view the answer to any question, the user should click on the question in the report. It will lead them to a new page showing the question, its answer and under them a report with all the FAQs. The return button on the page brings them back to the FAQ search page.



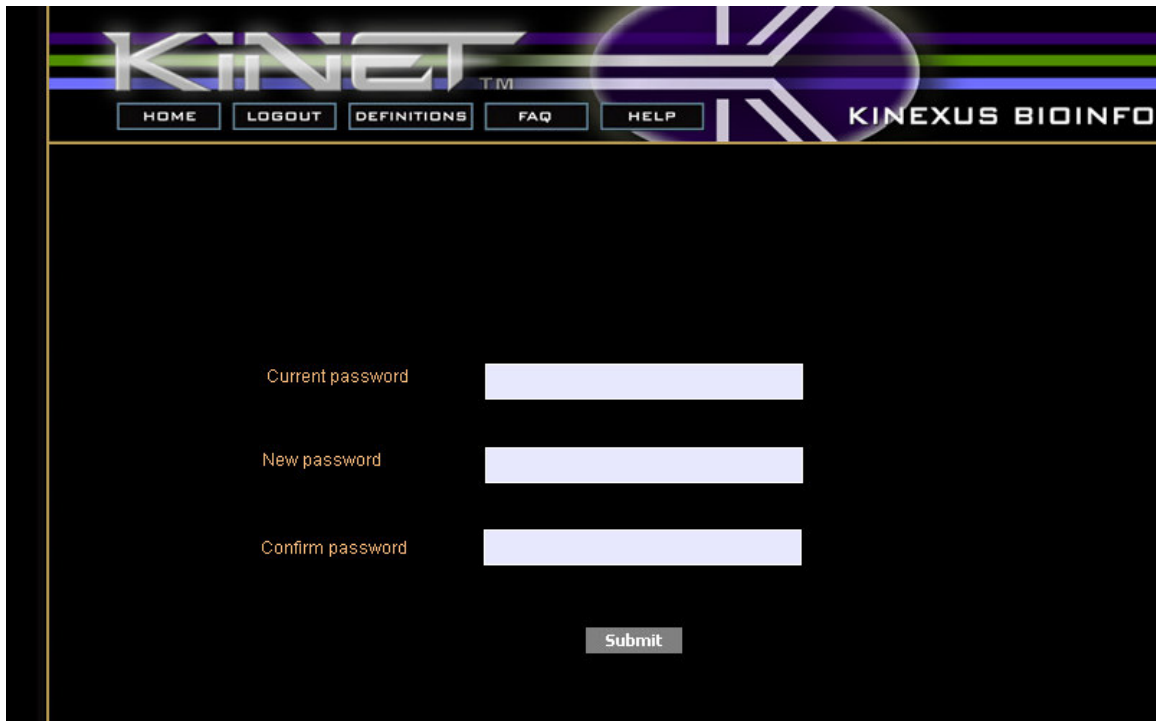


Help

The Help button provides an access to this user documentation. When users hits this button, a new browser window opens with the .pdf file of the user documentation loaded in it. Viewing of this will require the users PC to have Acrobat Reader installed.

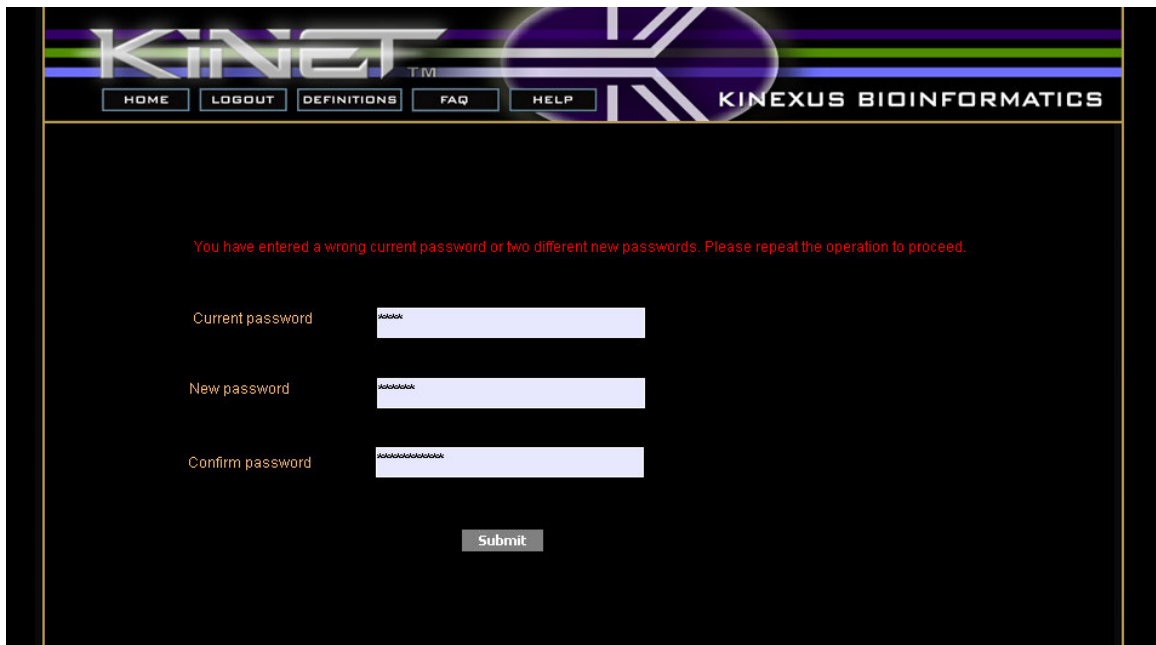
Change password

This is the area where a user can change his/her password. This button is only available from the user's homepage. When the users click that button, they are taken to a page where they are asked to enter their current password and their new password twice.



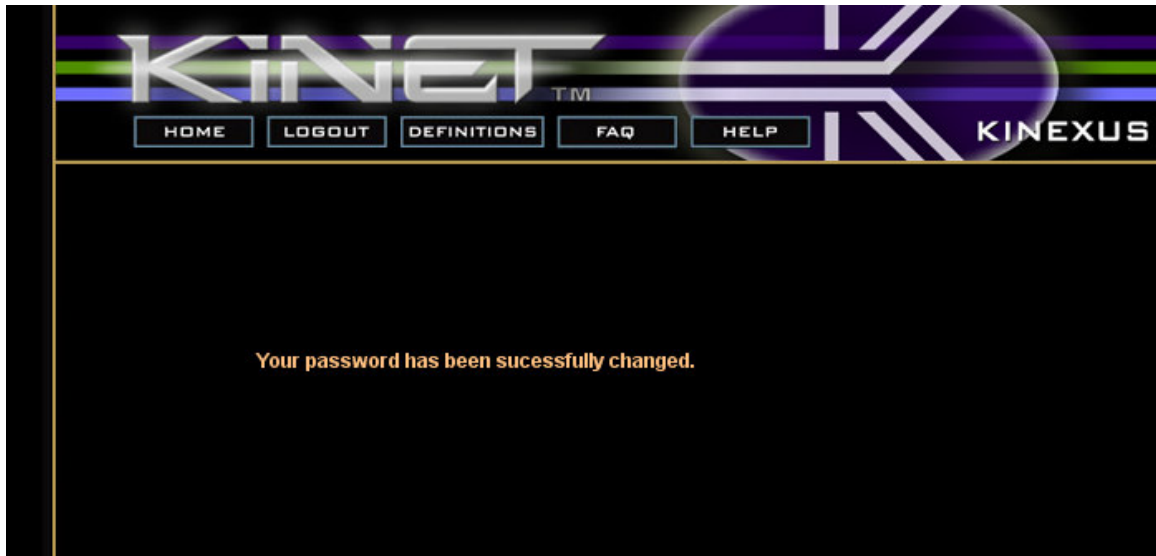
The image shows a web interface for KiNET. At the top, there is a header with the KiNET logo and a navigation bar containing links for HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. To the right of the navigation bar is the text KINEXUS BIOINFO. Below the header, the main content area is dark blue. It contains three input fields for password change: 'Current password', 'New password', and 'Confirm password'. Each field is represented by a light blue rectangular box. Below these fields is a 'Submit' button.

