SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHGA3 (D-12): sc-109811

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 (PCDH) gene clusters, designated α, β and γ, all of which contain multiple tandemly arranged genes. PCDHGA3 (protocadherin γ-A3) is a 932 amino acid that is one of 22 proteins encoded by the protocadherin γ cluster. The protocadherein γ cluster consists of three subfamilies (A, B and C) and PCDHGA3 is a member of the γ subfamily A. PCDHGA3 is a type I transmembrane receptor containing six cadherin motifs and is expressed in the central nervous system where it localizes to synapses. Members of the γ cluster of protocadherins are essential for neuronal survival. There are two isoforms of PCDHGA3 that are produced as a result of alternative splicing events.

REFERENCES

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2. Wu, Q., et al. 2001. Comparative DNA sequence analysis of mouse and human protocadherin gene clusters. Genome Res. 11: 389-404.
3. Tasic, B., et al. 2002. Promoter choice determines splice site selection in protocadherin α and γ pre-mRNA splicing. Mol. Cell. 10: 21-33.
4. Wang, X., et al. 2002. γ protocadherins are required for survival of spinal interneurons. Neuron 36: 843-854.
5. Kirov, G., et al. 2003. Variation in the protocadherin γ A gene cluster. Genomics 82: 433-440.
6. Zou, C., et al. 2007. Sequence analysis and expression mapping of the rat clustered protocadherin gene repertoires. Neuroscience 144: 579-603.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606297. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: PCDHGA3 (human) mapping to 5q31.3; Pcdhga3 (mouse) mapping to 18 B3.

SOURCE

PCDHGA3 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHGA3 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.

Blocking peptide available for competition studies, sc-109811 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHGA3 (D-12) is recommended for detection of PCDHGA3 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 PCDHGA family members.

Suitable for use as control antibody for PCDHGA3 siRNA (h): sc-106758, Pcdhga3 siRNA (m): sc-152090, PCDHGA3 shRNA Plasmid (h): sc-106758-SH, Pcdhga3 shRNA Plasmid (m): sc-152090-SH, PCDHGA3 shRNA (h) Lentiviral Particles: sc-106758-V and Pcdhga3 shRNA (m) Lentiviral Particles: sc-152090-V.

Molecular Weight of PCDHGA3: 101 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.

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.