

SUMO2/3 Antibody (C-term E69)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1223e

Specification

SUMO2/3 Antibody (C-term E69) - Product Information

Application	IF, WB, IHC-P,E
Primary Accession	P55854
Other Accession	Q7SZ22 , Q5XIF4 , Q9Z172 , Q6DI05 , Q17OV3 , P61959 , P61958 , P61957 , Q2PFW2 , P61956 , 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
Calculated MW	11637
Antigen Region	53-84

SUMO2/3 Antibody (C-term E69) - Additional Information

Gene ID 6612

Other Names

Small ubiquitin-related modifier 3, SUMO-3, SMT3 homolog 1 {ECO:0000312|HGNC:HGNC:11124}, SUMO-2, Ubiquitin-like protein SMT3A, Smt3A, SUMO3 (HGNC:11124)

Target/Specificity

This SUMO2/3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 53-84 amino acids from the C-terminal region of human SUMO2/3.

Dilution

IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50

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

SUMO2/3 Antibody (C-term E69) is for research use only and not for use in diagnostic or

therapeutic procedures.

SUMO2/3 Antibody (C-term E69) - Protein Information

Name SUMO3 ([HGNC:11124](#))

Function Ubiquitin-like protein which can be covalently attached to target lysines either as a monomer or as a lysine-linked polymer. Does not seem to be involved in protein degradation and may function as an antagonist of ubiquitin in the degradation process. Plays a role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction. Covalent attachment 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 or CBX4 (PubMed:[11451954](#), PubMed:[18538659](#), PubMed:[21965678](#)). Plays a role in the regulation of sumoylation status of SETX (PubMed:[24105744](#)).

Cellular Location

Cytoplasm. Nucleus. Nucleus, PML body

Tissue Location

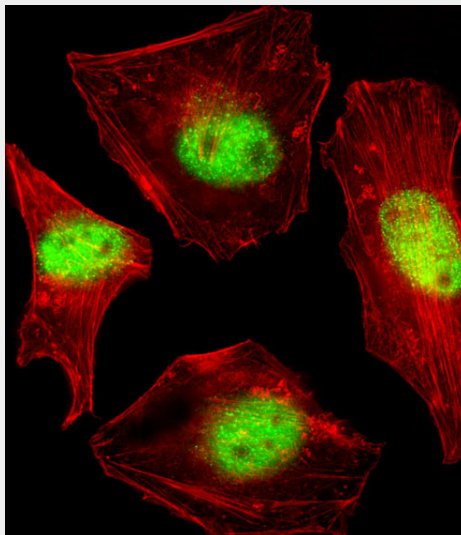
Expressed predominantly in liver.

SUMO2/3 Antibody (C-term E69) - Protocols

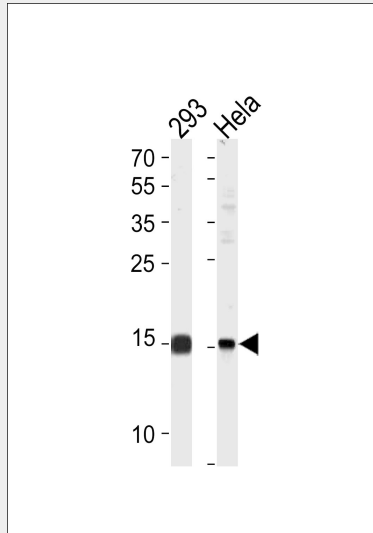
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

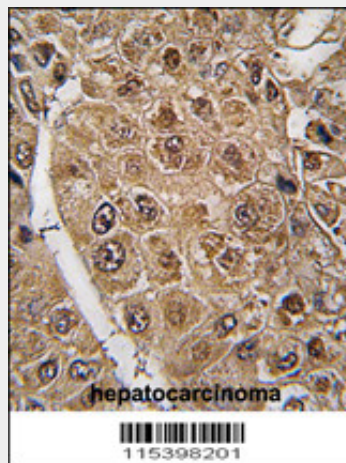
SUMO2/3 Antibody (C-term E69) - Images



Fluorescent confocal image of HeLa cell stained with SUMO2/3 Antibody (C-term E69)(Cat#AP1223e). HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with SUMO2/3 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). SUMO2/3 immunoreactivity is localized to Nucleus significantly.



SUMO2/3 Antibody (C-term E69) (Cat. #AP1223e) western blot analysis in 293, HeLa cell line lysates (35µg/lane). This demonstrates the SUMO2/3 antibody detected the SUMO2/3 protein (arrow).



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with SUMO2/3 antibody (C-term E69) (Cat.#AP1223e), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

SUMO2/3 Antibody (C-term E69) - Background

SUMO2 and SUMO3 are members 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.

SUMO2/3 Antibody (C-term E69) - 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).

Mannen, H., et al., Biochem. Biophys. Res. Commun. 222(1):178-180 (1996).