If they enter a wrong current password or two different new passwords or fail to fill one of the three input fields, they end up on a page where they are asked to re-enter the information.



The image shows the same web interface as the first image, but with an error message displayed in red text above the input fields: 'You have entered a wrong current password or two different new passwords. Please repeat the operation to proceed.' The input fields for 'Current password', 'New password', and 'Confirm password' are now filled with asterisks, indicating that the passwords have been masked. The 'Submit' button remains at the bottom.

If the inputs are correct a page telling the users that their passwords have been changed will appear. From there they can go back to the homepage and continue using KiNET.



Protein Target

Here users can browse a list of all the proteins (bands) represented in the application, along with their basic annotation. This page also includes an input field to search by protein (band name) and a drop down menu to search by screen. Selecting a protein from the list will display the protein profile for that protein. Selecting Locus, MIM or Refseq in the table will open a new browser window to the appropriate web page. The different columns of the report are sortable; by clicking on the column header the users will sort its contents. This is true for most reports within KiNET.

Report column headers: Protein, Abbreviation, Phospho-Epitope, Predicted Molecular Mass (kDa), Kinetworks Screen, Locus, MIM, Refseq.

The screenshot displays the KiNET Protein Search interface. At the top, the KiNET logo is visible alongside navigation links: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. The KINEXUS BIOINFORMATICS logo is also present. The search section includes a 'Protein Search' tab, a 'Protein Name' input field containing 'rsk', and a 'SEARCH' button. Below this, a 'Kinetworks Screen' dropdown menu is shown. The search results are displayed in a table with 5 columns: Protein, Abbreviation, Phospho-Epitope, Predicted Molecular Mass (kDa), and Kinetworks Screen. The table lists various ribosomal S6 protein-kinase complexes and their associated kinases (RSK1, RSK2) with their respective phosphorylation sites and predicted molecular masses. The results are sorted by predicted molecular mass, showing values of 90 kDa and 90 kDa. The table also includes links to Locus, MIM, and Refseq for each entry.

Protein	Abbreviation	Phospho-Epitope	Predicted Molecular Mass (kDa)	Kinetworks Screen
90 kDa Ribosomal S6 Kinases (S380/S386)			90	KCPK
90 kDa Ribosomal S6 Kinases (S381)			90	KCPK
Ribosomal S6 kinase 1 (90)		T360/S364	90	KPSK
Ribosomal S6 protein-serine kinase 1 (77)	RSK1 (77)			KPKK
Ribosomal S6 protein-serine kinase 1 (78)	RSK1 (78)			KPKK
Ribosomal S6 protein-serine kinase 1 (81)	RSK1 (81)			KPKK
Ribosomal S6 protein-serine kinase 1 (81)	RSK1 (81)			KPKK
Ribosomal S6 protein-serine kinase 1 (84)	RSK1 (84)			KPKK
Ribosomal S6 protein-serine kinase 1 (84)	RSK1 (84)			KCPK
Ribosomal S6 protein-serine kinase 1 (T359/S363)	RSK1	T359/S363		KPSK
Ribosomal S6 protein-serine kinase 1/2 (S380/S386)	RSK1/2	S380/S386		KPSK
Ribosomal S6 protein-serine kinase 1/2 (T573/T577)	RSK1/2	T573/T577		KPSK
Ribosomal S6 protein-serine kinase 1/2/3 (S380/S386/S377) (7)	RSK1/2/3 (79)	S380/S386/S377		KPSK
Ribosomal S6 protein-serine kinase 1/2/3 (T573/T577/T570) (7)	RSK1/2/3 (79)	T573/T577/T570		KPSK
Ribosomal S6 protein-serine kinase 1/3 (T359+S363/T356+S363)	RSK1/3 (79)	T359+S363/T356+S363		KPSK
Ribosomal S6 protein-serine kinase 2 (73)	RSK2 (73)			KPKK
Ribosomal S6 protein-serine kinase 2 (73)	RSK2 (73)			KPKK
Ribosomal S6 protein-serine kinase 2 (78)	RSK2 (78)			KPKK
Ribosomal S6 protein-serine kinase 2 (86)	RSK2 (86)			KPKK

Protein Profile

This page allows the users to view all the samples that a particular protein has been measured on for a given screen.

The users can refine this list by selecting from Species, Sex, Organ, Tissue/Cell, Cell Line, Kinexus ID, Order Number, Control, Disease, Treatment, Duration, Concentration, and Primary Cells. Users can click on the Kinexus ID in the report to be taken to the sample details page.

As well, at the bottom of the page there are some basic statistics. The first row is for all measurements for that protein shown in the above report. The second row is for all measurements for that protein for this screen.

Report column headers: Kinexus ID, Control CPM, Normalized CPM(Treatment CPM), %CFC, % of Max, Species, Sex, Organ, Tissue/Cell, Primary Cells, Cell Line, Control, Disease, Treatment, Sample Details.

KINEXUS BIOINFORMATICS

HOME LOGOUT DEFINITIONS FAQ HELP

Search by Protein Name: **Ribosomal S6 protein-serine kinase 2 (86)**

PROTEIN TARGET Phospho-Site: Kinexus ID:

PROTEIN PROFILE Kinetworks Screen: **KPKS-1.2** Order Number: Exclude values below this

PROTEIN DETAILS Species: Control: Normalized CPM:

PROTEIN COMPARISON Sex: Disease:

TREATMENT Organ: Treatment:

MODEL SYSTEM Tissue / Cell: Duration: **SEARCH**

KINETWORKS™ SCREEN Concentration:

ORDER NUMBER Cell Line: Primary Cells: **34 Results**

PhosphoNET

Kinexus ID	Control CPM	Normalized CPM	%CFC	% of Max	Species	Sex	Organ	Tissue/Cell
3814	418	418	0%	20%	rat	male	epididymis	initial segment
3816	418	406	-3%	19%	rat	male	epididymis	initial segment
4083	629	258	-59%	12%	rat	male	adrenal gland	
4084	629	624	-1%	30%	rat	male	adrenal gland	
4085	629	357	-43%	17%	rat	male	adrenal gland	
4086	629	629	0%	30%	rat	male	adrenal gland	
4133	2,096	2,096	0%	100%	rat	mixed or n	brain	cerebellum
4134	2,096	1,792	-15%	86%	rat	mixed or n	brain	cerebellum
4135	2,096	1,904	-9%	91%	rat	mixed or n	brain	cerebellum
4352	238	120	-50%	6%	rat	male	epididymis	initial segment
4355	238	232	-3%	11%	rat	male	epididymis	initial segment
4358	238	238	0%	11%	rat	male	epididymis	initial segment
4361	238	211	-11%	10%	rat	male	epididymis	initial segment
4364	238	115	-52%	5%	rat	male	epididymis	initial segment
4367	238	168	-29%	8%	rat	male	epididymis	initial segment

