SANTA CRUZ BIOTECHNOLOGY, INC.

transgelin (H-75): sc-50446

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Transgelin (also designated SM22α), is expressed abundantly in smooth muscle cells. The human transgelin gene (designated TAGLN), which is located on chromosome 11q23.3, encodes a 201 amino acid protein that contains nuclear factor-binding motifs known to regulate transcription in smooth muscle. During embryogenesis, transgelin is expressed in smooth, cardiac and skeletal muscle, but is restricted during late fetal development and adulthood to all vascular and visceral smooth muscle cells and low levels of expression in heart. Transgelin is downregulated in several transformed cell lines, indicating that a reduction of transgelin expression may be an early indicator of the onset of transformation. Transgelin also binds Actin, causing Actin fibers to gel within minutes of binding. Binding of transgelin to Actin occurs at a ratio of 1:6 Actin monomers.

CHROMOSOMAL LOCATION

Genetic locus: TAGLN (human) mapping to 11q23.3; Tagln (mouse) mapping to 9 A5.2.

SOURCE

transgelin (H-75) is a rabbit polyclonal antibody raised against amino acids 16-90 mapping near the N-terminus of transgelin 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

transgelin (H-75) is recommended for detection of transgelin 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).

transgelin (H-75) is also recommended for detection of transgelin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for transgelin siRNA (h): sc-44163, transgelin siRNA (m): sc-60022, transgelin shRNA Plasmid (h): sc-44163-SH, transgelin shRNA Plasmid (m): sc-60022-SH, transgelin shRNA (h) Lentiviral Particles: sc-44163-V and transgelin shRNA (m) Lentiviral Particles: sc-60022-V.

Moleclar Weight of transgelin: 22 kDa.

Positive Controls: Hs68 cell lysate: sc-2230, A-10 cell lysate: sc-3806 or WI-38 whole cell lysate: sc-364260.

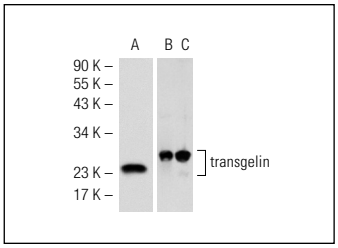
STORAGE

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

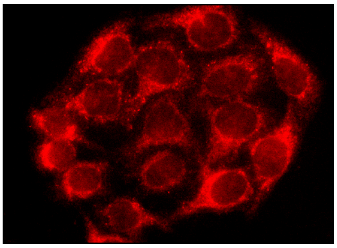
RESEARCH USE

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

DATA



transgelin (H-75): sc-50446. Western blot analysis of transgelin expression in A-10 (**A**), Hs68 (**B**) and WI 38 (**C**) whole cell lysates.



transgelin (H-75): sc-50446. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wang, C., et al. 2008. Krüppel-like factor 4 is required for the expression of vascular smooth muscle cell differentiation marker genes induced by all-*trans* retinoic acid. J. Biochem. 144: 313-321.
2. Beamish, J.A., et al. 2009. The influence of RGD-bearing hydrogels on the re-expression of contractile vascular smooth muscle cell phenotype. Biomaterials 30: 4127-4135.
3. Peng, J., et al. 2009. A rat-to-human search for proteomic alterations reveals transgelin as a biomarker relevant to colorectal carcinogenesis and liver metastasis. Electrophoresis 30: 2976-2987.
4. Li, H.X., et al. 2010. Krüppel-like factor 4 promotes differentiation by transforming growth factor-β receptor-mediated Smad and p38 MAPK signaling in vascular smooth muscle cells. J. Biol. Chem. 285: 17846-17856.
5. Bansal, A., et al. 2010. Proteomic analysis reveals late exercise effects on cardiac remodeling following myocardial infarction. J. Proteomics 73: 2041-2049.
6. Prosdocimo, D.A., et al. 2010. Regulation of vascular smooth muscle cell calcification by extracellular pyrophosphate homeostasis: synergistic modulation by cyclic AMP and hyperphosphatemia. Am. J. Physiol., Cell Physiol. 298: C702-C713.
7. Chen, L., et al. 2012. The role of notch 1 activation in cardiosphere derived cell differentiation. Stem Cells Dev. 21: 2122-2129.

PROTOCOLS

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