

SABIO-RK Documentation

(December 2022)

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Search

The screenshot shows the SABIO-RK search interface. At the top, there is a navigation bar with links for Home, Search, Curation, Web Services, News, Documentation, Evaluation, Statistics, Links, and About. The main search area has a text input field with 'gluc' entered. Below the input field, two suggestions are shown: 'glucose' with 5813 results and 'glucitol' with 327 results. A red arrow points to the search input field. To the right, there is a 'Filter Options' panel with various checkboxes and input fields for refining the search results.

The **Search** field offers free text search. The complete word (no fragments) inserted in this field will be searched in the entire database's content, including comments.

The auto completion function makes suggestions and indicates how many results (entries) are in the database for the distinct search terms. Queries can be modified by using the following syntax in the **Search** field:

Search	Result
rattus liver	entries containing both terms <i>rattus</i> and <i>liver</i>
rattus AND liver	

Search	Result
(rattus OR liver)	entries containing either the term <i>rattus</i> or <i>liver</i>
(rattus OR human) AND liver	entries containing the term <i>liver</i> and either <i>rattus</i> or <i>human</i>
"homo sapiens"	entries containing both terms <i>homo</i> and <i>sapiens</i> in the exact order
ratt* *kinase	wildcard search for more than one character entries containing terms starting with <i>ratt</i> (e.g. <i>Rattus norvegicus</i>) or ending with <i>kinase</i> (e.g. <i>Hexokinase</i>)
"mammalia (NCBI)" NOT "homo sapiens" "liver (BTO)"	entries for all organisms of class <i>mammalia</i> (based on NCBI taxonomy) but not for <i>homo sapiens</i> entries for tissue <i>liver</i> including all tissue sub-parts and cell lines (based on BRENDA Tissue Ontology)
Substrate:ATP	entries with reactions containing substrate <i>ATP</i> similar queries for specific attributes can be defined by using all other database attributes (see Advanced Search)
Substrate:ATP AND Substrate:Pyruvate Substrate:(ATP AND Pyruvate)	entries with reactions containing both <i>ATP</i> and <i>Pyruvate</i> as substrates
ECNumber:1.* ECNumber: 1.3.1.?	All entries containing EC numbers starting with 1. wildcard search for exactly one character Entries containig EC numbers 1.3.1.1 to 1.3.1.9
Year:[2000 TO 2021]	entries with publication years between 1990 and 2012 (see also Advanced Search)

More specific queries can additionally be defined by the **Advanced Search**.

Advanced Search

To restrict search terms to specific attributes also the **Advanced Search** can be used. First an attribute from the list must be selected. Then while typing terms a selection list with suggestions will appear containing the number of database entries related to them. Select a term from the list and click the **Add & Search** button to start the search.

Wildcard search is not possible for the Advanced Search, the exact search term is needed.

Searches with different terms for the same attribute is possible using the OR boolean operator.

For the specific attributes *Tissue* and *Organism* an ontology-based search can be defined by selecting terms with additional information (*BTO*) or (*NCBI*). By selecting BTO terms the search will include all subclasses of this term based on the BRENDA Tissue Ontology (<https://bioportal.bioontology.org/ontologies/BTO>) By selecting NCBI terms the search will include all subclasses of this term based on the NCBI Organism Taxonomy (<https://www.ncbi.nlm.nih.gov/taxonomy>).

Time periods of publications in attribute *Year* can be defined:

>1990	entries with publication years from 1990 until today
<1990	entries with publication years up to 1990

Filter Options

Queries can be specified additionally by setting different filters using the **Filter Options** box.

There are filters for the **Enzyme** (i.e. protein). By default all entries containing wildtype or mutant proteins are displayed. By disabling one of these criteria only **Wildtype** or only **Mutant** data will be displayed. Selecting **Recombinant** will restrict the search output to entries resulting from experiments conducted with recombinantly expressed proteins.

Selecting the **Rate Equation** filter will display only data entries with a kinetic rate equation. Accordingly, selecting the **Transport Reaction** filter will restrict the search result to transport reactions.

Environmental conditions (**pH** value, **Temperature**) can be specified by moving the slider buttons to select a range. Filtering by temperature and pH values will exclude all entries from search without definition of those values (value = null).

Additionally, the source of the data (**Direct Submission**, **Publication**, or **BioModel** (Model upload via SBML)) and the time of data insertion can be used to restrict the search.

Search Result

Entry View

The search result is represented by default in the Entry View, which is a table containing overview information of the database entries sorted by SABIO EntryID. The content of the table columns can be re-sorted by clicking on the column headers.

