SANTA CRUZ BIOTECHNOLOGY, INC.

SUMO-3 (M-20): sc-26973

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The small ubiquitin-related modifier (SUMO) proteins, which include SUMO-1, SUMO-2 and SUMO-3, belong to the ubiquitin-like protein family. Like ubiquitin, the SUMO proteins are synthesized as precursor proteins that undergo processing before conjugation to target proteins. Also, both utilize the E1, E2, and E3 cascade enzymes for conjugation. However, SUMO and ubiquitin differ with respect to targeting. Ubiquitination predominantly targets proteins for degradation, whereas sumoylation targets proteins to a variety of cellular processing, including nuclear transport, transcriptional regulation, apoptosis and protein stability. The unconjugated SUMO-1, SUMO-2 and SUMO-3 proteins localize to the nucleus.

REFERENCES

1. Duprez, E., et al. 1999. SUMO-1 modification of the acute promyelocytic leukaemia protein PML: implications for nuclear localisation. J. Cell Sci. 112: 381-393.
2. Saitoh, H., et al. 2000. Functional heterogeneity of small ubiquitin-related protein modifiers SUMO-1 versus SUMO-2/3. J. Biol. Chem. 275: 6252-6258.
3. Tatham, M.H., et al. 2001. Polymeric chains of SUMO-2 and SUMO-3 are conjugated to protein substrates by SAE1/SAE2 and Ubc9. J. Biol. Chem. 276: 35368-25374.
4. Kim, K.I., et al. 2002. Versatile protein tag, SUMO: its enzymology and biological function. J. Cell. Physiol. 191: 257-268.
5. Su, H., et al. 2002. Molecular features of human ubiquitin-like SUMO genes and their encoded proteins. Gene 296: 65.
6. Spengler, M.L., et al. 2002. SUMO-1 modification of human cytomegalovirus IE1/IE72. J. Virol. 76: 2990-2996.

CHROMOSOMAL LOCATION

Genetic locus: Sumo3 (mouse) mapping to 10 C1.

SOURCE

SUMO-3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SUMO-3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26973 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

SUMO-3 (M-20) is recommended for detection of SUMO-3 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

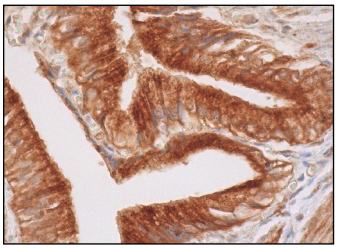
Suitable for use as control antibody for SUMO-3 siRNA (m): sc-41084, SUMO-3 shRNA Plasmid (m): sc-41084-SH and SUMO-3 shRNA (m) Lentiviral Particles: sc-41084-V.

Molecular Weight of SUMO-3: 11-13 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



SUMO-3 (M-20): sc-26973. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Rodríguez-Muñoz, M., et al. 2007. Sumoylated RGS-RZ proteins act as scaffolds for µ-opioid receptors and G-protein complexes in mouse brain. Neuropsychopharmacology 32: 842-850.

RESEARCH USE

For research use only, not for use in diagnostic procedures.