

## Product datasheet for **RC221677**

### Sumo 1 (SUMO1) (NM\_001005781) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Sumo 1 (SUMO1) (NM\_001005781) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Sumo 1  
**Synonyms:** DAP1; GMP1; OFC10; PIC1; SENP2; SMT3; SMT3C; SMT3H3; UBL1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC221677 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGACCAGGAGGCCAAAACCTTCAACTGAGGACTTGGGGGATAAGAAGGAAGGTGAATATATTAAC  
TCAAAGTCATTGGACAGGATAGCAGTGAGATTCACCTTCAAAGTAAAATGACAACACATCTCAAGAACT  
CAAAGAATCATACTGTCAAAGACAGGGTGTCCAATGAATTCCTCAGGTTTCTCTTTGAGGGTCAGAGA  
ATTGCTGATAATCATACTCCAAAAGAACTGGGAATGGAGGAAGAAGATGTGATTGAAGTTATCAGGAAC  
AAACGGGGGGTCATTCAACAGTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC221677 protein sequence  
Red=Cloning site Green=Tags(s)  
MSDQEAKPSTEDLGDKKEGEYIKLKVIGQDSSEIHFVKVMTTHLKKLKESYCRQGVPMNSLRFLFEGQR  
IADNHTPKELGMEEEDVIEVYQEQTGGHSTV

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6408\\_b07.zip](https://cdn.origene.com/chromatograms/mk6408_b07.zip)

**Restriction Sites:** SgfI-MluI



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Cloning Scheme:



ACCN: NM\_001005781

ORF Size: 303 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_001005781.2](#)

**RefSeq Size:** 1078 bp

**RefSeq ORF:** 306 bp

**Locus ID:** 7341

**UniProt ID:** [P63165](#)

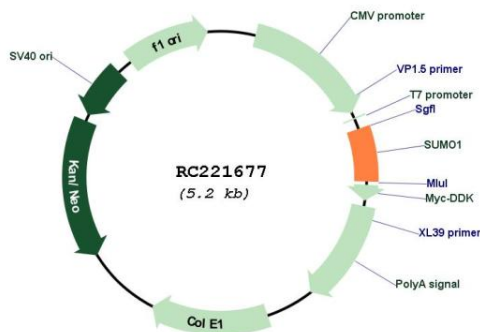
**Cytogenetics:** 2q33.1

**Protein Families:** Druggable Genome, Stem cell - Pluripotency, Transcription Factors

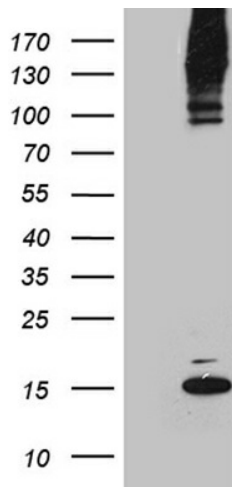
**MW:** 11.6 kDa

**Gene Summary:** 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. [provided by RefSeq, Jul 2008]

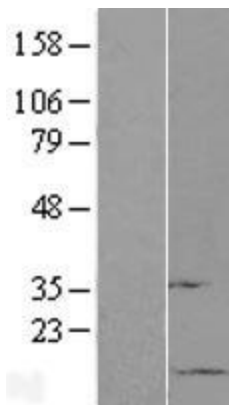
**Product images:**



Circular map for RC221677



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SUMO1 (Cat# RC221677, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SUMO1 (Cat# [TA811055]). Positive lysates [LY423653] (100ug) and [LC423653] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY423653]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221677 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).