SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHA13 (T-12): sc-103760

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 (PCDH) gene clusters, designated α, β and γ, all of which contain multiple tandemly arranged genes. The protein products of PCDH-α genes interact with Integrin β1 to promote cell adhesion and form oligomers with PCDH-γ proteins at specific membrane sites. PCDHA13 (protocadherin α-13) is a 950 amino acid single-pass transmembrane protein that contains six cadherin domains and functions as a potential calcium-dependent cell-adhesion protein, possibly playing a role in the creation and maintenance of neuronal connections. There are two isoforms of PCDHA13 that are produced as a result of alternative splicing events.

REFERENCES

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2. Tasic, B., et al. 2002. Promoter choice determines splice site selection in protocadherin α and γ pre-mRNA splicing. Mol. Cell 10: 21-33.
3. Hirayama, T., et al. 2006. The role and expression of the protocadherin-α clusters in the CNS. Curr. Opin. Neurobiol. 16: 336-342.
4. Kaneko, R., et al. 2006. Allelic gene regulation of Pcdh-α and Pcdh-γ clusters involving both monoallelic and biallelic expression in single Purkinje cells. J. Biol. Chem. 281: 30551-30560.
5. Ribich, S., et al. 2006. Identification of long-range regulatory elements in the protocadherin-α gene cluster. Proc. Natl. Acad. Sci. USA 103: 19719-19724.
6. Bonn, S., et al. 2007. Combinatorial expression of α- and γ-protocadherins alters their presenilin-dependent processing. Mol. Cell. Biol. 27: 4121-4132.
7. Yagi, T. 2008. Clustered protocadherin family. Dev. Growth Differ. 50 Suppl.1: S131-S140.
8. Kawaguchi, M., et al. 2008. Relationship between DNA methylation states and transcription of individual isoforms encoded by the protocadherin-α gene cluster. J. Biol. Chem. 283: 12064-12075.

CHROMOSOMAL LOCATION

Genetic locus: PCDHA13 (human) mapping to 5q31.

SOURCE

PCDHA13 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHA13 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-103760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCDHA13 (T-12) is recommended for detection of PCDHA13 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 PCDHA family members.

Suitable for use as control antibody for PCDHA13 siRNA (h): sc-106372, PCDHA13 shRNA Plasmid (h): sc-106372-SH and PCDHA13 shRNA (h) Lentiviral Particles: sc-106372-V.

Molecular Weight of PCDHA13: 102 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™ 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) 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.

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.