

USP30 Protein, Human (Sf9, His)

Cat. No.:	HY-P701451
Synonyms:	USP30; Ubiquitin carboxyl-terminal hydrolase 30; Deubiquitinating enzyme 30; Ubiquitin thioesterase 30; Ubiquitin-specific-processing protease 30; Ub-specific protease 30
Species:	Human
Source:	Sf9 insect cells
Accession:	Q70CQ3 (T57-E517)
Gene ID:	84749
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	USP30 Protein, anchored to the mitochondrial outer membrane, assumes a critical role as a deubiquitinating enzyme that acts as a key inhibitor of mitophagy, countering the actions of parkin (PRKN). By hydrolyzing ubiquitin attached by parkin on target proteins such as RHOT1/MIRO1 and TOMM20, USP30 impedes parkin's ability to drive mitophagy, thereby regulating the selective clearance of damaged mitochondria. Its substrate specificity extends to the preferential cleavage of 'Lys-6'- and 'Lys-11'-linked polyubiquitin chains, key linkages involved in mitophagic signaling. Notably, USP30 does not efficiently cleave polyubiquitin phosphorylated at 'Ser-65'. Beyond its role in mitophagy, USP30 also functions as a negative regulator of mitochondrial fusion, mediating the deubiquitination of MFN1 and MFN2. This dual role underscores the intricate regulatory mechanisms by which USP30 orchestrates mitochondrial dynamics and quality control, playing a central role in maintaining mitochondrial homeostasis.
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Caution: Product has not been fully validated for medical applications. For research use only.

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