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

Rabbit monoclonal antibody
Catalog # AGI1036

Product Information

Application	WB, FC, ICC
Primary Accession	Q86YM7
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB6005
Calculated MW	40277
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

Additional Information

Gene ID	9456
Other Names	Homer protein homolog 1, Homer-1, HOMER1 (HGNC:17512)

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.