SANTA CRUZ BIOTECHNOLOGY, INC.

TSPAN7 (Y-19): sc-139572

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. TSPAN7 (tetraspanin 7), also known as MXS1 (membrane component chromosome X surface marker 1) or TM4SF2 (transmembrane 4 superfamily member 2), is a 249 amino acid multi-pass membrane protein belonging to the tetraspanin (TM4SF) family of transmembrane proteins. TSPAN7 is believed to play a role in cell motility and cell proliferation. The gene that encodes TSPAN7 maps to human chromosome X and defects in this gene are a cause of mental retardation X-linked type 58 (MRX58), which is characterized by dramatically below average general intellectual functioning.

REFERENCES

1. Zemni, R., et al. 2000. A new gene involved in X-linked mental retardation identified by analysis of an X;2 balanced translocation. Nat. Genet. 24: 167-170.
2. Domínguez-Jimenez, C., et al. 2001. Involvement of α3 integrin/tetraspanin complexes in the angiogenic response induced by angiotensin II. FASEB J. 15: 1457-1459.
3. Berditchevski, F. 2001. Complexes of tetraspanins with integrins: more than meets the eye. J. Cell Sci. 114: 4143-4151.
4. Castellví-Bel, S., et al. 2001. Genes responsible for nonspecific mental retardation. Mol. Genet. Metab. 72: 104-108.
5. Abidi, F.E., et al. 2002. A novel 2 bp deletion in the TM4SF2 gene is associated with MRX58. J. Med. Genet. 39: 430-433.
6. Maranduba, C.M., et al. 2004. Does the P172H mutation at the TM4SF2 gene cause X-linked mental retardation? Am. J. Med. Genet. A 124A: 413-415.
7. Guilmatre, A., et al. 2009. Recurrent rearrangements in synaptic and neurodevelopmental genes and shared biologic pathways in schizophrenia, autism, and mental retardation. Arch. Gen. Psychiatry 66: 947-956.

CHROMOSOMAL LOCATION

Genetic locus: TSPAN7 (human) mapping to Xp11.4; Tspan7 (mouse) mapping to X A1.1.

SOURCE

TSPAN7 (Y-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of TSPAN7 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-139572 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TSPAN7 (Y-19) is recommended for detection of TSPAN7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other TSPAN family members.

TSPAN7 (Y-19) is also recommended for detection of TSPAN7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TSPAN7 siRNA (h): sc-91320, TSPAN7 siRNA (m): sc-154730, TSPAN7 shRNA Plasmid (h): sc-91320-SH, TSPAN7 shRNA Plasmid (m): sc-154730-SH, TSPAN7 shRNA (h) Lentiviral Particles: sc-91320-V and TSPAN7 shRNA (m) Lentiviral Particles: sc-154730-V.

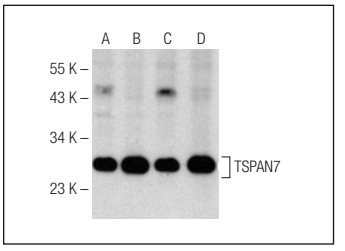
Molecular Weight of TSPAN7: 28 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TSPAN7 (Y-19): sc-139572. Western blot analysis of TSPAN7 expression in CCRF-CEM (**A**), K-562 (**B**), Jurkat (**C**) and M1 (**D**) whole cell lysates.

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.