

SUMO 1

Cat.No. 268-1P; control peptide, 100 µg peptide (lyophilized)

## **Data Sheet**

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Reconstitution/ Storage	100 $\mu$ g peptide, lyophilized. For reconstitution add 100 $\mu$ l H <sub>2</sub> O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 2 to 20 from mouse SUMO1 (UniProt Id: P63166)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	268 103
Remarks	This control peptide consists of the synthetic peptide (aa 2-20 of mouse SUMO 1) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

## TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The **S**mall **u**biquitin-related **mo**difiers **SUMO**s are ubiquitin-like proteins (UBLs) that can be conjugated to other proteins in a manner analogous to ubiquitin. Four SUMO paralogs, **SUMO 1**-4 have been described in mammals. SUMO 1 is also referred to as GMP 1, Setrin 1, SMT3C and SMT3H3. Modification of proteins with SUMO 1 or other SUMOs requires a unique activating enzyme complex as well as a conjugation enzyme. This process plays an important role in a wide variety of processes such as transcriptional regulation, maintenance of genome integrity and subcellular localization. Sumoylated proteins include PML, Sp100, IKBa, RanGAP1and RANBP2. The unmodified 70 kDa form of RanGAP1 is exclusively cytoplasmic, whereas the 90 kDa sumoylated form is associated with the cytoplasmic fibers of nuclear pore complexes (NPCs).

## **Selected General References**

Small ubiquitin-related modifier paralogs are indispensable but functionally redundant during early development of zebrafish. Yuan H, Zhou J, Deng M, Liu X, Le Bras M, de The H, Chen SJ, Chen Z, Liu TX, Zhu J Cell research (2010) 20(2): 185-96.

The polycomb repressive complex 2 is a potential target of SUMO modifications. Riising EM, Boggio R, Chiocca S, Helin K, Pasini D PloS one (2008) 3(7): e2704.

Small ubiquitin-related modifier (SUMO)-1, SUMO-2/3 and SUMOylation are involved with centromeric heterochromatin of chromosomes 9 and 1 and proteins of the synaptonemal complex during meiosis in men. Brown PW, Hwang K, Schlegel PN, Morris PL Human reproduction (Oxford, England) (2008) 23(12): 2850-7.

SUMOylation of the polyglutamine repeat protein, ataxin-1, is dependent on a functional nuclear localization signal. Riley BE, Zoghbi HY, Orr HT The Journal of biological chemistry (2005) 280(23): 21942-8.

Perturbation of SUMOlation enzyme Ubc9 by distinct domain within nucleoporin RanBP2/Nup358. Saitoh H, Pizzi MD, Wang J The Journal of biological chemistry (2002) 277(7): 4755-63.