SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHAC (2C1/E7): sc-130555

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 clustered protocadherins are comprised of more than 50 putative synaptic recognition molecules that are related to classical cadherins and are highly expressed in the nervous system. PCDHA (protocadherin α) family of clustered protocadherins consists of 14 cadherin-related molecules generated from a single gene cluster and are strongly expressed in the serotonergic neurons. The PCDHA genomic structure contains variable first exons, each regulated by its own promoter. The gene encoding PCDHAC (protocadherin α constant), also known as PCDHACT, maps to chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

1. Hirayama, T., et al. 2006. The role and expression of the protocadherin-α clusters in the CNS. Curr. Opin. Neurobiol. 16: 336-342.
2. 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.
3. Emond, M.R., et al. 2008. Inhibition of protocadherin-α function results in neuronal death in the developing zebrafish. Dev. Biol. 321: 175-187.
4. Yagi, T. 2008. Clustered protocadherin family. Dev. Growth Differ. 50: S131-S140.
5. Fukuda, E., et al. 2008. Down-regulation of protocadherin-α A isoforms in mice changes contextual fear conditioning and spatial working memory. Eur. J. Neurosci. 28: 1362-1376.
6. 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.

SOURCE

PCDHAC (2C1/E7) is a mouse monoclonal antibody raised against a 152 amino acid sequence corresponding to the conserved C-terminal region of the Pcdh α gene cluster of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PCDHAC (2C1/E7) is available conjugated to agarose (sc-130555 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-130555 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-130555 PE), fluorescein (sc-130555 FITC), Alexa Fluor® 488 (sc-130555 AF488), Alexa Fluor® 546 (sc-130555 AF546), Alexa Fluor® 594 (sc-130555 AF594) or Alexa Fluor® 647 (sc-130555 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-130555 AF680) or Alexa Fluor® 790 (sc-130555 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PCDHAC (2C1/E7) is recommended for detection of proteins containing the conserved C-terminal region of PCDHAC 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).

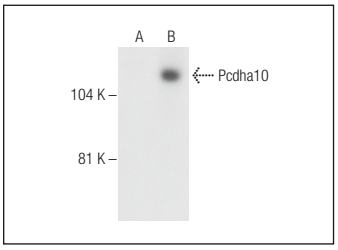
Molecular Weight of PCDHAC: 100-120 kDa.

Positive Controls: PCDHAC (m): 293T Lysate: sc-179301.

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 A/G PLUS-Agarose: sc-2003 (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



PCDHAC (2C1/E7): sc-130555. Western blot analysis of Pcdha10 expression in non-transfected: sc-110760 (**A**) and mouse Pcdha10 transfected: sc-179301 (**B**) 293 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.