



nEUROSTRESSPEP

DINeR

A Database for Insect Neuropeptide Research

Search the database for information about the various species and neuropeptides of interest

USER TUTORIAL



INFORMATION SEARCH FORM

INFORMATION SEARCH FORM



DINeR

A Database for Insect Neuropeptide Research

Search the database for information about the various species and neuropeptides of interest

Information Search

The following form is used for searching the database. Using this search you will be able to access General Information about Species and Neuropeptides. You can see any relevant and related neuropeptide isoforms, their functionality and even where available Image results. You may search using individual fields on their own or using any combination of Species, Neuropeptides and/or Functionality. You can also select multiple options at a time for any of the fields (using the 'cmd' button on a Mac or the 'Ctrl' button on a PC).

 Perform a Search

Select Species:

Click here to select species

Select Neuropeptide:

Click here to select neuropeptide

Select Functionality:

Click here to select functionality

Search 

Clear 

Use the form to select Species, Neuropeptide and / or Functionality. You can search using just one parameter or a combination of more parameters and values.

Information Search

The following form is used for searching the database. Using this search you will be able to access General Information about Species and Neuropeptides. You can see any relevant and related neuropeptide isoforms, their functionality and even where available Image results. You may search using individual fields on their own or using any combination of Species, Neuropeptides and/or Functionality. You can also select multiple options at a time for any of the fields (using the 'cmd' button on a Mac or the 'Ctrl' button on a PC).

 Perform a Search

Select Species:

Click here to select species

Select Neuropeptide:

Click here to select neuropeptide

Select Functionality:

Click here to select functionality

Search 

Clear 

For each of the parameters, you can select values from the dropdown.

Information Search

The following form is used for searching the database. Using this search you will be able to access General Information about Species and Neuropeptides. You can see any relevant and related neuropeptide isoforms, their functionality and even where available Image results. You may search using individual fields on their own or using any combination of Species, Neuropeptides and/or Functionality. You can also select multiple options at a time for any of the fields (using the 'cmd' button on a Mac or the 'Ctrl' button on a PC).

 Perform a Search

Select Species:

Dro|

Drosophila ananassae

Drosophila biarmipes

Drosophila bipectinata

Drosophila elegans

Drosophila erecta

Drosophila eugracilis

Drosophila ficusphila

Drosophila grimshawi

Drosophila kikkawai

Drosophila melanogaster

You can also select values by typing the text you want to search. Typing the first few letters should narrow down the options to the ones you are looking for.

Information Search

The following form is used for searching the database. Using this search you will be able to access General Information about Species and Neuropeptides. You can see any relevant and related neuropeptide isoforms, their functionality and even where available Image results. You may search using individual fields on their own or using any combination of Species, Neuropeptides and/or Functionality. You can also select multiple options at a time for any of the fields (using the 'cmd' button on a Mac or the 'Ctrl' button on a PC).

Perform a Search

Select Species:

Drosophila melanogaster ✕

Select Neuropeptide:

Capability/CAP2b (CAPA) ✕ Diuretic Hormone 31 (DH31) ✕ Kinin (Kinin) ✕

Select Functionality:

Cellular carbohydrate metabolic process ✕ cAMP-mediated signaling ✕ Feeding behavior ✕ Immune response ✕ |

Antioxidant activity

Behavioral response to starvation

Behavioral response to water deprivation

cAMP-mediated signaling

Cellular carbohydrate metabolic process

Eclosion

Feeding behavior

Immune response

Ion transport

Lipid homeostasis

Multiple values can be selected by using the 'cmd' button on a Mac or the 'Ctrl' button on a PC.

Information Search

The following form is used for searching the database. Using this search you will be able to access General Information about Species and Neuropeptides. You can see any relevant and related neuropeptide isoforms, their functionality and even where available Image results. You may search using individual fields on their own or using any combination of Species, Neuropeptides and/or Functionality. You can also select multiple options at a time for any of the fields (using the 'cmd' button on a Mac or the 'Ctrl' button on a PC).

 Perform a Search

Select Species:

Drosophila melanogaster ✕

Select Neuropeptide:

Capability/CAP2b (CAPA) ✕ Diuretic Hormone 31 (DH31) ✕ Kinin (Kinin) ✕

Select Functionality:

Cellular carbohydrate metabolic process ✕ cAMP-mediated signaling ✕ Feeding behavior ✕ Immune response ✕ Antioxidant activity ✕
Behavioral response to starvation ✕ Eclosion ✕ Positive regulation of calcium ion import ✕ Negative regulation of renal water transport ✕ Peptide biosynthetic process ✕
Lipid homeostasis ✕ |

Search 

Clear 

Once you have selected the options for the search criteria, click on the Search button to run the queries to retrieve the information from the database. You may also press Clear to re-select options for a new search.



