

PSD-93 (D-2): sc-515245

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, $\delta 2$, binds specifically to PSD-93, which is enriched in Purkinje neuron cell bodies and dendrites. In addition, PSD-93 clusters $\delta 2$ 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 $\delta 2$ 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 hippocampal synapses. *J. Neurosci.* 20: 1260-1271.

SOURCE

PSD-93 (D-2) 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 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PSD-93 (D-2) 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 μ g per 100-500 μ g 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).

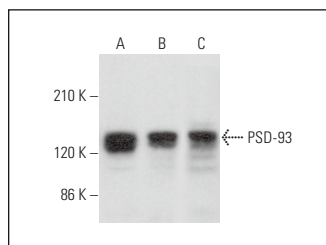
Molecular Weight of PSD-93: 117 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, A-673 cell lysate: sc-2414 or Neuro-2A whole cell lysate: sc-364185.

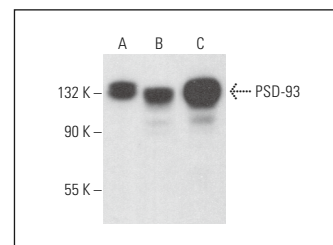
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-93 (D-2): sc-515245. Western blot analysis of PSD-93 expression in Neuro-2A (A), EOC 20 (B) and C6 (C) whole cell lysates.



PSD-93 (D-2): sc-515245. Western blot analysis of PSD-93 expression in SK-N-SH (A), A-673 (B) and T-47D (C) 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.