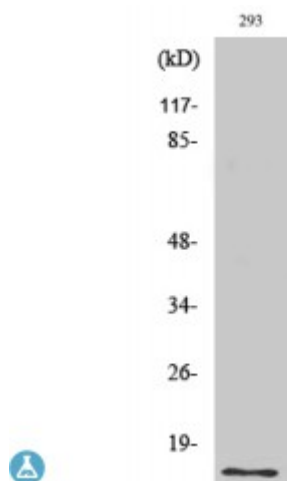


Anti-SUMO-1 antibody



Description

SUMO-1 is a protein encoded by the SUMO1 gene which is approximately 11,6 kDa. SUMO-1 is localised to the nuclear membrane and nucleus. It is involved in SUMOylation, DNA double-strand break repair, transcription-coupled nucleotide excision repair and interferon gamma signalling. This protein falls under the SUMO protein family. It functions similar to ubiquitin in that it is bound to target proteins as part of a post-translational modification system. This protein is involved in a variety of cellular processes, such as nuclear transport, transcriptional regulation, apoptosis, and protein stability. SUMO-1 is expressed in the cells of the nervous system, liver, lung, kidney and blood. Mutations in the SUMO1 gene result in disease such as non-syndromic orofacial cleft 10 which is a birth defect exhibiting cleft lips which can range in severity and can occur on one or both sides. TJ95835 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This primary antibody binds endogenous SUMO-1.

Model	STJ95835
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human SUMO-1
Immunogen Region	1-80 aa, N-terminal
Gene ID	7341
Gene Symbol	SUMO1
Dilution range	WB 1:500-1:2000 IHC 1:100-1:300 IF 1:200-1:1000 ELISA 1:20000

Specificity	SUMO-1 Polyclonal Antibody detects endogenous levels of SUMO-1 protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Small ubiquitin-related modifier 1 SUMO-1 GAP-modifying protein 1 GMP1 SMT3 homolog 3 Sentrin Ubiquitin-homology domain protein PIC1 Ubiquitin-like protein SMT3C Smt3C Ubiquitin-like protein UBL1
Molecular Weight	12 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:12502OMIM:601912
Alternative Names	Small ubiquitin-related modifier 1 SUMO-1 GAP-modifying protein 1 GMP1 SMT3 homolog 3 Sentrin Ubiquitin-homology domain protein PIC1 Ubiquitin-like protein SMT3C Smt3C Ubiquitin-like protein UBL1
Function	Ubiquitin-like protein that can be covalently attached to proteins as a monomer or 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 E3 ligases 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. Involved for instance in targeting RANGAP1 to the nuclear pore complex protein RANBP2. Covalently attached to the voltage-gated potassium channel KCNB1; this modulates the gating characteristics of KCNB1 . Polymeric SUMO1 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins. May also regulate a network of genes involved in palate development. Covalently attached to ZFH3 .
Cellular Localization	Nucleus membrane. Nucleus speckle. Cytoplasm. Nucleus, PML body. Cell membrane Nucleus. Recruited by BCL11A into the nuclear body. In the presence of ZFH3, sequestered to nuclear body (NB)-like dots in the nucleus some of which overlap or closely associate with PML body.
Post-translational Modifications	Cleavage of precursor form by SENP1 or SENP2 is necessary for function.; Polymeric SUMO1 chains undergo polyubiquitination by RNF4.