10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KD-Validated Anti-SUMO Specific Peptidase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1432

Product Information

Application	WB, FC
Primary Accession	Q9P0U3
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB3580
Calculated MW	73481
Gene Name	SENP1
Aliases	SENP1; SUMO Specific Peptidase 1; Sentrin/SUMO-Specific Protease SENP1; SUMO1/Sentrin Specific Peptidase 1; SUMO1/Sentrin Specific Protease 1; Sentrin-Specific Protease 1; EC 3.4.22.-; EC 3.4.22; SuPr-2
Immunogen	A synthesized peptide derived from human SENP1

Additional Information

Gene ID	29843
Other Names	Sentrin-specific protease 1, 3.4.22.-, Sentrin/SUMO-specific protease SENP1, SENP1

Protein Information

Name	SENP1
Function	Protease that catalyzes two essential functions in the SUMO pathway (PubMed:10652325, PubMed:15199155, PubMed:15487983, PubMed:16253240, PubMed:16553580, PubMed:21829689, PubMed:21965678, PubMed:23160374, PubMed:24943844, PubMed:25406032, PubMed:29506078, PubMed:34048572, PubMed:37257451). The first is the hydrolysis of an alpha-linked peptide bond at the C-terminal end of the small ubiquitin- like modifier (SUMO) propeptides, SUMO1, SUMO2 and SUMO3 leading to the mature form of the proteins (PubMed:15487983). The second is the deconjugation of SUMO1, SUMO2 and SUMO3 from targeted proteins, by cleaving an epsilon-linked peptide bond between the C-terminal glycine of the mature SUMO and the lysine epsilon-amino group of the target protein (PubMed:15199155, PubMed:16253240, PubMed:21829689, PubMed:21965678, PubMed:23160374, PubMed:24943844, PubMed:25406032, PubMed:29506078, PubMed:34048572, PubMed:37257451). Deconjugates SUMO1 from HIPK2 (PubMed:16253240). Deconjugates SUMO1 from HDAC1

	and BHLHE40/DEC1, which decreases its transcriptional repression activity (PubMed:15199155, PubMed:21829689). Deconjugates SUMO1 from CLOCK, which decreases its transcriptional activation activity (PubMed:23160374). Deconjugates SUMO2 from MTA1 (PubMed:21965678). Inhibits N(6)-methyladenosine (m6A) RNA methylation by mediating SUMO1 deconjugation from METTL3 and ALKBH5: METTL3 inhibits the m6A RNA methyltransferase activity, while ALKBH5 desumoylation promotes m6A demethylation (PubMed:29506078, PubMed:34048572, PubMed:37257451). Desumoylates CCAR2 which decreases its interaction with SIRT1 (PubMed:25406032). Deconjugates SUMO1 from GPS2 (PubMed:24943844).
Cellular Location	Nucleus. Cytoplasm Note=Shuttles between cytoplasm and nucleus
Tissue Location	Highly expressed in testis. Expressed at lower levels in thymus, pancreas, spleen, liver, ovary and small intestine

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