

transgelin-2 (C-12): sc-373928

BACKGROUND

Transgelin (also designated SM22 α), is expressed abundantly in smooth muscle cells. Transgelin-2 (also known as SM22 α homolog) is a homolog of transgelin and is also expressed in smooth muscle cells and by peritoneal B-1 cells. The human transgelin-2 gene (designated TAGLN2), which is located on chromosome 1q23.2, encodes a 199 amino acid protein that contains a calponin-like repeat and a calponin-homology (CH) domain. Transgelin-2 may function very similarly to transgelin. 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.

REFERENCES

1. Shapland, C., et al. 1993. Purification and properties of transgelin: a transformation and shape change sensitive Actin-gelling protein. *J. Cell Biol.* 121: 1065-1073.
2. Kobayashi, R., et al. 1994. Purification, characterization and partial sequence analysis of a new 25 kDa Actin-binding protein from bovine aorta: an SM22 homolog. *Biochem. Biophys. Res. Commun.* 198: 1275-1280.

CHROMOSOMAL LOCATION

Genetic locus: TAGLN2 (human) mapping to 1q23.2; Tagln2 (mouse) mapping to 1 H3.

SOURCE

transgelin-2 (C-12) is a mouse monoclonal antibody raised against amino acids 23-62 mapping near the N-terminus of transgelin-2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

transgelin-2 (C-12) is available conjugated to agarose (sc-373928 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373928 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373928 PE), fluorescein (sc-373928 FITC), Alexa Fluor[®] 488 (sc-373928 AF488), Alexa Fluor[®] 546 (sc-373928 AF546), Alexa Fluor[®] 594 (sc-373928 AF594) or Alexa Fluor[®] 647 (sc-373928 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373928 AF680) or Alexa Fluor[®] 790 (sc-373928 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

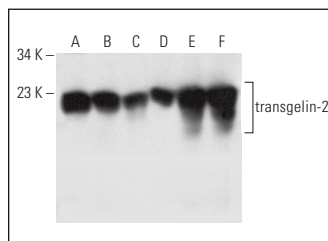
transgelin-2 (C-12) is recommended for detection of transgelin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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-2 siRNA (h): sc-106633, transgelin-2 siRNA (m): sc-77363, transgelin-2 shRNA Plasmid (h): sc-106633-SH, transgelin-2 shRNA Plasmid (m): sc-77363-SH, transgelin-2 shRNA (h) Lentiviral Particles: sc-106633-V and transgelin-2 shRNA (m) Lentiviral Particles: sc-77363-V.

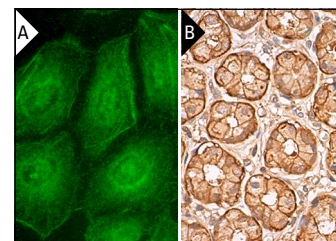
Molecular Weight of transgelin-2: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or NIH/3T3 whole cell lysate: sc-2210.

DATA



transgelin-2 (C-12): sc-373928. Western blot analysis of transgelin-2 expression in K-562 (A), HeLa (B), BC₃H1 (C), NIH/3T3 (D), RBL-1 (E) and RPE-J (F) whole cell lysates.



transgelin-2 (C-12): sc-373928. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Kee, H.J., et al. 2014. MiR-18a-5p microRNA increases vascular smooth muscle cell differentiation by downregulating syndecan4. *Korean Circ. J.* 44: 255-263.
2. Cheng, G., et al. 2018. ZIP8 induces monocyte adhesion to the aortas *ex-vivo* by regulating zinc influx. *Int. Immunopharmacol.* 62: 203-211.
3. Fletcher, C.E., et al. 2019. Androgen receptor-modulatory microRNAs provide insight into therapy resistance and therapeutic targets in advanced prostate cancer. *Oncogene* 38: 5700-5724.
4. Cheng, M., et al. 2019. Proatherogenic stimuli induce HuR in atherosclerosis through MAPK/ErK pathway. *Am. J. Transl. Res.* 11: 2317-2327.
5. Pan, T., et al. 2023. An integrated analysis identified TAGLN2 as an oncogene indicator related to prognosis and immunity in pan-cancer. *J. Cancer* 14: 1809-1836.

RESEARCH USE

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