

PCDHA13 (A-14): sc-103755

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. The protein products of PCDH- α genes interact with Integrin β 1 to promote cell adhesion and form oligomers with PCDH- γ proteins at specific membrane sites. PCDHA13 (protocadherin α -13) is a 950 amino acid single-pass transmembrane protein that contains six cadherin domains and functions as a potential calcium-dependent cell-adhesion protein, possibly playing a role in the creation and maintenance of neuronal connections. There are two isoforms of PCDHA13 that are produced as a result of alternative splicing events.

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.
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. Hirayama, T. and Yagi, T. 2006. The role and expression of the protocadherin- α clusters in the CNS. *Curr. Opin. Neurobiol.* 16: 336-342.
5. Kaneko, R., et al. 2006. Allelic gene regulation of PCDH- α and PCDH- γ clusters involving both monoallelic and biallelic expression in single Purkinje cells. *J. Biol. Chem.* 281: 30551-30560.
6. Ribich, S., et al. 2006. Identification of long-range regulatory elements in the protocadherin- α gene cluster. *Proc. Natl. Acad. Sci. USA* 103: 19719-19724.
7. Bonn, S., et al. 2007. Combinatorial expression of α - and γ -protocadherins alters their presenilin-dependent processing. *Mol. Cell. Biol.* 27: 4121-4132.
8. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606317. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
9. Yagi, T. 2008. Clustered protocadherin family. *Dev. Growth Differ.* 50: S131-S140.

CHROMOSOMAL LOCATION

Genetic locus: Pcdha13 (rat) mapping to 18p11.

SOURCE

PCDHA13 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PCDHA13 of rat 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-103755 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHA13 (A-14) is recommended for detection of PCDHA13 of rat 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.

Molecular Weight of PCDHA13: 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) 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.