

PRODUCT INFORMATION



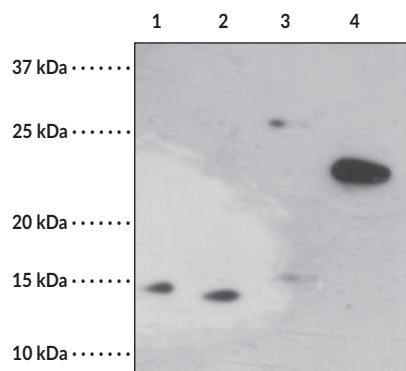
SUMO Monoclonal Antibody (Clone 3B5)

Item No. 12021

Overview and Properties

Contents:	This vial contains 500 µg of protein G-purified antibody.
Synonyms:	Small Ubiquitin-like Modifier, Smt3
Immunogen:	Recombinant yeast Smt3 amino acids 1-97
Uniprot No.:	Q12306
Form:	Solid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	TBS, pH 7.4, when reconstituted in 500 µl double distilled water
Clone:	3B5
Host:	Mouse
Isotype:	IgG ₁
Applications:	ELISA and Western blot (WB); the recommended starting dilution for ELISA is 1:500 and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Recombinant SUMO-Adipotide (0.05 µg)
Lane 2: Recombinant SUMO-Hemokinin (0.05 µg)
Lane 3: Recombinant SUMO-Hepcidin (0.05 µg)
Lane 4: Recombinant SUMO-Iricin (0.05 µg)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

The small ubiquitin like modifier (SUMO) protein is similar in structure and function to ubiquitin. However, SUMO does not typically target proteins for degradation as does ubiquitin.¹⁻⁴ SUMO is involved with the modification of a very diverse array of targets.⁵ Proteins involved with transcriptional regulation, DNA damage repair, genomic stability, nuclear transport, and histone modification are all subject to modification by SUMO.^{2,5-7} SUMO typically functions by covalently binding to a target protein, followed by regulation of protein:protein and protein:DNA interactions.² The SUMO family of proteins is highly conserved from yeast to human. Invertebrates contain a single SUMO gene (Smt3 in yeast and smo-1 in *C. elegans*), with three members of SUMO being identified in vertebrates to date (SUMO-1, SUMO-2 and SUMO-3).⁸

References

1. Hirano, Y., Yoshida, M., Shimizu, M., *et al.* Direct demonstration of rapid degradation of nuclear sterol regulatory element-binding proteins by the ubiquitin-proteasome pathway. *J. Biol. Chem.* **276(39)**, 36431-36437 (2001).
2. Müller, S., Hoegel, C., Pyrowolakis, G., *et al.* SUMO, ubiquitin's mysterious cousin. *Nat. Rev. Mol. Cell Biol.* **2(3)**, 202-10 (2011).
3. Seeler, J.S. and Dejean, A. SUMO: Of branched proteins and nuclear bodies. *Oncogene* **20(49)**, 723-9 (2001).
4. Zhang, L., Li, F., Dimayuga, E., *et al.* Effects of aging and dietary restriction on ubiquitination, sumoylation, and the proteasome in the spleen. *FEBS Lett.* **581(28)**, 5543-5547 (2007).
5. Song, J., Durrin, L.K., Wilkinson, T.A., *et al.* Identification of a SUMO-binding motif that recognizes SUMO-modified proteins. *Proc. Natl. Acad. Sci. USA* **101(40)**, 14373-14378 (2004).
6. Hochstrasser, M. SP-RING for SUMO: New functions bloom for a ubiquitin-like protein. *Cell* **107(1)**, 5-8 (2001).
7. Rouleau, N., Wang, J., Karras, L., *et al.* Highly sensitive assays for SUMOylation and small ubiquitin-like modifier-dependent protein-protein interactions. *Anal. Biochem.* **375(2)**, 364-366 (2008).
8. Felberbaum, R., Wilson, N.R., Cheng, D., *et al.* Desumoylation of the endoplasmic reticulum membrane VAP family protein Scs2 by Ulp1 and SUMO regulation of the inositol synthesis pathway. *Mol. Cell Biol.* **32(1)**, 64-75 (2012).

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