

Lot #

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MATERIAL DATA SHEET

His₆-Ataxin UIM Domains, *human recombinant* Cat. # UBE-100

Ataxin-3 protein belongs to a novel group of cysteine proteases similar to USP-type ubiquitin proteases and has deubiquitinating activity *in vitro*. The full-length protein contains an catalytic N-terminal Josephin domain, three ubiquitin interacting motifs (UIMs), and a variable C-terminus with a polyglutamine stretch. Ataxin3 has deconjugating activity and functions as a mixed linkage, chain editing enzyme with preferential cleavage of K63 linkages in mixed chains. Ataxin3 also bind both K48-linked and K63-linked poly-Ub chains via its UIM domains and preferentially interacts with four or more ubiquitin units. This protein can be used for the isolation and identification of K48-linked (preferentially) or K63-linked poly-Ub chains or ubiquitinated substrates that contain these linkages. This protein is His-tagged which allows for metal chelate affinity purification and also allows for convenient immuno-detection of conjugates using His₆-specific antibodies.

Product Information

Quantity:	250 µg
MW:	8.4 kDa
Stock:	X mg/ml (X µM) 50 mM Hepes, 200 mM NaCl, 1 mM DTT pH 8.0
Purity:	>95% by SDS-PAGE

Use & Storage

Use:	Use 50-100 µg of protein to detect 10-20 µg of purified K48-linked ubiquitin chains. The amount necessary for use in crude lysates needs to be determined empirically.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Albrecht., <i>et al.</i> (2004) <u>Eur. J. Biochem.</u> 271 :3155-3170 Buchberger A. (2002) <u>Tren. Cell. Biol.</u> 12 :216-221 Burnett B., <i>et al.</i> (2003) <u>Hum. Mol Genet.</u> 12 :3195-3205 Hurley J.H., <i>et al.</i> (2006) <u>Biochem. J.</u> 399 :361-372 Mao Y., <i>et al.</i> (2005) <u>Proc. Natl. Acad. Sci.</u> 102 :12700-12705 Shoesmith S.J., <i>et al.</i> (2005) <u>J. Biol. Chem.</u> 280 :32026-32034
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