SANTA CRUZ BIOTECHNOLOGY, INC.

# SMP30 (H-4): sc-377184

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Senescence marker protein-30 (SMP30) is expressed in the liver, kidney and submandibular gland. In the kidney, SMP30 localizes to the hepatocytes and renal proximal tubular epithelium. SMP30 expression levels increase during tissue maturation during development and decrease with aging in an androgen-independent fashion. SMP30 affects intracellular calcium homeostasis by modulating the activity of the plasma membrane calcium pump. The effect of SMP30 on calcium levels appears to protect cells from apoptosis. The promoter sequence for the mouse SMP30 gene contains binding sites for unknown and known transcription factors, including Sp1, AP2, CCAAT box, Lyf-1 and GATA-1.

## REFERENCES


1. Fujita, T., et al. 1992. Purification of senescence marker protein-30 (SMP30) and its androgen-independent decrease with age in the rat liver. Biochim. Biophys. Acta 1116: 122-128.
2. Fujita, T., et al. 1992. Isolation of cDNA clone encoding rat senescence marker protein-30 (SMP30) and its tissue distribution. Biochim. Biophys. Acta 1132: 297-305.
3. Fujita, T., et al. 1995. Isolation of cDNA clone encoding human homologue of senescence marker protein-30 (SMP30) and its location on the X chromosome. Biochim. Biophys. Acta 1263: 249-252.
4. Fujita, T., et al. 1996. Gene regulation of senescence marker protein-30 (SMP30): coordinated upregulation with tissue maturation and gradual downregulation with aging. Mech. Ageing Dev. 87: 219-229.
5. Fujita, T., et al. 1998. Senescence marker protein-30 (SMP30) rescues cell death by enhancing plasma membrane $Ca^{2+}$-pumping activity in Hep G2 cells. Biochem. Biophys. Res. Commun. 250: 374-380.
6. Supakar, P.C., et al. 2000. Identification of novel sequence-specific nuclear factors interacting with mouse senescence marker protein-30 gene promoter. Biochem. Biophys. Res. Commun. 272: 436-440.


## CHROMOSOMAL LOCATION

Genetic locus: RGN (human) mapping to Xp11.23; Rgn (mouse) mapping to X A1.3.

## SOURCE

SMP30 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 275-299 at the C-terminus of SMP30 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377184 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

SMP30 (H-4) is recommended for detection of SMP30 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).

Suitable for use as control antibody for SMP30 siRNA (h): sc-106902, SMP30 siRNA (m): sc-153635, SMP30 shRNA Plasmid (h): sc-106902-SH, SMP30 shRNA Plasmid (m): sc-153635-SH, SMP30 shRNA (h) Lentiviral Particles: sc-106902-V and SMP30 shRNA (m) Lentiviral Particles: sc-153635-V.

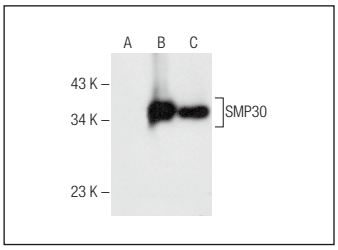
Molecular Weight of SMP30: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse liver extract: sc-2256 or SMP30 (h): 293T Lysate: sc-111590.

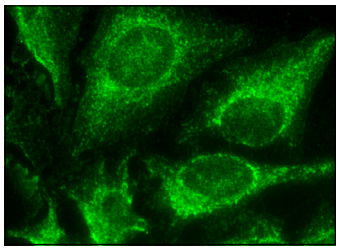
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




SMP30 (H-4): sc-377184. Western blot analysis of SMP30 expression in non-transfected 293T: sc-117752 (**A**), human SMP30 transfected 293T: sc-111590 (**B**) and Hep G2 (**C**) whole cell lysates.



SMP30 (H-4): sc-377184. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Chang, C.H. and Lee, T.H. 2021. Hypothermal effects on expression of regucalcin, a calcium-binding protein, in the livers of seawater- and fresh water-acclimated milkfish, *Chanos chanos*. Fish Physiol. Biochem. 47: 999-1010.


## STORAGE

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