The number of entries per page can be varied.

Entry View | Reaction View | Bar Chart Search | Visual Search

Total number of kinetic law entries found: **5415** expand all displayed entries

Previous 1 .. 12 13 14 15 16 **17** 18 19 20 21 .. 361 Next

display 15 entries per page

Kinetic data	Reaction	Enzyme			Tissue	Organism	Parameter (besides concentration)	Cond.		Add to export cart?
		ECNumber	Protein	Variant				°C	pH	
▶	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	Q4E657	wildtype	epimastigote	Trypanosoma cruzi	Km Vmax	23.0	7.5	<input type="checkbox"/>
▶	2-Phospho-D-glycerate = H2O + Phosphoenolpyruvate	4.2.1.11	P00924 P00925	wildtype	-	Saccharomyces cerevisiae	Ki	25.0	7.5	<input type="checkbox"/>
▶	2-Phospho-D-glycerate = H2O + Phosphoenolpyruvate	4.2.1.11	P00925 P00924	wildtype	-	Saccharomyces cerevisiae	Ki	25.0	7.5	<input type="checkbox"/>
▶	2-Phospho-D-glycerate = H2O + Phosphoenolpyruvate	4.2.1.11	P00924 P00925	wildtype	-	Saccharomyces cerevisiae	Ki	25.0	7.5	<input type="checkbox"/>
▶	ATP + Pyruvate = ADP + Phosphoenolpyruvate	2.7.1.40	P11974	wildtype	muscle	Oryctolagus cuniculus	Km Vmax Vmax/Km	25.0	7.4	<input type="checkbox"/>
▶	ATP + Pyruvate = ADP + Phosphoenolpyruvate	2.7.1.40	P11974	wildtype	muscle	Oryctolagus cuniculus	Km Vmax Vmax/Km	25.0	7.4	<input type="checkbox"/>
▶	ATP + Pyruvate = ADP + Phosphoenolpyruvate	2.7.1.40	P11974	wildtype	muscle	Oryctolagus cuniculus	Ki	25.0	7.4	<input type="checkbox"/>

Detailed information about kinetic data of a specific biochemical reaction determined in one experiment is given in the single database entries which can be displayed by clicking on the blue triangle to open an entry. Alternatively, all entries can be opened at once by selecting “expand all displayed entries”.

Total number of kinetic law entries found: **5415** expand all displayed entries

Previous 1 .. 12 13 14 15 16 **17** 18 19 20 21 .. 361 Next

display 15 entries per page

Kinetic data	Reaction	Enzyme			Tissue	Organism	Parameter (besides concentration)	Cond.		Add to export cart?
		ECNumber	Protein	Variant				°C	pH	
▼	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	Q4E657	wildtype	epimastigote	Trypanosoma cruzi	Km Vmax	23.0	7.5	<input type="checkbox"/>

Entry ID: 12542

General information	
Organism	Trypanosoma cruzi
Tissue	epimastigote
EC Class	2.7.1.11
SABIO reaction id	1113
Variant	wildtype
Experiment Type	in vitro
Pathways	Carbon metabolism Glycolysis classical Glycolysis/Gluconeogenesis Metabolic pathways Methane metabolism Microbial metabolism in diverse environments Starch and Sucrose metabolism

Substrates		
name	location	comment
D-Fructose 6-phosphate	-	-
ATP	-	-

Products		
name	location	comment
D-Fructose 1,6-bisphosphate	-	-
ADP	-	-

Modifiers				
name	location	effect	comment	protein complex
Mn2+	-	Modifier-Activator	-	-
6-phosphofructokinase(Enzyme)	-	Modifier-Catalyst	-	Q4E657

Enzyme (protein data)				
	UniProtKB_AC	name	mol. weight (kDa)	deviation (kDa)
subunit	Q4E657	-	-	-
complex	-	-	-	-

Kinetic Law		
type	formula	annotation
Sequential Bi Bi	$V_{max} * A * B / (K_m A * K_m B + K_m B * A + K_m A * B + A * B)$	SBO:0000151

Other definitions	
variable	variable formula

Parameter							
name	type	species	start val.	end val.	deviat.	unit	comment
M	concentration	Mn2+	3.0	-	-	mM	saturated
A	concentration	ATP	0.0	500.0	-	µM	-
B	concentration	D-Fructose 6-phosphate	0.0	10.0	-	mM	-
KmB	Km	D-Fructose 6-phosphate	1.1	-	0.1	mM	-
KmA	Km	ATP	22.0	-	3	µM	equals Kia
Vmax	Vmax	-	7.9	-	0.5	µmol/(min*mg)	-


