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

SENP1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1230a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9P0U3
Reactivity	Human
Predicted	Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	73481
Antigen Region	28-59

Additional Information

Gene ID	29843
Other Names	Sentrin-specific protease 1, Sentrin/SUMO-specific protease SENP1, SENP1
Target/Specificity	This SENP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 28-59 amino acids from the N-terminal region of human SENP1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SENP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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

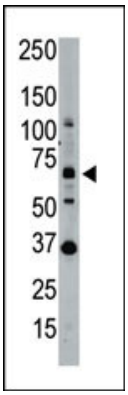
Background

SENP1 is a protease that catalyzes two essential functions in the SUMO pathway: processing of full-length SUMO1, SUMO2 and SUMO3 to their mature forms and deconjugation of SUMO1, SUMO2 and SUMO3 from targeted proteins. SENP deconjugates SUMO1 from HIPK2 and from HDAC1, which decreases the transcriptional repression activity of the latter.

References

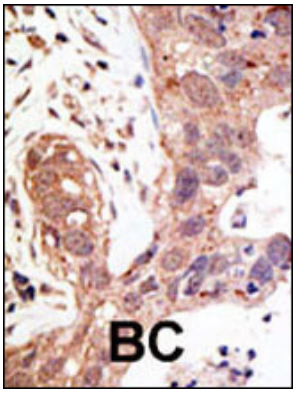
Gong, L., et al., J. Biol. Chem. 275(5):3355-3359 (2000). Bailey, D., et al., J. Gen. Virol. 83 (Pt 12), 2951-2964 (2002).

Images

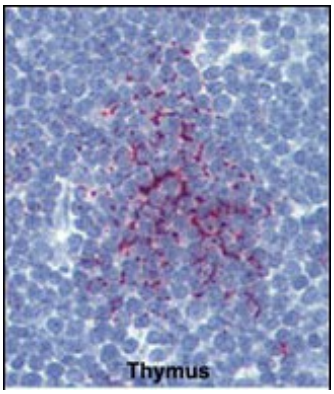


Western blot analysis of SENP1 polyclonal antibody (Cat. #AP1230)in whole HL60 cell lysate: SENP1 (Arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was



peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human Thymus tissue reacted with SENP1 Antibody (N-term)(Cat.#AP1230a), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Roles of sumoylation of a reptin chromatin-remodelling complex in cancer metastasis.
- MDM2-ARF complex regulates p53 sumoylation.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.