**Overview**

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-PSD95 antibody [6G6-1C9]</th>
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</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Mouse monoclonal [6G6-1C9] to PSD95</td>
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<tr>
<td><strong>Host species</strong></td>
<td>Mouse</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: IHC-P, WB, IHC-Fr, IP</td>
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<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Zebrafish</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Recombinant full length protein corresponding to PSD95.</td>
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<tr>
<td><strong>Positive control</strong></td>
<td>In Western Blot, this antibody gave a positive signal in rat and mouse forebrain and hippocampus tissue lysates.</td>
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<tr>
<td><strong>General notes</strong></td>
<td>This antibody clone is manufactured by Abcam. If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a> or you can find further information <a href="#">here</a>. The Protocols tab contains a Mouse on Mouse staining protocol with recommendations when using a mouse monoclonal antibody to stain mouse tissues and tips for reducing background.</td>
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</tbody>
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**Properties**

<table>
<thead>
<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
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<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
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<tr>
<td><strong>Storage buffer</strong></td>
<td>pH: 7.40</td>
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<tr>
<td></td>
<td>Preservative: 0.02% Sodium azide</td>
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<tr>
<td></td>
<td>Constituents: PBS, 6.97% L-Arginine</td>
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<tr>
<td><strong>Purity</strong></td>
<td>IgG fraction</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Monoclonal</td>
</tr>
<tr>
<td><strong>Clone number</strong></td>
<td>6G6-1C9</td>
</tr>
<tr>
<td><strong>Isootype</strong></td>
<td>IgG2a</td>
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</table>

**Applications**

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*Abcam*
Function
Interacts with the cytoplasmic tail of NMDA receptor subunits and shaker-type potassium channels. Required for synaptic plasticity associated with NMDA receptor signaling. Overexpression or depletion of DLG4 changes the ratio of excitatory to inhibitory synapses in hippocampal neurons. May reduce the amplitude of ASIC3 acid-evoked currents by retaining the channel intracellularly. May regulate the intracellular trafficking of ADR1B.

Tissue specificity
Brain.

Sequence similarities
Belongs to the MAGUK family. Contains 1 guanylate kinase-like domain. Contains 3 PDZ (DHR) domains. Contains 1 SH3 domain.

Domain
The PDZ domain 3 mediates interaction with ADR1B. The L27 domain near the N-terminus of isoform 2 is required for HGS/HRS-dependent targeting to postsynaptic density.

Post-translational modifications
Palmitoylation of isoform 1 is required for targeting to postsynaptic density.

Cellular localization

Images
Western blot - Anti-PSD95 antibody [6G6-1C9] (ab2723)

Image courtesy of an AbReview submitted by Grant Corbett

Lanes 1-6 : Anti-PSD95 antibody [6G6-1C9] (ab2723) at 1/1200 dilution
Lanes 7-12 : Anti-PSD95 antibody [6G6-1C9] (ab2723) at 1/1200 dilution (18 hours at 4°C)

Lanes 1-6 : Mouse Hippocampus with Li-Cor Block Buffer, 1 hour at 21°C
Lanes 7-12 : Mouse Liver with Li-Cor Block Buffer, 1 hour at 21°C

Lysates/proteins at 30 µg per lane.

Secondary

All lanes : Li-Cor IRDye® Donkey anti-mouse 680LT at 1/18000 dilution

Performed under reducing conditions.

Predicted band size: 80 kDa
Additional bands at: 95 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 5 minutes

ab2723 staining cultured rat primary hippocampal neurons by ICC/IF. The cultured neurons were fixed with 4% formaldehyde for 5 minutes and blocked with 10% donkey serum in 0.1% PBS-0.3% TritonX for 30 minutes at 24°C. The cultured neurons were then stained with ab2723 at 1/1000 in 0.3% TritonX with 0.1x PBS and 10% donkey serum for 4h at 24°C. An Alexa Fluro 568 donkey anti-mouse polyclonal antibody at 1/1000 was used as the secondary antibody. PSD95 (which stains the axons and dendritic spines) can be observed in red (Alexa fluro 568 secondary). Synaptophysin is observable in green (alexa 488 secondary) and colocalizes with PSD95 in dendritic spines. Nuclei are stained in blue with 1.43µM Hoechst.
Western blot - Anti-PSD95 antibody [6G6-1C9] (ab2723) at 5 µg/ml

**All lanes:** Anti-PSD95 antibody [6G6-1C9] (ab2723) at 5 µg/ml

**Lane 1:** Hippocampus (Rat) Tissue Lysate

**Lane 2:** Forebrain (Rat) Tissue Lysate

**Lane 3:** Hippocampus (Mouse) Tissue Lysate

**Lane 4:** Forebrain (Mouse) Tissue Lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes:** Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Performed under reducing conditions.

**Predicted band size:** 80 kDa

**Observed band size:** 95 kDa

**why is the actual band size different from the predicted?**

**Additional bands at:** 100 kDa, 110 kDa, 80 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 3 minutes

ab2723 staining PSD95 in Zebrafish retina (outer plexiform layer) tissue sections by Immunohistochemistry (IHC-Fr - frozen sections). Tissue was fixed with paraformaldehyde, permeabilized with Triton X-100 and blocked with 5% BSA for 1 hour at 23°C. Sodium citrate antigen retrieval was used. Samples were incubated with primary antibody (1/100) for 16 hours at 4°C. An Alexa Fluor® 647-conjugated goat anti-mouse IgG polyclonal (1/1000) was used as the secondary antibody.
ab2723 at 1/200 staining rat primary hippocampal neurons by ICC/IF. The cells were paraformaldehyde fixed and then permeabilized with 0.1% Triton X-100 before being stained with the antibody for 1 hour. An Alexa-Fluor® 594 conjugated goat polyclonal antibody was used as the secondary.

The antibody shows numerous puncta along the shafts.

**All lanes**: PSD95 antibody (ab2723) at 1/2000 dilution (in blocking buffer for 16 hours at 4°C) + whole tissue lysate of Mouse hippocampus at 10µg

**Secondary**
An HRP-conjugated Horse anti-mouse IgG polyclonal at 1/10000 dilution
developed using the ECL technique

Performed under reducing conditions

**Exposure time**: 30 seconds

**Blocking Step**: 5% Milk for 1 hour at 25°C

IHC-FoFr staining of PSD95 on rat hippocampus section using ab2723 (1:3000). The sections used came from animals perfused fixed with Paraformaldehyde 4% with 15% of a solution of saturated picric acid, in phosphate buffer 0.1M. Following postfixation in the same fixative overnight, the brains were cryoprotected in sucrose 30% overnight. Brains were then cut using a cryostat and the immunostainings were performed using the ‘free floating’ technique.

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