Statistics for the ABOVE

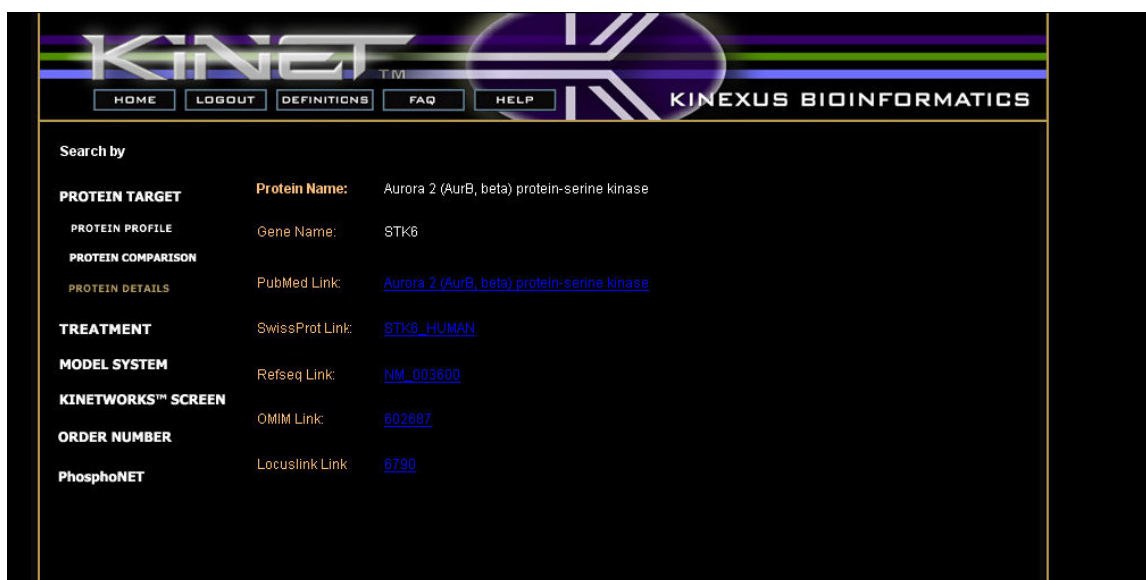
# of measurements	Average Normalized CPM	p-Value	Standard Deviation	Coefficient of Variance	Max Value
34	733	0.38894	547	0.75	2,096

Statistics for ALL Measurements

# of Measurements	Average Normalized CPM	p-Value	Standard Deviation	Coefficient of Variance	Max Value
34	733	0.38894	547	0.75	2,096

Proteins Details

It provides basic information on the proteins measured and has hyperlinks to Pubmed, Swissprot, Refseq, OMIM and LocusLink. The appropriate database name will not appear hyperlinked if the Protein does not have the required information.



The screenshot shows the KINET website interface. At the top, there is a navigation bar with links: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. The main content area is titled "Search by" and displays a table of protein details for "Aurora 2 (AurB, beta) protein-serine kinase".

Search by	Protein Name:	Aurora 2 (AurB, beta) protein-serine kinase
PROTEIN TARGET	Gene Name:	STK6
PROTEIN PROFILE	PubMed Link:	Aurora 2 (AurB, beta) protein-serine kinase
PROTEIN COMPARISON	SwissProt Link:	STK6_HUMAN
PROTEIN DETAILS	Refseq Link:	NM_003600
TREATMENT	OMIM Link:	602687
MODEL SYSTEM	Locuslink Link:	6790
KINETWORKS™ SCREEN		
ORDER NUMBER		
PhosphoNET		

Protein Comparison



This page allows the users to perform a pairwise comparison of protein measured on a same screen. The search brings back details of the samples where the 2 proteins appear.

On this page the users must first select a screen to compare, then the drop-down boxes for Protein #1 and Protein #2 are filled with the proteins from that screen. The users can then pick one protein in each drop-down box and compare them. They can also narrow down the results using the combo-boxes on the right.

As part of the results, the users see the value of the Pearson correlation coefficient computed from the values of the %CFC for the 2 proteins on each sample. As part of the computation of the correlation coefficient a max value has been set and that value is used in the calculation whenever the %CFC is greater than that max value. It helps correct the impact of very high %CFC values on the overall calculation (this is usually the result of a very

small control value). The max value is set by the data administrator and that value appears in the input field below the correlation coefficient value.

Report column headers: Kinexus ID, Protein #1 %CFC, Protein #2 %CFC, Species, Sex, Organ, Tissue, Primary Cells, Cell Line, Control, Disease, Treatment, Sample Details, Kinetworks Screen.

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Search by
PROTEIN TARGET
PROTEIN COMPARISON
TREATMENT
MODEL SYSTEM
KINETWORKS™ SCREEN
ORDER NUMBER
PhosphoNET

Protein Search
Kinetworks Screen
Protein #1
Protein #2

Number of Results : 94
Correlation Coefficient : -0.06477
Max Value used for Correlation Coefficient : 5000%

Sample Filter Search
Species
Sex
Organ
Tissue
Primary Cells
Cell Line
Control
Disease
Treatment
Treatment Conc.
Treatment Duration

< Kinexus ID	< Protein #1 %CFC	< Protein #2 %CFC	< Species	< Sex	< Organ	< Tissue	< Primary Cells	< Cell Line
3197	29%	4%	mouse	mixed or not	blood	bone marrow		FDCP-1 myeloi
3198	-29%	-4%	mouse	mixed or not	blood	bone marrow		FDCP-1 myeloi
3328	0%	0%	mouse	mixed or not	blood			WEHI231 lymph
3329	-77%	-68%	mouse	mixed or not	blood			WEHI231 lymph
3330	-84%	-83%	mouse	mixed or not	blood			WEHI231 lymph
3336	0%	-100%	human	mixed or not	blood		neutrophil	
3337	-54%	-100%	human	mixed or not	blood		neutrophil	
3342	0%	0%	mouse	mixed or not	blood	bone marrow		FDCP-1 myeloi
3343	5%	29%	mouse	mixed or not	blood	bone marrow		FDCP-1 myeloi
3374	0%	0%	rat	mixed or not	liver			
3375	-19%	36%	rat	mixed or not	liver			
3376			rat	mixed or not	kidney			
3507	0%	0%	rat	mixed or not	liver			H4IIE hepatom
3508	-16%	-26%	rat	mixed or not	liver			H4IIE hepatom
3556	0%	0%	mouse	mixed or not	bone			HC3T3-1b ostr
3564	-47%	-13%	mouse	mixed or not	bone			HC3T3-1b ostr
3579	0%	-100%	human	male	blood			Jurkat T lymph
3594	0%	-100%	human	male	blood			Jurkat T lymph
3602	0%	-100%	human	mixed or not	brain			

Treatment

This page allows the users to search through KiNET to find what treatments have been applied to samples. The users can search by Treatment Name, Treatment Concentration and Treatment Duration. The users can then see how many samples are in the system with any given treatment.

