

TSPAN18 (E-14): sc-169698

BACKGROUND

Tetraspanins are a group of hydrophobic membrane proteins that interact with a wide variety of proteins including intracellular signaling molecules, integrins and membrane receptors. TSPAN18 (tetraspanin 18), also known as TSPAN, is a 248 amino acid multi-pass membrane protein belonging to the tetraspanin (TM4SF) family of transmembrane proteins. TSPAN18 maps to murine chromosome 2 E1 and human chromosome 11p11.2. Human chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. Fabiani, J.E., Avigliano, A., Dupont, J.C. and Fabiana, J.E. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine Allergy and Immunology Institute. *Allergol. Immunopathol.* 28: 267-271.
2. Hemler, M.E. 2001. Specific tetraspanin functions. *J. Cell Biol.* 155: 1103-1107.
3. Jira, P.E., Waterham, H.R., Wanders, R.J., Smeitink, J.A., Sengers, R.C. and Wevers, R.A. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
4. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.
5. Siem, G., Früh, A., Leren, T.P., Heimdal, K., Teig, E. and Harris, S. 2008. Jervell and Lange-Nielsen syndrome in Norwegian children: aspects around cochlear implantation, hearing, and balance. *Ear Hear.* 29: 261-269.
6. Garcia-España, A., Chung, P.J., Sarkar, I.N., Stiner, E., Sun, T.T. and Desalle, R. 2008. Appearance of new tetraspanin genes during vertebrate evolution. *Genomics* 91: 326-334.
7. Bhuiyan, Z.A., Momenah, T.S., Amin, A.S., Al-Khadra, A.S., Alders, M., Wilde, A.A. and Mannens, M.M. 2008. An intronic mutation leading to incomplete skipping of exon-2 in KCNQ1 rescues hearing in Jervell and Lange-Nielsen syndrome. *Prog. Biophys. Mol. Biol.* 98: 319-327.
8. Coldren, C.D., Lai, Z., Shragg, P., Rossi, E., Glidewell, S.C., Zuffardi, O., Mattina, T., Ivy, D.D., Curfs, L.M., Mattson, S.N., Riley, E.P., Treier, M. and Grossfeld, P.D. 2009. Chromosomal microarray mapping suggests a role for BSX and Neurogranin in neurocognitive and behavioral defects in the 11q terminal deletion disorder (Jacobsen syndrome). *Neurogenetics* 10: 89-95.

CHROMOSOMAL LOCATION

Genetic locus: TSPAN18 (human) mapping to 11p11.2; Tspan18 (mouse) mapping to 2 E1.

SOURCE

TSPAN18 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TSPAN18 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169698 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TSPAN18 (E-14) is recommended for detection of TSPAN18 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other TSPAN family members.

TSPAN18 (E-14) is also recommended for detection of TSPAN18 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TSPAN18 siRNA (h): sc-97006, TSPAN18 siRNA (m): sc-154726, TSPAN18 shRNA Plasmid (h): sc-97006-SH, TSPAN18 shRNA Plasmid (m): sc-154726-SH, TSPAN18 shRNA (h) Lentiviral Particles: sc-97006-V and TSPAN18 shRNA (m) Lentiviral Particles: sc-154726-V.

Molecular Weight of TSPAN18: 28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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