SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHGC (5A2): sc-130556

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. PCDHG (protocadherin γ) family of protein are associated with a subset of excitatory synapses, which may mediate presynaptic to postsynaptic recognition in concert with classical cadherins. The presence of PCDHGs in intracellular compartments suggests a role in modifying synaptic physiology or stability. PCDHGC (protocadherin γ constant) is also known as PCDHGCT and consists of 22 members that share an identical C-terminal cytoplasmic domain. The major part of each of the 22 PCDHG isoforms is encoded by a single large variable exon, which is spliced to three short downstream constant exons. The resulting proteins differ in their extracellular and transmembrane regions and in their N-terminal region of the cytoplasmic domain.

REFERENCES

1. Wu, Q., et al. 2001. Compar-ative DNA sequence analysis of mouse and human protocadherin gene clusters. Genome Res. 11: 389-404.
2. Kirov, G., et al. 2003. Variation in the protocadherin γ A gene cluster. Genomics 82: 433-440.
3. Phillips, G.R., et al. 2003. γ-protocadherins are targeted to subsets of synapses and intracellular organelles in neurons. J. Neurosci. 23: 5096-5104.
4. Gayet, O., et al. 2004. The b1 isoform of protocadherin-γ (Pcdhγ) interacts with the microtubule-destabilizing protein SCG10. FEBS Lett. 578: 175-179.

SOURCE

PCDHGC (5A2) is a mouse monoclonal antibody raised against a 124 amino acid sequence corresponding to the conserved C-terminal region of the PCDHGC of mouse origin.

PRODUCT

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

APPLICATIONS

PCDHGC (5A2) is recommended for detection of proteins containing the conserved C-terminal region of PCDHGC 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).

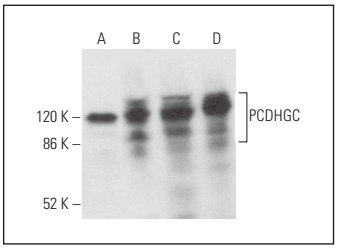
Molecular Weight of PCDHGC: 90-102 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, Neuro-2A whole cell lysate: sc-364185 or C6 whole cell lysate: sc-364373.

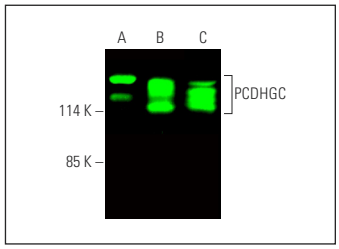
RECOMMENDED SUPPORT REAGENTS

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



PCDHGC (5A2): sc-130556. Western blot analysis of PCDHGC expression in IMR-32 (**A**), Neuro-2A (**B**) and C6 (**C**) whole cell lysates and rat cerebellum tissue extract (**D**).



PCDHGC (5A2): sc-130556. Near-infrared western blot analysis of PCDHGC expression in Neuro-2A (**A**) and C6 (**B**) whole cell lysates and rat cerebellum tissue extract (**C**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Dilling, C., et al. 2017. Multiple protocadherins are expressed in brain microvascular endothelial cells and might play a role in tight junction protein regulation. J. Cereb. Blood Flow Metab. 37: 3391-3400.

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.