

Homer1 Recombinant Antibody [JE65-19] - Rat IgG1 (Chimeric)

HA601415



Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Mouse, Rat, Cynomolgus monkey, Pig
Applications:	IHC-Fr, IHC-P, WB
Molecular Wt:	Predicted band size: 40 kDa
Clone number:	JE65-19

Description: Postsynaptic density scaffolding protein. Binds and cross-links cytoplasmic regions of GRM1, GRM5, ITPR1, DNM3, RYR1, RYR2, SHANK1 and SHANK3. By physically linking GRM1 and GRM5 with ER-associated ITPR1 receptors, it aids the coupling of surface receptors to intracellular calcium release. May also couple GRM1 to PI3 kinase through its interaction with AGAP2. Isoform 1 regulates the trafficking and surface expression of GRM5. Isoform 3 acts as a natural dominant negative, in dynamic competition with constitutively expressed isoform 1 to regulate synaptic metabotropic glutamate function. Isoform 3, may be involved in the structural changes that occur at synapses during long-lasting neuronal plasticity and development. Forms a high-order complex with SHANK1, which in turn is necessary for the structural and functional integrity of dendritic spines (By similarity). Negatively regulates T cell activation by inhibiting the calcineurin-NFAT pathway. Acts by competing with calcineurin/PPP3CA for NFAT protein binding, hence preventing NFAT activation by PPP3CA.

Immunogen:	Recombinant protein within human Homer1 aa 101-250/354.
Positive control:	Mouse brain tissue, rat brain tissue, Mouse brain tissue lysate, Rat brain tissue lysate.
Subcellular location:	Cytoplasm, postsynaptic density, synapse, dendritic spine.
Database links:	SwissProt: Q9Z2Y3 Mouse Q9Z214 Rat
Recommended Dilutions:	
IHC-Fr	1:500
IHC-P	1:1,000
WB	1:5,000
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

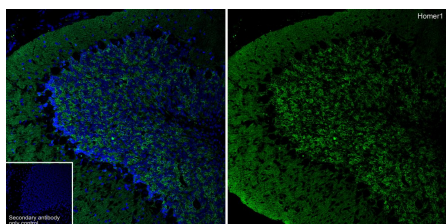
Technical: 0086-571-89986345

Service mail: support@huabio.cn

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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

**Fig1:** Application: IHC-Fr

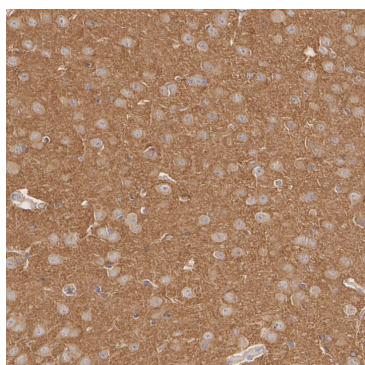
Species: Mouse

Site: Cerebellum

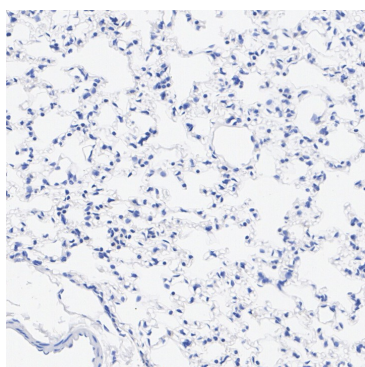
Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

**Fig2:** Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rat anti-Homer1 antibody (HA601415) at 1/1,000 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 ddH₂O and PBS, and then probed with the primary antibody (HA601415) at 1/1,000 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.

**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse lung tissue (negative) with Rat anti-Homer1 antibody (HA601415) at 1/1,000 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 ddH₂O and PBS, and then probed with the primary antibody (HA601415) at 1/1,000 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.

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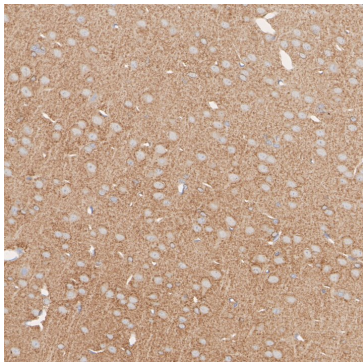
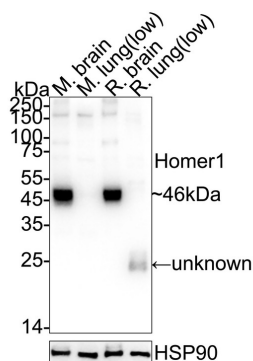


Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rat anti-Homer1 antibody (HA601415) at 1/1,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA601415) at 1/1,000 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.

Fig5: Western blot analysis of Homer1 on different lysates with Rat anti-Homer1 antibody (HA601415) at 1/5,000 dilution.

Lane 1: Mouse brain tissue lysate (20 µg/Lane)
 Lane 2: Mouse lung tissue lysate (low expression) (20 µg/Lane)
 Lane 3: Rat brain tissue lysate (20 µg/Lane)
 Lane 4: Rat lung tissue lysate (low expression) (20 µg/Lane)



Predicted band size: 40 kDa

Observed band size: 46 kDa

Exposure time: 2 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 (HA601415) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/5,000 dilution was used for 1 hour at room temperature.

Low expression: heart, kidney and lung (PMID: 19046353).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Yoon S. et. al. Homer1 promotes dendritic spine growth through ankyrin-G and its loss reshapes the synaptic proteome. Mol Psychiatry. 2021 Jun
2. Zhao M. et. al. Circ-HOMER1 enhances the inhibition of miR-1322 on CXCL6 to regulate the growth and aggressiveness of hepatocellular carcinoma cells. J Cell Biochem. 2020 Nov

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