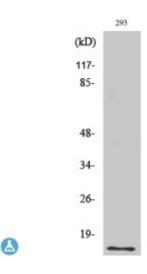


Anti-SUMO-1 antibody



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 nucelus. 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 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 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:125020MIM: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 ZFHX3.

Cellular Localization Nucleus membrane. Nucleus speckle. Cytoplasm. Nucleus, PML body. Cell

membrane Nucleus. Recruited by BCL11A into the nuclear body. In the presence of ZFHX3, sequesterd to nuclear body (NB)-like dots in the nucleus

some of which overlap or closely associate with PML body.

Post-translational Cleavage of precursor form by SENP1 or SENP2 is necessary for function.;

Modifications Polymeric SUMO1 chains undergo polyubiquitination by RNF4.