Experimental conditions			
	start value	end value	unit
pH	7.5	-	-
temperature	23.0	-	°C
buffer	50 mM HEPES, 90 mM KCl, 5 mM mercaptoethanol, 0.2 mM NADH, 50 U/ml aldolase, 50 U/ml triosephosphate isomerase, 50 U/ml glycerol-3-phosphate dehydrogenase		
comment	-		

Reference						
title	author	year	journal	volume	pages	PubMed
Involvement of a divalent cation in the binding of fructose 6-phosphate to Trypanosoma cruzi phosphofructokinase: kinetic and magnetic resonance studies report wrong or missing data	Urbina JA, Ysern X, Mildvan AS	1990	Arch Biochem Biophys	278	187-94	2138869

Furthermore SABIO-RK offers details about the Reaction, Organism, Enzyme, Protein, Pathway and Compound of an entry which are shown in additional pop-up windows after clicking on the appropriate term.

These Details are partially interlinked, and contain additionally links to external databases, e.g., clicking on the Reaction (in the Entry View or in the Reaction View) opens the Reaction Details containing the SABIO ReactionID, Stoichiometric Equation, Substrates, Products, Enzymes known to catalyse this reaction, Pathways and links to external databases.

Reaction Details pop-up window with links to other data resources.



Reaction Details

Reaction ID 7

Stoichiometric Equation 2-Phosphoglycerate <-> Glycerate 3-phosphate

Substrates [2-Phosphoglycerate](#)

Products [Glycerate 3-phosphate](#)

	EC Number	in Organism	UniProtKB Link	PubMedID
Enzymes known to catalyse this reaction (curated information)	5.4.2.11	Amycolatopsis methanolica	UniProtKB ↗	7961441 ↗
	5.4.2.11	Equus caballus	UniProtKB ↗	8447 ↗
	5.4.2.11	Gallus gallus	UniProtKB ↗	213437 ↗
	5.4.2.11	Gallus gallus	UniProtKB ↗	8447 ↗
	5.4.2.11	Homo sapiens	UniProtKB ↗	15949708 ↗
	5.4.2.11	Rattus norvegicus	UniProtKB ↗	6450416 ↗
	5.4.2.11	Rattus norvegicus	UniProtKB ↗	7929251 ↗
	5.4.2.11	Saccharomyces cerevisiae	UniProtKB ↗	1386023 ↗
	5.4.2.11	Saccharomyces cerevisiae	UniProtKB ↗	23856461 ↗
	5.4.2.11	Sus scrofa	UniProtKB ↗	6293580 ↗
5.4.2.12	Entamoeba histolytica	UniProtKB ↗	15794763 ↗	

Pathways [Biosynthesis of amino acids](#)
[Biosynthesis of secondary metabolites](#)
[Carbon metabolism](#)
[Glycine, Serine and Threonine metabolism](#)
[Glycolysis classical](#)
[Glycolysis/Gluconeogenesis](#)
[Metabolic pathways](#)
[Methane metabolism](#)
[Microbial metabolism in diverse environments](#)

External Links

KEGG-Pathway-ID [map01230](#) [↗](#)
[map01110](#) [↗](#)
[map01200](#) [↗](#)
[map00260](#) [↗](#)
[map00010](#) [↗](#)
[map01100](#) [↗](#)
[map00680](#) [↗](#)
[map01120](#) [↗](#)

KEGG-Reaction-ID [R01518](#) [↗](#)

MetaNetX-Reaction-ID [MNXR102547](#) [↗](#)

Rhea-Reaction-ID [15903](#) [↗](#) [15904](#) [↗](#) [15901](#) [↗](#) [15902](#) [↗](#)