RESULTS PAGE

RESULTS PAGE

Information Search

Your search results are displayed below

Here are the results from your search. Please use the appropriate buttons to navigate to the relevant sections. You may also start a new search using the Start a New Search button. All the results for each section are displayed in a tabular format. You may choose the number of results you would want to see using the entries dropdown. You may want to navigate through all your results using the pagination at the bottom of each table. You can also filter your result by typing the specific text in the Search field for each table.

[Click here to Start a new search](#)

Search Results:

- General Information
- Neuropeptide Isoform Information
- Functionality Information
- Image Results

General Information

Show 10 entries

Species Name	Order
Drosophila melanogaster	Diptera

Showing 1 to 1 of 1 entries

Neuropeptide Isoform Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related FASTA	AAFS6969.2
Drome-CAPA-2	CAPA	Drosophila melanogaster				
Drome-DH31	DH31	Drosophila melanogaster				
Drome-K	Kinin	Drosophila melanogaster				

Showing 1 to 4 of 4 entries

Functionality Information

Show 10 entries

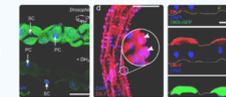
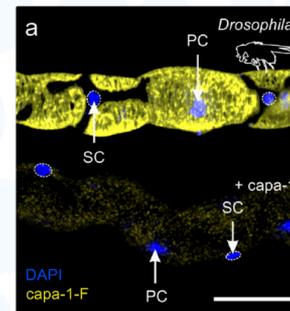
Search:

Isoform	Neuropeptide	Species Used in Study	Functionality Category	Quick Go Reference	Functionality Description	Functionality Reference
Aedae-K-I	Kinin	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Aedae-K-II	Kinin	Drosophila melanogaster	Regulation of renal water transport	GO:2001151	No effect on Malpighian tubules	Get Reference
Aedae-K-III	Kinin	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Anoga-CAPA-1	CAPA	Drosophila melanogaster				
Drome-AKH	AKH	Drosophila melanogaster				
Drome-AKH	AKH	Drosophila melanogaster				
Drome-AKH	AKH	Drosophila melanogaster				
Drome-AKH	AKH	Drosophila melanogaster				
Drome-CAPA-1	CAPA	Drosophila melanogaster				
Drome-CAPA-1	CAPA	Drosophila melanogaster				

