PCDHA9 (G-14): sc-103801



The Power to Question

BACKGROUND

Protocadherins are a large family of cadherin-like cell adhesion proteins that are involved in the establishment and maintenance of neuronal connections in the brain. There are three protocadherin gene clusters, designated $\alpha,\,\beta$ and $\gamma,$ all of which contain multiple tandemly arranged genes. PCDHA9 (protocadherin α 9), also known as KIAA0345, is a 950 amino acid single-pass type I membrane protein that contains six cadherin domains and is encoded by a gene which is located within the protocadherin α gene cluster on human chromosome 5. Existing as multiple alternatively spliced isoforms, PCDHA9 functions as a potential calcium-dependent cell adhesion protein that may be involved in the establishment and maintenance of neuronal connections within the brain.

REFERENCES

- Suzuki, S.T. 2000. Recent progress in protocadherin research. Exp. Cell Res. 261: 13-18.
- Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. Genes Dev. 14: 1169-1180.
- Nollet, F., Kools, P. and van Roy, F. 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., Zhang, T., Cheng, J.F., Kim, Y., Grimwood, J., Schmutz, J., Dickson, M., Noonan, J.P., Zhang, M.Q., Myers, R.M. and Maniatis, T. 2001. Comparative DNA sequence analysis of mouse and human protocadherin gene clusters. Genome Res. 11: 389-404.
- 6. Noonan, J.P., Li, J., Nguyen, L., Caoile, C., Dickson, M., Grimwood, J., Schmutz, J., Feldman, M.W. and Myers, R.M. 2003. Extensive linkage disequilibrium, a common 16.7 kilobase deletion, and evidence of balancing selection in the human protocadherin α cluster. Am. J. Hum. Genet. 72: 621-635.
- 7. Ribich, S., Tasic, B. and Maniatis, T. 2006. Identification of long-range regulatory elements in the protocadherin α gene cluster. Proc. Natl. Acad. Sci. USA 103: 19719-19724.
- 8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606314. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PCDHA9 (human) mapping to 5q31.3.

SOURCE

PCDHA9 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of PCDHA9 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-103801 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHA9 (G-14) is recommended for detection of PCDHA9 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 PCDHA family members.

Suitable for use as control antibody for PCDHA9 siRNA (h): sc-106385, PCDHA9 shRNA Plasmid (h): sc-106385-SH and PCDHA9 shRNA (h) Lentiviral Particles: sc-106385-V.

Molecular Weight of PCDHA9: 102 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) 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.

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