SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHB13 (C-14): sc-109763



The Power to Question

BACKGROUND

PCDHB13 (protocadherin β -13) is a 798 amino acid type I membrane protein that contains 6 cadherin domains. As a potential calcium-dependent cell-adhesion protein, PCDHB13 may be involved in the establishment and maintenance of specific neuronal connections in the brain. The gene that encodes PCDHB13 maps to human chromosome 5q31, and is a member of the protocadherin β gene cluster. This gene cluster is one of three related gene clusters tandemly linked on chromosome 5. It demonstrates an unusual genomic organization similar to that of B-cell and T-cell receptor gene clusters. Containing 16 genes and 3 pseudogenes, the β gene cluster encodes 6 extracellular cadherin domains and a cytoplasmic tail that deviates from others in the cadherin superfamily. The extracellular domains interact in a homophilic manner to specify differential cell-cell connections.

REFERENCES

- 1. Wu, Q. and Maniatis, T. 1999. A striking organization of a large family of human neural cadherin-like cell adhesion genes. Cell 97: 779-790.
- Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. Genes Dev. 14: 1169-1180.
- Nollet, F., et al. 2000. Phylogenetic analysis of the cadherin superfamily allows identification of six major subfamilies besides several solitary members. J. Mol. Biol. 299: 551-572.
- Wu, Q. and Maniatis, T. 2000. Large exons encoding multiple ectodomains are a characteristic feature of protocadherin genes. Proc. Natl. Acad. Sci. USA 97: 3124-3129.
- Vanhalst, K., et al. 2001. The human and murine protocadherin-β one-exon gene families show high evolutionary conservation, despite the difference in gene number. FEBS Lett. 495: 120-125.
- 6. Wu, Q., et al. 2001. Comparative DNA sequence analysis of mouse and human protocadherin gene clusters. Genome Res. 11: 389-404.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606337. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Frank, M. and Kemler, R. 2002. Protocadherins. Curr. Opin. Cell Biol. 14: 557-562.
- 9. Miki, R., et al. 2005. Identification and characterization of coding singlenucleotide polymorphisms within human protocadherin- α and - β gene clusters. Gene 349: 1-14.

CHROMOSOMAL LOCATION

Genetic locus: PCDHB13 (human) mapping to 5q31.3.

SOURCE

PCDHB13 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of PCDHB13 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109763 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHB13 (C-14) is recommended for detection of PCDHB13 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other PCDHB family members.

Suitable for use as control antibody for PCDHB13 siRNA (h): sc-91996, PCDHB13 shRNA Plasmid (h): sc-91996-SH and PCDHB13 shRNA (h) Lentiviral Particles: sc-91996-V.

Molecular Weight of PCDHB13: 88 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **D0 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.

PROTOCOLS

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