

# PRODUCT INFORMATION



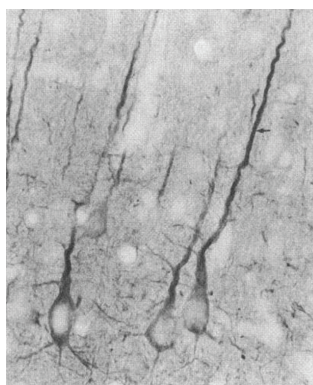
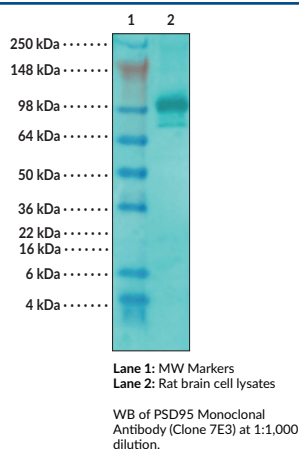
## PSD95 Monoclonal Antibody (Clone 7E3)

Item No. 10011436

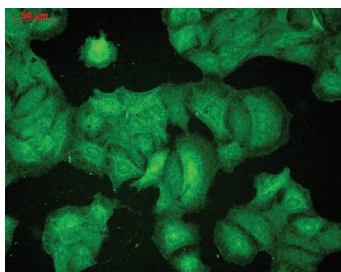
### Overview and Properties

<b>Contents:</b>	This vial contains 25 or 100 µg of protein G-affinity purified monoclonal antibody.
<b>Synonym:</b>	Postsynaptic Density Protein 95
<b>Immunogen:</b>	Rat recombinant PSD95
<b>Species Reactivity:</b>	(+) Human, bovine, mouse, rat; other species not tested
<b>Uniprot No.:</b>	P31016
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, pH 7.4, with 50% glycerol and 0.09% sodium azide
<b>Concentration:</b>	1 mg/ml
<b>Clone:</b>	7E3
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG2a
<b>Applications:</b>	Immunocytochemistry (ICC), Immunofluorescence (IF), Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100 for ICC and IF and 1:1,000 for IHC and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

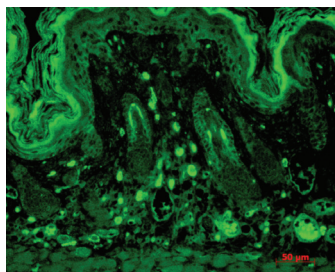
### Images



Immunohistochemical labeling of rat neocortex using PSD95 Monoclonal Antibody (Clone 7E3) at a 1:100 dilution.



Immunocytochemical/Immunofluorescent labeling of human HaCat cells. Cells were fixed with 100% cold methanol for 10 minutes at -20°C and incubated with PSD95 Monoclonal Antibody (Clone 7E3) at a 1:100 dilution for one hour at room temperature. Then cells were incubated with FITC Goat Anti-Mouse (green) at a dilution of 1:50 for one hour at room temperature.



Immunohistochemical labeling of transgenic mouse back skin cells. Cells were fixed with Bouin's fixative and embedded in paraffin and incubated with CaMKII Monoclonal Antibody (Clone 7E3) at a 1:100 dilution for one hour at room temperature. Then cells were incubated with FITC Goat Anti-Mouse (green) at a dilution of 1:50 for one hour at room temperature. Positive staining was localized to the basal cells in the epidermis, some hair follicles, and the dermis.

**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.

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## Description

Postsynaptic Density protein 95 (PSD95), also known as synapse associated protein 90 kDa, 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.<sup>1</sup> These family members consist of an N-terminal variable segment followed by three amino-terminal PDZ domains, an upstream SH3 domain and an inactive carboxyl-terminal guanylate kinase (GK) domain. The first and second PDZ domains localize NMDA receptors and K<sup>+</sup> channels to synapses, and the third binds to neuroligins, which are neuronal cell adhesion molecules that interact with  $\beta$ -neurexins and form intercellular junctions. PSD95 also binds to neuronal nitric oxide synthase, possibly through interactions between PDZ domains present on both proteins.<sup>2</sup> Thus different PDZ domains of PSD95 might be specialized for distinct functions.<sup>3,4</sup> PSD95 participates in synaptic targeting of AMPA receptors through an indirect manner involving Stargazin and related transmembrane AMPA receptor regulatory proteins (TARPs).<sup>5</sup> The protein is implicated in experience-dependent plasticity and plays an indispensable role in learning.<sup>6</sup> Mutations in PSD95 are associated with autism.<sup>7</sup>

## References

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