

BRENDA 2021.2

Data addition & further updates

- The structure of the database has improved with respect to loading times.
- BRENDA Tissue Ontology (BTO) has been updated.

BRENDA 2021.1

Data addition & further updates

- Gene names are now highlighted by a small DNA symbol in the *Synonyms* section of enzyme summary pages.
- BRENDA has been supplemented by a newly classified SARS-Cov-2 enzyme given the BRENDA EC number 3.4.22.B80. Papain-like proteinase 2 EC 3.4.22.B50 and papain-like proteinase 1 EC 3.4.22.B14 are additional enzymes related to SARS-Cov-2 with a provisional EC number provided by BRENDA.

BRENDA 2020.2

Data addition & further updates

- Enzymes referring to COVID-19 and SARS-Cov-2, 3.4.17.23 and 3.4.22.69 have been updated.
- Enzyme summary pages have been reworked – amongst others with respect to loading times.

BRENDA 2020.1

Data addition & further updates

- The BRENDA chart of metabolic pathways has been revised again.

BRENDA 2019.2

Data addition & further updates

- In the current release, BRENDA comprises 7867 EC numbers allotted to seven EC classes. Of these more than 6,280 are active entries, 523 entries are considered preliminary while others are retired and just kept for documentary purpose.
- 8,659,739 references have been exploited by manual curation or text mining.

- Users of BRENDA Online or the default local installation will also notice a revised top of the Enzyme Summary Pages and a rearranged left-hand menu providing a direct glance on the amount of data available.
- BRENDA Online or the default local installation: Chart of metabolic pathways now shows the names for all metabolic pathways. Denominations will be enlarged if necessary and turn to bold font when you mouse-over. Individual pathways are now displayed as parts of a network

BRENDA 2019.1

Data addition & further updates

- Translocases create a new EC class, EC7.

BRENDA 2018.2

Data addition & further updates

- The number of EC numbers has increased by 241. Thus, in the current release BRENDA comprises 7,512 EC numbers. Of these about 6,000 are active entries, 509 entries are considered preliminary while others are retired and kept for documentary purpose.
- For the 2018.2 release 7,482,724 references have been exploited by manual curation or text mining.
- In addition, the Ligand Structure Search has been enhanced and the Ontology “Chemical entities of biological interest” has been updated.

BRENDA 2018.1

Updates

- 479 EC classes have been enhanced by manually curated data
- Word Maps are now also available for a selection of organisms

BRENDA 2017.2

Data addition & further updates

- 176 new enzyme classes have been integrated. Now BRENDA comprises 7,271 EC numbers. 951 EC numbers were updated with new manually annotated references and more than 55,000 new data were added in this process. Especially the classes of transferases and oxidoreductases have been enhanced by adding 524 or 212 organisms, respectively. Additional data retrieved by text mining led to a further increase of data.
- BRENDA Tissue Ontology (BTO) has been extended by 59 additional terms, further 263 synonyms, and 53 new definitions.
- 15 new pathways have been added.
- 2,079,383 amino acid sequences of cellular organisms have been added. BRENDA now comprises 9,250,412 amino acid sequences.

BRENDA 2017.1

New features & updates of the web interface and BRENDA online, respectively:

- The Enzyme Summary Page has been revised.
- Most of the newly added pathways are accessible via Pathway Overview for customers using the web interface.