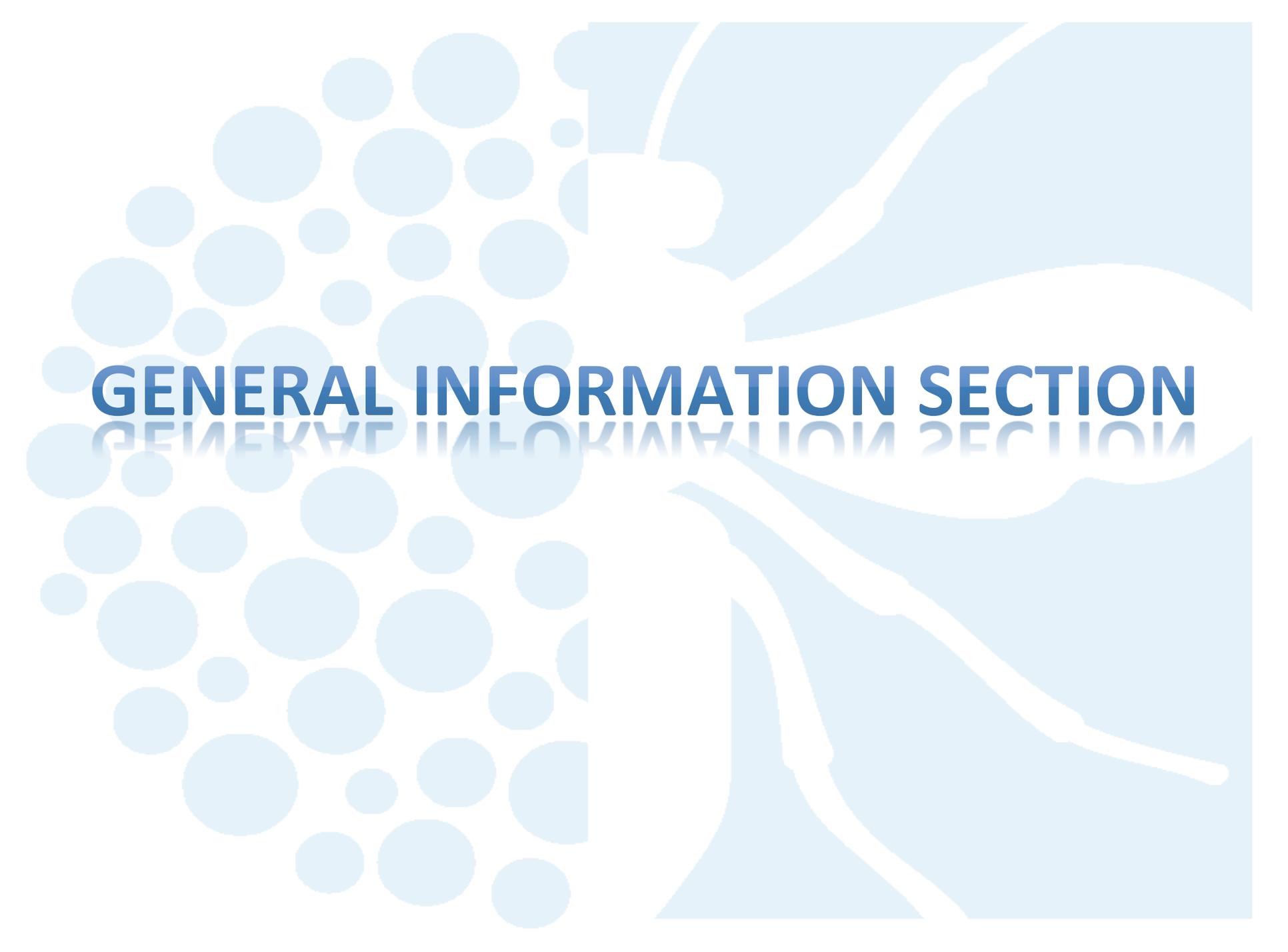
Showing 1 to 10 of 33 entries

Image Results

Instructions: Please click on the thumbnails to see main image. You may use the slider at the bottom to scroll through all the images. Click on the main image for better view. Once open, you may click on More to view on a new page.



The Results are displayed in four sections. Each section has been described in the following slides.



GENERAL INFORMATION SECTION

GENERAL INFORMATION SECTION

Information Search

Your search results are displayed below

Here are the results from your search. Please use the appropriate buttons to navigate to the relevant sections. You may also start a new search using the Start a New Search button. All the results for each section are displayed in a tabular format. You may choose the number of results you would want to see using the entries dropdown. You may want to navigate through all your results using the pagination at the bottom of each table. You can also filter your result by typing the specific text in the Search field for each table.

[Click here to Start a new search](#)

Search Results:

- General Information
- Neuropeptide Isoform Information
- Functionality Information
- Image Results

General Information

Show 10 entries

Search:

Species Name	Order	Common Name	Importance	Genome Sequence Available	Genome Database
Drosophila melanogaster	Diptera	Fruitfly	Model system	Yes	FlyBase

Showing 1 to 1 of 1 entries

Previous **1** Next

This section displays all the general information about the relevant species such as Name, Order, Common Name Importance, Genome Sequence Availability and Genome Database.

Information Search

Your search results are displayed below

Here are the results from your search. Please use the appropriate buttons to navigate to the relevant information. You may also start a new search using the Start a New Search button. All the results for each section are displayed in a tabular format. You may choose the number of results you would want to see using the entries displayed per page. You can also want to navigate through all your results using the pagination at the bottom of each table. You can also click on a result to view more information by typing the specific text in the Search field for each table.

Search Results:

General Information

Neuropeptide Isoform Information

General Information

Show 10 entries

Species Name	Order	Common Name	Importance	Genome Sequence Available	Genome Database
Drosophila melanogaster	Diptera	Fruitfly	Model system	Yes	FlyBase

Showing 1 to 1 of 1 entries

Previous 1 Next



The Genome Database button is clickable and opens up the relevant website on a new page.

The background features a stylized white neuron with branching processes against a light blue background. On the left side, there is a cluster of light blue circles of various sizes, representing synaptic vesicles. The text is centered over the neuron's cell body.