Report Column headers: Name, Concentration, Duration, Number of Samples treated, Number of Samples available to "Free" Users.

The screenshot shows the KiNET web interface. At the top, there's a navigation bar with links: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. The main header reads "KINET T.M. KINEXUS BIOINFORMATICS". Below this, a search section titled "Treatment Search" has three input fields: "Treatment Name" (containing "na"), "Treatment Concentration", and "Treatment Duration". A "SEARCH" button is to the right. On the left, a sidebar lists search categories: "Search by", "PROTEIN TARGET", "PROTEIN COMPARISON", "TREATMENT", "MODEL SYSTEM", "KINETWORKS™ SCREEN", "ORDER NUMBER", and "PhosphoNET". The main content area displays a table of 140 treatments. The table has five columns: Name, Concentration, Duration, Number of Sample, and Number of Samples available to "Free" Users. The table lists various treatments such as "1. extracellular regulated kinase-1 [Erk1, p44 MAP kinase] siR", "1. inhibitor of NF-kappa B kinase kinase alpha [IKK-alpha] -/-", "1. LY294002 (PI 3-kinase inhibitor)", "1. LY294003 (PI 3-kinase inhibitor)", "1. p53 dominant-negative mutant stable expression", "1. pcDNA3.1 empty vector transfection", "1. pcDNA3.1+ empty vector transfection", "1. pcDNA3.1+ with LEDGFp75 transfection", "1. protein kinase B [PKB, Akt] E40K (constitutively active) over", "1. protein kinase B [PKB, Akt] wild-type", "1. protein kinase C-epsilon [PKC-epsilon] over-expression", "1. Raf1 protein kinase stable transfection", "1. sodium chloride [NaCl, salt]", "1. Verteporfin photodynamic therapy", "1. wortmannin (PI 3-kinase inhibitor) pretreatment", "1279 siRNA + anti-b1 + fibroblast growth factor 2 [FGF2]", "1L-6-Hydroxymethyl-chiro-inositol 2-(R)-2-O-methyl-3-O-octa", "2. 2,3-dimethoxy-1-naphthoquinone [DMNQ]", "2. dimethyl varacin [DMV] (MAP kinase phosphatase inhibitor)", "2. G418 (neomycin analogue) (antibiotic)", "2. geldanamycin (HSP90 inhibitor)", "2. herpes simplex virus 1 [HSV1] (UV-inactivated)", "2. Iressa [gefitinib, ZD1839] (epidermal growth factor [EGF] re", "2. minocycline [Dvacin, Minocin] (antibiotic)", "2. SU11274 (Met receptor-tyrosine kinase inhibitor)", "2. wortmannin (PI 3-kinase inhibitor)", "2. wortmannin (PI 3-kinase inhibitor) pretreatment", "3. wortmannin (PI 3-kinase inhibitor)", "5-lipoxygenase inhibitor [MK886] + zVAD FMK (caspase inhi", "5-lipoxygenase inhibitor [MK886] + zVAD FMK (caspase inhi".

Name	Concentration	Duration	Number of Sample	Number of Samples available to "Free" Users
1. extracellular regulated kinase-1 [Erk1, p44 MAP kinase] siR	-	-	1	0
1. inhibitor of NF-kappa B kinase kinase alpha [IKK-alpha] -/-	-	-	3	0
1. inhibitor of NF-kappa B kinase kinase-alpha [IKK-alpha] +/-	-	-	1	0
1. LY294002 (PI 3-kinase inhibitor)	10 uM	30 min	2	0
1. LY294003 (PI 3-kinase inhibitor)	50 uM	3 hr	2	0
1. p53 dominant-negative mutant stable expression	-	-	8	0
1. pcDNA3.1 empty vector transfection	-	-	1	0
1. pcDNA3.1+ empty vector transfection	-	-	1	0
1. pcDNA3.1+ with LEDGFp75 transfection	-	-	1	0
1. protein kinase B [PKB, Akt] E40K (constitutively active) over	-	-	12	0
1. protein kinase B [PKB, Akt] wild-type	-	-	12	6
1. protein kinase C-epsilon [PKC-epsilon] over-expression	-	-	1	0
1. Raf1 protein kinase stable transfection	-	-	5	0
1. sodium chloride [NaCl, salt]	8.0%	3 weeks	2	0
1. Verteporfin photodynamic therapy	-	-	2	0
1. wortmannin (PI 3-kinase inhibitor) pretreatment	-	30 min	6	0
1279 siRNA + anti-b1 + fibroblast growth factor 2 [FGF2]	1 uM (FGF2)	15 min	2	0
1L-6-Hydroxymethyl-chiro-inositol 2-(R)-2-O-methyl-3-O-octa	20 uM	2 hr	1	0
2. 2,3-dimethoxy-1-naphthoquinone [DMNQ]	46 uM	30 min	1	0
2. dimethyl varacin [DMV] (MAP kinase phosphatase inhibitor)	5 uM	2 hr	4	0
2. G418 (neomycin analogue) (antibiotic)	290 nM	3 days	2	0
2. geldanamycin (HSP90 inhibitor)	1 mg/kg body weight	2 weeks	1	0
2. herpes simplex virus 1 [HSV1] (UV-inactivated)	5 M.O.I.	30 min	1	0
2. Iressa [gefitinib, ZD1839] (epidermal growth factor [EGF] re	1 uM	20 hr	6	0
2. minocycline [Dvacin, Minocin] (antibiotic)	50 mg/kg	2X daily, 2 days	1	0
2. SU11274 (Met receptor-tyrosine kinase inhibitor)	5 uM	1 day	1	0
2. wortmannin (PI 3-kinase inhibitor)	100 nM	45 min	3	0
2. wortmannin (PI 3-kinase inhibitor) pretreatment	-	30 min	6	0
3. wortmannin (PI 3-kinase inhibitor)	100 nM	45 min	3	0
5-lipoxygenase inhibitor [MK886] + zVAD FMK (caspase inhi	40 uM + 50 uM40 uM + 50 uM	15 hr	1	0
5-lipoxygenase inhibitor [MK886] + zVAD FMK (caspase inhi	40 uM + 50 uM	10 hr	3	0

Treatment Details

This page lists the samples in the system for the selected treatment.

Report Column headers: Kinexus ID, Species, Sex, Organ, Tissue, Primary Cells, Cell Line, Disease, Treatment, Sample Details, Kinetworks Screen.

