

# PCDHA5 (S-03): sc-81800

## 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. PCDHA5 (protocadherin  $\alpha$ -5) is one of fifteen members of the protocadherin  $\alpha$  protein family that is expressed in neurons. PCDHA5 is a 936 amino acid single-pass type I membrane protein containing 6 cadherin domains. Localized to the cell membrane, PCDHA5 functions as a calcium-dependent cell-adhesion protein that is present in synaptic junctions and is essential to the establishment and maintenance of certain cell-cell interactions. PCDHA5 is expressed as 3 isoforms produced by alternative splicing.

## 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.
2. Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. *Genes Dev.* 14: 1169-1180.
3. Nollet, F., Kools, P. and van Roy, F. 2000. Phylogenetic analysis of the cadherin superfamily allows identification of six major subfamilies besides several solitary members. *J. Mol. Biol.* 299: 551-572.
4. Wu, Q. and Maniatis, T. 2000. Large exons encoding multiple ectodomains are a characteristic feature of protocadherin genes. *Proc. Natl. Acad. Sci. USA* 97: 3124-3129.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606311. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: PCDHA5 (human) mapping to 5q31.3.

## SOURCE

PCDHA5 (S-03) is a mouse monoclonal antibody raised against recombinant PCDHA5 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ l ascites containing IgM with < 0.1% sodium azide.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

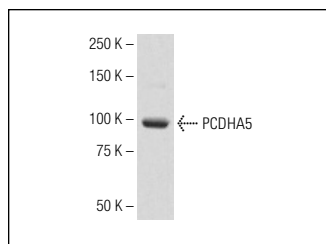
PCDHA5 (S-03) is recommended for detection of PCDHA5 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2  $\mu$ l per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Suitable for use as control antibody for PCDHA5 siRNA (h): sc-106960, PCDHA5 shRNA Plasmid (h): sc-106960-SH and PCDHA5 shRNA (h) Lentiviral Particles: sc-106960-V.

Molecular Weight of PCDHA5: 102 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## DATA



PCDHA5 (S-03): sc-81800. Western blot analysis of PCDHA5 expression in HeLa whole cell lysate.

## RESEARCH USE

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