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KD-Validated Anti-Homer scaffold protein 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1036

Specification

KD-Validated Anti-Homer scaffold protein 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q86YM7
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 40 kDa, observed, 45 kDa KDa**
Gene Name	**HOMER1**
Aliases	**HOMER1; Homer Scaffold Protein 1; SYN47; Ves-1; Homer Scaffolding Protein 1; Homer Protein Homolog 1; HOMER-1B; Homer-1; Homer, Neuronal Immediate Early Gene, 1; Homer Homolog 1 (Drosophila); Homer Homolog 1; HOMER1A; HOMER1B; HOMER1C; HOMER**
Immunogen	**A synthesized peptide derived from human Homer1**

KD-Validated Anti-Homer scaffold protein 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**9456**

Other Names
Homer protein homolog 1, Homer-1, HOMER1 (HGNC:17512)

KD-Validated Anti-Homer scaffold protein 1 Rabbit Monoclonal Antibody - Protein Information

Name HOMER1 (HGNC:17512)

Function
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 (PubMed:18218901).

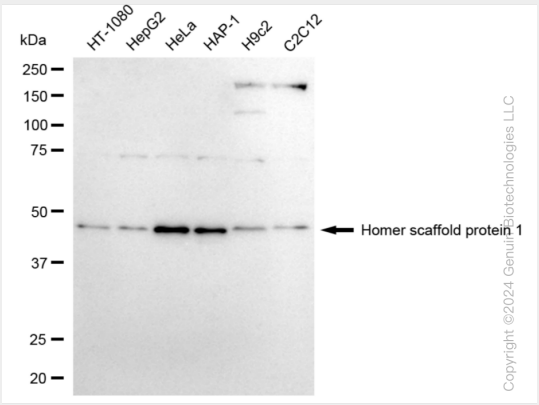
Cellular Location
Cytoplasm. Postsynaptic density. Synapse. Cell projection, dendritic spine {ECO:0000250|UniProtKB:Q9Z214}. Note=Isoform 1 inhibits surface expression of GRM5 causing it to be retained in the endoplasmic reticulum.

KD-Validated Anti-Homer scaffold protein 1 Rabbit Monoclonal Antibody - Protocols

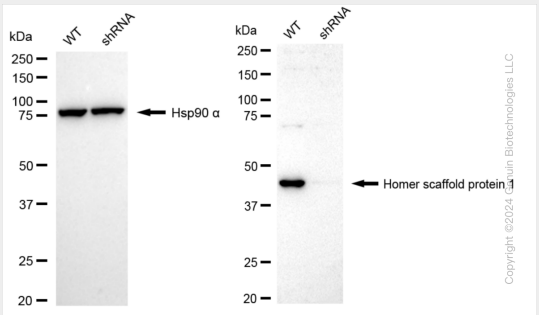
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Homer scaffold protein 1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-homer scaffold protein 1 antibody (Cat#AGI1036). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-homer scaffold protein 1 antibody (Cat#AGI1036, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-homer scaffold protein 1 antibody (Cat#AGI1036). Homer

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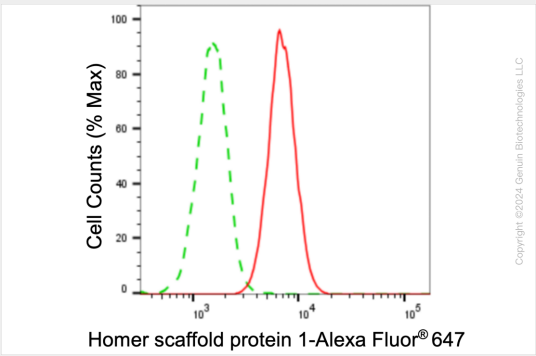
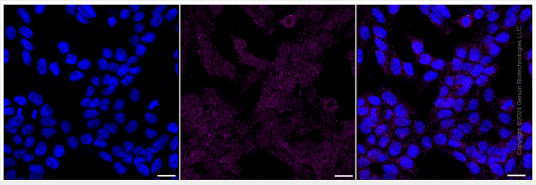
scaffold protein 1 expression in wild type (WT) and homer scaffold protein 1 (HOMER1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-homer scaffold protein 1 antibody (Cat#AGI1036, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of homer scaffold protein 1 expression in HAP-1 cells using anti-homer scaffold protein 1 antibody (Cat#AGI1036, 1:2,000). Green, isotype control; red, homer scaffold protein 1.



Immunocytochemical staining of HAP-1 cells with anti-Homer scaffold protein 1 antibody (Cat#AGI1036, 1:1,000). Nuclei were stained blue with DAPI; Homer scaffold protein 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain:Medium. Scale bar, 20 µm.