

PCDHB12 (F-12): sc-109762

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. PCDHB12 (protocadherin β 12) is a 795 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 PCDHB12) 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, PCDHB12 is a single-pass type I membrane protein that contains six cadherin domains. PCDHB12 may participate in the establishment and maintenance of specific neuronal connections in the brain.

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. 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.
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.

CHROMOSOMAL LOCATION

Genetic locus: PCDHB12 (human) mapping to 5q31.3.

SOURCE

PCDHB12 (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHB12 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109762 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHB12 (F-12) is recommended for detection of PCDHB12 of 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)], 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); non cross-reactive with other PCDHB family members.

Suitable for use as control antibody for PCDHB12 siRNA (h): sc-91945, PCDHB12 shRNA Plasmid (h): sc-91945-SH and PCDHB12 shRNA (h) Lentiviral Particles: sc-91945-V.

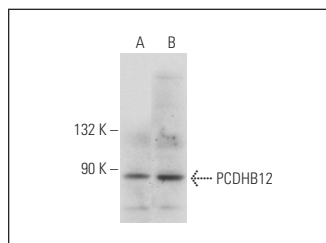
Molecular Weight of PCDHB12: 87 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or Raji whole cell lysate: sc-364236.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PCDHB12 (F-12): sc-109762. Western blot analysis of PCDHB12 expression in Raji (A) and IMR-32 (B) whole cell lysates.

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 or our catalog for detailed protocols and support products.