VCPIP1 Protein, Human (Sf9, His)

Cat. No.:	HY-P701435
Synonyms:	VCPIP1; Deubiquitinating protein VCPIP1; Valosin-containing protein p97/p47 complex-interacting protein 1; Valosin-containing protein p97/p47 complex-interacting protein p135; VCP/p47 complex-interacting 135-kDa protein
Species:	Human
Source:	Sf9 insect cells
Accession:	Q96JH7 (M1-S1222)
Gene ID:	80124
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.
Reconsititution	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	VCPIP1 Protein, a multifaceted deubiquitinating enzyme, plays essential roles in diverse cellular processes. It is intricately involved in DNA repair and the reassembly of the Golgi apparatus and endoplasmic reticulum post-mitosis, facilitating VCP-mediated Golgi stack reassembly and transitional endoplasmic reticulum (tER) formation. Additionally, VCPIP1 participates in the dissociation of the ternary complex containing STX5A, NSFL1C, and VCP. Moreover, following phosphorylation by ATM or ATR, VCPIP1 contributes to DNA repair by catalyzing the deubiquitination of SPRTN, promoting SPRTN recruitment to chromatin and facilitating the proteolytic cleavage of covalent DNA-protein cross-links (DPCs). The enzyme further demonstrates its versatility by hydrolyzing 'Lys-11'- and 'Lys-48'-linked polyubiquitin chains. In the context of microbial infection, VCPIP1 regulates the duration of C.botulinum neurotoxin type A (BoNT/A) intoxication by catalyzing the deubiquitination of Botulinum neurotoxin A light chain (LC), thereby preventing LC degradation by the proteasome and accelerating botulinum neurotoxin intoxication in patients. This highlights the diverse and crucial functions of VCPIP1 in cellular homeostasis and response to external challenges.

Caution: Product has not been fully validated for medical applications. For research use only.

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