SANTA CRUZ BIOTECHNOLOGY, INC.

SMP30 (G-10): sc-374019

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.

CHROMOSOMAL LOCATION

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

SOURCE

SMP30 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 247-279 within an internal region of SMP30 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SMP30 (G-10) is available conjugated to agarose (sc-374019 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374019 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374019 PE), fluorescein (sc-374019 FITC), Alexa Fluor® 488 (sc-374019 AF488), Alexa Fluor® 546 (sc-374019 AF546), Alexa Fluor® 594 (sc-374019 AF594) or Alexa Fluor® 647 (sc-374019 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374019 AF680) or Alexa Fluor® 790 (sc-374019 AF790), 200 µg/ml, for Near-Infrared (NIR) WB,

Blocking peptide available for competition studies, sc-374019 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

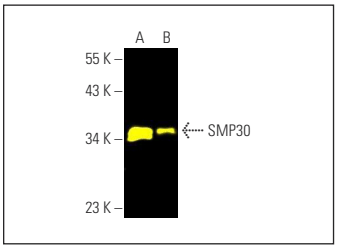
SMP30 (G-10) is recommended for detection of SMP30 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilu-tion range 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.

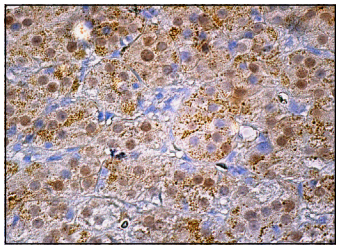
Molecular Weight of SMP30: 35 kDa.

Positive Controls: mouse liver extract: sc-2256, human kidney extract: sc-363764 or human adrenal gland extract: sc-363761.

DATA



SMP30 (G-10) Alexa Fluor® 488: sc-374019 AF488. Direct fluorescent western blot analysis of SMP30 expression in human kidney (**A**) and human adrenal gland (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214.



SMP30 (G-10): sc-374019. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Rodriguez-Losada, N., et al. 2017. Cell survival and differentiation with nanocrystalline glass-like carbon using substantia nigra dopaminergic cells derived from transgenic mouse embryos. PLoS ONE 12: e0173978.
2. Rodríguez-Losada, N., et al. 2020. Overexpression of α-synuclein promotes both cell proliferation and cell toxicity in human SH-SY5Y neuroblastoma cells. J. Adv. Res. 23: 37-45.

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.