Reactome-Reaction-ID [R-DRE-71654](#) [↗](#) [R-SSC-71445](#) [↗](#) [R-SPO-71654](#) [↗](#) [R-DME-71445](#) [↗](#) [R-DRE-71445](#) [↗](#) [R-ATH-71445](#) [↗](#) [R-PFA-71654](#) [↗](#) [R-DDI-71654](#) [↗](#) [R-CFA-71445](#) [↗](#) [R-MMU-71654](#) [↗](#) [R-SCE-71654](#) [↗](#) [R-BTA-71445](#) [↗](#) [R-DME-71654](#) [↗](#) [R-HSA-71445](#) [↗](#) [R-SCE-71445](#) [↗](#) [R-XTR-71445](#) [↗](#) [R-RNO-71445](#) [↗](#) [R-BTA-71654](#) [↗](#) [R-TGU-71445](#) [↗](#) [R-CFA-71654](#) [↗](#) [R-MMU-71445](#) [↗](#) [R-HSA-71654](#) [↗](#) [R-OSA-71654](#) [↗](#) [R-GGA-71445](#) [↗](#) [R-TGU-71654](#) [↗](#) [R-DDI-71445](#) [↗](#) [R-ATH-71654](#) [↗](#) [R-PFA-71445](#) [↗](#) [R-XTR-71654](#) [↗](#) [R-SSC-71654](#) [↗](#) [R-SPO-71445](#) [↗](#) [R-RNO-71654](#) [↗](#) [R-OSA-71445](#) [↗](#) [R-GGA-353014](#) [↗](#) [R-GGA-71654](#) [↗](#) [R-GGA-352994](#) [↗](#)

MetaCyc-Reaction-ID [3PGAREARR-RXN](#) [↗](#)

Reaction View

In addition to the Entry View table there is the Reaction View table which groups the entries based on the biochemical reaction and shows the number of entries per reaction.

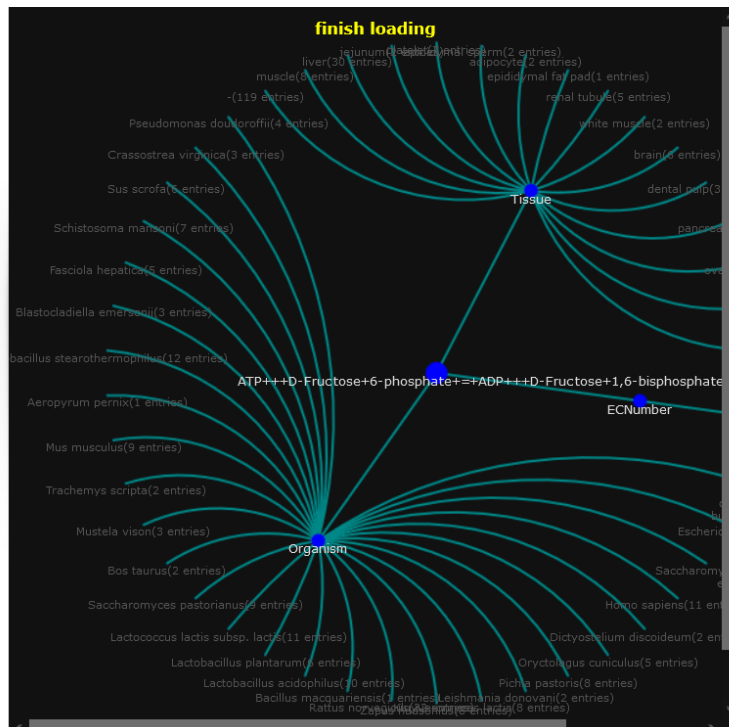
In the Entry and in the Reaction View data can be exported in spreadsheet, SBML or BioPAX format. Entries can be selected either by clicking the checkbox at the end of each entry row in the overview table or by clicking the checkbox in the last column header to select all displayed entries per page (see also **Data Export**).

Kinetic data	[Sabio ID]: Reaction	Kegg ID	Visualization (Please allow pop-up windows in your browser)	Number of Entries	Add to export cart?
	[6915]: Glucose + ATP = ADP + Glucose 6-phosphate	R01786	Click here to view visualization	236	<input type="checkbox"/>
	[1113]: ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	R00756	Click here to view visualization	678	<input type="checkbox"/>
	[8]: 2-Phospho-D-glycerate = H2O + Phosphoenolpyruvate	R00658	Click here to view visualization	435	<input type="checkbox"/>
	[7644]: ATP + 3-Phospho-D-glycerate = ADP + 3-Phospho-D-glyceroyl phosphate	R01512	Click here to view visualization	300	<input type="checkbox"/>
	[6]: Glycerate 3-phosphate + ATP = Glycerate 1,3-bisphosphate + ADP	-	Click here to view visualization	255	<input type="checkbox"/>
	[1123]: D-Glucose 6-phosphate = D-Fructose 6-phosphate	R00771	Click here to view visualization	326	<input type="checkbox"/>
	[3]: beta-D-Fructose 1,6-bisphosphate = D-Glyceraldehyde 3-phosphate + Glycerone phosphate	R01070	Click here to view visualization	10	<input type="checkbox"/>
	[274]: D-Fructose 1-phosphate = Glycerone phosphate + D-Glyceraldehyde	R02568	Click here to view visualization	119	<input type="checkbox"/>

To get a quick impression about a certain reaction and to understand the connections between reaction, enzymes, organisms, and tissues a visualization is available.

