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SUMO2 Antibody (C-term)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2225b

Product Information

Application	WB, IF, E
Primary Accession	P61956
Other Accession	P61959, P61958, P61957, Q2PFW2, Q6LDZ8, Q5ZJM9, P61955
Reactivity	Human, Rat
Predicted	Bovine, Chicken, Hamster, Monkey, Mouse, Pig, Canine, Rabbit
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Clone Names	973CT8.1.1
Calculated MW	10871

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	Purified His-tagged SUMO2 protein was used to produced this monoclonal antibody.
Dilution	WB~~1:1000 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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.

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..

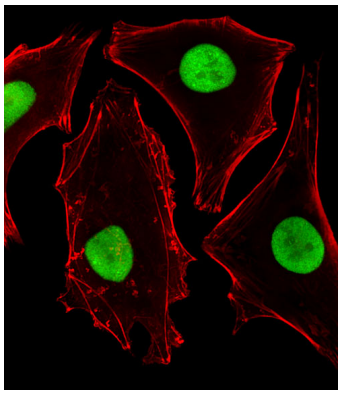
Background

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 or CBX4. 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.

References

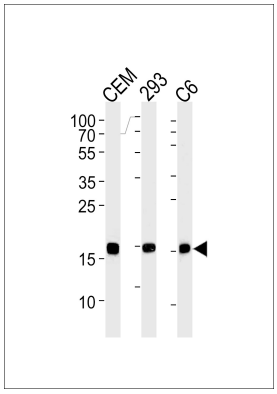
Reverter D., et al. Structure 12:1519-1531(2004).
Xu Z., et al. Biochem. J. 386:325-330(2005).
Mannen H., et al. Biochem. Biophys. Res. Commun. 222:178-180(1996).
Lapenta V., et al. Genomics 40:362-367(1997).
Ota T., et al. Nat. Genet. 36:40-45(2004).

Images



Fluorescent image of Hela cells stained with SUMO2 Antibody (C-term)(Cat#AM2225B). AM2225B was diluted at 1:25 dilution. An Alexa Fluor® 488-conjugated goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).

SUMO2 Antibody (C-term)(Cat. #AM2225b) western blot analysis in CEM,293,rat C6 cell line lysates (35µg/lane).This demonstrates the SUMO2 antibody detected the SUMO2 protein (arrow).



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