

# PCDHB10 (D-12): sc-109759

## 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. PCDHB10 (protocadherin  $\beta$ 10), also known as PCHB10 or PCDH- $\beta$ 10, is an 800 amino acid protein that is one of 16 proteins in the protocadherin  $\beta$  cluster. Unlike the  $\alpha$  and  $\gamma$  gene clusters, whose genes are spliced to downstream constant-region exons during transcription, members of the  $\beta$  cluster (such as PCDHB10) do not use constant-region exons to produce mRNAs. As a result, each protocadherin  $\beta$  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., et al. 2001. Comparative DNA sequence analysis of mouse and human protocadherin gene clusters. *Genome Res.* 11: 389-404.
2. Vanhalst, K., et al. 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. Miki, R., et al. 2005. Identification and characterization of coding single-nucleotide polymorphisms within human protocadherin- $\alpha$  and - $\beta$  gene clusters. *Gene* 349: 1-14.
4. Yang, X., et al. 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.
5. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606336. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: PCDHB10 (human) mapping to 5q31.3.

## SOURCE

PCDHB10 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHB10 of human 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-109759 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PCDHB10 (D-12) is recommended for detection of PCDHB10 of human 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); non cross-reactive with other PCDHB family members.

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

Molecular Weight of PCDHB10: 88 kDa.

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

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## 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.