SANTA CRUZ BIOTECHNOLOGY, INC.

SENP8 (FL-212): sc-67077

BACKGROUND

SUMO (small ubiquitin-related modifier), a member of the ubiquitin-like protein family, regulates diverse cellular functions of a variety of target proteins including transcription, DNA repair, nucleocytoplasmic trafficking and chromosome segregation. SUMO precursor proteins undergo cleavage of the residues after the "GG" region by SUMO-specific proteases in maturation. This cleavage of the precursor is a prerequisite for subsequent sumoylation. The sentrin-specific (or SUMO-specific) protease (SENP) proteins belong to the peptidase C48 family and include SENP1-3 and SENP5-8. SENP1, SENP2 and SENP3 degrade UBL1 and SMT3H2 conjugates and subsequently release the monomers from sumoylated substrates. HIPK2 is a desumoylation target for SENP1 which shuttles between the cytoplasm and the nucleus. Mutation analyses reveal that SENP1 contains the nuclear export sequence (NES) within the extreme carboxyl-terminal region, and SENP1 is exported to the cytoplasm in a NES-dependent manner. SENP2 has been implicated as a downregulator of CTNNB1 levels and may therefore be a modulator of the Wnt pathway. SUMO protease SENP3 reverses the sumoylation of MEF-2 to augment its transcriptional and myogenic activities. SENP5 localizes to the nucleolus and preferentially processes SUMO-3. It is thought to play a role in mitosis and/or cytokinesis. SENP6 localizes to the cytoplasm and releases SUMO-1. Expression of SENP6 is higher in reproductive organs, indicating that it may mediate processes related to reproduction. SENP8 is involved in the release of sentrins.

REFERENCES

1. Gong, L., et al. 2000. Differential regulation of sentrinized proteins by a novel sentrin-specific protease. J. Biol. Chem. 275: 3355-3359.
2. Kim, K.I., et al. 2000. A new SUMO-1-specific protease, SUSP1, that is highly expressed in reproductive organs. J. Biol. Chem. 275: 14102-14106.
3. Cheng, J., et al. 2004. SENP1 enhances androgen receptor-dependent transcription through desumoylation of histone deacetylase 1. Mol. Cell. Biol. 24: 6021-6028.
4. Reverter, D., et al. 2004. A basis for SUMO protease specificity provided by analysis of human SENP2 and a SENP2-SUMO complex. Structure 12: 1519-1531.

CHROMOSOMAL LOCATION

Genetic locus: SENP8 (human) mapping to 15q23; Senp8 (mouse) mapping to 9 B.

SOURCE

SENP8 (FL-212) is a rabbit polyclonal antibody raised against amino acids 1-212 representing full length SENP8 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

SENP8 (FL-212) is recommended for detection of SENP8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

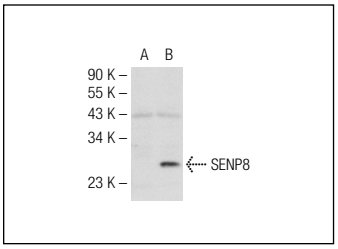
SENP8 (FL-212) is also recommended for detection of SENP8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SENP8 siRNA (h): sc-44452, SENP8 siRNA (m): sc-45721, SENP8 shRNA Plasmid (h): sc-44452-SH, SENP8 shRNA Plasmid (m): sc-45721-SH, SENP8 shRNA (h) Lentiviral Particles: sc-44452-V and SENP8 shRNA (m) Lentiviral Particles: sc-45721-V.

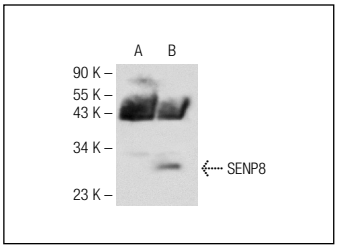
Molecular Weight of SENP8: 24 kDa.

Positive Controls: mouse spleen extract: sc-2391, SENP8 (h2): 293T Lysate: sc-174054 or SENP8 (m): 293T Lysate: sc-123457.

DATA



SENP8 (FL-212): sc-67077. Western blot analysis of SENP8 expression in non-transfected: sc-117752 (**A**) and mouse SENP8 transfected: sc-123457 (**B**) 293T whole cell lysates.



SENP8 (FL-212): sc-67077. Western blot analysis of SENP8 expression in non-transfected: sc-117752 (**A**) and human SENP8 transfected: sc-174054 (**B**) 293T whole cell lysates.

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.