



## **Product** Data Sheet

## SENP3 Protein, Human (GST)

Cat. No.: HY-P701469

Synonyms: SENP3; Sentrin-specific protease 3; SUMO-1-specific protease 3; Sentrin/SUMO-specific

protease SENP3

Human Species: Source: E. coli

Accession: Q9H4L4 (E301-V574)

Gene ID: 26168

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 $^{\circ}$ C for 1 year. It is stable at -20 $^{\circ}$ C for 3 months after opening. It is recommended to freeze aliquots at -80 $^{\circ}$ C for

extended storage. Avoid repeated freeze-thaw cycles.

**Shipping** Shipping with dry ice.

## **DESCRIPTION**

Background

SENP3 protein emerges as a pivotal protease in the intricate world of protein sumoylation, exhibiting a potent ability to release SUMO2 and SUMO3 monomers from sumoylated substrates, with weaker activity against SUMO1 conjugates. Its regulatory influence extends to various cellular processes, as SENP3 is involved in deconjugating SUMO2 from MEF2D, enhancing its transcriptional activation potential, and from CDCA8, impacting cellular dynamics. Functioning as a redox sensor, SENP3, when redistributed into the nucleoplasm, acts as an effector to boost HIF1A transcriptional activity by desumoylating EP300. It plays a vital role in rRNA processing through deconjugation of SUMO2 and SUMO3 from nucleophosmin, NPM1, while also participating in the regulation of the sumoylation status of ZNF148. Operating as a component of the Five Friends of Methylated CHTOP (5FMC) complex, SENP3 contributes to the desumoylation of ZNF148, leading to the subsequent transactivation of ZNF148 target genes. Furthermore, SENP3 deconjugates SUMO2 from KAT5 and, under oxidative stress, its degradation is impeded, resulting in its stabilization and accumulation in the nucleoplasm.

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

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