

PCDHA10 (JH-86): sc-130462

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 α , β and γ , all of which contain multiple tandemly arranged genes. These genes generate thousands of different protocadherin proteins through alternative promoter usage and *cis*-alternative splicing. PCDHA and PCDHG family members form oligomers, which also increases the diversity of PCDH proteins at the cell surface. All three gene clusters, PCDHA, PCDHB, and PCDHG show upregulated expression during brain development, and PCDHA is subsequently downregulated by myelination. Expression of all three clusters continues in the olfactory bulb, hippocampus and cerebellum until adulthood. Members of the PCDH family are potential targets in schizophrenia and bipolar disorder pathogenesis. PCDHA10 produces at least three isoforms by alternative splicing.

REFERENCES

1. 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.
2. Vanhalst, K., Kools, P., Vanden Eynde, E. and van Roy, F. 2001. The human and murine protocadherin- β one-exon gene families show high evolutionary conservation, despite the difference in gene number. *FEBS Lett.* 495: 120-125.
3. Morgan, M. 2008. Models for the recent evolution of protocadherin gene clusters. *BioCell* 32: 9-26.
4. Yagi, T. 2008. Clustered protocadherin family. *Dev. Growth Differ.* 50: S131-S140.
5. Lachman, H.M., Petruolo, O.A., Pedrosa, E., Novak, T., Nolan, K. and Stopkova, P. 2008. Analysis of protocadherin α gene deletion variant in bipolar disorder and schizophrenia. *Psychiatr. Genet.* 18: 110-115.
6. Pedrosa, E., Stefanescu, R., Margolis, B., Petruolo, O., Lo, Y., Nolan, K., Novak, T., Stopkova, P. and Lachman, H.M. 2008. Analysis of protocadherin α gene enhancer polymorphism in bipolar disorder and schizophrenia. *Schizophr. Res.* 102: 210-219.

CHROMOSOMAL LOCATION

Genetic locus: PCDHA10 (human) mapping to 5q31.3.

SOURCE

PCDHA10 (JH-86) is a mouse monoclonal antibody raised against recombinant PCDHA10 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

PCDHA10 (JH-86) is recommended for detection of PCDHA10 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

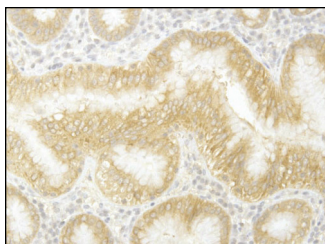
Suitable for use as control antibody for PCDHA10 siRNA (h): sc-106366, PCDHA10 shRNA Plasmid (h): sc-106366-SH and PCDHA10 shRNA (h) Lentiviral Particles: sc-106366-V.

Molecular Weight of PCDHA10: 103 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



PCDHA10 (JH-86): sc-130462. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing cytoplasmic and membrane localization.

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 for detailed protocols and support products.