

smoothelin (H-300): sc-28562

BACKGROUND

The cytoskeletal protein smoothelin is highly conserved among vertebrates and is expressed exclusively by contractile smooth muscle cells where it localizes to the filament network. Smoothelin associates with actin stress fibers but does not interact with desmin. At least two isoforms of smoothelin are produced by alternative splicing. The short isoform lacks amino acids 1-544 at the amino-terminus of the long isoform. The short isoform is expressed in visceral muscle tissue, including intestine and stomach, but not in brain, while the long isoform is expressed in all vascularized organs. In the vascular system, smoothelin expression is limited to large veins and arteries capable of pulsatile contraction. As a marker for the highly differentiated contractile smooth muscle cell, smoothelin expression is useful for studying vascular malformation and injury. The gene encoding human smoothelin maps to chromosome 22q12.2.

CHROMOSOMAL LOCATION

Genetic locus: SMTN (human) mapping to 22q12.2; Smtn (mouse) mapping to 11 A1.

SOURCE

smoothelin (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of smoothelin of human origin.

PRODUCT

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

APPLICATIONS

smoothelin (H-300) is recommended for detection of smoothelin long isoform 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

smoothelin (H-300) is also recommended for detection of smoothelin long isoform in additional species, including equine and canine.

Suitable for use as control antibody for smoothelin siRNA (h): sc-36512, smoothelin siRNA (m): sc-36513, smoothelin shRNA Plasmid (h): sc-36512-SH, smoothelin shRNA Plasmid (m): sc-36513-SH, smoothelin shRNA (h) Lentiviral Particles: sc-36512-V and smoothelin shRNA (m) Lentiviral Particles: sc-36513-V.

Molecular Weight of smoothelin short/long isoform: 59/110 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226.

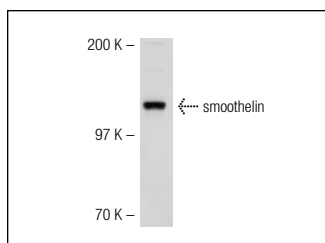
STORAGE

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.

DATA



smoothelin (H-300): sc-28562. Western blot analysis of smoothelin expression in COLO 320DM whole cell lysate.

SELECT PRODUCT CITATIONS

- Chai, J., et al. 2007. A critical role of serum response factor in myofibroblast differentiation during experimental oesophageal ulcer healing in rats. *Gut* 56: 621-630.
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- Cooper, T.K., et al. 2010. The haploinsufficient Col3a1 mouse as a model for vascular Ehlers-Danlos syndrome. *Vet. Pathol.* 47: 1028-1039.
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- Zhang, S.M., et al. 2014. Interferon regulatory factor 8 modulates phenotypic switching of smooth muscle cells by regulating the activity of myocardin. *Mol. Cell. Biol.* 34: 400-414.
- Han, T.Y., et al. 2015. Intestinal smooth muscle phenotype determines enteric neuronal survival via GDNF expression. *Neuroscience* 290C: 357-368.
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Try **smoothelin (C-8): sc-376902** or **smoothelin (R4A): sc-23883**, our highly recommended monoclonal alternatives to smoothelin (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **smoothelin (C-8): sc-376902**.