SANTA CRUZ BIOTECHNOLOGY, INC.

PSD-93 (A-6): sc-515252

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The postsynaptic density protein (PSD)-93 and related membrane associated guanylate kinase (MAGUK) proteins assemble signal transduction complexes at sites of cell-cell contact including synapses. PSD-93 (also designated channel associated protein of synapse-110 or chapsyn-110) occurs only at postsynaptic sites in hippocampal neurons. PSD-95 and PSD-93 mediate ion channel clustering in heterologous cells and are believed to cluster and anchor NMDA receptors at the synapse. The glutamate receptor subunit, δ2, binds specifically to PSD-93, which is enriched in Purkinje neuron cell bodies and dendrites. In addition, PSD-93 clusters δ2 when they are coexpressed and they are co-localized at parallel fiber synapses.

REFERENCES

1. Brenman, J.E., et al. 1996. Cloning and characterization of postsynaptic density 93, a nitric oxide synthase interacting protein. J. Neurosci. 16: 7407-7415.
2. Fukaya, M., et al. 1999. Distinct spatiotemporal expression of mRNAs for the PSD-95/SAP90 protein family in the mouse brain. Neurosci. Res. 33: 111-118.
3. Roche, K.W., et al. 1999. Postsynaptic density-93 interacts with the δ2 glutamate receptor subunit at parallel fiber synapses. J. Neurosci. 19: 3926-3934.
4. El-Husseini, A.E., et al. 2000. Ion channel clustering by membrane-associated guanylate kinases. Differential regulation by N-terminal lipid and metal binding motifs. J. Biol. Chem. 275: 23904-23910.
5. Sans, N., et al. 2000. A developmental change in NMDA receptor-associated proteins at hippocampalsynapses. J. Neurosci. 20: 1260-1271.

SOURCE

PSD-93 (A-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PSD-93 of human origin.

PRODUCT

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

PSD-93 (A-6) is available conjugated to agarose (sc-515252 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515252 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515252 PE), fluorescein (sc-515252 FITC), Alexa Fluor® 488 (sc-515252 AF488), Alexa Fluor® 546 (sc-515252 AF546), Alexa Fluor® 594 (sc-515252 AF594) or Alexa Fluor® 647 (sc-515252 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515252 AF680) or Alexa Fluor® 790 (sc-515252 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PSD-93 (A-6) is recommended for detection of PSD-93, PSD-95, SAP97, SAP102 and PSD-95 related protein 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).

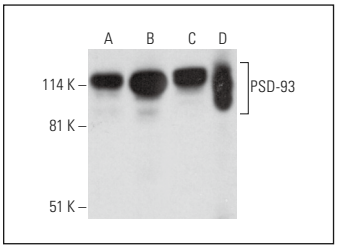
Molecular Weight of PSD-93: 117 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or SK-N-MC cell lysate: sc-2237.

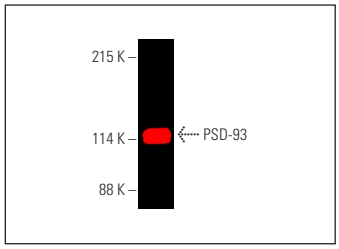
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PSD-93 (A-6): sc-515252. Western blot analysis of PSD-93 expression in HeLa (**A**), SK-N-MC (**B**) and Jurkat (**C**) whole cell lysates and human breast tissue extract (**D**).



PSD-93 (A-6) Alexa Fluor® 790: sc-515252 AF790. Direct near-infrared western blot analysis of PSD-93 expression in T-47D whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Casili, G., et al. 2022. Dimethyl fumarate (DMF) alleviated post-operative (PO) pain through the N-methyl-D-aspartate (NMDA) receptors. Antioxidants 11: 1774.

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.