KINET T.M. KINEXUS BIOINFORMATICS

HOME LOGOUT DEFINITIONS FAQ HELP

Search by

PROTEIN TARGET

PROTEIN COMPARISON

TREATMENT **Sample Information for the Treatment:**

TREATMENT DETAILS siRNA (control, water) for 4 days

MODEL SYSTEM

KINETWORKS™ SCREEN

ORDER NUMBER



PhosphoNET 4 Samples

← Kinexus ID	← Species	← Sex	← Organ	← Tissue	← Primary Cells	← Cell Line	← Disease
5191	human	female	cervix	epithelium		HeLa adenocarcinor	cervical car
5194	human	female	cervix	epithelium		HeLa adenocarcinor	cervical car
5529	human	female	cervix	epithelium		HeLa adenocarcinor	cervical car
5532	human	female	cervix	epithelium		HeLa adenocarcinor	cervical car

Model System

This page displays a search for model systems (samples) and some basic information on each. The users can also search for a sample by annotation elements using a series of input fields. Selecting a sample will display its details.

Report column headers: Kinexus ID, Species, Sex, Organ, Tissue, Primary Cells, Cell Line, Control, Disease, Treatment, Cell State / Fractionation, Sample Details, Kinetworks Screen.

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Search by

Species

Kinexus ID

PROTEIN TARGET

Sex

Order Number

PROTEIN COMPARISON

Organ

blood

Kinetworks Screen

TREATMENT

Tissue

Control

MODEL SYSTEM

Primary Cells

Disease

KINETWORKS™ SCREEN

Cell Line

Cell Fractionation

Treatment

Cell State

ORDER NUMBER

SEARCH



PhosphoNET

296 Results

Sample Details

This page displays all the detailed information about a particular Kinetworks sample as well as a report of all proteins measured from that sample. You can also filter down the results in this report by entering a CPM value and hitting the search button. Selecting a protein from the report list will display the protein profile page.

Report column headers: Full name of Protein, Phospho-Epitope, Control CPM, Normalized. CPM (Treatment CPM), DFC (Difference from Control), %CFC (Percent Change from Control), Max all (all tested species), Max (same species).

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Search by
Species: human
 Kinexus ID: 3681

PROTEIN TARGET
Sex: mixed or not specified
 Order Number: 609

PROTEIN COMPARISON
Organ: blood
 Kinetworks Screen: KPSS-1.3

TREATMENT
Tissue:

MODEL SYSTEM
Primary Cells:
Disease: leukemia

SAMPLE DETAILS
Cell Line: MM6 monoblastic

SAMPLE COMPARISON
Control: FALSE

KINETWORKS™ SCREEN
Cell State: Subconfluent, Proliferating

ORDER NUMBER
Cell Fractionation: DetergentSolubilizedTotalLysate



PhosphoNET
Norm. CPM values between **and** **SEARCH**
31 Results

< Full name of Protein	< Phospho-Epitope	< Control CPM	< Norm. CPM	< %CFC	< DFC	< Max (all test
Adducin alpha (ADD1) [S726]	S726	6,444	7,439	15%	995	87,536
Adducin gamma (ADD3) [S693]	S693	3,193	3,568	12%	375	18,944
cAMP response element binding protein 1 [S133]	S133	831	1,210	46%	379	7,470
Cyclin-dependent protein-serine kinase 1/2 (Cdc2) [Y15] (24)	Y15	8,618	7,228	-16%	-1,390	14,993
Double-stranded RNA-dependent protein-serine kinase [T451] (65)	T451	712	768	8%	56	23,906
Extracellular regulated protein-serine kinase 1 [T202/Y204]	T202/Y204	1,666	2,148	29%	482	27,176
Extracellular regulated protein-serine kinase 2 [T185/Y187]	T185/Y187	960	1,479	54%	519	29,506
Glycogen synthase-serine kinase 3 alpha [S21]	S21	1,030	825	-20%	-205	22,707
Glycogen synthase-serine kinase 3 alpha [Y279] (44)	Y279	5,183	3,974	-23%	-1,209	29,844
Glycogen synthase-serine kinase 3 beta [S9]	S9	239	275	15%	36	14,746
Glycogen synthase-serine kinase 3 beta [Y216] (34)	Y216	2,736	2,876	5%	140	27,896
Jun N-terminus protein-serine kinase (Stress-activated protein kinase) [T183/Y185]	T183/Y185	611	1,012	66%	401	44,756
MAPK/ERK protein-serine kinase 1/2 (MKK1/2) [S217/S221]	S217/S221	1,281	1,302	2%	21	16,430
Mitogen & stress-activated protein-serine kinase 1 [S376] (66)	S376	332	315	-5%	-17	3,122
Mitogen & stress-activated protein-serine kinase 1 [S376] (74)	S376	972	1,036	7%	64	11,165
Mitogen-activated protein-serine kinase p38 alpha [T180/Y182] (36)	T180/Y182	3,516	5,224	49%	1,708	14,348
N-methyl-D-aspartate glutamate receptor subunit 1 [S896]	S896	1,555	1,026	-34%	-529	19,264
p70 ribosomal protein-serine S6 kinase alpha [T389]	T389	611	514	-16%	-97	9,388
p85 ribosomal protein-serine S6 kinase 2 [T412]	T412	1,197	1,271	6%	74	54,868
Protein-serine kinase B alpha (Akt1) [S473]	S473	1,084	852	-21%	-232	42,075
Protein-serine kinase B alpha (Akt1) [T308]	T308	278	267	-4%	-11	8,062
Protein-serine kinase C alpha [S657]	S657	7,294	7,585	4%	291	48,510

Sample Comparison

This page allows the users to view information about the sample that was selected and make quantitative comparisons to other samples from the same screen within the same order or across all orders. The users can then select a sample from one of two lists; samples from the same order as the sample selected (from the same screen), or from a list of samples from all orders (from the same screen). The sample chosen to compare will populate the report table with its CPM and other comparative values. Selecting a protein from the list will display its protein profile.

Report column headers: Full Name of Protein, Phospho-Epitope, Max (all tested species), Sample No.1 Control Norm. cpm, Sample No.1 Selected Norm. cpm, %CFC for Sample #1, % of Max for Sample #1 Selected, Sample No.2 Selected Norm. cpm, %CFC for Sample No.2, % of Max for Sample No.2 Selected.

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Search by

Kinexus ID: 2261

Sample No.2 to Compare

Kinexus ID: 2262

PROTEIN TARGET

Organ: eye

From Same Order

Organ: eye

PROTEIN COMPARISON

Tissue: cornea

From All Orders

Tissue: cornea

TREATMENT

Cell:

Cell:

MODEL SYSTEM

Treatment:

Order No.: 346

Treatment:

