**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 peptidease 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 carboxy-terminal region, and SENP1 is exported to the cytoplasm in a NES-dependent manner. SENP2 has been implicated as a downstream regulator of CTNNB1 levels and may therefore be a modulator of the Wnt pathway. SUMO protease SENP3 reverses the sumoylation of MEF2 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.

**CHROMOSOMAL LOCATION**

Genetic locus: SENP1 (human) mapping to 12q13.11; Senp1 (mouse) mapping to 15 F1.

**SOURCE**

SENP1 (C-12) is a mouse monoclonal antibody raised against amino acids 381-425 mapping within an internal region of SENP1 of human origin.

**PRODUCT**

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

SENP1 (C-12) is available conjugated to agarose (sc-271360 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271360 HRP), 200 µg/ml, for Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for SENP1 siRNA (h): sc-44449, SENP1 siRNA (m): sc-45715, SENP1 shRNA Plasmid (h): sc-44449-SH, SENP1 shRNA Plasmid (m): sc-45715-SH, SENP1 shRNA (h) Lentiviral Particles: sc-44449-V and SENP1 shRNA (m) Lentiviral Particles: sc-45715-V.

Molecular Weight of SENP1: 73 kDa.

**APPLICATIONS**

SENP1 (C-12) is recommended for detection of SENP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

**DATA**

SENP1 (C-12) sc-271360 Western blot analysis of SENP1 expression in NIH/3T3(A), Neuro-2A (B) and F9 (C) whole cell lysates.

SENP1 (C-12) Alexa Fluor® 488: sc-271360 AF488. Direct fluorescent western blot analysis of SENP1 expression in F9 (A), K-562 (B) and HEK293 (C) whole cell lysates. Blocked with UltraSpec® Blocking Reagent: sc-51014. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 647: sc-016791.

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

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