Reaction Related Information Visualization (ECNumber, Organism, Tissue)

you can click on "ECNumber", "Organism", "Tissue" nodes respectively to see all possible ecumbers, organisms and tissues for such reaction



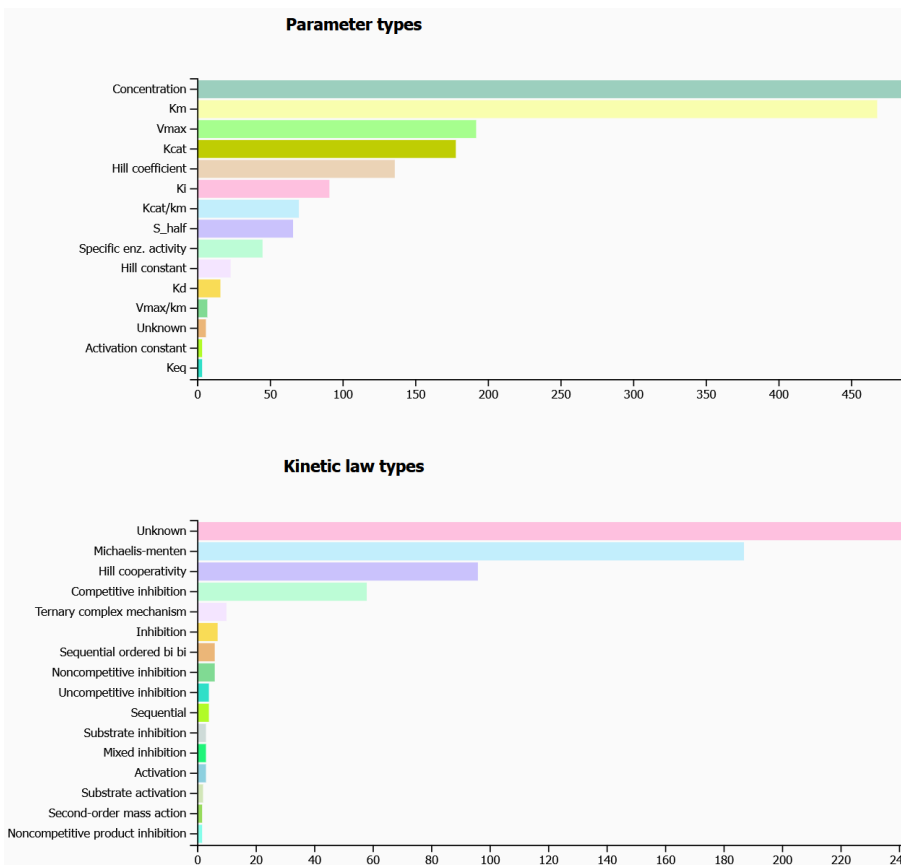
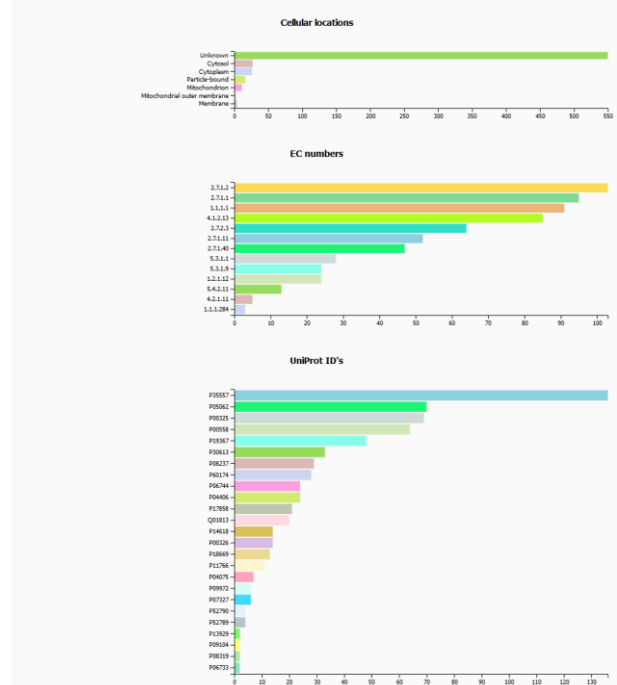
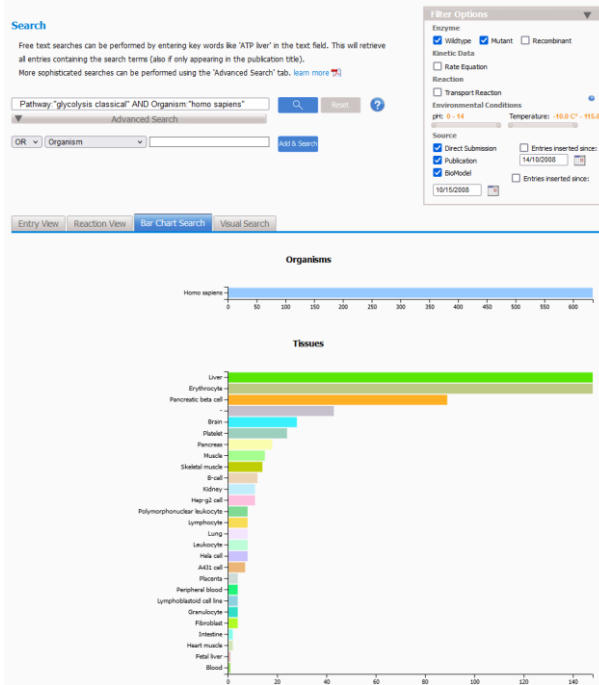
ATP+++D-Fructose+6-phosphate+=ADP+++D-Fructose+1,6-bisphosphate

