

PCDHGA10 (D-13): sc-109799

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. PCDHGA10 (protocadherin γ -A10) is a 936 amino acid that is one of 22 proteins encoded by the protocadherin γ cluster. The protocadherin γ cluster consists of three subfamilies (A, B and C) and PCDHGA10 is a member of the γ subfamily A. PCDHGA10 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 PCDHGA10 that are produced as a result of alternative splicing events.

REFERENCES

1. Kohmura, N., et al. 1998. Diversity revealed by a novel family of cadherins expressed in neurons at a synaptic complex. *Neuron* 20: 1137-1151.
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/>

CHROMOSOMAL LOCATION

Genetic locus: PCDHGA10 (human) mapping to 5q31.3; Pcdhga10 (mouse) mapping to 18 B3.

SOURCE

PCDHGA10 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHGA10 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109799 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PCDHGA10 (D-13) is recommended for detection of PCDHGA10 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 other PCDHGA family members.

Suitable for use as control antibody for PCDHGA10 siRNA (h): sc-106941, PCDHGA10 siRNA (m): sc-152086, PCDHGA10 shRNA Plasmid (h): sc-106941-SH, PCDHGA10 shRNA Plasmid (m): sc-152086-SH, PCDHGA10 shRNA (h) Lentiviral Particles: sc-106941-V and PCDHGA10 shRNA (m) Lentiviral Particles: sc-152086-V.

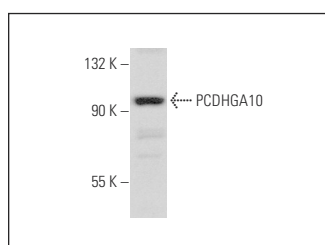
Molecular Weight of PCDHGA10: 101 kDa.

Positive Controls: mouse brain extract: sc-2253.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PCDHGA10 (D-13): sc-109799. Western blot analysis of PCDHGA10 expression in mouse brain tissue extract.

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.