Anti-PSD95 Antibody [SR38-09] - BSA and Azide free

HA750035

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IF-Tissue, IHC-P, IP, IHC-Fr
Molecular Wt:	Predicted band size: 80 kDa
Clone number:	SR38-09

Description: PSD-95 (postsynaptic density protein 95) also known as SAP-90 (synapse-associated protein 90) is a protein that in humans is encoded by the DLG4 (discs large homolog 4) gene. PSD-95 is a member of the membrane-associated guanylate kinase (MAGUK) family. With PSD-93 it is recruited into the same NMDA receptor and potassium channel clusters. These two MAGUK proteins may interact at postsynaptic sites to form a multimeric scaffold for the clustering of receptors, ion channels, and associated signaling proteins. PSD-95 is the best studied member of the MAGUK-family of PDZ domain-containing proteins. Like all MAGUK-family proteins, its basic structure includes three PDZ domains, an SH3 domain, and a guanylate kinase-like domain (GK) connected by disordered linker regions. It is almost exclusively located in the post synaptic density of neurons, and is involved in anchoring synaptic proteins. Its direct and indirect binding partners include neuroligin, NMDA receptors, AMPA receptors, and potassium channels. It plays an important role in synaptic plasticity and the stabilization of synaptic changes during long-term potentiation.

Immunogen: Synthetic peptide within human PSD95 aa 1-40.

Positive control: Human brain tissue lysate, mouse brain tissue lysate, mouse hippocampus tissue lysate, rat brain tissue lysate, rat hippocampus tissue lysate, mouse brain tissue, mouse retina tissue, rat brain tissue, rat retina tissue, mouse cerebellum tissue.

Subcellular location: Cell membrane, Postsynaptic density, Synapse, Cytoplasm, Cell projection, axon, dendritic spine, dendrite, Presynapse.

Database links: SwissProt: P78352 Human | Q62108 Mouse | P31016 Rat

Recommended Dilutions:

WB	1:2,000
IF-Tissue	1:500
IHC-P	1:2,000
IHC-Fr	1:500-1:1,000

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

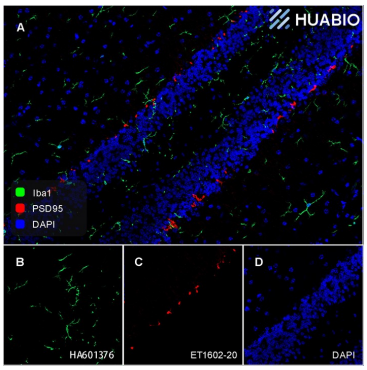

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1: 500 (PSD95, HA750035, red); 1:500 (Iba1, HA601376, green)

Antigen retrieval: Not required

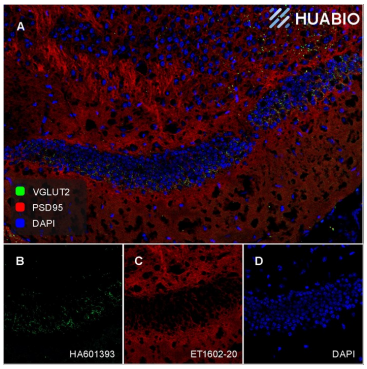

Fig2: Application: IHC-Fr

Species: Mouse

Site: Hippocampus

Sample: Frozen section

Antibody concentration: 1: 1,000 (PSD95, HA750035, red); 1:500 (VGLUT2, HA601393, green)

Antigen retrieval: Not required

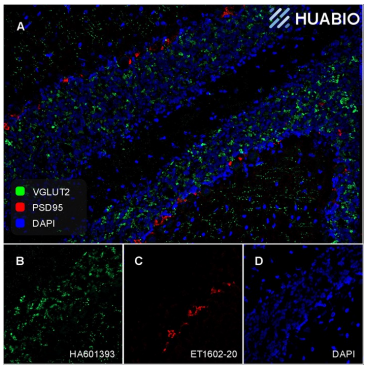

Fig3: Application: IHC-Fr

Species: Rat

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1: 1,000 (PSD95, HA750035, red); 1:500 (VGLUT2, HA601393, green)

Antigen retrieval: Not required

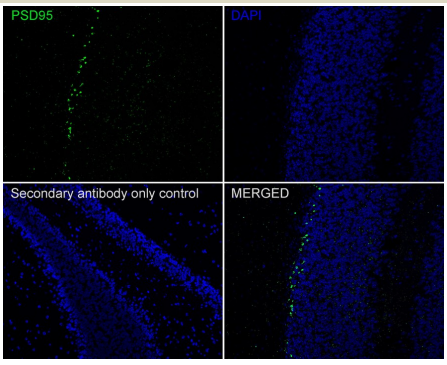

Fig4: Application: IF-tissue

Species: Mouse

Site: Cerebellum

Sample: Paraffin-embedded section

Antibody concentration: 1:500

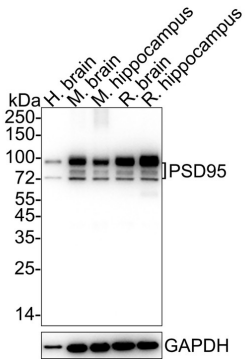

Fig5: Western blot analysis of PSD95 on different lysates with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

