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HOMER1 / Homer 1 Antibody (aa72-339)

Rabbit Polyclonal Antibody
Catalog # ALS16881

Specification

HOMER1 / Homer 1 Antibody (aa72-339) - Product Information

Application	**IHC, ICC, WB**
Primary Accession	Q86YM7
Other Accession	9456
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**40277**

HOMER1 / Homer 1 Antibody (aa72-339) - Additional Information

Gene ID 9456

Other Names
HOMER1, HOMER, Homer homolog 1 (Drosophila), Homer protein homolog 1, HOMER1B, SYN47, Ves-1, Homer-1, HOMER-1B, HOMER1A, HOMER1C

Target/Specificity
Human HOMER

Reconstitution & Storage
0.1 M Tris-glycine, pH 7.0, 10% glycerol, 0.01% Thimerosal. Keep as concentrated solution. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles.

Precautions
HOMER1 / Homer 1 Antibody (aa72-339) is for research use only and not for use in diagnostic or therapeutic procedures.

HOMER1 / Homer 1 Antibody (aa72-339) - 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.

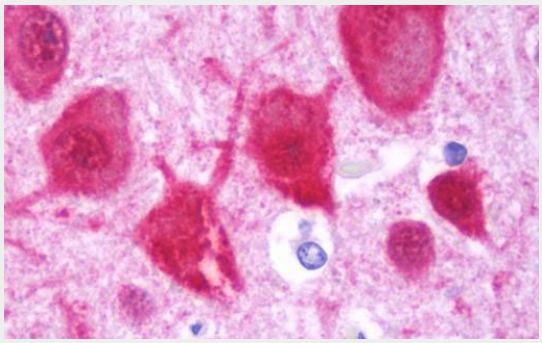
Volume
50 µl

HOMER1 / Homer 1 Antibody (aa72-339) - 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

HOMER1 / Homer 1 Antibody (aa72-339) - Images



Anti-HOMER1 / Homer 1 antibody IHC staining of human brain, cortex.

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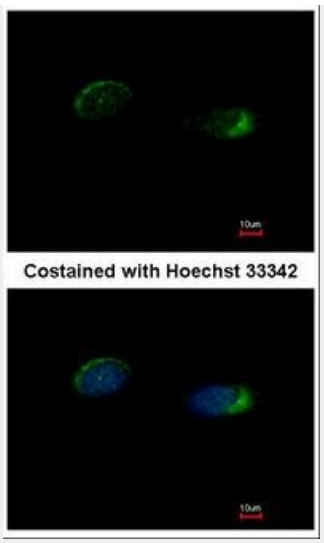
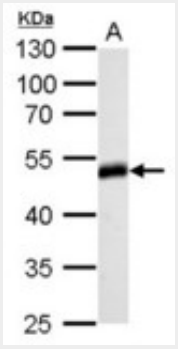
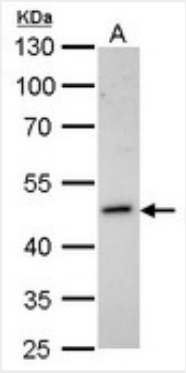


Immunofluorescence of methanol-fixed HeLa using Homer antibody at 1:500 dilution.



Homer antibody detects HOMER1 protein by Western blot analysis.



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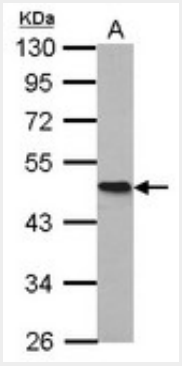

Sample (20 ug of whole cell lysate).

HOMER1 / Homer 1 Antibody (aa72-339) - Background

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.

HOMER1 / Homer 1 Antibody (aa72-339) - References

Xiao B.,et al.Neuron 21:707-716(1998).
Nickels A.,et al.Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
Klugmann M.,et al.Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.
Kalnine N.,et al.Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).