

Using the caBIO Portlet Simple Search Tool to Find Genes Associated with a Compound

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To Print the Guide

We recommend you print one wiki page of the guide at a time. To do this, click the printer icon at the top right of the page; then from the browser File menu, choose Print. Printing multiple pages at one time is more complex. For instructions, refer to [How do I print multiple pages?](#).



Having Trouble Reading the Text?

Resizing the text for any web page is easy. For information on how to do this in your web browser, refer to this [W3C tutorial](#).

Selecting a Compound Search Term

The [caBIO Portlet Simple Search](#) tool creates an auto-populated list of caBIO terms that match the characters you have entered (1). Thus, you may select any of these suggested terms that match your disease concept of interest (for example, "etoposide") to search for objects that match the term. If you would like to use a more general search term in order to retrieve objects that are associated with more than one disease term (for example, any compound term associated with the a given search string), you may use the "*" wild card character, which will replace zero or more characters (for example, a search for "etopo*").

Simple Search Tool Retrieved Results

Once you have found a compound search term (1), click the Search button (2). If you would like, you may refine your search by clicking the Advanced Options (3). The Exclude field allows you to exclude objects that match your desired terms. You may select the format for retrieved results as lists of "simple" records, the default setting, or as objects. The Simple view returns at most three pieces of information from each retrieved object: the object name in blue text, miscellaneous data specific to the object's type in black text, and the type name in green text. You can view all of the object's attributes and data by clicking on the blue object name link. Alternatively, the Objects view will give a list of all attributes and metadata from retrieved objects.



Note

Due to space constraints and the nature of the Simple Search (that is, you must click through to a separate caBIO viewer to find the desired genes), you will likely not find this view to be a useful option.

You may also increase the number of results per page from the default value of five to either ten or fifteen. Finally, if you enter multiple keywords, you may define whether to search for objects with attributes that contain any of the keywords, the default setting or that contain all of the keywords. This advanced option is only useful if you do not take advantage of the auto-populated list of matched search options.



Note

Although the Cancer Gene Index refers to pharmacological substances as "compounds," caBIO and the NCI Thesaurus use the term "agents" for this concept.



Search Tip



It is strongly advised for you to select 15 returned results per page from the Advanced Options.

Simple Search queries retrieve lists of caBIO objects. The list is formatted such that three pieces of information are shown for each object - a blue link to all of the object's attributes and data, type-specific information (here, an agent term name or NCI Thesaurus concept code from *Agent* type objects and a snippet of a sentence from an *Evidence* type object) in black text, and the object's type in green text. You do not have to first search the NCI Thesaurus to find an appropriate search term or code. Occasionally, the type-specific information will not be shown.

Review the list of retrieved objects, clicking through to subsequent results pages, until you find an *Evidence* type object (green box).

caBIO Portlet



The [caBIO portlet](#)  is a portal user interface built on top of the caBIO APIs. [caBIO](#)  is a repository of data useful in biomedical research, compiled from multiple primary sources.


[Simple Search](#)
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1

2

▼ Advanced Options:

Match Terms: ☒ any ☐ all

Exclude:

3

View: ☒ simple ☐ objects

Results per page: 5

Results 1 - 5 of 1290 for **etoposide**
[etoposide](#)

Agent

We have previously shown that the cells become resistant to topois...

(VP-16)- **etoposide**

Evidence

[Etoposide \(VP-16\) ...](#)

Agent

[etoposide phosphate](#)

C1093

Agent

[Neuroblastoma directed therapy by a rational prodrug design of eto...](#)

compound=prodrug of **etoposide**

Evidence

1 2 3 4 5 6 7 8 ... 258 [Next](#) 4

Once you click on the object's name, you may review the sentence, [sentence status flag](#), [cell line indicator](#), and [negation indicator](#) data for the object (1). In order to view the gene associated with this piece of evidence, you must use the caBIO Object Graph Browser.



Warning!

If you do not want to spend time navigating through the caBIO object model for candidate gene-compound/agent associations that were found to be false positives, unclear, or redundant to other data, you should first view the check that the [sentenceStatus](#) attribute is set to *finished* and the [negationIndicator](#) to *no* (1) before opening the caBIO Viewer (2).

To open the browser, click the [Open this record in the caBIO Object Graph Browser](#) link at the bottom of the page (2). A new window or tab in your web browser should open and display the *Evidence* type object. To return to the list of retrieved results, you may return to the Simple Search window or tab in your web browser and click the "Return to results" link (3).

