

transgelin (6G6): sc-53932

BACKGROUND

Transgelin, also designated SM22a, 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 (6G6) is a mouse monoclonal antibody raised against full length transgelin 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.

transgelin (6G6) is available conjugated to agarose (sc-53932 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53932 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53932 PE), fluorescein (sc-53932 FITC), Alexa Fluor® 488 (sc-53932 AF488), Alexa Fluor® 546 (sc-53932 AF546), Alexa Fluor® 594 (sc-53932 AF594) or Alexa Fluor® 647 (sc-53932 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53932 AF680) or Alexa Fluor® 790 (sc-53932 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

transgelin (6G6) 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), 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 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.

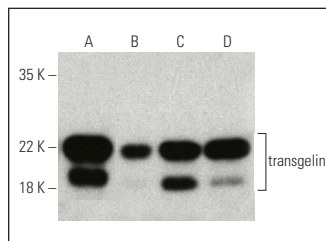
Molecular Weight of transgelin: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, WI-38 whole cell lysate: sc-364260 or Sol8 cell lysate: sc-2249.

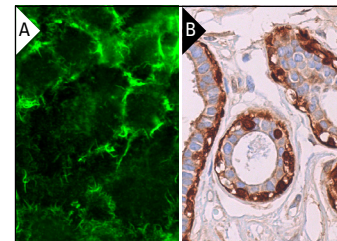
STORAGE

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

DATA



transgelin (6G6): sc-53932. Western blot analysis of transgelin expression in WI-38 (A), HeLa (B), Sol8 (C) and Caco-2 (D) whole cell lysates.



transgelin (6G6): sc-53932. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of myoepithelial cells (B).

SELECT PRODUCT CITATIONS

- 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.
- Descotes, F., et al. 2012. Identification of potential prognostic biomarkers for node-negative breast tumours by proteomic analysis: a multicentric 2004 national PHRC study. *Int. J. Oncol.* 41: 92-104.
- Sahasrabudde, N.A., et al. 2014. Identification of prosaposin and transgelin as potential biomarkers for gallbladder cancer using quantitative proteomics. *Biochem. Biophys. Res. Commun.* 446: 863-869.
- Zhong, Y., et al. 2018. Isolation of primitive mouse extraembryonic endoderm (pXEN) stem cell lines. *Stem Cell Res.* 30: 100-112.
- Liang, J., et al. 2019. Inhibition of polycomb repressor complex 2 ameliorates neointimal hyperplasia by suppressing trimethylation of H3K27 in vascular smooth muscle cells. *Br. J. Pharmacol.* 176: 3206-3219.
- Kimura, M., et al. 2020. Homeobox A4 suppresses vascular remodeling by repressing YAP/TEAD transcriptional activity. *EMBO Rep.* 21: e48389.
- Song, K., et al. 2020. PDGFRA in vascular adventitial MSCs promotes neointima formation in arteriovenous fistula in chronic kidney disease. *JCI Insight* 5: e137298.
- Ko, E.J., et al. 2021. Generation of the human induced pluripotent stem cell lines (CMCi009-A) from a patient with Birt-Hogg-Dubé syndrome (BHD) with heterozygous frameshift deletion mutation c.1285delC of the FLCN gene. *Stem Cell Res.* 51: 102215.

RESEARCH USE

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

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