The "Full-text Search" is a simple search option for a quick database search over all BRENDA data fields.
Enter a search term and perform the query.

You can perform a search with the default query options or restrict your search to specific data fields or include/exclude text mining results.
More details can be obtained by clicking on the data field name...

On the result page you get a table showing the number of hits in the different data fields.
Fulltext Search

Search term: alkaloid

...to find the list of enzymes containing the search term in their entries

directly linked to the Enzyme Summary Page
The „Advanced Search“ is a query system providing target-oriented searches.
The “Advanced Search” allows you to combine 20 different query criteria.
Enter your search criteria and click the corresponding checkbox.
The result page displays all enzymes which meet the search criteria.

- Directly linked to the Enzyme
  Summary Page

- Directly linked to the detailed
  reference information
The topic „Enzyme & Disease“ provides searches for disease-related enzyme information.
You can either search DRENDA or the MeSH Ontology.
Enter the disease-related term

DRENSDA provides searches for disease-related enzyme information based on text mining methods.

DRENSDA (Disease Related Enzyme Information Database) [1]

DRENSDA is a new supplement to BRENDA providing disease-related enzyme information on the absence or malfunction of enzymes which have a major influence on the metabolism, regulation, and immunity etc. causing severe diseases. The development of DRENSDA focuses on the automatic search of enzyme-disease relations from titles and abstracts of the PubMed database [2] and its classification. This approach is based on a text-mining method, supported by:

- BRENDA vocabularies (~100 000 items)
- EC numbers
- Enzyme names (including synonyms)
- MeSH terms for diseases and metabolic disorders from the NCBI database (~23 500 terms)

This approach resulted in 0.9 million enzyme-disease combinations extracted from the literature. Further on the enzyme-disease relations are classified into four categories using machine learning methods via Support Vector Machines [3]:

- causal interaction: if the absence or the malfunction of an enzyme causes a disease
- therapeutic application: the therapeutic usage of an enzyme as drug target or therapeutic agent is described
- diagnostic usage: the enzyme is used for a diagnostic approach/analysis tests or the malfunction of an enzyme is detected to diagnose a disease
- ongoing research: the research about the enzyme-disease relation is still in progress
DREnda provides searches for disease-related enzyme information based on text mining methods.

You can refine search by choosing one of the four categories:
- therapeutic application
- ongoing research
- diagnostic usage
- causal interaction

DREnda (Disease Related Enzyme information DAtabase) [1]

DREnda is a new supplement to BRENDA providing disease-related enzyme information on the absence or malfunction of enzymes which have a major influence on the metabolism, regulation, and immunity etc. causing severe diseases. The development of DREnda focuses on the automatic search of enzyme-disease relations from titles and abstracts of the PubMed database [2] and its classification. This approach is based on a text-mining method, supported by:

- BRENDA vocabularies (~100,000 items)
- EC numbers
- Enzyme names (including synonyms)
- MeSH terms for diseases and metabolic disorders from the NCBI database (~23,500 terms)

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- ongoing research: the research about the enzyme-disease relation is still in progress
DREND используют для поиска информации о заболеваниях, основанной на методах текстовой минерализации.

Вы можете уточнить свой запрос, введя уровень уверенности.

Пожалуйста, выберите один из четырех уровней уверенности:
- Уровень 1: Точность > 75%, Точность > 70%
- Уровень 2: Точность > 77%, Точность > 70%
- Уровень 3: Точность > 85%, Точность > 80%
- Уровень 4: Точность > 95%, Точность > 80%
This page shows the results of the DRENGA text mining procedure, containing the relevant references, with the chosen category and confidence level, including the enzyme information in BRENDA.
MeSH (Medical Subject Headings) is the controlled vocabulary thesaurus for PubMed
Enter the search term or an EC number.
On the result page you find the details of the corresponding MeSH terms ...

...and the position in the MeSH ontology, including the definition.
...and the position of the disease within Tree View of the MeSH ontology...

In the box you find further details about the disease, the MeSH-IDs, direct links, synonyms...
...and links to the corresponding enzymes in BRENDA

You can browse along the tree to get further information.