

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
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.

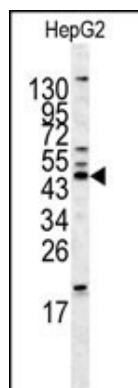
Background

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

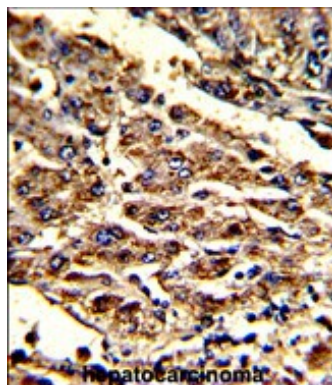
References

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)

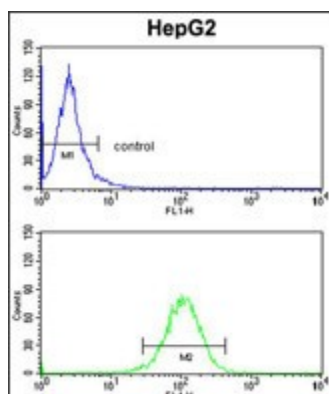
Images



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'.