NEUROPEPTIDE ISOFORM INFORMATION SECTION

Neuropeptide Isoform Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-CAPA-2	CAPA	Drosophila melanogaster	ASGLVAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-DH31	DH31	Drosophila melanogaster	TVDFGLARGYSGTQEAKHRMGLAAANFAGGPamide	Get FASTA	Get Related FASTA	Q9VLK4.1
Drome-K	Kinin	Drosophila melanogaster	NSVVLGKKQRFHSWGamide	Get FASTA	Get Related FASTA	AAF49731.2

Showing 1 to 4 of 4 entries

Previous [1](#) Next

This section displays all the information related to the Neuropeptide Isoforms including Isoform name, Neuropeptide, Species Name, Amino Acid Sequences and Genbank or Other References.

Neuropeptide Isoform Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-CAPA-2	CAPA	Drosophila melanogaster	ASGLVAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-DH31	DH31	Drosophila melanogaster	AKHRMGLAAANFAGGPamide	Get FASTA	Get Related FASTA	Q9VLK4.1
Drome-K	Kinin	Drosophila melanogaster	KQRFHSWGamide	Get FASTA	Get Related FASTA	AAF49731.2



Isoform	Neuropeptide	Species Name
Drome-CAPA-1	CAPA	Drosophila melanogaster
Drome-	CAPA	Drosophila

Showing 1 to 4 of 4 entries

Previous 1 Next

By hovering over the Information tooltips, you can see relevant information. E.g. The full form of the listed abbreviations like Capability/CAP2b (or CAPA).

Neuropeptide Isoform Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-CAPA-2	CAPA	Drosophila melanogaster			Get Related FASTA	AAF56969.2
Drome-DH31	DH31	Drosophila melanogaster	TVDFGLARGYS		Get Related FASTA	Q9VLK4.1
Drome-K	Kinin	Drosophila melanogaster	NSV		Get Related FASTA	AAF49731.2

Amino Acid Sequence ⓘ

Please note : (Where applicable) the "p" prefix stands for Pyroglutamate while the "amide" stands for Amidation

FASTA Sequences

[Get FASTA](#)

Showing 1 to 4 of 4 entries

Previous **1** Next

The Amino Acid sequences where applicable display a Pyroglutamate prefix (p) or an Amidation suffix (amide).

Neuropeptide Isoform Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-CAPA-2	CAPA	Drosophila melanogaster	ASGLVAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-DH31	DH31	Drosophila melanogaster	TVDFGLARGYSGTQEAKHRMGLAAANF...amide	Get FASTA	Get Related FASTA	Q9VLK4.1
Drome-K	Kinin	Drosophila melanogaster	NSVV...	Get FASTA	Get Related FASTA	AAF49731.2

Showing 1 to 4 of 4 entries

Previous **1** Next

```
>Drome-CAPA-2  
ASGLVAFPRV
```

The individual FASTA format of the Neuropeptide Amino Acid sequence can be obtained by clicking on the "Get FASTA" button.

Neuropeptide Isoform Information

Show entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence ⓘ	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA ⓘ	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-CAPA-2	CAPA ⓘ	Drosophila melanogaster	ASGLVAFPRVamide	Get FASTA	Get Related FASTA	AAF56969.2
Drome-DH31	DH31 ⓘ	Drosophila melanogaster	TVDFGLARGYSGTQEAKHRMGLAAANFAGGPamide	Get FASTA	Get Related FASTA	Q9VLK4.1
Drome-K	Kinin ⓘ	Drosophila melanogaster	NSVVLGKKQRFHSWGamide	Get FASTA	Get Related FASTA	AAF49731.2

Showing 1 to 4 of 4 entries

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- >Drops-CAPA-2
AGLVAFPRV
- >Haeir-CAPA-2
NAKLYPMPRV
- >Luccu-CAPA-1
GGGGSSGLFAPPRV
- >Leuma-CAPA-2
GSSGLISMPRV
- >Drovi-CAPA-1
GANMGLYTFPRV
- >Neobu-CAPA-1
NGGTSGLFAPPRV
- >Eusse-CAPA-2
EQLIPFPRI

The related FASTA sequences of each of the Neuropeptide Amino Acid sequences can be obtained by clicking on the “Get Related FASTA” button.

