

transgelin (h2): 293T Lysate: sc-178080

BACKGROUND

Transgelin, also designated SM22 α , is expressed abundantly in smooth muscle cells. The human transgelin gene (designated TAGLN), which is located on chromosome 11q23.2, 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.

REFERENCES

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2. Kobayashi, R., Kubota, T. and Hidaka, H. 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.
3. Li, L., Liu, Z., Mercer, B., Overbeek, P. and Olson, E.N. 1997. Evidence for serum response factor-mediated regulatory networks governing SM22 α transcription in smooth, skeletal and cardiac muscle cells. *Dev. Biol.* 187: 311-321.
4. Lawson, D., Harrison, M. and Shapland, C. 1997. Fibroblast transgelin and smooth muscle SM22 α are the same protein, the expression of which is downregulated in many cell lines. *Cell Motil. Cytoskeleton* 38: 250-257.
5. Camoretti-Mercado, B., Forsythe, S.M., LeBeau, M.M., Espinosa, R., Vieira, J.E., Halayko, A.J., Willadsen, S., Kurtz, B., Ober, C., Evans, G.A., Thweatt, R., Shapiro, S., Niu, Q., Qin, Y., Padrid, P.A. and Solway, J. 1998. Expression and cytogenetic localization of the human SM22 gene (TAGLN). *Genomics* 49: 452-457.

CHROMOSOMAL LOCATION

Genetic locus: TAGLN (human) mapping to 11q23.3.

PRODUCT

transgelin (h2): 293T Lysate represents a lysate of human transgelin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

transgelin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive transgelin antibodies. Recommended use: 10-20 μ l per lane.

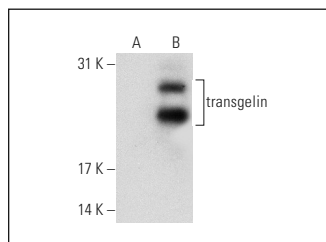
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

transgelin (6G6): sc-53932 is recommended as a positive control antibody for Western Blot analysis of enhanced human transgelin expression in transgelin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



transgelin (6G6): sc-53932. Western blot analysis of transgelin expression in non-transfected: sc-117752 (A) and human transgelin transfected: sc-178080 (B) 293T whole cell lysates.

RESEARCH USE

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