

Datasheet for ABIN361694

**anti-DLG4 antibody**[Go to Product page](#)**1** Validation**3** Images

## Overview

Quantity:	100 µg
Target:	DLG4
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This DLG4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC), Antibody Array (AA), Multiplex Immunohistochemistry (mIHC)

## Product Details

Immunogen:	Recombinant rat PSD-95
Clone:	6G6
Isotype:	IgG2a
Specificity:	Detects ~100 kDa. 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.
Cross-Reactivity:	Cow, Human, Mouse, Rat
Purification:	Protein G Purified

## Target Details

Target:	DLG4
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## Target Details

Alternative Name:	PSD95 ( <a href="#">DLG4 Products</a> )
Background:	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 (1). 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 domain 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 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). 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).
Gene ID:	29495
NCBI Accession:	<a href="#">NP_062567</a>
UniProt:	<a href="#">P31016</a>
Pathways:	<a href="#">Regulation of Muscle Cell Differentiation</a> , <a href="#">Synaptic Membrane</a> , <a href="#">Skeletal Muscle Fiber Development</a> , <a href="#">Asymmetric Protein Localization</a> , <a href="#">Regulation of long-term Neuronal Synaptic Plasticity</a>

## Application Details

Application Notes:	<ul style="list-style-type: none"><li>• WB (1:250)</li><li>• IHC (1:1000)</li><li>• ICC/IF (1:100)</li><li>• optimal dilutions for assays should be determined by the user.</li></ul>
Comment:	1 µg/ml was sufficient for detection of PSD-95 on 20 µg rat brain tissue extract by ECL immunoblot analysis using Goat Anti-Mouse IgG: HRP as the secondary.
Restrictions:	For Research Use only

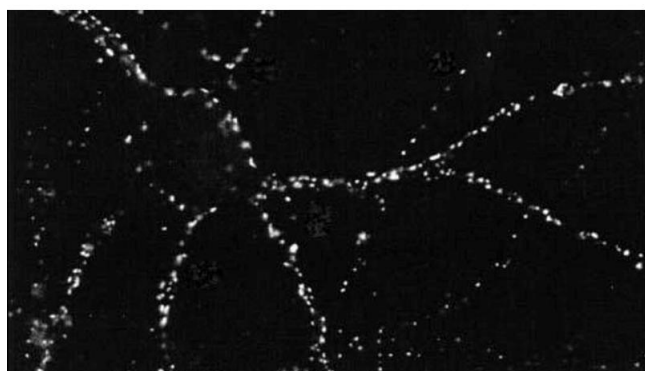
## Handling

Format:	Liquid
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## Handling

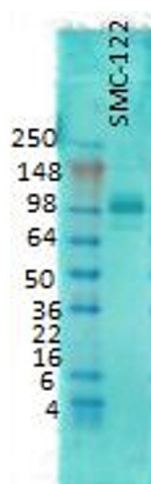
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

## Images



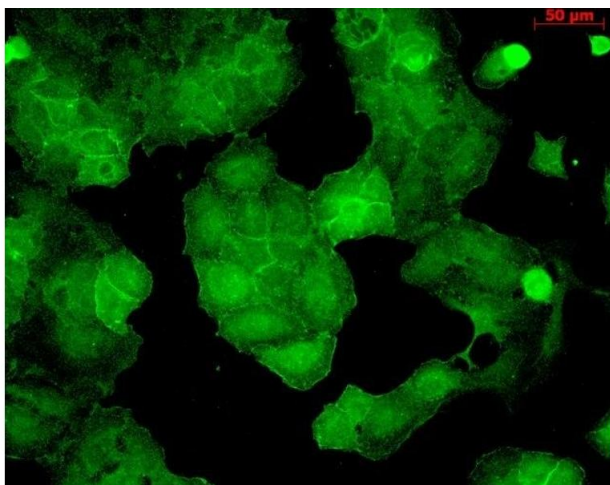
### Immunocytochemistry

**Image 1.** Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-PSD95 Monoclonal Antibody, Clone 6G6 (ABIN361693 and ABIN361694). Tissue: dissociated hippocampal neurons. Species: Rat. Fixation: Cold 4 % paraformaldehyde/0.2 % glutaraldehyde in 0.1M sodium phosphate buffer. Primary Antibody: Mouse Anti-PSD95 Monoclonal Antibody (ABIN361693 and ABIN361694) at 1:1000 for 12 hours at 4 °C. Secondary Antibody: FITC Goat Anti-Mouse IgG (green) at 1:50 for 30 minutes at RT. Magnification: 10X. Courtesy of: Mary Kennedy, Caltech.



### Western Blotting

**Image 2.** western rat membrane 1 in 1000 PSD 95 copy.



### Immunocytochemistry

**Image 3.** Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-PSD95 Monoclonal Antibody, Clone 6G6 (ABIN361693 and ABIN361694). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100 % methanol for 10 minutes at -20 °C. Primary Antibody: Mouse Anti-PSD95 Monoclonal Antibody (ABIN361693 and ABIN361694) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Junction staining.