Neuropeptide Isoform Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Name	Amino Acid Sequence	FASTA Sequences	RELATED FASTA Sequences	GenBank / Other Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	GANMGLYAFPRVamide	Get FASTA	Get Related	AAF56969.2
Drome-CAPA-2	CAPA	Drosophila melanogaster	ASGLVAFPRVamide	Get FASTA	Get Related	AAF56969.2
Drome-DH31	DH31	Drosophila melanogaster	TVDFGLARGYSGTQEAKHRMGLAAANFAGGP	Get FASTA	Get Related	Q9VLK4.1
Drome-K	Kinin	Drosophila melanogaster	NSVVLGKKQRFHSWGamide	Get FASTA	Get Related	AAF49731.2

Showing 1 to 4 of 4 entries

NCBI Resources How To

Protein Advanced

GenPept

capability [Drosophila melanogaster]

GenBank: AAF56969.2

[Identical Proteins](#) [FASTA](#) [Graphics](#)

[Go to](#)

LOCUS AAF56969 151 aa linear INV 14-OCT-2015

DEFINITION capability [Drosophila melanogaster].

ACCESSION AAF56969

VERSION AAF56969.2 GI:23172626

DBLINK BioProject: [PRJNA13812](#)

BioSample: [SAMN02802731](#)

accession [AB014297.3](#)

DBSOURCE

KEYWORDS

SOURCE Drosophila melanogaster (fruit fly)

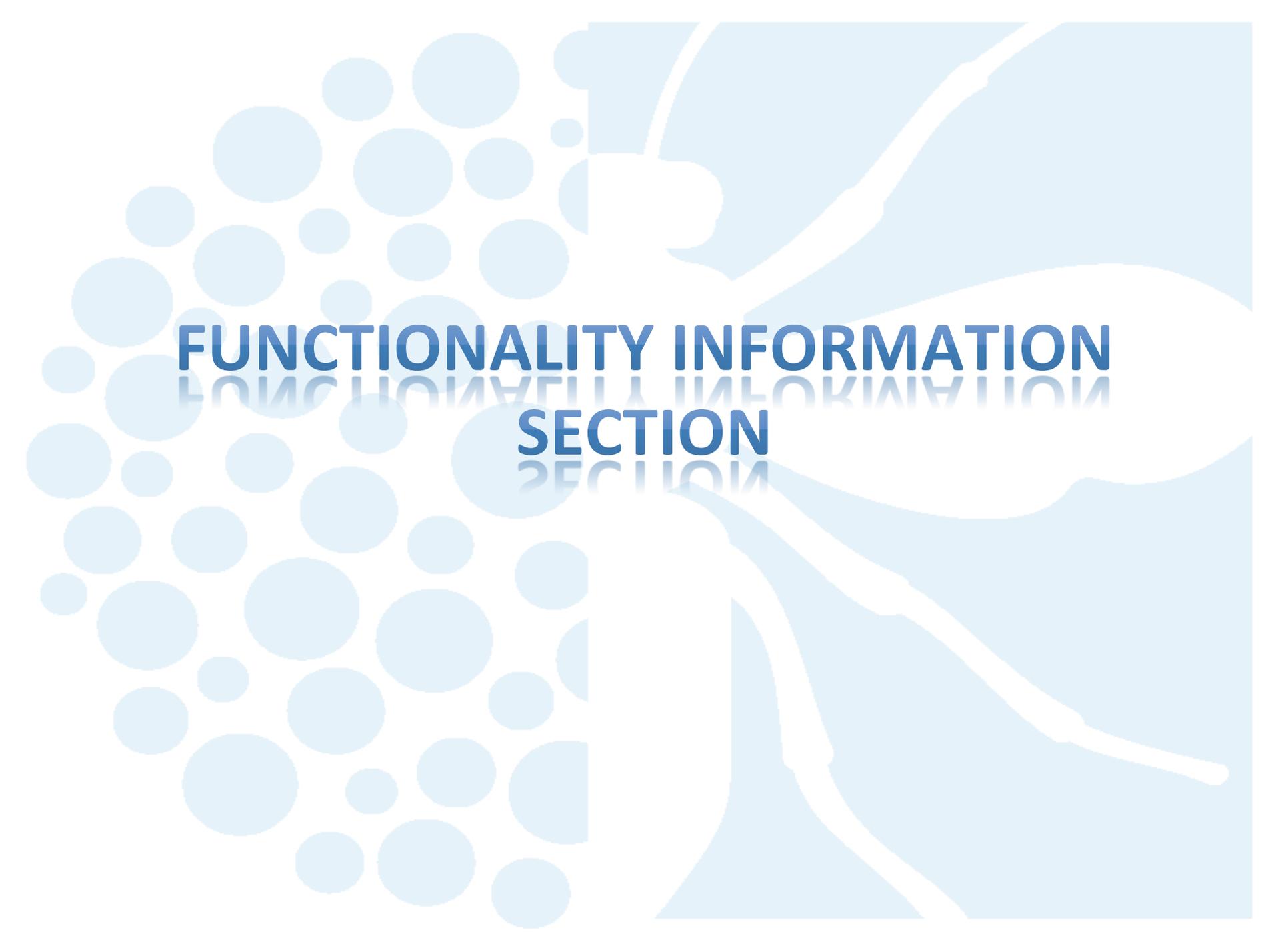
ORGANISM Drosophila melanogaster

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila; Sophophora. 1 (residues 1 to 151)

