

AM12013PU-S**Monoclonal Antibody to DLG4 / PSD95 - Purified**

Alternate names:	DLGH4, Disks large homolog 4, PSD-95, Postsynaptic density protein 95, SAP-90, SAP90, Synapse-associated protein 90
Quantity:	25 µg
Concentration:	1.0 mg/ml
Background:	<p>Postsynaptic Density protein 95 (PSD95), also known as Synapse associated protein 90kDa, is a member of the membrane-associated guanylate kinase (MAGUK) family of proteins. PSD95 is a scaffolding protein and is involved in the assembly and function of the postsynaptic density complex (1). These family members consist of an Nterminal variable segment followed by three aminoterminal PDZ domains, an upstream SH3 domain and an inactive carboxyl-terminal guanylate kinase (GK) domain. The first and second PDZ domain localize NMDA receptors and K⁺ channels to synapses, and the third binds to neuroligins which are neuronal cell adhesion molecules that interact with b-neurexins and form intercellular junctions. PSD-95 also binds to neuronal nitric oxide synthase, possibly through interactions between PDZ domains present on both proteins (2). Thus different PDZ domains of PSD-95 might be specialized for distinct functions (3, 4).</p> <p>PSD95 participates in synaptic targeting of AMPA receptors through an indirect manner involving Stargazin and related transmembrane AMPA receptor regulatory proteins (TARPs) (5). The protein is implicated in experience dependent plasticity and plays an indispensable role in learning (6). Mutations in PSD95 are associated with autism (7).</p>
Uniprot ID:	P31016
NCBI:	NP_062567
GeneID:	29495
Host / Isotype:	Mouse / IgG2a
Recommended Isotype Controls:	AM03096PU-N
Clone:	6G6
Immunogen:	Recombinant rat PSD-95
Format:	State: Liquid Ig fraction Purification: Protein G chromatography Buffer System: PBS pH 7.4, in 0.09% azide in 50% glycerol
Applications:	Western blot. Immunocytochemistry. Immunofluorescence Immunohistochemistry on frozen sections. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

- Specificity:** This antibody detects an ~100 kDa protein corresponding to the apparent molecular mass of PSD-95 on SDS-PAGE immunoblots. An additional protein of >100 kDa is also detected. Additional cross-reactive bands are detected at ~75 kDa and 50 kDa in rat and mouse samples.
- Species Reactivity:** **Tested:** Mouse, Rat, Bovine, Human
- Storage:** Store the antibody at 2 - 8 °C up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
- General Readings:**
1. Chetkovich D.M., Bunn R.C., Kuo S.H., Kawasaki Y., Kohwi M., and Bredt D.S. (2002) *J Neurosci.* 22(15): 6415-25.
 2. Cao J., Viholainen J.I., Dart C., Warwick H.K., Levland M.L. and Courtney M.J. (2005) *J Cell Biol.* 168(1): 117-26.
 3. Kennedy M. (1997) *Trends in Neurosci.* 6: 264-268.
 4. Irie M. et al. (1997) *Science* 277(5331): 1511-5.
 5. Cai C. et al. (2006) *J Biol Chem.* 281: 4267-73.
 6. Yao W.D. et al. (2004) *Neuron* 41: 625-38.
 7. Cline H. (2005) *Curr Biol.* 15: R203-5.