SANTA CRUZ BIOTECHNOLOGY, INC.

TMEFF1 (H-11): sc-393005

BACKGROUND

TMEFF1 and TMEFF2 are putative transmembrane proteins comprised of one epidermal growth factor (EGF)-like domain and two follistatin-like domains. Both TMEFF1 and TMEFF2 are members of the EGF-like protein family and are predominantly expressed in the brain. The structure of TMEFF1 is that of a transmembrane protein with a highly conserved cytoplasmic tail, two follistatin domains and one modified EGF domain in its extracellular region. TMEFF1 is expressed on the cell membrane, and may behave as a tumor suppressor gene in brain cancers. It inhibits nodal but not activin signaling by binding to Cripto, the nodal co-receptor, and is also involved in the regulation of BMPs.

REFERENCES

1. Kanemoto, N., Horie, M., Omori, K., Nishino, N., Kondo, M., Noguchi, K. and Tanigami, A. 2001. Expression of TMEFF1 mRNA in the mouse central nervous system: precise examination and comparative studies of TMEFF1 and TMEFF2. Brain Res. Mol. Brain Res. 86: 48-55.
2. Morais da Silva, S., Gates, P.B., Eib, D.W., Martens, G.J. and Brockes, J.P. 2001. The expression pattern of tomoregulin-1 in urodele limb regeneration and mouse limb development. Mech. Dev. 104: 125-128.
3. Harms, P.W. and Chang, C. 2003. Tomoregulin-1 (TMEFF1) inhibits nodal signaling through direct binding to the nodal co-receptor Cripto. Genes Dev. 17: 2624-2629.
4. Gery, S., Yin, D., Xie, D., Black, K.L. and Koeffler, H.P. 2003. TMEFF1 and brain tumors. Oncogene 22: 2723-2727.
5. Chang, C., Eggen, B.J., Weinstein, D.C. and Brivanlou, A.H. 2003. Regulation of nodal and BMP signaling by tomoregulin-1 (X7365) through novel mechanisms. Dev. Biol. 255: 1-11.
6. Ge, W., Hu, H., Ding, K., Sun, L. and Zheng, S. 2006. Protein interaction analysis of ST14 domains and their point and deletion mutants. J. Biol. Chem. 281: 7406-7412.

CHROMOSOMAL LOCATION

Genetic locus: TMEFF1 (human) mapping to 9q31.1; Tmeff1 (mouse) mapping to 4 B1.

SOURCE

TMEFF1 (H-11) is a mouse monoclonal antibody raised against amino acids 204-260 mapping within an internal region of TMEFF1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

TMEFF1 (H-11) is recommended for detection of TMEFF1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TMEFF1 (H-11) is also recommended for detection of TMEFF1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TMEFF1 siRNA (h): sc-45762, TMEFF1 siRNA (m): sc-45763, TMEFF1 shRNA Plasmid (h): sc-45762-SH, TMEFF1 shRNA Plasmid (m): sc-45763-SH, TMEFF1 shRNA (h) Lentiviral Particles: sc-45762-V and TMEFF1 shRNA (m) Lentiviral Particles: sc-45763-V.

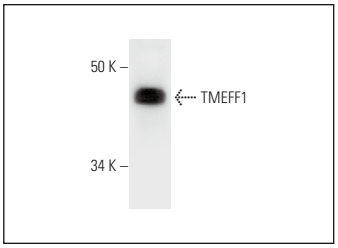
Molecular Weight of TMEFF1: 41 kDa.

Positive Controls: human heart extract: sc-363763.

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.

DATA



TMEFF1 (H-11): sc-393005. Western blot analysis of TMEFF1 expression in human heart tissue extract.

RESEARCH USE

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

PROTOCOLS

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