SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHA11 (A-4): sc-514668

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. PCDHA11 (protocadherin α-11) is a 949 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 PCDHA11 that are produced as a result of alternative splicing events.

REFERENCES

1. Tasic, B., et al. 2002. Promoter choice determines splice site selection in protocadherin α and γ pre-mRNA splicing. Mol. Cell 10: 21-33.
2. Hirayama, T. and Yagi, T. 2006. The role and expression of the protocadherin-α clusters in the CNS. Curr. Opin. Neurobiol. 16: 336-342.
3. 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.
4. 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.
5. Bonn, S., et al. 2007. Combinatorial expression of α- and γ-protocadherins alters their presenilin-dependent processing. Mol. Cell. Biol. 27: 4121-4132.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606317. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Yagi, T. 2008. Clustered protocadherin family. Dev. Growth Differ. 50: S131-S140.

CHROMOSOMAL LOCATION

Genetic locus: PCDHA11 (human) mapping to 5q31.3; Pcdha11 (mouse) mapping to 18 B3.

SOURCE

PCDHA11 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 281-299 within an internal region of PCDHA11 of mouse origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514668 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PCDHA11 (A-4) is recommended for detection of PCDHA11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for PCDHA11 siRNA (h): sc-106368, PCDHA11 siRNA (m): sc-106369, PCDHA11 shRNA Plasmid (h): sc-106368-SH, PCDHA11 shRNA Plasmid (m): sc-106369-SH, PCDHA11 shRNA (h) Lentiviral Particles: sc-106368-V and PCDHA11 shRNA (m) Lentiviral Particles: sc-106369-V.

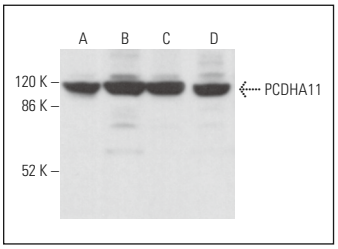
Molecular Weight of PCDHA11: 103 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, C2C12 whole cell lysate: sc-364188 or L929 cell lysate: sc-24729.

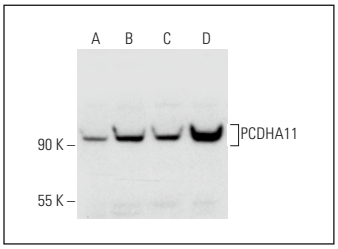
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PCDHA11 (A-4): sc-514668. Western blot analysis of PCDHA11 expression in AN3 CA (**A**), IMR-32 (**B**), MCF7 (**C**) and Neuro-2A (**D**) whole cell lysates.



PCDHA11 (A-4): sc-514668. Western blot analysis of PCDHA11 expression in KNRK (**A**), C2C12 (**B**), L929 (**C**) and NIH/3T3 (**D**) 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 for detailed protocols and support products.