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Homer Recombinant Rabbit mAb

Catalog # AP100053

Product Information

Application	WB, IHC-P, IHC-F, IF, IP
Primary Accession	Q86YM7
Other Accession	Q86YM7
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	40277
Physical State	Liquid
Immunogen	A synthesized peptide derived from human Homer 1
Epitope Specificity	101-220
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the Homer family. Contains 1 WH1 domain.
SUBUNIT	Interacts with GRM1, GRM5, ITPR1, DNM3, RYR1, RYR2,SHANK1 and SHANK3. Interacts with IFT57 and OPHN1. Isoform 1 encodes a coiled-coil structure that mediates homo- and heteromultimerization.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	9456
Other Names	HOMER; HOMER1A; HOMER1B; HOMER1C; SYN47; Ves-1; PSD-Zip45; homer-1; vesl-1; HOMER1F; HOME1_HUMAN; HOMER1; HOME1_MOUSE; VASP/Ena-related gene up-regulated during seizure and LTP 1 (Vesl-1); Vesl1; HOME1_RAT; Vesl; homer scaffold protein 1; homer homolog 1 (Drosophila); homer scaffolding protein 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IP=1:20-50,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.