REFERENCE

AUTHORS Adams,M.D., Celniker,S.E., Holt,R.A., Evans,C.A., Gocayne,J.D., Amanatides,P.G., Scherer,S.E., Li,P.M., Hoskins,R.A., Galle,R.F., George,R.A., Lewis,S.E., Richards,S., Ashburner,M., Henderson,S.N., Sutton,G.G., Wortman,J.R., Yandell,M.D., Zhang,Q., Chen,L.X., Brandon,R.C., Rogers,Y.H., Blaise,R.G., Champs,M., Pfeiffer,B.D., Wan,K.H., Doyle,C., Baxter,E.G., Helt,G., Nelson,C.R., Gabor,G.L., Abail,J.F., Agbayani,A., An,H.J., Andrews-Hamkooh,C., Baldwin,D., Ballew,R.M., Basu,A., Baxendale,J., Bayraktaroglu,L., Beasley,E.M., Beeson,K.Y., Benos,P.V., Berman,B.P., Bhandari,D., Bolshakov,S., Bonkova,D., Borkan,M.S., Bouck,J., Brockstein,F., Brotlier,F., Burtis,K.C., Busam,D.A., Butler,H., Cadieu,E., Center,A., Chandra,I., Cherry,J.M., Cawley,S., Dahlke,C., Davenport,L.B., Davies,F., de Pablos,B., Delcher,A., Deng,Z., Dvornik,A., Dew,I., Dietz,S.H., Dodson,P., Dong,L.E., Downes,M., Dugan-Rocha,S., Dunkov,B.C., Dunn,P., Durbin,K.J., Evangelista,C.C., Ferraz,C., Ferreira,S., Fleischmann,W., Fowler,C., Gabrielian,A.E., Garg,N.S., Gelbart,W.M., Glasser,K., Glodde,A., Gong,P., Gorrell,J.H., Gu,Z., Guan,P., Harris,M., Harris,N.L., Harvey,D., Heiman,T.J., Hernandez,J.R., Houck,J., Hostin,D., Houston,K.A., Howland,T.J., Wei,M.H., Ibegyan,C., Jalili,M., Kalush,F., Karpun,G.H., Re,Z.,

The Reference Paper for that particular neuropeptide can be obtained by clicking on the respective Reference button.



FUNCTIONALITY INFORMATION SECTION

Functionality Information

Show entries

Search:

Isoform 	Neuropeptide 	Species Used in Study 	Functionality Category 	Quick Go Reference 	Functionality Description 	Functionality Reference 
Aedae-K-I	Kinin 	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Aedae-K-II	Kinin 	Drosophila melanogaster	Regulation of renal water transport	GO:2001151	No effect on Malpighian tubules	Get Reference
Aedae-K-III	Kinin 	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Anoga-CAPA-1	CAPA 	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Diuretic on Malpighian tubules	Get Reference
Drome-AKH	AKH 	Drosophila melanogaster	Behavioral response to starvation	GO:0042595	Stronger resistance to starvation	Get Reference
Drome-AKH	AKH 	Drosophila melanogaster	Lipid homeostasis	GO:0055088	Energy homeostasis control in adult flies	Get Reference
Drome-AKH	AKH 	Drosophila melanogaster	Lipid homeostasis	GO:0055088	Induces hyperlipemia and hypertrehalosemia	Get Reference
Drome-AKH	AKH 	Drosophila melanogaster	Positive regulation of response to oxidative stress	GO:1902884	Protection from oxidative stress	Get Reference
Drome-CAPA-1	CAPA 	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Activates renal Nuclear Factor -kappa B stress signalling network	Get Reference
Drome-CAPA-1	CAPA 	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Diuretic on Malpighian tubules	Get Reference

Showing 1 to 10 of 33 entries

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This section displays all the information related to the functionality information of the neuropeptide isoforms such as name, neuropeptide, Species Used in Study, Functionality Category, Quick Go Reference, Functionality Description and Functionality Reference

