SANTA CRUZ BIOTECHNOLOGY, INC.

transgelin-2 (G-5): sc-166697

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Transgelin (also designated SM22α), is expressed abundantly in smooth muscle cells. Transgelin-2 (also known as SM22α 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.

CHROMOSOMAL LOCATION

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

SOURCE

transgelin-2 (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 145-175 within an internal region of transgelin-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166697 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

transgelin-2 (G-5) 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 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).

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.

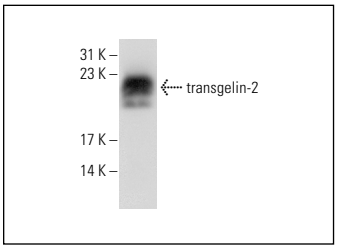
Molecular Weight of transgelin-2: 22 kDa.

Positive Controls: BC_3H1 cell lysate: sc-2299, HISM cell lysate: sc-2229 or A-10 cell lysate: sc-3806.

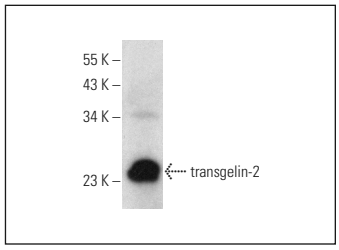
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



transgelin-2 (G-5): sc-166697. Western blot analysis of transgelin-2 expression in A-10 whole cell lysate.



transgelin-2 (G-5): sc-166697. Western blot analysis of transgelin-2 expression in HISM whole cell lysate.

SELECT PRODUCT CITATIONS

1. Liao, X.H., et al. 2017. ERα inhibited myocardin-induced differentiation in uterine fibroids. Exp. Cell Res. 350: 73-82.
2. Kim, I.G., et al. 2018. Hypoxia-inducible transgelin 2 selects epithelial-to-mesenchymal transition and gamma-radiation-resistant subtypes by focal adhesion kinase-associated Insulin-like growth factor 1 receptor activation in non-small-cell lung cancer cells. Cancer Sci. 109: 3519-3531.
3. Zhou, Q., et al. 2019. Transgelin 2 overexpression inhibits cervical cancer cell invasion and migration. Mol. Med. Rep. 19: 4919-4926.

STORAGE

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

PROTOCOLS

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