SANTA CRUZ BIOTECHNOLOGY, INC.

SMP30 (17): sc-130344

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.

CHROMOSOMAL LOCATION

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

SOURCE

SMP30 (17) is a mouse monoclonal antibody raised against recombinant SMP30 of human origin.

PRODUCT

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

APPLICATIONS

SMP30 (17) is recommended for detection of SMP30 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), 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).

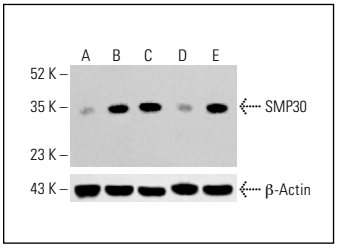
Suitable for use as control antibody for SMP30 siRNA (h): sc-106902, SMP30 siRNA (m): sc-153635, SMP30 shRNA Plasmid (h): sc-106902-SH, SMP30 shRNA Plasmid (m): sc-153635-SH, SMP30 shRNA (h) Lentiviral Particles: sc-106902-V and SMP30 shRNA (m) Lentiviral Particles: sc-153635-V.

Molecular Weight of SMP30: 35 kDa.

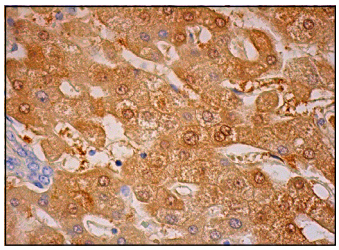
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SMP30 (17): sc-130344. Western blot analysis of SMP30 expression in untreated HeLa (**A**), chemically-treated HeLa (**B**), K-562 (**C**), untreated HCT-116 (**D**) and chemically-treated HCT-116 (**E**) whole cell lysates. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



SMP30 (17): sc-130344. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and membrane staining of hepatocytes.

SELECT PRODUCT CITATIONS

1. Tao, J., et al. 2017. Targeting β-catenin in hepatocellular cancers induced by coexpression of mutant β-catenin and K-Ras in mice. Hepatology 65: 1581-1599.
2. Yoon, Y.M., et al. 2020. Melatonin-stimulated exosomes enhance the regenerative potential of chronic kidney disease-derived mesenchymal stem/stromal cells via cellular prion proteins. J. Pineal Res. 68: e12632.
3. Lee, E.J., et al. 2022. PPARδ inhibits hyperglycemia-triggered senescence of retinal pigment epithelial cells by upregulating SIRT1. Antioxidants 11: 1207.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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