SAMPLE DETAILS

Order No.: 346

SAMPLE COMPARISON

KINETWORKS™ SCREEN

Kinetworks Screen: KPSS-1.1

Kinetworks Screen: KPSS-1.1

ORDER NUMBER

Control: TRUE

Control: FALSE

PhosphoNET

43 Results

Full name of Protein	Phospho-Epitope	Max (all tested species)	Sample No.1 Control Norm. cpm	Sample No.1 Treatment Norm. cpm
Adducin alpha (ADD1) [S726]	S726	25,679	2,069	2,069
Adducin gamma (ADD3) [S693]	S693	9,899	904	904
B23 (Nucleophosmin) [S4]	S4	0	0	0
cAMP response element binding protein 1 [S133]	S133	21,910	1,759	1,759
Cyclin-dependent protein-serine kinase 1/2 (Cdc2) [Y15]	Y15	15,344	0	0
Double-stranded RNA-dependent protein-serine kinase [T451]	T451	29,968	4,888	4,888
Extracellular regulated protein-serine kinase 1 [T202]	T202/Y204	32,213	1,527	1,527
Extracellular regulated protein-serine kinase 2 [T185]	T185/Y187	29,813	3,036	3,036
Glycogen synthase-serine kinase 3 alpha [S21]	S21	7,727	117	117
Glycogen synthase-serine kinase 3 alpha [Y279] [4]	Y279	27,608	1,987	1,987
Glycogen synthase-serine kinase 3 alpha [Y279] [4]	Y279	0	0	0
Glycogen synthase-serine kinase 3 beta [S9]	S9	8,497	0	0
Glycogen synthase-serine kinase 3 beta [Y216] [34]	Y216	0	0	0
Glycogen synthase-serine kinase 3 beta [Y216] [35]	Y216	34,123	4,901	4,901
Jun N-terminus protein-serine kinase (Stress-activated) [T183/Y185]	T183/Y185	12,725	268	268
Jun N-terminus protein-serine kinase (Stress-activated) [T183/Y185]	T183/Y185	5,902	268	268
Jun-c transcription factor [S73] [39]	S73	10,328	652	652
MAP kinase kinase 3/6 (MKK3/6) [S189/S207]	S189/S207	7,782	125	125
MAP kinase kinase 6 (MKK6) [S207]	S207	1,532	261	261
MAPK/ERK protein-serine kinase 1/2 (MKK1/2) [S21]	S217/S221	35,310	266	266
Mitogen & stress-activated protein-serine kinase 1 [S376]	S376	3,188	0	0
Mitogen & stress-activated protein-serine kinase 1 [S376]	S376	4,464	190	190

Kinetworks Screen

The Kinetworks Screen page displays a list of all screens along with their type, description, number of Proteins generally measured on that screen and number of Samples in the application that have used that Screen. Users can also search screens by name and/or type. Screens in the list are hyperlinked and selecting a screen will open the Screen Details form.

Report column headers: Screen Name, Screen Type, Description, Proteins and Samples.

The screenshot shows the Kinetworks Screen page. At the top, there is a navigation bar with links: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. The page title is KINEXUS BIOINFORMATICS. Below the navigation bar, there is a search section with the following options:

- PROTEIN TARGET**: Screen Name
- PROTEIN COMPARISON**: Screen Type
- TREATMENT**
- MODEL SYSTEM**
- KINETWORKS™ SCREEN**
- ORDER NUMBER**
- PhosphoNET**



A **SEARCH** button is located to the right of the search fields. Below the search section, the results are displayed as a table with 25 results. The table has the following columns: Screen Name, Screen Type, Description, Proteins, and Samples.

Screen Name	Screen Type	Description	Proteins	Samples
KAPS-1.0	Non-Phosphospecific	Kinetworks Apoptosis Screen	31	113
KCCP-1.0	Non-Phosphospecific	Kinetworks Cell Cycle Screen	31	86
KCP-1.0	Phospho/non-phosphospecific	Kinetworks Custom Screen	325	316
KHSP-1.0	Non-Phosphospecific	Kinetworks Stress/Heat Shock Protein Screen	27	33
KPKS-1.0	Non-Phosphospecific	Kinetworks Protein Kinase Screen	82	0
KPKS-1.2	Non-Phosphospecific	Kinetworks Protein Kinase Screen	104	340
KPPS-1.1	Non-Phosphospecific	Kinetworks Phosphatase Screen	30	35
KPPS-1.2	Non-Phosphospecific	Kinetworks Phosphatase Screen	31	40
KPPS-1.1	Phosphospecific	Kinetworks PhosphoSite Screen	38	0
KPPS-1.2	Phosphospecific	Kinetworks PhosphoSite Screen	39	0
KPPS-1.3	Phosphospecific	Kinetworks PhosphoSite Screen	41	380
KPPS-10.0	Phosphospecific	Kinetworks PhosphoSite Screen	41	0
KPPS-11.0	Phosphospecific	Kinetworks PhosphoSite Screen	31	0
KPPS-12.0	Phosphospecific	Kinetworks PhosphoSite Screen	28	0
KPPS-2.0	Phosphospecific	Kinetworks PhosphoSite Screen	42	115
KPPS-2.1	Phosphospecific	Kinetworks PhosphoSite Screen	40	220
KPPS-3.0	Phosphospecific	Kinetworks PhosphoSite Screen	42	64
KPPS-3.1	Phosphospecific	Kinetworks PhosphoSite Screen	41	82
KPPS-4.0	Phosphospecific	Kinetworks PhosphoSite Screen	46	166
KPPS-4.1	Phosphospecific	Kinetworks PhosphoSite Screen	43	277
KPPS-5.0	Phosphospecific	Kinetworks PhosphoSite Screen	35	194
KPPS-6.0	Phosphospecific	Kinetworks PhosphoSite Screen	35	57
KPPS-7.0	Phosphospecific	Kinetworks PhosphoSite Screen	41	0
KPPS-8.0	Phosphospecific	Kinetworks PhosphoSite Screen	61	0
KPPS-9.0	Phosphospecific	Kinetworks PhosphoSite Screen	63	0

Screen Details

This page displays a list of all the samples that have been run on this screen. This is the default page once a screen is selected. Selecting a sample will display the appropriate Sample Details page. The number of results can be narrowed down using the available choices in the drop-down boxes.

Report column headers: Kinexus ID, Species, Sex, Organ, Tissue, Primary Cells, Cell Line, Control, Disease, Treatment, Sample Details.

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Search by

PROTEIN TARGET

PROTEIN COMPARISON

TREATMENT

MODEL SYSTEM

KINETWORKS™ SCREEN

SCREEN DETAILS

PATHWAYS

GO TERMS

PROTEIN LIST

ORDER NUMBER

PhosphoNET

Screen Name: KCCP-1.0

Screen Type: Non-Phosphospecific

Description: Kinetworks Cell Cycle Screen

SEARCH

Species

Organ

Tissue

Sex

Control

Disease

Primary Cells

Cell Line

Treatment

86 Results

Kinexus ID	Species	Sex	Organ	Tissue	Primary Cells	Cell Line	Control
3744	mouse	mixed or		embryonic inner cell m		ES-J1 embryonic stem	TRUE
3745	mouse	mixed or		embryonic inner cell m		ES-J1 embryonic stem	FALSE
3746	mouse	mixed or		embryonic inner cell m		ES-J1 embryonic stem	FALSE
3892	human	mixed or	colon	epithelium			TRUE
3893	human	mixed or	colon	epithelium			FALSE
3894	human	mixed or	colon	epithelium			FALSE
4054	human	mixed or					TRUE
4055	human	mixed or					FALSE
4058	human	mixed or					FALSE
4059	human	mixed or					FALSE
4428	mouse	female	brain	cerebellum			FALSE
4429	mouse	female	brain	cerebellum			FALSE
4430	mouse	female	brain	cerebellum			TRUE
4431	mouse	female	brain	cerebellum			FALSE
4432	mouse	male	brain	cerebellum			FALSE
4439	human	male	colon	epithelium		DLD1 adenocarcinoma	TRUE
4440	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE
4441	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE
4442	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE
4443	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE
4444	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE
4445	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE
4446	human	male	colon	epithelium		DLD1 adenocarcinoma	FALSE

Pathways

The Pathways page displays 2 lists: metabolic and signalling pathways. Each is a list of the pathways that have proteins detected on the screen in context.

