SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHGC5 (N-15): sc-132026

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The Power to Question

BACKGROUND

The PCDHGA6 gene is a member of the protocadherin γ gene cluster, one of three related clusters tandemly linked on chromosome five. These gene clusters have an immunoglobulin-like organization, suggesting that a novel mechanism may be involved in their regulation and expression. The γ gene cluster includes 22 genes divided into 3 subfamilies. Subfamily A contains 12 genes, subfamily B contains 7 genes and 2 pseudogenes, and the more distantly related subfamily C contains 3 genes. PCDHGC5 (protocadherin γ-C5) is a 944 amino acid single-pass type I membrane protein that contains 6 cadherin domains and exists as 2 alternatively spliced isoforms. As a potential calcium-dependent cell-adhesion protein, PCDHGC5 may be involved in the establishment and maintenance of specific neuronal connections in the brain. The gene that encodes PCDHGC5 consists of approximately 23,739 bases and maps to human chromosome 5q31.3.

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.
2. Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. Genes Dev. 14: 1169-1180.
3. 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.
4. 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.
5. Wu, Q., et al. 2001. Comparative DNA sequence analysis of mouse and human protocadherin gene clusters. Genome Res. 11: 389-404.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606306. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Abe, M., et al. 2008. Identification of genes targeted by CpG island methylator phenotype in neuroblastomas, and their possible integrative involvement in poor prognosis. Oncology 74: 50-60.
8. Wang, L., et al. 2010. Microarray data integration for genome-wide analysis of human tissue-selective gene expression. BMC Genomics 11 Suppl. 2: S15.

CHROMOSOMAL LOCATION

Genetic locus: PCDHGC5 (human) mapping to 5q31.3; Pcdhgc5 (mouse) mapping to 18 B3.

SOURCE

PCDHGC5 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of PCDHGC5 of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-132026 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHGC5 (N-15) is recommended for detection of PCDHGC5 isoforms 1 and 2 of mouse, rat and 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 PCDHG family members.

PCDHGC5 (N-15) is also recommended for detection of PCDHGC5 isoforms 1 and 2 in additional species, including equine and porcine.

Suitable for use as control antibody for PCDHGC5 siRNA (h): sc-106934, Pcdhgc5 siRNA (m): sc-152104, PCDHGC5 shRNA Plasmid (h): sc-106934-SH, Pcdhgc5 shRNA Plasmid (m): sc-152104-SH, PCDHGC5 shRNA (h) Lentiviral Particles: sc-106934-V and Pcdhgc5 shRNA (m) Lentiviral Particles: sc-152104-V.

Molecular Weight of PCDHGC5 isoforms: 102/95 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) Immunofluorescence: 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, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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