Functionality Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Used in Study	Functionality Category	Quick Go Reference	Functionality Description	Functionality Reference
Aedae-K-I	Kinin	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Aedae-K-II	Kinin	Drosophila melanogaster	Regulation of renal water transport	GO:2001151	No effect on Malpighian tubules	Get Reference
Aedae-K-III	Kinin	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Anoga-CAPA-1	CAPA	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Diuretic on Malpighian tubules	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001151	Stronger resistance to starvation	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001151	Energy homeostasis control in adult flies	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001151	Induces hyperlipemia and hypertrehalosemia	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001151	Protection from oxidative stress	Get Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Activates renal Nuclear Factor- κ B stress signalling network	Get Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Diuretic on Malpighian tubules	Get Reference

The screenshot shows the QuickGO web interface. At the top, it says "EMBL-EBI QuickGO A fast browser for Gene Ontology terms and annotations." Below that, the path "EBI > Databases > QuickGO" is shown. The main heading is "GO:2001151 regulation of renal water transport". There is a search bar with the placeholder "Click for example search" and a "Search!" button. Below the search bar are icons for "Web Services", "Dataset", and "Term Basket: 0". A navigation bar includes "Term Information", "Ancestor Chart", "Child Terms", "Protein Annotation", "Co-occurring Terms", and "Change Log". The "Term Information" section is expanded, showing: ID: GO:2001151, Name: regulation of renal water transport, Ontology: Biological Process, Definition: Any process that modulates the frequency, rate or extent of renal water transport., and GONUTS: GO:2001151 Wiki Page.

Showing 1 to 10 of 33 entries

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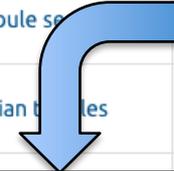
The Gene ontology entry for that particular neuropeptide functionality can be obtained by clicking on the respective QuickGo Reference button.

Functionality Information

Show 10 entries

Search:

Isoform	Neuropeptide	Species Used in Study	Functionality Category	Quick Go Reference	Functionality Description	Functionality Reference
Aedae-K-I	Kinin	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Increases Malpighian tubule secretion	Get Reference
Aedae-K-II	Kinin	Drosophila melanogaster	Regulation of renal water transport	GO:2001151	No effect on Malpighian tubules	Get Reference
Aedae-K-III	Kinin	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001152	Increases Malpighian tubule secretion	Get Reference
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Drome-AKH	AKH	Drosophila melanogaster	Behavioral response to starvation	GO:0042575	Increases Malpighian tubule secretion	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Lipid homeostasis	GO:0055088	Increases Malpighian tubule secretion	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Lipid homeostasis	GO:0055088	Increases Malpighian tubule secretion	Get Reference
Drome-AKH	AKH	Drosophila melanogaster	Positive regulation of response to oxidative stress	GO:1902884	Protection from oxidative stress	Get Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Activates renal Nuclear Factor- κ B stress signalling network	Get Reference
Drome-CAPA-1	CAPA	Drosophila melanogaster	Positive regulation of renal water transport	GO:2001153	Diuretic on Malpighian tubules	Get Reference



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Abstract - Send to: -

J Exp Biol. 1999 Dec;202(Pt 24):3667-76.

Isolation and characterization of a leucokinin-like peptide of Drosophila melanogaster.

Terhzaz S¹, O'Connell FC, Pollock VP, Kean L, Davies SA, Veenstra JA, Dow JA.

© Author information

Abstract

The leucokinin (LK) family of neuropeptides has been found widely amongst invertebrates. A member of this family was purified from adults of the fruit fly *Drosophila melanogaster*. The peptide sequence for *Drosophila leucokinin* (DLK) was determined as Asn-Ser-Val-Val-Leu-Gly-Lys-Lys-Gln-Arg-Phu-His-Ser-Tyr-Gly-amide, making it the longest member of the family characterized to date. Synthetic DLK peptide was shown to act to stimulate fluid secretion in *D. melanogaster* Malpighian (renal) tubules by approximately threefold, with an EC₅₀ of approximately 10⁻¹⁰ mol l⁻¹, and a secondary effect at approximately 10⁻⁷ mol l⁻¹. DLK also acted to elevate intracellular [Ca²⁺]_i in the Malpighian tubules by approximately threefold, with an EC₅₀ of 10⁻¹⁰ to 10⁻⁹ mol l⁻¹. Responses were detected in stellate cells and occasionally in principal cells, although at no concentration tested did [Ca²⁺]_i in the principal cell increase significantly above background. In stellate cells, DLK produced a biphasic rise in intracellular [Ca²⁺]_i from resting levels of 80-100 nmol l⁻¹, with a transient peak being followed by a slower rise that peaked at 200-300 nmol l⁻¹ (1) after 3 s, then decayed over approximately 10 s. The wide range of concentrations over which DLK acts suggests the involvement of more than one receptor. The genomic sequence encoding the DLK peptide has been identified, and the gene has been named pp. The gene resides at cytological location 70E3-70F4 of chromosome 3L. The localisation of this first *Drosophila* LK gene in a genetic model permits a genetic analysis of the locus.

