SENP2 Protein, Human

Cat. No.:	HY-P71288
Synonyms:	Sentrin-specific protease 2; Axam2; SMT3-specific isopeptidase 2; Sentrin/SUMO-specific protease SENP2; KIAA1331; SENP2.
Species:	Human
Source:	E. coli
Accession:	Q9HC62 (D363-L589)
Gene ID:	59343
Molecular Weight:	Approximately 29.0 kDa

PROPERTIES

AA Sequence	D D L L E L T E D M E K E I S N A L G H G P Q D E I L S S A F K L R I T R G D I Q T L K N Y H W L N D E V I N F Y M N L L V E R N K K Q G Y P A L H V F S T F F Y P K L K S G G Y Q A V K R W T K G V N L F E Q E I I L V P I H R K V H W S L V V I D L R K K C L K Y L D S M G Q K G H R I C E I L L Q Y L Q D E S K T K R N S D L N L L E W T H H S M K P H E I P Q Q L N G S D C G M F T C K Y A D Y I S R D K P I T F T Q H Q M P L F R K K M V W E I L H Q Q L L
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 50 mM HEPES, 5% Glycerol, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
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	SENP2 protein plays a pivotal role in the SUMO pathway, exerting dual functions crucial for the maturation and deconjugation of small ubiquitin-like modifiers (SUMOs). Firstly, it hydrolyzes an alpha-linked peptide bond at the C-terminal end of SUMO propeptides (SUMO1, SUMO2, and SUMO3), facilitating their conversion into mature forms. Secondly, SENP2 contributes to the deconjugation process by cleaving the epsilon-linked peptide bond between the C-terminal glycine of mature SUMO and the lysine epsilon-amino group of target proteins. This dual enzymatic activity enables SENP2 to finely regulate SUMOylation dynamics and impact various cellular processes. Beyond its canonical functions, SENP2 has been implicated in modulating the Wnt pathway, influencing CTNNB1 levels, and actively participating in adipogenesis by

desumoylating and stabilizing CEBPB. Additionally, SENP2 emerges as a key player in antiviral responses, contributing to the regulation of the cGAS-STING pathway by catalyzing desumoylation of CGAS and STING1 during the late phase of viral infection. The interactions of SENP2 with SUMO isoforms, as well as its binding to proteins like NUP153 and MTA1, further underscore its intricate involvement in cellular processes and signaling pathways.

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