SANTA CRUZ BIOTECHNOLOGY, INC.

PSD-95 (2Q128): sc-71935

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The *Drosophila* discs large (dlg) tumor suppressor gene was first identified in *Drosophila* through genetic analysis of germline mutations. Several mammalian homologs were subsequently identified and categorized into a protein family termed MAGUK (membrane-associated guanylate kinase homolog). Human homologs of dlg include hdlg-1 (rat SAP 97) and NE-dlg (neuronal and endocrine dlg). The rat synaptic protein PSD-95 (also designated SAP 90) also shares homology with these proteins. MAGUKs are localized at the membrane-cytoskeleton interface and contain several distinct domains which suggest a role for these proteins in intracellular signal transduction. Interaction of hdlg-1 and NE-dlg with the tumor suppresor protein APC suggest that MAGUK proteins may also play a role in regulation of growth.

CHROMOSOMAL LOCATION

Genetic locus: DLG4 (human) mapping to 17p13.1; Dlg4 (mouse) mapping to 11 B3.

SOURCE

PSD-95 (2Q128) is a mouse monoclonal antibody raised against purified recombinant PSD-95 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

PSD-95 (2Q128) is recommended for detection of PSD-95 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PSD-95 siRNA (h): sc-42010, PSD-95 siRNA (m): sc-42012, PSD-95 siRNA (r): sc-270159, PSD-95 shRNA Plasmid (h): sc-42010-SH, PSD-95 shRNA Plasmid (m): sc-42012-SH, PSD-95 shRNA Plasmid (r): sc-270159-SH, PSD-95 shRNA (h) Lentiviral Particles: sc-42010-V, PSD-95 shRNA (m) Lentiviral Particles: sc-42012-V and PSD-95 shRNA (r) Lentiviral Particles: sc-270159-V.

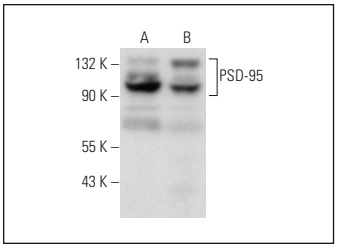
Molecular Weight of PSD-95: 95 kDa.

Positive Controls: rat cerebellum extract: sc-2398, mouse cerebellum extract: sc-2403 or mouse brain extract: sc-2253.

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



PSD-95 (2Q128): sc-71935. Western blot analysis of PSD-95 expression in mouse cerebellum (**A**) and rat cerebellum (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Westmark, C.J., et al. 2011. Reversal of fragile X phenotypes by manipulation of AβPP/Aβ levels in Fmr1KO mice. PLoS ONE 6: e26549.
2. Luo, J.H., et al. 2012. Arsenite exposure altered the expression of NMDA receptor and postsynaptic signaling proteins in rat hippocampus. Toxicol. Lett. 211: 39-44.
3. Zhang, Z., et al. 2015. The synaptic mechanism of learning-memory injury induced by chronic fluorosis in brain. Journal of Zhejiang Normal University 38: 1-8.
4. Liu, J., et al. 2017. Roscovitine, a CDK5 inhibitor, alleviates sevoflurane-induced cognitive dysfunction via regulation Tau/GSK3β and ERK/PPARγ/CREB signaling. Cell. Physiol. Biochem. 44: 423-435.
5. Gassowska-Dobrowolska, M., et al. 2020. Prenatal exposure to valproic acid affects microglia and synaptic ultrastructure in a brain-region-specific manner in young-adult male rats: relevance to autism spectrum disorders. Int. J. Mol. Sci. 21: 3576.
6. Hidisoglu, E., et al. 2022. Cognitive dysfunctions and spontaneous EEG alterations induced by hippocampal amyloid pathology in rats. Adv. Med. Sci. 67: 328-337.

CONJUGATES

See **PSD-95 (7E3): sc-32290** for PSD-95 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.