

# PCDHGB7 (P-12): sc-131321

## 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. The protocadherin  $\gamma$  cluster consists of three subfamilies (A, B and C). As a member of the  $\gamma$  sub-family B, PCDHGB7 (Protocadherin  $\gamma$  B7) is a 923 amino acid protein that is one of 22 proteins encoded by the protocadherin  $\gamma$  cluster. Typical of  $\gamma$  protocadherins, PCDHGB7 contains six cadherin motifs and is a type I transmembrane receptor expressed in the central nervous system. With localization to synapses, members of the  $\gamma$  cluster of protocadherins are essential for neuronal survival. There are two isoforms of PCDHGB7 that are produced as a result of alternative splicing events.

## REFERENCES

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3. Wang, X., et al. 2002.  $\gamma$  protocadherins are required for survival of spinal interneurons. *Neuron* 36: 843-854.
4. Kirov, G., et al. 2003. Variation in the protocadherin  $\gamma$  A gene cluster. *Genomics* 82: 433-440.
5. Frank, M., et al. 2005. Differential expression of individual  $\gamma$ -protocadherins during mouse brain development. *Mol. Cell. Neurosci.* 29: 603-616.
6. Reiss, K., et al. 2006. Regulated ADAM10-dependent ectodomain shedding of  $\gamma$ -protocadherin C3 modulates cell-cell adhesion. *J. Biol. Chem.* 281: 21735-21744.
7. Bonn, S., et al. 2007. Combinatorial expression of  $\alpha$ - and  $\gamma$ -protocadherins alters their presenilin-dependent processing. *Mol. Cell. Biol.* 27: 4121-4132.
8. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606302. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: PCDHGB7 (human) mapping to 5q31.3; Pcdhgb7 (mouse) mapping to 18 B3.

## SOURCE

PCDHGB7 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHGB7 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-131321 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCDHGB7 (P-12) is recommended for detection of PCDHGB7 isoforms 1 and 2 of mouse, rat and 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 PCDH family members.

PCDHGB7 (P-12) is also recommended for detection of PCDHGB7 in additional species, including equine and porcine.

Suitable for use as control antibody for PCDHGB7 siRNA (h): sc-106880, Pcdhgb7 siRNA (m): sc-152101, PCDHGB7 shRNA Plasmid (h): sc-106880-SH, Pcdhgb7 shRNA Plasmid (m): sc-152101-SH, PCDHGB7 shRNA (h) Lentiviral Particles: sc-106880-V and Pcdhgb7 shRNA (m) Lentiviral Particles: sc-152101-V.

Molecular Weight of PCDHGB7: 101 kDa.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.