Small Ubiquitin-Related Modifier 1 (SUMO1) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Small ubiquitin-related modifier 1 (SUMO1), Recombinant Protein
Full Product Name	Recombinant Human Small ubiquitin-related modifier 1 (SUMO1)
Product Gene Name	SUMO1 recombinant protein
Sequence	SDQEAKPSTE DLGDKKEGEY IKLKVIGQDS SEIHFKVKMT THLKKLKESY CQRQGVPMNS LRFLFEGQRI ADNHTPKELG MEEEDVIEVY QEQTGG
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	8,799 Da
Sequence Positions	2-97, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
OMIM	601912
3D Structure	ModBase 3D Structure for P63165
Species	Human
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for SUMO1 recombinant protein	This gene encodes a protein that is a member of the SUMO (small ubiquitin-like modifier) protein family. It 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. It is not active until the last four amino acids of the carboxy-terminus have been cleaved off. Several pseudogenes have been reported for this gene. Alternate transcriptional splice variants encoding different isoforms have been characterized.
Other Notes	Small volumes of SUMO1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for SUMO1 purchase	MBS957504 is a recombinant protein targeting SUMO1. Also known as Recombinant Human Small ubiquitin-related modifier 1 (SUMO1). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SUMO1. It may not necessarily be applicable to this product.

NCBI GI #	54792065
NCBI GeneID	7341

NCBI Accession #	NP_001005781.1
UniProt Primary Accession #	P63165
UniProt Secondary Accession #	P55856; Q6FGG0; Q6NZ62; Q93068; A8MUS8; B2R4I5
UniProt Related Accession #	P63165
GenBank Nucleotide #	NM_001005781.1
NCBI Official Full Name	small ubiquitin-related modifier 1 isoform a
NCBI Official Synonym Full Names	small ubiquitin-like modifier 1
NCBI Official Symbol	SUMO1
NCBI Official Synonym Symbols	DAP1; GMP1; PIC1; SMT3; UBL1; OFC10; SENP2; SMT3C; SMT3H3
UniProt Protein Name	Small ubiquitin-related modifier 1
UniProt Synonym Protein Names	GAP-modifying protein 1; GMP1; SMT3 homolog 3; Sentrin; Ubiquitin-homology domain protein PIC1; Ubiquitin-like protein SMT3C; Smt3C; Ubiquitin-like protein UBL1
Protein Family	Small ubiquitin-related modifier
UniProt Gene Name	SUMO1
UniProt Synonym Gene Names	SMT3C; SMT3H3; UBL1; SUMO-1; GMP1; Smt3C
NCBI Protein Information	small ubiquitin-related modifier 1
UniProt Comments for SUMO1	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 (PubMed:19223394). 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 (PubMed:24651376).
Research Articles on SUMO1	**1.** These results suggest that SUMO1 contributes to hepatocellular carcinoma progression by promoting p65 nuclear translocation
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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