

# TSPEAR (A-10): sc-373868

## BACKGROUND

TSPEAR, also known as C21orf9, is a 669 amino acid secreted protein. Expressed as two isoforms produced by alternative splicing, TSPEAR contains one Thrombospondin N-terminal domain and seven EAR (epilepsy-associated repeat) domains. EAR domains are found in several proteins, including TSPEAR, encoded by genes that map within chromosome regions associated with seizure 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

1. Beckmann, G., et al. 1998. Merging extracellular domains: fold prediction for laminin G-like and amino-terminal thrombospondin-like modules based on homology to pentraxins. *J. Mol. Biol.* 275: 725-730.
2. Bate, L. and Gardiner, M. 1999. Molecular genetics of human epilepsies. *Expert Rev. Mol. Med.* 1999: 1-22.
3. Scheel, H., et al. 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.
5. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.

## CHROMOSOMAL LOCATION

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

## SOURCE

TSPEAR (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 22-57 near the N-terminus of TSPEAR of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TSPEAR (A-10) is available conjugated to agarose (sc-373868 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373868 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373868 PE), fluorescein (sc-373868 FITC), Alexa Fluor® 488 (sc-373868 AF488), Alexa Fluor® 546 (sc-373868 AF546), Alexa Fluor® 594 (sc-373868 AF594) or Alexa Fluor® 647 (sc-373868 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373868 AF680) or Alexa Fluor® 790 (sc-373868 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373868 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

TSPEAR (A-10) is recommended for detection of TSPEAR 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), immunohistochemistry (including paraffin-embedded sections) (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.

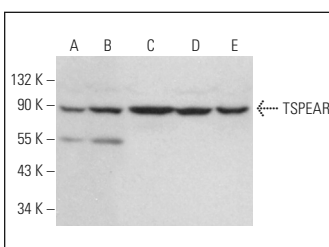
Molecular Weight of TSPEAR: 75 kDa.

Positive Controls: A549 cell lysate: sc-2413, HEK293 whole cell lysate: sc-45136 or NIH/3T3 whole cell lysate: sc-2210.

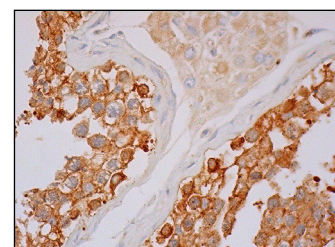
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



TSPEAR (A-10): sc-373868. Western blot analysis of TSPEAR expression in HEK293 (A), A549 (B), c4 (C), NIH/3T3 (D) and PC-12 (E) whole cell lysates.



TSPEAR (A-10): sc-373868. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

## STORAGE

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

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