By clicking on a pathway the users will open a new window that will display the appropriate BioCarta or KEGG page.

Report column header: Pathway name.

The screenshot displays the KINET web application interface. At the top, there is a header with the KINET logo and navigation buttons: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. Below the header, a search bar is present. The main content area is divided into two columns. The left column contains a sidebar with the following menu items: PROTEIN TARGET, PROTEIN COMPARISON, TREATMENT, MODEL SYSTEM, KINETWORKS™ SCREEN, SCREEN DETAILS, PATHWAYS, GO TERMS, PROTEIN LIST, ORDER NUMBER, and PhosphoNET. The right column displays the results for the selected screen, KCCP-1.0. It shows two lists of pathways: 29 Signalling Pathways for the proteins on this screen and 15 Metabolic Pathways for the proteins on this screen. Each list is followed by a scrollable box containing a list of pathway names with hyperlinks. The signalling pathways list includes: Apoptotic Signaling in Response to DNA Damage, ATM Signaling Pathway, Bioactive Peptide Induced Signaling Pathway, cdc25 and chk1 Regulatory Pathway in response to DNA damage, Cell Cycle: G1/S Check Point, Cell Cycle: G2/M Checkpoint, Cyclin E Destruction Pathway, Cyclins and Cell Cycle Regulation, Double Stranded RNA Induced Gene Expression, E2F1 Destruction Pathway, Effects of calcineurin in Keratinocyte Differentiation, FAS signaling pathway (CD95), FOSB gene expression and drug abuse, Human Cytomegalovirus and Map Kinase Pathways, Inactivation of Gsk3 by AKT causes accumulation of b-catenin in Alveolar Macrophages, and Influence of Rac and Rho proteins on G1 to S Transition. The metabolic pathways list includes: Benzoate degradation via coa ligation, Circadian rhythm, Circadian rhythm, Dorso-ventral axis formation, Glycerolipid metabolism, Inositol phosphate metabolism, Nicotinate and nicotinamide metabolism, Phosphatidylinositol signaling system, Phospholipid degradation, Porphyrin and chlorophyll metabolism, Prostaglandin and leukotriene metabolism, Sphingoglycolipid metabolism, and Starch and sucrose metabolism.

GO Terms

This page would allow the users to select a Gene Ontology category (biological process, cellular component, molecular function) which creates a list of GO terms that are associated with proteins from the screen in context. This page is still under construction and will be available in a future version of KINET.

Protein List

The Protein list is a report of all proteins involved on the screen in context. Selecting a protein from the list will display its protein profile.

Report column headers: Full Name, Abbreviation, Phospho-Epitope, Predicted Molecular Mass (kDa), Locus, MIM, Refseq, Measurements.

By clicking respectively on Locus, MIM and Refseq for any protein, the users can see in a new window the information for that protein from respectively Entrez Gene, OMIM and Entrez Protein.

KINET KINEXUS BIOINFORMATICS

HOME LOGOUT DEFINITIONS FAQ HELP

Search by

PROTEIN TARGET Screen: KCCP-1.0 31 Proteins

PROTEIN COMPARISON

TREATMENT

MODEL SYSTEM

KINETWORKS™ SCREEN

SCREEN DETAILS

PATHWAYS

GO TERMS

PROTEIN LIST

ORDER NUMBER

PhosphoNET

Full Name	Abbreviation
14-3-3 protein zeta (cross-reacts with other isoforms) (22)	14-3-3???, 14-3-
14-3-3 protein zeta (cross-reacts with other isoforms) (24)	14-3-3???, 14-3-
CDK5 regulatory subunit 1, p35	p35, p25
Cell division cycle 25B phosphatase	Cdc25B
Cell division cycle 25C phosphatase	Cdc25C
Cell division cycle 34 (ubiquitin-conjugating ligase)	Cdc34
Checkpoint protein-serine kinase 1	Chk1
Checkpoint protein-serine kinase 2	Chk2
Cyclin A1	Cyclin A
Cyclin B1	Cyclin B1
Cyclin D1 (PRAD1)	Cyclin D1
Cyclin E1	Cyclin E
Cyclin G1	Cyclin G1
Cyclin-dependent kinase inhibitor 1 (MDA6)	p21
Cyclin-dependent protein-serine kinase 1 (Cdc2)	Cdk1 [T14/Y15], C1
Cyclin-dependent protein-serine kinase 2	CDK2
Cyclin-dependent protein-serine kinase 4	CDK4
Cyclin-dependent protein-serine kinase 5	CDK5
Cyclin-dependent protein-serine kinase 6	CDK6
Cyclin-dependent protein-serine kinase 7	CDK7
Cyclin-dependent protein-serine kinase 9	CDK9
Cyclin-dependent kinase associated phosphatase (CDK inhibitor 3, CIP2)	KAP, KAP (C-18)
DNA-activated protein-serine kinase	DNA-PK, DNAPK
NIMA (never-in-mitosis)-related protein-serine kinase 2	Nek2
p27 cyclin-dependent kinase inhibitor 1B	p27
Polo-like protein-serine kinase 1	Plk-1, Plk1
Proliferating cell nuclear antigen	PCNA
Retinoblastoma-associated protein 1	Rb, Rb [T821], Rb [
Truncated form of p35, the CDK5 regulatory subunit 1	p35, p25
Tumor suppressor protein p53 (antigenNY-CO-13)	p53 [S392], p53
Wee1 protein-tyrosine kinase	Wee1

Order Number

This page allows the users to select an order by its number and to navigate through its details. Orders are samples that have been grouped together usually because they are biologically relevant to each other. Also listed are the number of samples and normalization groups each order has. The users may also search by order number. Selecting an order will display the summary report for that order.

Report column headers: Order, No of Samples, Norm. Groups, No of Control Samples, Screens.

The screenshot displays the KINET KINEXUS BIOINFORMATICS web interface. At the top, there is a navigation bar with links: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. Below this, a search bar is visible with the text "Search by" and "Order Search". The search criteria are "PROTEIN TARGET" and "Order Number" with the value "7" entered. A "SEARCH" button is present. The results show "100 Results".