Lane 1: Human brain tissue lysate (20 µg/Lane)
Lane 2: Mouse brain tissue lysate (20 µg/Lane)
Lane 3: Mouse hippocampus tissue lysate (20 µg/Lane)
Lane 4: Rat brain tissue lysate (20 µg/Lane)
Lane 5: Rat hippocampus tissue lysate (20 µg/Lane)

Predicted band size: 80 kDa
Observed band size: 75-100 kDa

Exposure time: 20 seconds; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750035) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

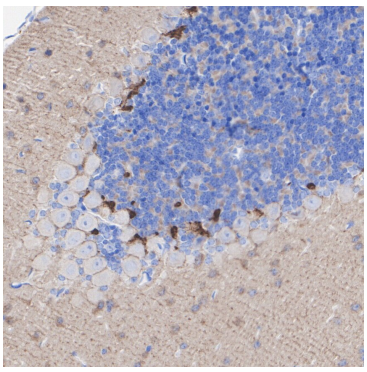

Fig6: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750035) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

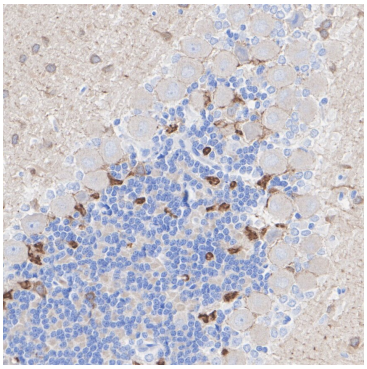

Fig7: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750035) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

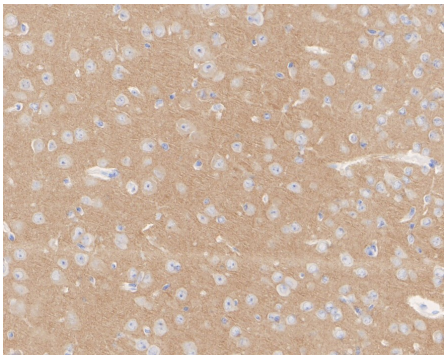

Fig8: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750035) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

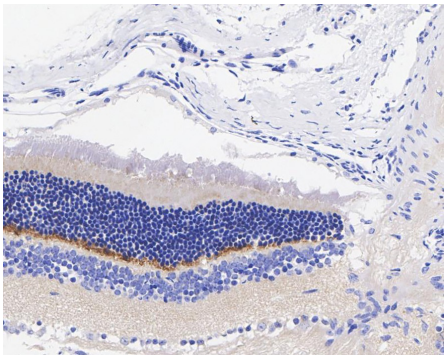

Fig9: Immunohistochemical analysis of paraffin-embedded mouse retina tissue with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750035) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

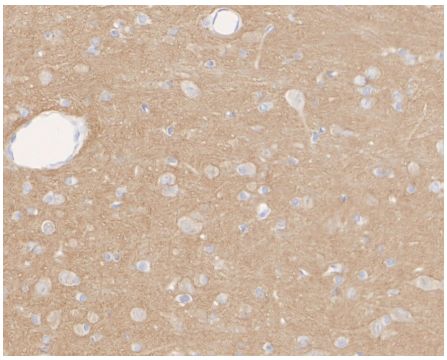

Fig10: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750035) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

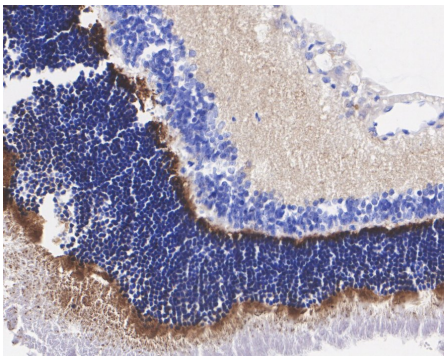

Fig11: Immunohistochemical analysis of paraffin-embedded rat retina tissue with Rabbit anti-PSD95 antibody (HA750035) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750035) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Fred SM et al. TRKB interaction with PSD95 is associated with latency of fluoxetine and 2R,6R-hydroxynorketamine. Eur J Neurosci. 2023 Apr
2. Yang L et al. Targeting PSD95/nNOS by ZL006 alleviates social isolation-induced heightened attack behavior in mice. Psychopharmacology (Berl). 2022 Jan