

PCDHGB3 (T-12): sc-131306

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. The protocadherin γ cluster consists of three subfamilies (A, B and C). As a member of the γ sub-family B, PCDHGB3 (protocadherin γ B3) is a 929 amino acid protein that is one of 22 proteins encoded by the protocadherin γ cluster. Typical of γ protocadherins, PCDHGB3 contains six cadherin motifs and is a type I transmembrane receptor expressed in the central nervous system. With localization to synapses, members of the γ cluster of protocadherins are essential for neuronal survival. There are two isoforms of PCDHGB3 that are produced as a result of alternative splicing events.

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. 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.
3. Wang, X., Weiner, J.A., Levi, S., Craig, A.M., Bradley, A. and Sanes, J.R. 2002. γ protocadherins are required for survival of spinal interneurons. *Neuron* 36: 843-854.
4. Kirov, G., Georgieva, L., Williams, N., Nikolov, I., Norton, N., Toncheva, D., O'Donovan, M. and Owen, M.J. 2003. Variation in the protocadherin γ A gene cluster. *Genomics* 82: 433-440.
5. Frank, M., Ebert, M., Shan, W., Phillips, G.R., Arndt, K., Colman, D.R. and Kemler, R. 2005. Differential expression of individual γ -protocadherins during mouse brain development. *Mol. Cell. Neurosci.* 29: 603-616.
6. Reiss, K., Maretzky, T., Haas, I.G., Schulte, M., Ludwig, A., Frank, M. and Saftig, P. 2006. Regulated ADAM10-dependent ectodomain shedding of γ -protocadherin C3 modulates cell-cell adhesion. *J. Biol. Chem.* 281: 21735-21744.
7. Bonn, S., Seeburg, P.H. and Schwarz, M.K. 2007. Combinatorial expression of α - and γ -protocadherins alters their Presenilin-dependent processing. *Mol. Cell. Biol.* 27: 4121-4132.
8. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606292. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: PCDHGB3 (human) mapping to 5q31.3.

SOURCE

PCDHGB3 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHGB3 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-131306 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHGB3 (T-12) is recommended for detection of PCDHGB3 isoforms 1 and 2 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 PCDH family members.

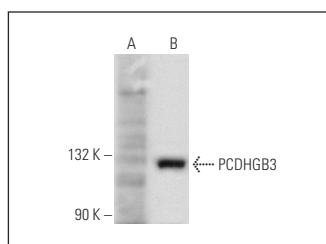
PCDHGB3 (T-12) is also recommended for detection of PCDHGB3 isoforms 1 and 2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for PCDHGB3 siRNA (h): sc-106778, PCDHGB3 shRNA Plasmid (h): sc-106778-SH and PCDHGB3 shRNA (h) Lentiviral Particles: sc-106778-V.

Molecular Weight of PCDHGB3: 101 kDa.

Positive Controls: PCDHGB3 (h): 293T Lysate: sc-112714.

DATA



PCDHGB3 (T-12): sc-131306. Western blot analysis of PCDHGB3 expression in non-transfected: sc-117752 (A) and human PCDHGB3 transfected: sc-112714 (B) 293T 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.