On the left side, there is a sidebar with the following categories:

- PROTEIN COMPARISON
- TREATMENT
- MODEL SYSTEM
- KINETWORKS™ SCREEN
- ORDER NUMBER
- PhosphoNET

The main content area displays a table with the following columns:

Order	No. of Samples	Norm. Groups	No. Of Control Samples	Screens
700	4	2	2	KPCS-1.0, KPSS-1.3
701	3	1	1	KPSS-2.0
702	4	1	1	KPSS-5.0
703	2	2	1	KPKS-1.2
704	3	0	1	
705	8	2	5	KPSS-5.0, KPSS-4.0
706	2	1	1	KPSS-4.0
707	8	2	3	KPSS-3.0
708	9	1	3	KAPS-1.0
709	4	1	1	KPSS-5.0
710	6	1	1	KPCS-1.0
711	21	4	3	KPKS-1.2, KPSS-1.1, KPSS-1.3
712	6	1	1	KPSS-5.0
713	4	2	2	KPSS-1.1, KPSS-2.0
714	8	1	2	KPSS-4.0
715	3	2	1	KPKS-1.2
716	2	1	1	KPSS-4.0
717	4	1	2	KPSS-1.3
718	4	1	1	KPSS-4.0
719	2	1	2	KPSS-2.0
720	2	1	1	KPSS-3.0
721	3	1	1	KPKS-1.2
722	6	3	3	KPSS-5.0, KPSS-2.0, KPSS-4.0
723	2	1	1	KPSS-1.3
724	2	1	1	KPSS-3.0
725	5	1	1	KCCP-1.0
726	6	2	2	KPSS-2.0, KAPS-1.0
727	18	2	2	KCCP-1.0
728	6	2	2	KPSS-1.3
729	4	1	1	KAPS-1.0
730	3	2	1	KPKS-1.2
731	5	2	1	KPKS-1.2
732	5	2	2	KPCS-1.0
733	10	1	1	KPSS-1.3
734	12	2	2	KCCP-1.0

Summary Report

The summary report is a qualitative list of gel type, screen, sample, and treatment information for a given order. Selecting an entry from the list will display its sample details. Please note that free users may often see no results in this report as there is no information visible to them for that Order.

Report column headers: Kinexus ID, Species, Sex, Organ, Tissue, Primary Cells, Cell Line, Control, Disease, Treatment, Sample Details, Screen, Normalization Group.

The screenshot displays the KINET KINEXUS BIOINFORMATICS web interface. At the top, there is a navigation bar with links: HOME, LOGOUT, DEFINITIONS, FAQ, and HELP. Below this, a search bar is present. The main content area shows a summary report for Order 711, with 28 results. The report is organized into a table with the following columns: Kinexus ID, Species, Sex, Organ, Tissue, Primary Cells, and Cell Line. The table lists 28 entries, all of which are for rat, male, epididymis, initial segment. The left sidebar contains a list of report types: PROTEIN TARGET, PROTEIN COMPARISON, TREATMENT, MODEL SYSTEM, KINETWORKS™ SCREEN, ORDER NUMBER, SUMMARY REPORT (highlighted), COMPARISON REPORT, and PhosphoNET.

Kinexus ID	Species	Sex	Organ	Tissue	Primary Cells	Cell Line
4351	rat	male	epididymis	initial segment		
4352	rat	male	epididymis	initial segment		
4352	rat	male	epididymis	initial segment		
4353	rat	male	epididymis	initial segment		
4354	rat	male	epididymis	initial segment		
4355	rat	male	epididymis	initial segment		
4355	rat	male	epididymis	initial segment		
4356	rat	male	epididymis	initial segment		
4356	rat	male	epididymis	initial segment		
4357	rat	male	epididymis	initial segment		
4358	rat	male	epididymis	initial segment		
4358	rat	male	epididymis	initial segment		
4359	rat	male	epididymis	initial segment		
4360	rat	male	epididymis	initial segment		
4361	rat	male	epididymis	initial segment		
4361	rat	male	epididymis	initial segment		
4362	rat	male	epididymis	initial segment		
4363	rat	male	epididymis	initial segment		
4364	rat	male	epididymis	initial segment		
4364	rat	male	epididymis	initial segment		
4365	rat	male	epididymis	initial segment		
4366	rat	male	epididymis	initial segment		
4367	rat	male	epididymis	initial segment		
4367	rat	male	epididymis	initial segment		
4368	rat	male	epididymis	initial segment		
4369	rat	male	epididymis	initial segment		
4370	rat	male	epididymis	initial segment		
4370	rat	male	epididymis	initial segment		
4371	rat	male	epididymis	initial segment		

Comparison Report

The comparison report is a quantitative list of protein measurements for the order in context. The users can select the normalization group within the order from a drop down menu which will populate the columns with the control and sample values in counts per minute (CPM) for each protein. Next to each sample value is a %CFC (Percent Change From Control) which is simply the control value subtracted from the treatment value, divided by the control value. Generally, the control sample will appear as the first column. Selecting a protein from the list will display its protein profile. *Report column headers: Full name of Protein, Phospho-Epitope, CPM 1, %CFC 1, CPM 2, %CFC 2, CPM 3, %CFC 3, CPM 4, %CFC 4, CPM 5, %CFC 5.*

KINET KINEXUS BIOINFORMATICS

HOME LOGOUT DEFINITIONS FAQ HELP

Search by

Order: 711

Screen of Selected Group: KPXS-1.2

PROTEIN TARGET NORMALIZATION GROUP 2 SEARCH

TREATMENT 1 2 3 4 5

MODEL SYSTEM Kinexus ID 4358 4355 4364 4367 4352

KINETWORKS™ SCREEN

Full name of Protein	Phospho-Epitope	CPM 1	%CFC 1	CPM 2	%CFC 2	CPM 3	%CFC 3	CPM 4	%CFC 4	CPM 5	%CFC 5
Bone marrow X protein-tyrosine kinase		247	0%	312	26%	167	-32%	123	-50%	360	
Calcium/calmodulin-dependent protein		129	0%	138	7%	88	-32%	122	-5%	134	
Calmodulin-dependent protein-serine		960	0%	984	3%	1,128	18%	1,251	30%	1,158	
Calmodulin-dependent protein-serine		81	0%	112	38%	52	-36%	93	15%	92	
cAMP-dependent protein-serine kinase		219	0%	95	-57%	247	13%	290	32%	206	
Casein protein-serine kinase 1 epsilon		104	0%	96	-8%	100	-4%	88	-15%	115	
Death associated protein kinase 1 (1)		222	0%	477	115%	575	159%	403	82%	365	
Extracellular regulated protein-serine		310	0%	274	-12%	277	-11%	231	-25%	346	
Focal adhesion protein-tyrosine kinase		1,794	0%	2,712	51%	3,507	95%	2,481	38%	3,450	
G protein-coupled receptor-serine kinase		1,408	0%	2,177	55%	2,077	48%	1,463	4%	2,370	
Inhibitor of NF-kappa-B protein-serine		568	0%	1,408	148%	939	65%	923	63%	1,240	
Janus protein-tyrosine kinase 1		342	0%	395	15%	1,201	251%	1,117	227%	801	
Janus protein-tyrosine kinase 2		716	0%	550	-23%	646	-10%	495	-31%	1,057	
Protein-serine kinase G1 (cGMP-dep)		3,239	0%	4,103	27%	3,458	7%	2,258	-30%	4,849	
Raf1 proto-oncogene-encoded protein		1,296	0%	1,337	3%	1,508	16%	963	-26%	1,186	
Raf1 proto-oncogene-encoded protein		6,135	0%	5,500	-10%	5,559	-9%	6,206	1%	5,523	
Src proto-oncogene-encoded protein		57	0%	56	-2%	82	44%	92	61%	91	
Yes-related protein-tyrosine kinase		189	0%	291	54%	167	-12%	262	39%	208	

ORDER NUMBER

SUMMARY REPORT

COMPARISON REPORT

PhosphoNET

PhosphoNET

PhosphoNET is currently under construction and will be available at a future date.