Showing 1 to 10 of 33 entries

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The Reference Paper for that particular neuropeptide functionality can be obtained by clicking on the respective Get Reference button.

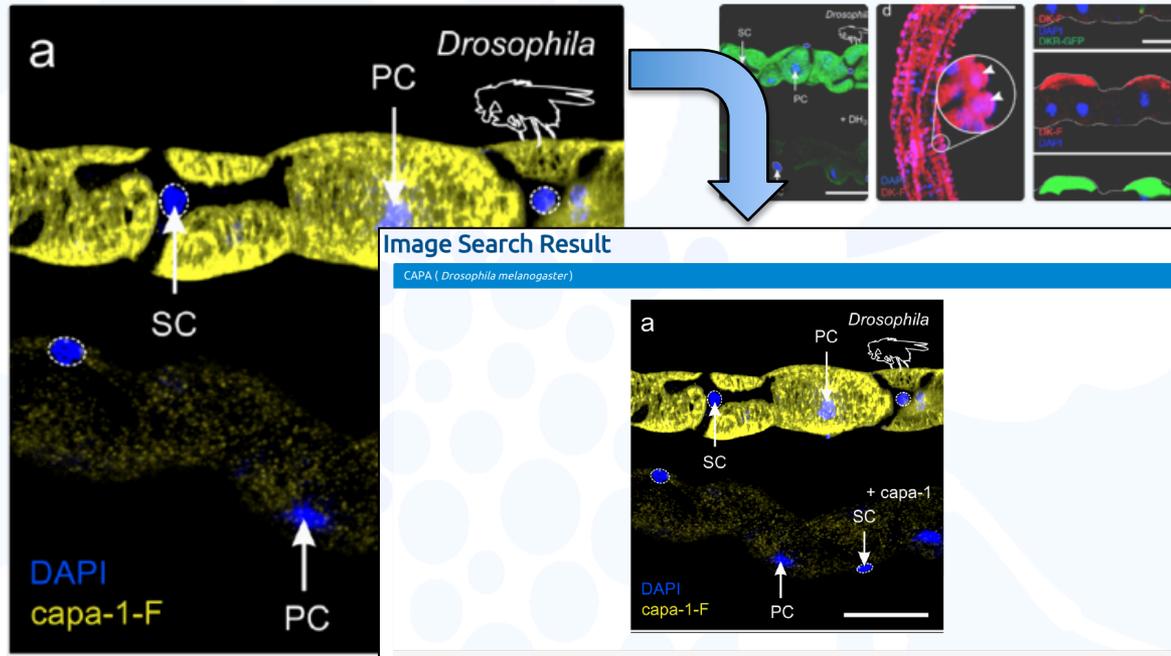


IMAGE RESULTS SECTION

IMAGE RESULTS SECTION

Image Results

Instructions: Please click on the thumbnails to see main image. You may use the slider at the bottom to scroll through all the images. Click on the main image for better view. Once open, you may click on More to view on a new page.



Clicking on the image will open up a new page containing more information about that specific image.



NEW SEARCH FORM

NEW SEARCH FORM

New Search

The following form is used for searching the database. Using this search you will be able to access General Information about Species and Neuropeptides. You can see any relevant and related neuropeptide isoforms, their functionality and even where available Image results. You may search using individual fields on their own or using any combination of Species, Neuropeptides and/or Functionality. You can also select multiple options at a time for any of the fields (using the 'cmd' button on a Mac or the 'Ctrl' button on a PC).

[Click here to perform a new Search](#)

Select Species:

Click here to select species

Select Neuropeptide:

Click here to select neuropeptide

Select Functionality:

Click here to select functionality

Search 

Clear 

Finally a new search can be conducted using the form at the bottom of the Results Page.