

ZYMED® Laboratories

invitrogen immunodetection

Qty: 100µg/400 µL

Rabbit anti-SUMO-1 (C-term)

Catalog No. 38-2000

Lot No.

Rabbit anti-SUMO-1 (C-term)

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.349

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the SUMO-1 (also known as Sentrin-1, Ubiquitin-like protein SMT3C precursor, Ubiquitin-homology domain protein PIC1, Ubiquitin-like protein (UBL1) and GAP modifying protein 1 (GMP-1)) protein.

SPECIFICITY

This antibody reacts with the human, mouse and African green monkey SUMO-1 proteins. On Western blots of purified human recombinant SUMO-1 protein, this antibody identifies a band at ~18 kDa. On Western blots of NIH3T3, HeLa, and COS-7 cells, it identifies a single band at ~90 kDa, representing a conjugate of SUMO-1 and the ~70 kDa RanGAP-1 protein.

REACTIVITY

Reactivity has been confirmed with recombinant human SUMO-1 protein and mouse NIH3T3, human HeLa and African green monkey COS-7 cell lysates.

Sample	Western Blotting	Immunoprecipitation (native)
Human	+++	0*
Mouse	+++	ND
African Green Monkey	+++	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

*No reactivity observed under conditions tested.

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

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BACKGROUND

SUMO-1 (also called GMP-1 and Setrin-1) is a ubiquitin-like protein that can be conjugated to other proteins in a manner analogous to ubiquitin.¹ Modification of proteins with SUMO-1 or other SUMOs requires a unique activating enzyme complex as well as a conjugation enzyme. Proteins that are conjugated with SUMO include PML², Sp100³, IκBα⁴, RanGAP1^{1,5-6} and RANBP2^{5,7-8}. Sumoylation of RanGAP1 is required for its translocation from the cytosol to the nuclear pore complex.⁵ The unmodified 70 kDa form of RanGAP1 is exclusively cytoplasmic, whereas the 90 kDa modified form of RanGAP1 associates with the cytoplasmic fibers of nuclear pore complexes (NPCs).^{1,9} Most SUMO-1 exists as a protein conjugate rather than in a free form *in vivo*, and a major target of SUMO-1 conjugation is a 90 kDa protein.¹⁰

REFERENCES

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RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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