

PRODUCT INFORMATION



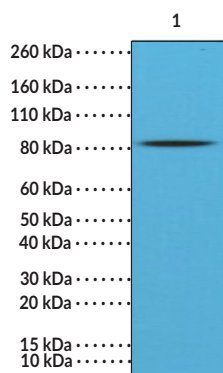
PSD-95 (N-Term) Rabbit Monoclonal Antibody (Clone RM288)

Item No. 32240

Overview and Properties

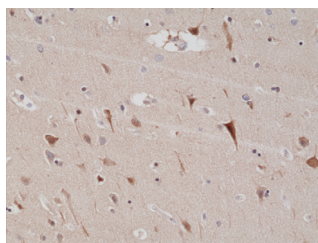
Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonym:	Postsynaptic Density Protein-95
Immunogen:	Peptide from the N-terminal region of human PSD-95
Cross Reactivity:	(+) PSD-95
Species Reactivity:	(+) Human, mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM288
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:1,000-1:8,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Mouse brain lysates

WB of mouse brain lysates using PSD-95 (N-Term) Rabbit Monoclonal Antibody (Clone RM288) at a dilution of 1:8,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human brain tissue using PSD-95 (N-Term) Rabbit Monoclonal Antibody (Clone RM288) at a 1:200 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Postsynaptic density protein-95 (PSD-95) is a scaffold protein and member of the membrane-associated guanylate kinase (MAGUK) family encoded by the *DLG4* gene in humans.^{1,2} It is composed of three N-terminal PDZ domains that facilitate protein-protein interactions and are subject to palmitoylation, which regulates its membrane localization, a Src homology domain that interacts with the tyrosine kinases Src, Lyn, and Yes, and a C-terminal catalytically inactive guanylate kinase domain.¹ PSD-95 is expressed in excitatory synapses and localizes to the postsynaptic density, a network of proteins that facilitates the stabilization and trafficking of receptors and ion channels to the postsynaptic membrane.^{1,3} PSD-95 interacts with the transmembrane AMPA receptor-associated protein stargazin, as well as the NR2 subunit of the NMDA receptor, regulating glutamatergic signaling, synaptic plasticity, and neurodevelopment.^{1,4} *DLG4* mutations have been found in patients with schizophrenia or autism.¹ Cayman's PSD-95 (N-Term) Rabbit Monoclonal Antibody (Clone RM288) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Coley, A.A. and Gao, W.-J. PSD95: A synaptic protein implicated in schizophrenia or autism? *Prog. Neuropsychopharmacol. Biol. Psychiatry* **82**, 187-194 (2018).
2. Yoo, K.-S., Lee, K., Oh, J.-Y., *et al.* Postsynaptic density protein 95 (PSD-95) is transported by KIF5 to dendritic regions. *Mol. Brain* **12(1)**, 97 (2019).
3. Vyas, Y. and Montgomery, J.M. The role of postsynaptic density proteins in neural degeneration and regeneration. *Neural Regen. Res.* **11(6)**, 906-907 (2016).
4. Keith, D. and El-Husseini, A. Excitation control: Balancing PSD-95 function at the synapse. *Front. Mol. Neurosci.* **1**, 4 (2008).

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