

calnt 0006 - Searching for pathway in calIntegrator

Question: How do I search for pathway in calIntegrator?

Topic: calIntegrator Usage

Release: calIntegrator 1.2 and above

Date entered: 08/31/2010

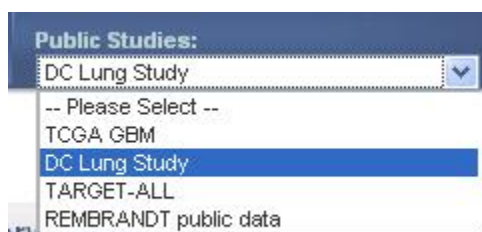
Answer

The user can launch the search for pathway in caBio within calIntegrator by following the steps below:

Step 1: Select a study.

The pathway search can be done in either a private or a public study (no login required). In the example below, we used the [public study, hosted on calIntegrator's public domain](#).

Select a study from the drop-down list in the top tool bar (DC Lung Study in this example).



Step 2 : Initiate Search within the study.

The left menu bar shows the options available within the study. Click on **Search DC Lung Study** from the left menu bar.



Step 3 Initiate Search for the gene

Select **Gene expression** under the Criteria tab in the main section of the study, and Click on **Add** next to the option. After the field of **Gene Expression** appears, select **Gene name**.

Search DC Lung Study

Criteria

Results Type

Sorting

Query Results

Define Query Criteria for: Unsaved Query

Gene Expression

+

Add

Gene Expression

-- Please Select --

-- Please Select --

Gene Name

Fold Change

☐ or ☒ and

Run Query

Step 4 Search for pathway in caBio.

Click on the **caBIO** icon at the right side to launch the search in **caBio**.

Search DC Lung Study

Criteria

Results Type

Sorting

Query Results

Define Query Criteria for: Unsaved Query

Gene Expression

+



Add

Gene Expression

Gene Name

Gene Symbol(s)
(comma separated list) or blank for all genes

EGFR

Put a search term in the field, and select pathways from the drop down menu. In this example, the search term **EGFR** was used and there are 16 pathways found in the results.

caBIO Gene Search

Search Terms: in

Match Terms: ☒ Any ☐ All

Choose Taxon:

☒ Show only genes that are part of this study

16 pathway(s) found.

<input checked="" type="checkbox"/> Name	Title	Description
<input checked="" type="checkbox"/> h_EGFR_downregul...	EGFR downregulation	EGFR downregulation (mouseover for full description)
<input checked="" type="checkbox"/> h_EGFR_interacts...	EGFR interacts with phospholipase C-gamma	EGFR interacts with phospholipase C-gamma (mouseover for full description)
<input checked="" type="checkbox"/> h_ErbB3Pathway	Neuroregulin receptor	The neuregulins comprise a subfamily of at least four

Step 5 Search for pathway gene.

The user can select one or many pathways from the 16 found in the results from which to search for genes, although the the list of genes returned will be large when the multiple pathways are selected. In the example below, we selected one pathway: h_vegfr1_pathway (top portion of the figure) for the search, then clicked on the 'Search Pathways For Genes' button below. The results for this search returned 30 genes (the first five are shown in the bottom portion of the figure).

Select Pathway:

<input checked="" type="checkbox"/> h_vegfr1_pathway	VEGFR1 specific signals	VEGFR1 specific signals (mouseover for full description)
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Returned Genes:

30 gene(s) found.

<input checked="" type="checkbox"/> Symbol	HUGO Symbol	Taxon	Full Name
<input checked="" type="checkbox"/> AKT1	AKT1	human	V-akt murine thymoma viral oncogene homolog 1
<input checked="" type="checkbox"/> CALM1	CALM1	human	Calmodulin 1 (phosphorylase kinase, delta)
<input checked="" type="checkbox"/> CALM2	CALM2	human	Calmodulin 2 (phosphorylase kinase, delta)
<input checked="" type="checkbox"/> CALM3	CALM3	human	Calmodulin 3 (phosphorylase kinase, delta)
<input checked="" type="checkbox"/> CAV1	CAV1	human	Caveolin 1, caveolae protein, 22kDa

Step 6 Using pathway gene

Select pathway genes of interest and click on "Use Genes" (top portion of the figure below). The selected genes are populated in the Gene Symbol box in the original Gene expression query (done at step 3) as shown below in the lower portion of the figure (RASA1, SHC2, VEGFA, VEGFP).

<input type="checkbox"/>	PRKCB	PRKCB	human	Protein kinase C, beta
<input type="checkbox"/>	PTPN11	PTPN11	human	Protein tyrosine phosphatase, non-receptor type 11
<input checked="" type="checkbox"/>	RASA1	RASA1	human	RAS p21 protein activator (GTPase activating protein) 1
<input checked="" type="checkbox"/>	SHC2	SHC2	human	SHC (Src homology 2 domain containing) transforming protein 2
<input checked="" type="checkbox"/>	VEGFA	VEGFA	human	Vascular endothelial growth factor A
<input checked="" type="checkbox"/>	VEGFB	VEGFB	human	Vascular endothelial growth factor B

Use Genes

Search DC Lung Study

Criteria
Results Type
Sorting
Query Results

Define Query Criteria for: Unsaved Query

Gene Expression
Add

Gene Expression
Gene Name
Gene Symbol(s) (comma separated list) or blank for all genes

RASA1,SHC2,VEGFA,VEGFB

or
and

Run Query

Have a comment?

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