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SUMO2/3 Antibody (C-term E69)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1223e

Specification

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

Application	**WB, IF, IHC-P,E**
Primary Accession	P55854
Other Accession	Q7SZ22, Q5XIF4, Q9Z172, Q6DI05, Q17QV3, 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
WB~~1:1000
IF~~1:10~50
IHC-P~~1:10~50
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

SUMO2/3 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 Cytomety
- Cell Culture

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

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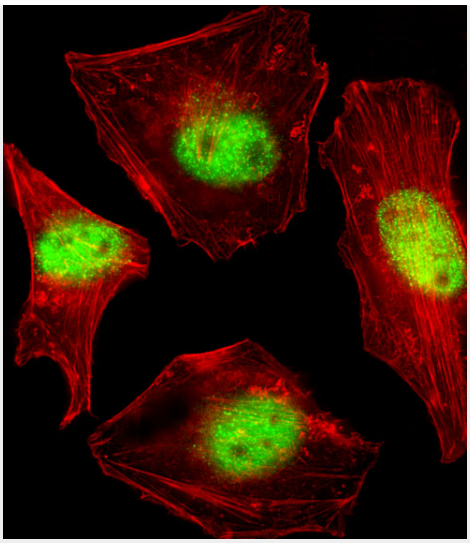
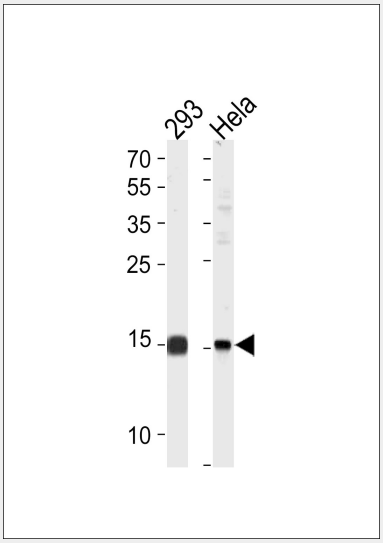


Fluorescent confocal image of Hela cell stained with SUMO2/3 Antibody (C-term E69)(Cat#AP1223e).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with SUMO2/3 primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃). 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 (35ug/lane).This demonstrates the SUMO2/3 antibody detected the SUMO2/3 protein (arrow).

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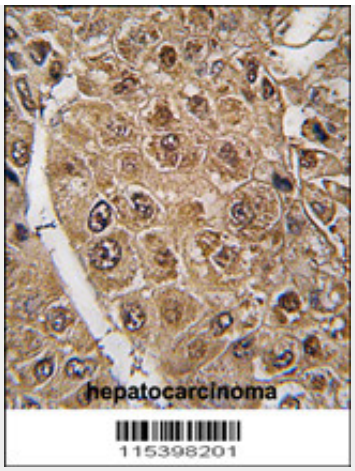

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with SUMO2/3 antibody (C-term E69) (Cat.#AP1223e), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance 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).