Connections:

- ECNumber (relation: click the Node to see all possible ECNumbers)
- Organism (relation: click the Node to see all possible Organisms)
- Tissue (relation: click the Node to see all possible Tissues)

Bar Chart Search

A visual overview of the frequency distribution of single attributes within a search result is given in the Bar Chart Search. Here the user can confine the search to one specific Organism, Tissue, Cellular location, EC number, Uniprot ID, Parameter type or Kinetic law type by clicking on the corresponding bar.



Visual Search

Visual search is a graphical interface that is customizable and allows interactive navigation of search results.

The offered graphs consist of a heat map representing an Overview of the Entry Data, Parallel Coordinates (PC) of the Entry Data and Scatter Plot Matrix of the Entry Data with histograms (SPM). These entry based graphs contain all entry information except the kinetic parameter values of the Search result.

SABIO-RK
Biochemical Reaction Kinetics Database

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Search

Free text searches can be performed by entering key words like "ATP liver" in the text field. This will retrieve all entries containing the search terms (also if only appearing in the publication title).
More sophisticated searches can be performed using the "Advanced Search" tab. [learn more](#)

Any Role: "6-fructose 6-phosphate" AND Organism: "mammalia" (NCBI)

Advanced Search

OR Organism Add & Search

Filter Options

Enzyme Wildtype Mutant Recombinant

Kinetic Data Rate Equation Reaction Transport Reaction

Environmental Conditions
pH: 6 - 14 Temperature: -10.0 C - 110.0

Source Direct Submission Entries inserted since: 1/15/2008
 Publication Entries inserted since: 1/15/2008
 BioModel Entries inserted since: 1/15/2008

Entry View Reaction View Bar Chart Search **Visual Search**

Total number of kinetic law entries found: 691 (691 shown)

Overview of the Entry Data

Index Enzyme EC Number Tissue Organism Year Kinetic Parameters

691

One line in Overview represents one entry in the database.
Click on the keyaxis name to sort by that key. Hover over the heatmap to see the data values.
Select values by clicking on the heatmap area. Multiple categories or ranges are selected by brushing.
Overview visible axis/keys can be set in "Visible Overview Axes" (click to open/close).
Selection on all graphs can be reset by using "Reset Highlighting".
Selected color scheme (set in "Color Scheme (PC, SPM, KPPC, KPSP)"): Plasma (Warm, Dark)
Extra Color Information

Parallel Coordinates (PC) of the Entry Data

EntryID EC Number Tissue Organism Year Index

5.3.1.9 white ad. Zapus ha. 2010
5.3.1.8 skeletal reticulo renal lz. 691
3.5.99.6 polyneur. placenta
3.1.3.46 pancreas
3.1.3.71 liver
2.7.1.4 rat pancreas
2.7.1.2 pancreas
5.1.1.10 heart
2.7.1.10 pancreas
2.7.1.10 pancreas
2.7.1.10 pancreas
2.7.1.10 pancreas
2.6.1.10 Bos taurus

Scatter Plot Matrix (SPM) of the Entry Data (numerical values only -> pH, Temperature, Year, kinetic data separately)

pH

Temperature (°C)

