

Deubiquitination

In the eukaryotic cell, in addition to ubiquitination of proteins, their deubiquitination also occurs. The enzymes responsible for this process are called **deubiquitinases** and denoted by the abbreviation DUB. We can divide them into the following five groups:

1. ubiquitin C-terminal hydrolases,
2. ubiquitin specific proteases,
3. proteases with the Machado-Joseph disease domain,
4. proteases from ovarian tumors,
5. proteases with a JAMM domain^[1].

Today, 75 DUBs are known, which interact with hundreds of proteins and play an immense number of different roles in the eukaryotic cell^[2]. Note that one of the JAMM domain deubiquitinases, referred to in human cells as **Poh1**, is part of the eukaryotic proteasome and plays a key role in its proper functioning.

Links

Related articles

- Proteins
- Degradation of proteins
- Ubiquitination
- History of ubiquitin-proteasome system
- Proteasome
- Proteasome inhibitors
- Translation

Source

- CVEK, Boris. From ubiquitin to antabuse. *Britské listy: a newspaper about everything that is not talked about much in the Czech Republic* [online]. 2011, year. -, pp. -, also available from <<https://blisty.cz//legacy.blisty.cz/art/56680.html>>. ISSN 1213-1792.

Reference

1. KOMANDER, David, Michael J CLAGUE a Sylvie URBÉ. Breaking the chains: structure and function of the deubiquitinases. *Nat Rev Mol Cell Biol* [online]. 2009, vol. 10, no. 8, s. 550-63, dostupné také z <<https://www.ncbi.nlm.nih.gov/pubmed/19626045>>. ISSN 1471-0072 (print), 1471-0080.
2. SOWA, Mathew E, Eric J BENNETT a Steven P GYGI, et al. Defining the human deubiquitinating enzyme interaction landscape. *Cell* [online]. 2009, vol. 138, no. 2, s. 389-403, dostupné také z <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2716422/?tool=pubmed>>. ISSN 0092-8674 (print), 1097-4172.