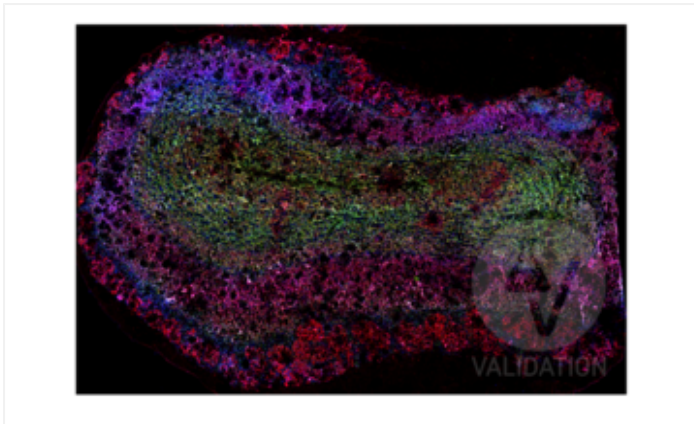
### Successfully validated (Multiplex Immunohistochemistry (mIHC))

by [Akoya Biosciences](#)

Report Number: 104331

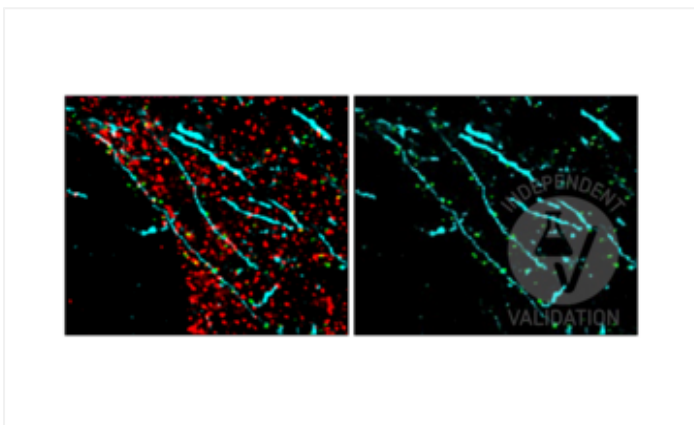
Date: Apr 20 2021

Target:	DLG4
Lot Number:	MP686150
Method validated:	Multiplex Immunohistochemistry (mIHC)
Positive Control:	Fresh frozen mouse olfactory bulb
Negative Control:	Unlabeled control (mouse fresh frozen)
Notes:	Passed. The anti-DLG4 antibody ABIN361694 specifically labels areas that contain high levels of post-synaptic boutons; these are located throughout the murine olfactory bulb and are concentrated in the glomerular layer.
Primary Antibody:	ABIN361694
Protocol:	<ul style="list-style-type: none"><li>• Protocol details are described in the Akoya Biosciences CODEX® User Manual (see <a href="https://www.akoyabio.com/wp-content/uploads/2021/01/CODEX-User-Manual.pdf">https://www.akoyabio.com/wp-content/uploads/2021/01/CODEX-User-Manual.pdf</a>).</li><li>• Tissue preparation as outlined in the Akoya Biosciences CODEX® User Manual fresh-frozen tissue protocol.</li><li>• Conjugation of the anti-DLG4 antibody ABIN361694 to an oligo barcode used to bind oligo-conjugated fluorophore ATTO 550.</li></ul>
Experimental Notes:	<ul style="list-style-type: none"><li>• No signal was detected in unlabeled specimens.</li><li>• Specific staining of DLG4 was also observed with human FFPE cortical tissue sections with both citrate antigen retrieval and EDTA antigen retrieval.</li><li>• Optimal staining and signal to noise ratios were obtained if tissue was pre-treated for endogenous tissue autofluorescence removal (see <a href="https://www.akoyabio.com/wp-content/uploads/2020/07/Customer-Demonstrated-Protocol-Autofluorescence-Quenching-Mar2020.pdf">https://www.akoyabio.com/wp-content/uploads/2020/07/Customer-Demonstrated-Protocol-Autofluorescence-Quenching-Mar2020.pdf</a>).</li></ul>



**Validation image no. 1 for anti-Discs, Large Homolog 4 (Drosophila) (DLG4) antibody (ABIN361694)**

Murine fresh frozen coronal olfactory bulb section (Thickness = 5  $\mu$ m) labeled with anti-DLG4 antibody ABIN361694 (red; bound to fluorophore ATTO 550). Labeling is present throughout olfactory bulb layers with a strong degree of labeling in the glomerular layer; this is consistent with the large number of postsynaptic targets within the glomerular neuropil. Slc17a7 and Map2 were labeled with ABIN1027710 (green; bound to fluorophore ATTO 550) and ABIN125739 (blue; bound to fluorophore ATTO 550).



**Validation image no. 2 for anti-Discs, Large Homolog 4 (Drosophila) (DLG4) antibody (ABIN361694)**

FFPE normal human cortex tissue section labeled with anti-DLG4 antibody ABIN361694 (green; bound to fluorophore ATTO 550) after EDTA antigen retrieval. MAP2 and Synapsin were labeled with anti-MAP2 antibody ABIN125739 (cyan; bound to fluorophore ATTO 550) and anti-SYN1 antibody ABIN5542390 (red; bound to fluorophore AF488).