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

SUMO2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1282a

Specification

SUMO2 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P61956
Other Accession	Q7SZ22, Q5XIF4, Q9Z172, P55854, Q6DI05, Q5ZHQ1, Q17QV3, P61959, P61958, P61957, Q2PFW2, Q6DHL4, Q6LDZ8, Q5ZJM9, P61955, Q6NV25, Q6GPW2, Q7ZTK7
Reactivity	**Human**
Predicted	**Xenopus, Zebrafish, Bovine, Chicken, Hamster, Monkey, Mouse, Pig, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**63-93**

SUMO2 Antibody (C-term) - Additional Information

Gene ID 6613

Other Names
Small ubiquitin-related modifier 2, SUMO-2, HSMT3, SMT3 homolog 2 {ECO:0000312|HGNC:HGNC:11125}, SUMO-3, Sentrin-2, Ubiquitin-like protein SMT3B, Smt3B, SUMO2 (HGNC:11125)

Target/Specificity
This SUMO2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 63-93 amino acids from the C-terminal region of human SUMO2.

Dilution
WB~~1:1000
IHC-P~~1:50~100
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
SUMO2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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SUMO2 Antibody (C-term) - Protein Information

Name SUMO2 (HGNC:11125)

Function Ubiquitin-like protein that can be covalently attached to proteins as a monomer or as a lysine-linked polymer. Covalent attachment via an isopeptide bond to its substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I, and can be promoted by an E3 ligase such as PIAS1-4, RANBP2, CBX4 or ZNF451 (PubMed:26524494). This post-translational modification on lysine residues of proteins plays a crucial role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction. Polymeric SUMO2 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins (PubMed:18408734, PubMed:18538659, PubMed:21965678, PubMed:9556629). Plays a role in the regulation of sumoylation status of SETX (PubMed:24105744).

Cellular Location
Nucleus. Nucleus, PML body.

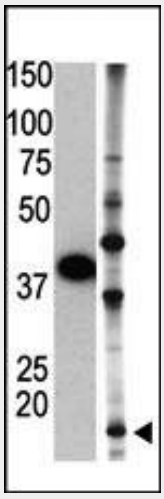
Tissue Location
Broadly expressed..

SUMO2 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SUMO2 Antibody (C-term) - Images



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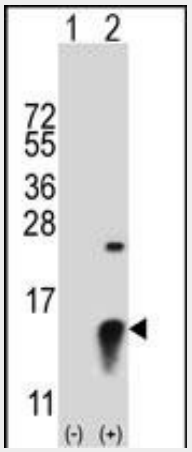
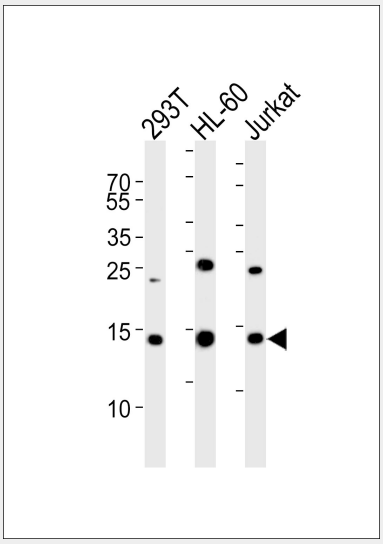
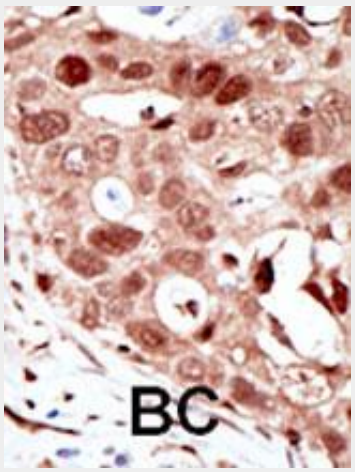
The SUMO2 C-term Antibody (Cat.#AP1282a) is used in Western blot to detect SUMO2 in GST-SUMO2 fusion protein (lane 1) and HL60 cell lysate (lane 2).



Western blot analysis of SUMO2 (arrow) using rabbit polyclonal SUMO2 Antibody (Cat.#AP1282a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the SUMO2 gene.



Western blot analysis of lysates from 293T, HL-60, Jurkat cell line (from left to right), using SUMO2 Antibody(Cat. # AP1282A). AP1282A was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



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.

SUMO2 Antibody (C-term) - Background

SUMO2 is a member of the SUMO (small ubiquitin-like modifier) protein family. This protein family functions in a manner similar to ubiquitin in that it is bound to target proteins as part of a post-translational modification system. However, unlike ubiquitin which targets proteins for degradation, this protein is involved in a variety of cellular processes, such as nuclear transport, transcriptional regulation, apoptosis, and protein stability. In vertebrates, three members of the SUMO family have been described, SUMO 1 and the functionally distinct homologues SUMO 2 and SUMO 3. SUMO modification sites present in the N terminal regions of SUMO 2 and SUMO 3 are utilized by SAE1/SAE2 (SUMO E1) and Ubc9 (SUMO E2) to form polymeric chains of SUMO 2 and SUMO 3 on protein substrates, a property not shared by SUMO 1.

SUMO2 Antibody (C-term) - References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002). Lapenta, V., et al., Genomics 40(2):362-366 (1997).

SUMO2 Antibody (C-term) - Citations

- TRIB3 Promotes APL Progression through Stabilization of the Oncoprotein PML-RARα and Inhibition of p53-Mediated Senescence.
- Novel eosinophilic neuronal cytoplasmic inclusions in the external cuneate nucleus of humans.
- Ubiquitin-related proteins in neuronal and glial intranuclear inclusions in intranuclear inclusion body disease.
- Incipient intranuclear inclusion body disease in a 78-year-old woman.
- SUMOylation attenuates the aggregation propensity and cellular toxicity of the polyglutamine expanded ataxin-7.
- Sumoylation regulates lamin A function and is lost in lamin A mutants associated with familial cardiomyopathies.