Brush any of the scatter plots to select the data.
SPM visible axis/keys can be set in "Visible SPM Axes"
SPM colored by the key (set in "PC, SPM, color by axis"): EC Number

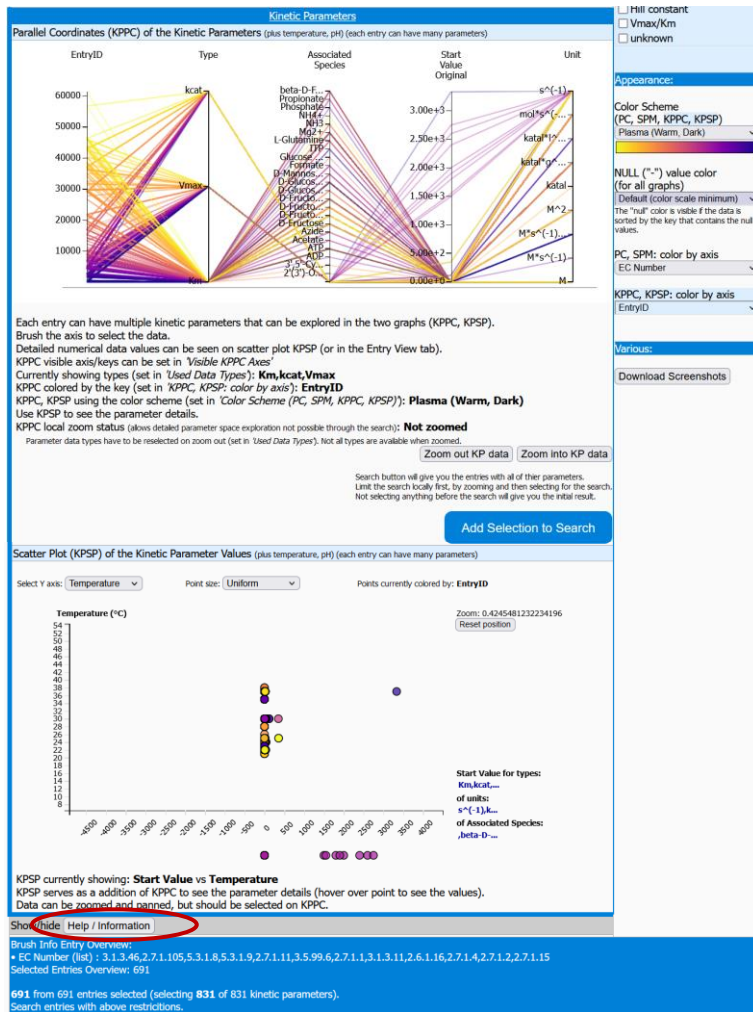
Kinetic Parameter Data:

Used Data Types

kcat
 concentration
 Vmax
 Km
 pKa
 kcat/Km
 IC50
 Ki
 specific enz. activity
 Hill coefficient
 S_half
 Keq

Since each entry can contain several kinetic parameters, the kinetic parameters are represented separately in the KPPC (Parallel Coordinates of the Kinetic Parameters)


and the KPSP (Scatter Plot of the Kinetic Parameter Values) graphs, which allow to explore through the kinetic data space.



By pressing the Help/Information button detailed explanation of all the functionalities in the Visual Search is shown in detail.

Data Export

To export data in SBML, spreadsheet or other formats entries can be selected either in the **Entry View** or **Reaction View** by clicking the checkbox at the end of each entry row in the overview table or by clicking the checkbox in the last column header to select all displayed entries per page.



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Entries to Export: **3**

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Search

Free text searches can be performed by entering key words like 'ATP liver' in the text field. This will retrieve all entries containing the search terms (also if only appearing in the publication title).
More sophisticated searches can be performed using the 'Advanced Search' tab. [learn more](#)

Pathway: "glycolysis classical"

Advanced Search
?

OR
Organism

Add & Search

Filter Options

Enzyme

Wildtype Mutant Recombinant

Kinetic Data

Rate Equation

Reaction

Transport Reaction

Environmental Conditions

pH: 0 - 14 Temperature: -10.0 C° - 115.0

Source

Direct Submission Entries inserted since: 14/10/2008

Publication

BioModel Entries inserted since: 10/15/2008

Entry View
Reaction View
Bar Chart Search
Visual Search

Total number of kinetic law entries found: **5415** expand all displayed entries

Previous 1 .. 39 40 41 42 43 **44** 45 46 47 48 .. 361 Next display 15 entries per page