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▼ Advanced Options

Match Terms: ☒ any ☐ all

Exclude:

View: ☒ simple ☐ objects

Results per page: 5

3 [« Return to results](#)

1 Evidence

negationStatus	no
comments	(VP-16)- etoposide
celllineStatus	no
sentenceStatus	unclear
pubmedId	12504087
bigid	
sentence	We have previously shown that the cells become resistant to topoisomerase II alpha (topo II alpha) targeted cancer chemotherapeutic drug such as etoposide (VP-16) when GRP78 is up-regulated by various means.

External Links

2 • [Open this record in the caBIO Object Graph Browser](#)

You must scroll to the right, represented as the black double line breaks in the Browser record, and click the `getGeneFunctionAssociationCollection` method link (1, blue box). Next, click the `getGene` method link in the `GeneAgentAssociation` type object (2, blue box) to view the associated gene's full name and HUGO Gene Symbol in the `fullName` and `hugoSymbol` columns of the `Gene` type object (3, blue box).

Criteria: gov.nih.nci.cabio.domain.Evidence[@id=498883]							
gov.nih.nci.cabio.domain.Evidence							
bigid	celllineStatus	comments	id	negationStatus	sentenceStatus	evidenceCodeCollection	geneFunctionAssociationCollection
-	no	(VP-16)- etoposide	498883	no	unclear	getEvidenceCodeCollection	getGeneFunctionAssociationCollection

1

Criteria: Evidence[@id=498883]						
gov.nih.nci.cabio.domain.GeneAgentAssociation						
bigid	id	role	source	gene	evidenceCollection	agent
-	19934141	Not assigned	Cancer Gene Index	getGene	getEvidenceCollection	getAgent

2

Criteria: GeneAgentAssociation[@id=19934141]					
gov.nih.nci.cabio.domain.Gene					
bigid	clusterId	fullName	hugoSymbol	id	symbol
hdl://2500.1.PMEUGUOCL5/EXR4GW46D7	156346	Topoisomerase (DNA) II alpha 170kDa	TOP2A	7589	TOP2A

3

Agent Ontologies

Should you wish to find parent and child concepts for your compound search term in order to perform additional searches using these disease terms, you must utilize the [NCI Thesaurus](#). To find [parent and child compound/agent concepts via the NCI Thesaurus, enter your compound/agent search term or concept code that you used for caBIO (1) and click the Search button (3).

NCI thesaurus

etoposide 2

Search ?

1 ☐ Exact Match ☐ Begins With ☒ Contains 3

[Home](#) | [View Hierarchy](#) | [Subsets](#) | [Help](#) [Term Suggestion](#)

Quick Links

From the compound/agent concept's NCI Thesaurus page, click on the Relationships tab (blue box) to view direct parent and child concepts or click the red View in Hierarchy button to find where the concept is located in the agent hierarchy (green box).

Etoposide (Code C491)

[Suggest changes to this concept](#)[Terms & Properties](#)[Relationships](#)[Synonym Details](#)[View All](#)[View in Hierarchy](#)[View History](#)

Terms and Properties

Definition: A semisynthetic derivative of podophyllotoxin, a substance extracted from the mandrake root *Podophyllum peltatum*. Possessing potent antineoplastic properties, etoposide binds to and inhibits topoisomerase II and its function in ligating cleaved DNA molecules, resulting in the accumulation of single- or double-strand DNA breaks, the inhibition of DNA replication and transcription, and apoptotic cell death. Etoposide acts primarily in the G2 and S phases of the cell cycle. (NCI04)

NCI-GLOSS Definition: An anticancer drug that is a podophyllotoxin derivative and belongs to the family of drugs called mitotic inhibitors.

Preferred Name: Etoposide

NCI Thesaurus Code: C491

NCI Metathesaurus CUI: C0015133 ([see NCI Metathesaurus info](#))

Synonyms & Abbreviations: ([see Synonym Details](#))

4'-Demethylepipodophyllotoxin 9-[4,6-O-ethylidene-beta-D-glucopyranoside

9-[(4,6-O-Ethylidene-beta-D-glucopyranosyl)-5,8,8a,9-tetrahydro-5-(4-hydroxy-3,5-dimethoxyphenyl)furo[3',4':6,7]naphtho[2,3-d]-1,3-dioxol-6(5aH)-one