

BACKGROUND

TSPEAR, also known as C21orf9, is a 669 amino acid secreted protein. Expressed as 2 isoforms produced by alternative splicing, TSPEAR contains one Thrombospondin N-terminal domain and 7 EAR (epilepsy-associated repeat) domains. EAR domains are found in several proteins, including TSPEAR, encoded by genes that map within chromosome regions associated with sei-zure disorders. It is thought that the EAR domain plays a role in the pathogenesis of epilepsy by either binding to an unknown epileptic ligand or interfering with axon synaptogenesis.

REFERENCES

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2. Bate, L. and Gardiner, M. 1999. Molecular genetics of human epilepsies. *Expert Rev. Mol. Med.* 1999: 1-22.
3. Scheel, H., Tomiuk, S. and Hofmann, K. 2002. A common protein interaction domain links two recently identified epilepsy genes. *Hum. Mol. Genet.* 11: 1757-1762.
4. Ptacek, L. 2002. Channelopathies: episodic disorders of the nervous system. *Novartis Found. Symp.* 241: 87-104.
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CHROMOSOMAL LOCATION

Genetic locus: TSPEAR (human) mapping to 21q22.3; Tspear (mouse) mapping to 10 C1.

SOURCE

TSPEAR (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of TSPEAR 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-83765 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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.

APPLICATIONS

TSPEAR (N-20) is recommended for detection of TSPEAR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

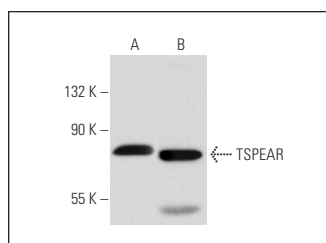
Suitable for use as control antibody for TSPEAR siRNA (h): sc-91435, TSPEAR siRNA (m): sc-270602, TSPEAR shRNA Plasmid (h): sc-91435-SH, TSPEAR shRNA Plasmid (m): sc-270602-SH, TSPEAR shRNA (h) Lentiviral Particles: sc-91435-V and TSPEAR shRNA (m) Lentiviral Particles: sc-270602-V.

Molecular Weight of TSPEAR: 75 kDa.

Positive Controls: A549 cell lysate: sc-2413 or HEK293 whole cell lysate: sc-45136.

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

TSPEAR (N-20): sc-83765. Western blot analysis of TSPEAR expression in HEK293 (A) and A549 (B) whole cell lysates.

PROTOCOLS

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