

PCDHB10 (RR-K6): sc-81819

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. PCDHB10 (protocadherin β 10), also known as PCHB10 or PCDH- β 10, is an 800 amino acid protein that is one of 16 proteins in the protocadherin β cluster. Unlike the α and γ gene clusters, whose genes are spliced to downstream constant region exons during transcription, members of the β cluster (such as PCDHB10) do not use constant-region exons to produce mRNAs. As a result, each protocadherin β gene encodes the transmembrane, extracellular and short cytoplasmic domains of the protein. Localized to the cell membrane, PCDHB10 is a single-pass type I membrane protein that contains six cadherin domains.

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. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606336. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Miki, R., Hattori, K., Taguchi, Y., Tada, M.N., Isosaka, T., Hidaka, Y., Hirabayashi, T., Hashimoto, R., Fukuzako, H. and Yagi, T. 2005. Identification and characterization of coding single-nucleotide polymorphisms within human protocadherin- α and - β gene clusters. *Gene* 349: 1-14.
5. Yang, X., Chen, M.W., Terry, S., Vacherot, F., Chopin, D.K., Bemis, D.L., Kitajewski, J., Benson, M.C., Guo, Y. and Buttyan, R. 2005. A human- and male-specific protocadherin that acts through the Wnt signaling pathway to induce neuroendocrine transdifferentiation of prostate cancer cells. *Cancer Res.* 65: 5263-5271.
6. Sjöblom, T., Jones, S., Wood, L.D., Parsons, D.W., Lin, J., Barber, T.D., Mandelker, D., Leary, R.J., Ptak, J., Silliman, N., Szabo, S., Buckhaults, P., Farrell, C., Meeh, P., Markowitz, S.D., Willis, J., Dawson, D., Willson, J.K., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.

CHROMOSOMAL LOCATION

Genetic locus: PCDHB10 (human) mapping to 5q31.3; Pcdhb10 (mouse) mapping to 18 B3.

SOURCE

PCDHB10 (RR-K6) is a mouse monoclonal antibody raised against recombinant PCDHB10 of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PCDHB10 (RR-K6) is recommended for detection of PCDHB10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PCDHB10 siRNA (h): sc-91964, Pcdhb10 siRNA (m): sc-152067, PCDHB10 shRNA Plasmid (h): sc-91964-SH, Pcdhb10 shRNA Plasmid (m): sc-152067-SH, PCDHB10 shRNA (h) Lentiviral Particles: sc-91964-V and Pcdhb10 shRNA (m) Lentiviral Particles: sc-152067-V.

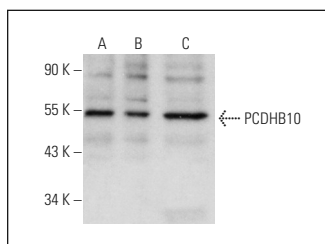
Molecular Weight of PCDHB10: 88 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or PCDHB10 (h): 293T Lysate: sc-113923.

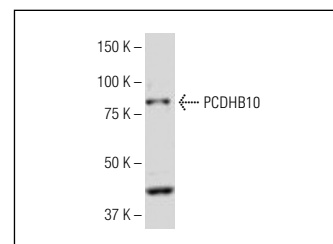
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PCDHB10 (RR-K6): sc-81819. Western blot analysis of PCDHB10 expression in non-transfected 293T: sc-117752 (A), human PCDHB10 transfected 293T: sc-113923 (B) and HeLa (C) whole cell lysates.



PCDHB10 (RR-K6): sc-81819. Western blot analysis of PCDHB10 expression in NIH/3T3 whole cell lysate.

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.