SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHGB6 (G-13): sc-131315

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 protocadherein γ cluster consists of three subfamilies (A, B and C). As a member of the γ subfamily B, PCDHGB6 (protocadherin γ B6) is a 930 amino acid protein that is one of 22 proteins encoded by the protocadherin γ cluster. Typical of γ protocadherins, PCDHGB6 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 PCDHGB6 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.

CHROMOSOMAL LOCATION

Genetic locus: PCDHGB6 (human) mapping to 5q31.3; Pcdhgb6 (mouse) mapping to 18 B3.

SOURCE

PCDHGB6 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of PCDHGB6 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131315 P, (100 µg 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

PCDHGB6 (G-13) is recommended for detection of PCDHGB6 isoforms 1 and 2 of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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.

PCDHGB6 (G-13) is also recommended for detection of PCDHGB6 isoforms 1 and 2 in additional species, including porcine.

Suitable for use as control antibody for PCDHGB6 siRNA (h): sc-106855, Pcdhgb6 siRNA (m): sc-152100, PCDHGB6 shRNA Plasmid (h): sc-106855-SH, Pcdhgb6 shRNA Plasmid (m): sc-152100-SH, PCDHGB6 shRNA (h) Lentiviral Particles: sc-106855-V and Pcdhgb6 shRNA (m) Lentiviral Particles: sc-152100-V.

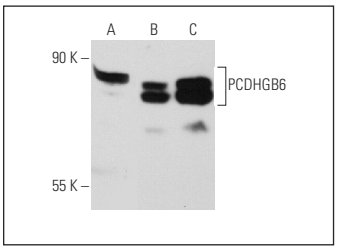
Molecular Weight of PCDHGB6: 101/90 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, mouse brain extract: sc-2253 or mouse cerebellum extract: sc-2403.

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



PCDHGB6 (G-13): sc-131315. Western blot analysis of PCDHGB6 expression in IMR-32 whole cell lysate (**A**) and mouse cerebellum (**B**) and mouse brain (**C**) tissue extracts.

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.