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ProductInformation

Ubiquitin C-Terminal Hydrolase, UCH-L3 from rabbit

Product Number **U2133**
Storage Temperature –70 °C

Product Description

Ubiquitin C-Terminal Hydrolase, UCH-L3, is a 30 kDa protein isolated from rabbit.

The ubiquitin proteolytic system plays an important role in a broad array of basic cellular processes. Among these are regulation of cell cycle, modulation of the immune and inflammatory responses, development and differentiation, and control of signal transduction pathways. These complex processes are controlled via specific degradation of a single or a subset of proteins. Degradation of a protein by the ubiquitin system involves two successive steps; conjugation with multiple moieties of ubiquitin and degradation of the ubiquitin tagged protein by the 26S proteasome.[1]

Ubiquitin C-terminal hydrolase is a low molecular weight cysteine hydrolase. It hydrolyzes the small C-terminal derivatives of ubiquitin (esters, amides, and thioesters), which form during ubiquitination of proteins.[2] Enzyme activity may be measured by the cleavage of subtrates such as ubiquitin ethyl ester and ubiquitin-AMC (Product No. U 2258). This enzyme is completely inhibited by ubiquitin-hydroxylamine.[3]

An enzyme concentration range of 0.05–5 nM is suggested for *in vitro* hydrolysis reactions. The concentration is dependent on reaction conditions and substrate. To achieve maximal activity, it is recommended to incubate the enzyme in a 10 mM DTT solution for 15 minutes.

This product is supplied as a solution in 50 mM HEPES, pH 7.6, with 1 mM DTT.

Purity: minimum 95% (SDS-PAGE)

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This product ships on dry ice and storage at –70 °C is recommended. The product is stable through multiple freeze/thaw cycles.

References

1. Ciechanover, A., The Ubiquitin-mediated proteolytic pathway: mechanisms of action and cellular physiology. Biol. Chem. Hoppe-Seyler, **375**, 565-581 (1994).
2. Dang, L. C., et al., Kinetic and mechanistic studies on the hydrolysis of ubiquitin C-terminal 7-amido-4-methylcoumarin by deubiquitinating enzymes. Biochemistry, **37**, 1868-1879 (1998).
3. Pickart, C. M., et al., Mechanism of ubiquitin carboxyl-terminal hydrolase. Borohydride and hydroxylamine inactivated in the presence of ubiquitin. J. Biol. Chem., **261**, 10210-102107 (1986).

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