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Research Use Only. Not for diagnostic or therapeutic use.

Storage: For long-term storage keep aliquots at -20°C. (Store no longer than 12 months at 4°C). Minimize freezing and thawing.

EB06281 - Goat Anti-SM22 Alpha / Transgelin Antibody

Size: 100µg specific antibody in 200µl



Target Protein

Principal Names: transgelin variant 2, DKFZp686B01212, TAGLN1, DKFZp686P11128, SM22-alpha, transgelin, WS3-10, SMCC, SM22, TAGLN

Official Symbol: TAGLN

Accession Number(s): NP_003177.2

Human GeneID(s): [6876](#)

Non-Human GeneID(s): 21345 (mouse), 25123 (rat)

Important Comments: NP_003177.2 and NP_001001522.1 represent identical protein. The transgelin protein is found in fibroblasts and smooth muscle and is known as a transformation or shape change protein that is involved with actin cross-linking. Transgelin is one of the earliest markers of differentiated smooth muscle cells and recent evidence suggests that transgelin acts as a tumour suppressor.

Immunogen

Peptide with sequence C-MTGYGRPRQIIS, from the C Terminus of the protein sequence according to NP_003177.2.

Please note the [peptide](#) is available for sale.

Purification and Storage

Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin.

Aliquot and store at -20°C. Minimize freezing and thawing.

Applications Tested

Peptide ELISA: antibody detection limit dilution 1:32000.

Western blot: Approx 23kDa bands observed in Human HeLa lysates and in lysates of Rat Colon (calculated MW of 22.6kDa according to NP_003177.2). Recommended concentration: 0.01-0.03µg/ml.

Species Reactivity

Tested: Human, Mouse, Rat, Rabbit

Expected from sequence similarity: Human, Mouse, Rat, Dog, Cow

Specific References

This antibody has been successfully used in the following papers:

Donati C, Marseglia G, Magi A, Serrati S, Cencetti F, Bernacchioni C, Nannetti G, Benelli M, Brunelli S, Torricelli F, Cossu G, Bruni P.

Sphingosine 1-phosphate induces differentiation of mesoangioblasts towards smooth muscle. A role for GATA6.

PLoS One. 2011;6(5):e20389.

PMID: 21629665

Cencetti F, Bernacchioni C, Nincheri P, Donati C, Bruni P.

Transforming growth factor-beta1 induces transdifferentiation of myoblasts into myofibroblasts via up-regulation of sphingosine kinase-1/S1P3 axis.

Mol Biol Cell. 2010 Mar 15;21(6):1111-24.

PMID: 20089836

Nincheri P, Luciani P, Squecco R, Donati C, Bernacchioni C, Borgognoni L, Luciani G, Benvenuti S, Francini F, Bruni P.
Sphingosine 1-phosphate induces differentiation of adipose tissue-derived mesenchymal stem cells towards smooth muscle cells.
Cell Mol Life Sci. 2009 May;66(10):1741-54.
PMID: 19337690

Donoghue P, Doran P, Wynne K, Pedersen K, Dunn MJ, Ohlendieck K.
Proteomic profiling of chronic low-frequency stimulated fast muscle.
Proteomics. 2007 Sep;7(18):3417-30.
PMID: 17708595

The goat polyclonal antibody used in the following papers was manufactured by us:
Léguillette R, Laviolette M, Bergeron C, Zitouni N, Kogut P, Solway J, Kachmar L, Hamid Q, Lauzon AM.
Myosin, transgelin, and myosin light chain kinase: expression and function in asthma.
Am J Respir Crit Care Med. 2009 Feb 1;179(3):194-204.
PMID: 19011151

Cohen ED, Ihida-Stansbury K, Lu MM, Panettieri RA, Jones PL, Morrissey EE.
Wnt signaling regulates smooth muscle precursor development in the mouse lung via a tenascin C/PDGFR pathway.
J Clin Invest. 2009 Sep;119(9):2538-49.
PMID: 19690384

High FA, Lu MM, Pear WS, Loomes KM, Kaestner KH, Epstein JA.
Endothelial expression of the Notch ligand Jagged1 is required for vascular smooth muscle development.
Proc Natl Acad Sci U S A. 2008 Feb 12;105(6):1955-9.
PMID: 18245384

Huang J, Cheng L, Li J, Chen M, Zhou D, Lu MM, Proweller A, Epstein JA, Parmacek MS.
Myocardin regulates expression of contractile genes in smooth muscle cells and is required for closure of the ductus arteriosus in mice.
J Clin Invest. 2008 Feb;118(2):515-25.
PMID: 18188448

Maile LA, Capps BE, Ling Y, Xi G, Clemmons DR.
Hyperglycemia alters the responsiveness of smooth muscle cells to insulin-like growth factor-I.
Endocrinology. 2007 May;148(5):2435-43.
PMID: 17255202

Ross JJ, Hong Z, Willenbring B, Zeng L, Isenberg B, Lee EH, Reyes M, Keirstead SA, Weir EK, Tranquillo RT, Verfaillie CM.
Cytokine-induced differentiation of multipotent adult progenitor cells into functional smooth muscle cells.
J Clin Invest. 2006 Dec;116(12):3139-49.
PMID: 17099777

Zeng L, Rahrman E, Hu Q, Lund T, Sandquist L, Felten M, O'Brien TD, Zhang J, Verfaillie C.
Multipotent adult progenitor cells from swine bone marrow.
Stem Cells. 2006 Nov;24(11):2355-66.
PMID: 16931778

Bandapalli OR, Geheeb M, Kobelt D, Kuehnle K, Elezkurtaj S, Herrmann J, Gressner AM, Weiskirchen R, Beule D, Blüthgen N, Herzel H, Franke C, Brand K.
Global analysis of host tissue gene expression in the invasive front of colorectal liver metastases.

Int J Cancer. 2006 Jan 1;118(1):74-89.

PMID: 16080196

Deaton RA, Su C, Valencia TG, Grant SR.

Transforming growth factor-beta1-induced expression of smooth muscle marker genes involves activation of PKN and p38 MAPK.

J Biol Chem. 2005 Sep 2;280(35):31172-81.

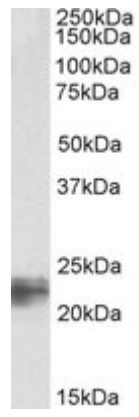
PMID: 15980430

Illi B, Scopece A, Nanni S, Farsetti A, Morgante L, Biglioli P, Capogrossi MC, Gaetano C.

Epigenetic histone modification and cardiovascular lineage programming in mouse embryonic stem cells exposed to laminar shear stress.

Circ Res. 2005 Mar 18;96(5):501-8.

PMID: 15705964



Transgelin staining of HeLa lysate (35µg protein in RIPA buffer) by EB06281 (0.01µg/ml). Primary incubation was 1 hour. Detected by chemiluminescence.