

# PCDHA10 (P-14): sc-103741

## 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. 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 down-regulated 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

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2. Vanhalst, K., Kools, P., Vanden Eynde, E. and van Roy, F. 2001. The human and murine protocadherin- $\beta$  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 Suppl. 1: S131-S140.
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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  $\alpha$  gene enhancer polymorphism in bipolar disorder and schizophrenia. *Schizophr. Res.* 102: 210-219.

## CHROMOSOMAL LOCATION

Genetic locus: *Pcdha10* (rat) mapping to 18p11.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## SOURCE

PCDHA10 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PCDHA10 of rat origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-103741 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCDHA10 (P-14) is recommended for detection of PCDHA10 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).

Molecular Weight of PCDHA10: 103 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.