SENP6 Protein, Human (GST)

Cat. No.:	HY-P701473
Synonyms:	SENP6; Sentrin-specific protease 6; SUMO-1-specific protease 1; Sentrin/SUMO-specific protease SENP6
Species:	Human
Source:	E. coli
Accession:	Q9GZR1 (K628-D1112)
Gene ID:	26054
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	SENP6 protein serves as a crucial protease in the intricate landscape of protein sumoylation, specializing in the deconjugation of SUMO1, SUMO2, and SUMO3 from their target proteins. This proteolytic activity is particularly pronounced in processing polymeric chains of SUMO2 and SUMO3, underscoring its selectivity within the SUMO family. SENP6's influence extends to transcriptional regulation, as it efficiently deconjugates SUMO1 from RXRA, consequently activating transcription. Beyond its role in molecular events, SENP6 emerges as a key player in chromosomal dynamics, impacting chromosome alignment and spindle assembly by modulating the CENPH-CENPI-CENPK complex at the kinetochore. Notably, SENP6 exerts protective effects by desumoylating critical proteins such as PML and CENPI, shielding them from ubiquitin ligase RNF4-mediated degradation. Additionally, it modulates the DNA damage response by preventing the recruitment of RAD51 through the desumoylation of RPA1, thereby regulating DNA repair pathways, specifically homologous recombination.

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