Kinetic data	Reaction	Enzyme			Tissue	Organism	Parameter (besides concentration)	Cond.		Add to export cart?
		ECNumber	Protein	Variant				°C	pH	
▶	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	P08237	mutant	muscle	Homo sapiens	Kcat Km	25.0	7.0	<input checked="" type="checkbox"/>
▶	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	P90521	mutant	-	Dictyostelium discoideum	Kcat Km	25.0	7.0	<input type="checkbox"/>
▶	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	P08237	mutant	muscle	Homo sapiens	Ki	25.0	7.0	<input checked="" type="checkbox"/>
▶	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	P16861 P16862	wildtype	-	Saccharomyces cerevisiae	Vmax	30.0	7.0	<input type="checkbox"/>
▶	ATP + D-Fructose 6-phosphate = ADP + D-Fructose 1,6-bisphosphate	2.7.1.11	P08237	mutant	muscle	Homo sapiens	Activation constant	25.0	7.0	<input checked="" type="checkbox"/>

Save Excelsheet

Select Columns to Export

8 items selected

Item	Selected
Activator	+
CellularLocation	+
Cofactor	+
Enzyme Variant	+
Enzymename	+
Inhibitor	+
KeggReactionID	+
KineticMechanism	+
Other Modifier	+
Export Distinct Rows Only	<input type="checkbox"/>
EntryID	-
Reaction	-
ECNumber	-
UniProtKB_AC	-
Tissue	-
Organism	-
Temperature	-
pH	-

Buttons: Export xls, Export tsv, Reset, Back to Results

Preview of the first 3 entries

Sabio Excel Export Preview							
	A	B	C	D	E	F	G
1	Reaction	ECNumber	Enzymename	UniProtKB_AC	Tissue	Organism	Temperature
2	NAD+ + D-Glycer...	1.2.1.12	glyceraldehyde-3...	P04406	lung	Homo sapiens	-
3	ATP + 3-Phospho...	2.7.2.3	phosphoglycerate..	P00558	muscle	Homo sapiens	30.0
4	D-Glyceraldehyd...	1.2.1.12	glyceraldehyde-3...	P04406	erythrocyte	Homo sapiens	23.0

The user can choose which entry information should be exported by selecting the columns to be exported.

As a default choice 8 items are selected (right column) which can easily be removed by clicking on the minus. To include additional columns in the export table the appropriate items on the left side should be included by clicking on the plus.

The order of the columns can easily be changed by shifting them up and down.

After finishing the selection and the order of the favoured columns, which are previewed for the first 3 entries, the Export xls or Export tsv button should be pressed to execute the export.

Write SBML allows to export the selected entries as a model in the Systems Biology Markup Language (SBML)-format or as pdf. Different SBML versions and annotation schema could be selected and a user-defined name could be given to the SBML file

SABIO-RK
Biochemical Reaction Kinetics Database

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Save Model

Enter name of model: SABIOmdl01Dec202231 SBML level 3, version 1 ▾

Export parameters normalized to SI base units: SBML level 2, version 4

Choose the annotation schema *: SBML level 2, version 3

SBML level 2, version 2

Save Model on Disk as SBML

Save Model on Disk as PDF

Back to Results

SBML
SBML
LATEX

* For details please refer to <http://identifiers.org/> or http://co.mbine.org/standards/miriam_uris .

No Search Result

If the **Search** did not give any results, a link to a pre-filled request form is given.

The screenshot shows the SABIO-RK Biochemical Reaction Kinetics Database search interface. The search bar contains '2.7.8.6'. The search results section displays a message: "Sorry, we found no results for your query... - but you may send a request to add the corresponding data [request](#)". A red arrow points to the 'request' link. The 'Filter Options' panel on the right shows search criteria: Enzyme (Wildtype, Mutant, Recombinant), Kinetic Data (Rate Equation), Reaction (Transport Reaction), Environmental Conditions (pH: 0 - 14, Temperature: -40 C° - 115 C°), and Source (Direct Submission, Publication, BioModel). The 'Curation' menu item is circled in red in the top navigation bar.

User feedback can also be given via the **Contact** button or within **Curation** as **Request for SABIO-RK curation service**. Any feedback is highly appreciated.

The screenshot shows the 'User Request' form. The form fields are: Your name, Your email, Subject (curated request), Your message, Query (pre-filled with a JSON string), and Details Hidden** (false). A 'Submit' button is located at the bottom of the form. Below the form, there is a section titled 'Please order the numbers before sending a request:' with a 'Drag to order' instruction and a grid of numbers: 6, 3, 4, 1, 2, 5.