

# PCDH2 (h2): 293T Lysate: sc-172657

## 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. PCDH2 (protocadherin-2), also known as PCDHGC3 (protocadherin  $\gamma$  subfamily C, 3) or PC43, is a 934 amino acid single-pass type I membrane protein that contains six cadherin domains and belongs to the protocadherin  $\gamma$  family. Functioning as a calcium-dependent cell-adhesion protein, PCDH2 is thought to be involved in the establishment and maintenance of neuronal connections within the brain. Multiple isoforms of PCDH2 exist due to alternative splicing events.

## REFERENCES

1. Sano, K., Tanihara, H., Heimark, R.L., Obata, S., Davidson, M., St John, T., Taketani, S. and Suzuki, S. 1993. Protocadherins: a large family of cadherin-related molecules in central nervous system. *EMBO J.* 12: 2249-2256.
2. Sago, H., Kitagawa, M., Obata, S., Mori, N., Taketani, S., Rochelle, J.M., Seldin, M.F., Davidson, M., St John, T. and Suzuki, S.T. 1995. Cloning, expression, and chromosomal localization of a novel cadherin-related protein, protocadherin-3. *Genomics* 29: 631-640.
3. 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.
4. Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. *Genes Dev.* 14: 1169-1180.
5. 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.
6. 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.
7. Reiss, K., Maretzky, T., Haas, I.G., Schulte, M., Ludwig, A., Frank, M. and Saftig, P. 2006. Regulated ADAM10-dependent ectodomain shedding of  $\gamma$ -protocadherin C3 modulates cell-cell adhesion. *J. Biol. Chem.* 281: 21735-21744.
8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 603627. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: PCDHGC3 (human) mapping to 5q31.3.

## PRODUCT

PCDH2 (h2): 293T Lysate represents a lysate of human PCDH2 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

PCDH2 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PCDH2 antibodies. Recommended use: 10-20  $\mu$ l per lane.

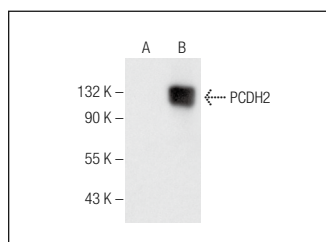
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PCDH2 (D-11): sc-376885 is recommended as a positive control antibody for Western Blot analysis of enhanced human PCDH2 expression in PCDH2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



PCDH2 (D-11): sc-376885. Western blot analysis of PCDH2 expression in non-transfected: sc-117752 (A) and human PCDH2 transfected: sc-172657 (B) 293T whole cell lysates.

## 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) for detailed protocols and support products.