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HOMER1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7302a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q86YM7
Other Accession	Q9Z214, Q9Z2Y3, Q2KJ56
Reactivity	Human, Mouse
Predicted	Bovine, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18229
Calculated MW	40277
Antigen Region	96-122

Additional Information

Gene ID	9456
Other Names	Homer protein homolog 1, Homer-1, HOMER1, SYN47
Target/Specificity	This HOMER1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 96-122 amino acids from the N-terminal region of human HOMER1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HOMER1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

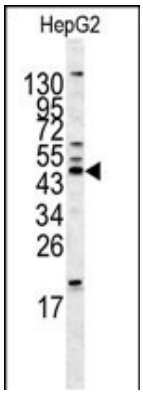
Background

HOMER1 is a member of the homer family of dendritic proteins. Members of this family regulate group 1 metabotrophic glutamate receptor function.

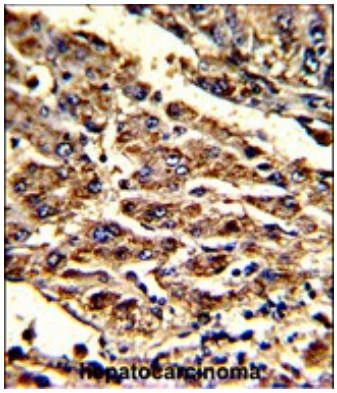
References

Sanna,S., Jackson,A.U. Nat. Genet. 40 (2), 198-203 (2008)
Dahl,J.P., Kampman,K.M. Psychiatr. Genet. 15 (4), 277-283 (2005)
Tu,J.C., Xiao,B. Neuron 23 (3), 583-592 (1999)

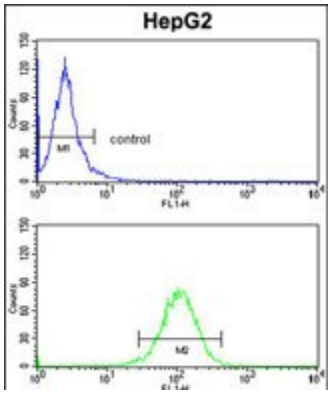
Images



Western blot analysis of HOMER1 antibody (N-term) (Cat.#AP7302a) in HepG2 cell line lysates (35ug/lane). HOMER1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma with HOMER1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



HOMER1 Antibody (N-term) (Cat.#AP7302a) flow cytometry analysis of HepG2 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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