SANTA CRUZ BIOTECHNOLOGY, INC.

CSMD1/2/3 (H-300): sc-68865

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The CUB and sushi domain-containing proteins, CSMD1-3, are membrane proteins that are involved in cell-cell adhesion and are weakly expressed in most tissues, with higher levels of expression observed in the cerebellum and hippocampus. CSMD1 is part of the complement system that defends against pathogens through either the classical pathway or the alternative pathway. Located primarily in nerve growth cones, CSMD1 blocks the classical pathway of the immune system and is thought to be involved in tumor suppression, as defects in the gene encoding CSMD1 are associated with squamous cell carcinomas. CSMD2 and CSMD3 are located primarily in the brain and are implicated in some forms of head and neck cancer. Additionally, the CSMD3 gene is a candidate for induction of epileptic seizures.

REFERENCES

1. Sun, P.C., Uppaluri, R., Schmidt, A.P., Pashia, M.E., Quant, E.C., Sunwoo, J.B., Gollin, S.M. and Scholnick, S.B. 2001. Transcript map of the 8p23 putative tumor suppressor region. Genomics 75: 17-25.
2. Lau, W.L. and Scholnick, S.B. 2003. Identification of two new members of the CSMD gene family small star, filled. Genomics 82: 412-415.
3. Shimizu, A., Asakawa, S., Sasaki, T., Yamazaki, S., Yamagata, H., Kudoh, J., Minoshima, S., Kondo, I. and Shimizu, N. 2003. A novel giant gene CSMD3 encoding a protein with CUB and sushi multiple domains: a candidate gene for benign adult familial myoclonic epilepsy on human chromosome 8q23.3-q24.1. Biochem. Biophys. Res. Commun. 309: 143-154.
4. Riedl, S., Giedion, A., Schweitzer, K., Müllner-Eidenböck, A., Grill, F., Frisch, H. and Lüdecke, H.J. 2004. Pronounced short stature in a girl with trichorhino-phalangeal syndrome II (TRPS II, Langer-Giedion syndrome) and growth hormone deficiency. Am. J. Med. Genet. A 131: 200-203.
5. Richter, T.M., Tong, B.D. and Scholnick, S.B. 2005. Epigenetic inactivation and aberrant transcription of CSMD1 in squamous cell carcinoma cell lines. Cancer Cell Int. 5: 29-29.
6. Kraus, D.M., Elliott, G.S., Chute, H., Horan, T., Pfenninger, K.H., Sanford, S.D., Foster, S., Scully, S., Welcher, A.A. and Holers, V.M. 2006. CSMD1 is a novel multiple domain complement-regulatory protein highly expressed in the central nervous system and epithelial tissues. J. Immunol. 176: 4419-4430.

SOURCE

CSMD1/2/3 (H-300) is a rabbit polyclonal antibody raised against amino acids 21-320 mapping near the N-terminus of CSMD3 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.

STORAGE

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

APPLICATIONS

CSMD1/2/3 (H-300) is recommended for detection of CSMD1, CSMD2 and CSMD3 of human origin and CSMD1 and CSMD3 of mouse and rat 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); non cross-reactive with CSMD2 of mouse and rat origin.

CSMD1/2/3 (H-198) is also recommended for detection of CSMD1, CSMD2 and CSMD3 in additional species, including equine, canine and avian.

Molecular Weight of CSMD1: 388 kDa.

Molecular Weight of CSMD2: 380 kDa.

Molecular Weight of CSMD3: 398 kDa.

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.

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.