SANTA CRUZ BIOTECHNOLOGY, INC.

PCDH2 (H-111): sc-292554

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. PCDH2 (protocadherin-2), also known as PCDHGC3 (protocadherin γ subfamily C, 3) or PC43, is a 934 amino acid single-pass type I membrane protein that contains six cadherin domains and belongs to the protocadherin γ family. Functioning as a calcium-dependent cell-adhesion protein, PCDH2 is thought to be involved in the establishment and maintenance of neuronal connections within the brain. Multiple isoforms of PCDH2 exist due to alternative splicing events.

REFERENCES

1. Sano, K., Tanihara, H., Heimark, R.L., Obata, S., Davidson, M., St John, T., Taketani, S. and Suzuki, S. 1993. Protocadherins: a large family of cadherin-related molecules in central nervous system. EMBO J. 12: 2249-2256.
2. Sago, H., Kitagawa, M., Obata, S., Mori, N., Taketani, S., Rochelle, J.M., Seldin, M.F., Davidson, M., St John, T. and Suzuki, S.T. 1995. Cloning, expression, and chromosomal localization of a novel cadherin-related protein, protocadherin-3. Genomics 29: 631-640.
3. 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.
4. Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. Genes Dev. 14: 1169-1180.
5. 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.
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.
7. 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.
8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 603627. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PCDHGC3 (human) mapping to 5q31.3; Pcdhgc3 (mouse) mapping to 18 B3.

SOURCE

PCDH2 (H-111) is a rabbit polyclonal antibody raised against amino acids 453-563 mapping within an internal region of PCDH2 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

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

APPLICATIONS

PCDH2 (H-111) is recommended for detection of PCDH2 of mouse, rat and human 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).

PCDH2 (H-111) is also recommended for detection of PCDH2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PCDH2 siRNA (h): sc-76082, PCDH2 siRNA (m): sc-76083, PCDH2 shRNA Plasmid (h): sc-76082-SH, PCDH2 shRNA Plasmid (m): sc-76083-SH, PCDH2 shRNA (h) Lentiviral Particles: sc-76082-V and PCDH2 shRNA (m) Lentiviral Particles: sc-76083-V.

Molecular Weight (predicted) of PCDH2: 101 kDa.

Molecular Weight (observed) of PCDH2: 118-137 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.