

SMP30 (E-11): sc-390098

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.

CHROMOSOMAL LOCATION

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

SOURCE

SMP30 (E-11) is a mouse monoclonal antibody raised against amino acids 1-299 representing full length SMP30 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SMP30 (E-11) is available conjugated to agarose (sc-390098 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390098 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390098 PE), fluorescein (sc-390098 FITC), Alexa Fluor® 488 (sc-390098 AF488), Alexa Fluor® 546 (sc-390098 AF546), Alexa Fluor® 594 (sc-390098 AF594) or Alexa Fluor® 647 (sc-390098 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390098 AF680) or Alexa Fluor® 790 (sc-390098 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SMP30 (E-11) 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), 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.

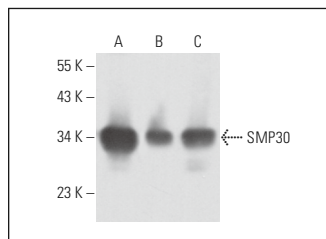
Molecular Weight of SMP30: 35 kDa.

Positive Controls: human kidney extract: sc-363764, mouse liver extract: sc-2256 or rat liver extract: sc-2395.

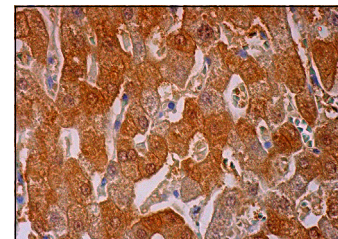
STORAGE

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

DATA



SMP30 (E-11): sc-390098. Western blot analysis of SMP30 expression in mouse liver (A), human kidney (B) and rat liver (C) tissue extracts.



SMP30 (E-11): sc-390098. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and nuclear staining of hepatocytes.

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2016. Cr(VI) induces premature senescence through ROS-mediated p53 pathway in L-02 hepatocytes. *Sci. Rep.* 6: 34578.
2. Choo, J., et al. 2018. Senescence marker protein 30 protects intestinal epithelial cells against inflammation-induced cell death by enhancing Nrf2 activity. *Biochim. Biophys. Acta Mol. Basis Dis.* 1864: 3668-3678.
3. Hou, J., et al. 2019. D-galactose induces astrocytic aging and contributes to astrocytoma progression and chemoresistance via cellular senescence. *Mol. Med. Rep.* 20: 4111-4118.
4. Zhang, Y., et al. 2019. Expression of Clusterin suppresses Cr(VI)-induced premature senescence through activation of PI3K/Akt pathway. *Ecotoxicol. Environ. Saf.* 183: 109465.
5. Hossain, M.S., et al. 2020. Decreased ascorbic acid biosynthesis in response to PMSG in the pre-pubertal female rat ovary. *Res. Vet. Sci.* 131: 15-20.
6. Sung, J.Y., et al. 2020. Prednisolone suppresses adriamycin-induced vascular smooth muscle cell senescence and inflammatory response via the SIRT1-AMPK signaling pathway. *PLoS ONE* 15: e0239976.
7. Pedroza, A.J., et al. 2020. Single-cell transcriptomic profiling of vascular smooth muscle cell phenotype modulation in Marfan syndrome aortic aneurysm. *Arterioscler. Thromb. Vasc. Biol.* 40: 2195-2211.
8. Hu, S., et al. 2022. Single-cell spatial transcriptomics reveals a dynamic control of metabolic zonation and liver regeneration by endothelial cell Wnt2 and Wnt9b. *Cell Rep. Med.* 3: 100754.

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.