Homer 1

Cat.No. 160 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage 200 µl antiserum, lyophilized. For reconstitution add 200 µl H2O, then aliquot and store at -20°C until use.

Applications WB: 1 : 1000 (AP staining) 
IP: yes 
ICC: 1 : 500 up to 1 : 1000 (see remarks) 
IHC: yes 
IHC-P/FFPE: 1 : 500

Immunogen Recombinant protein corresponding to AA 1 to 196 from human Homer1 (UniProt Id: Q86YM7)

Reactivity Reacts with: human (Q86YM7), rat (Q9Z214), mouse (Q9Z2Y3). Other species not tested yet.

Specificity Specific for Homer 1. Cross-reactivity of the serum to Homer 2 and 3 was removed by pre-absorption with Homer 2 (aa 1 - 176) and Homer 3 (aa 1 - 177). According to Soloviev et al. (2000), aa 1 - 180 are present in isoforms a, b, c and d.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIONOUS, NOT CONTAGIOUS

Homer is a scaffolding protein of the post synaptic density (PSD) and enriched at excitationary synapses. The protein binds metabotropic glutamate receptors, TRPC1, proteins of the Shank family and others. By aggregating these proteins into clusters, homer was suggested to organize distinct signalling domains.

Three isoforms, Homer 1, 2 and 3 have been described. Each of these isoforms is subject to alternative splicing yielding the splice variants a, b, c, d.

Selected References SYSY Antibodies

Microtubule-associated protein 1B (MAP1B)-deficient neurons show structural presynaptic deficiencies in vitro and altered presynaptic physiology.
Bodaiuca FJ, Montenegro-Venegas C, Henriquez DR, Court FA, Gonzalez-Billault C

Scientific reports (2016) 6: 30069. WB, ICC

Changes in the Synaptic Proteome in Tauopathy and Rescue of Tau-Induced Synapse Loss by C1q Antibodies.


Dorsal Horn Gastrin-Releasing Peptide Expressing Neurons Transmit Spinal Ith but Not Pain Signals.
Albisetti GW, Pagani M, Platonova E, Höfl M, Johannsen HC, Fritschi JM, Wildner H, Zeilhofer HJ


AP180 promotes release site clearance and clathrin-dependent vesicle reformation in mouse cochlear inner hair cells.
Kroll J, Šrteček Ž, Jung S, Marizent T, Milosevic I, Wichmann C, Moser T

Journal of cell science (2020) 133(2): IHC; tested species: mouse

In vivo proximity proteomics of nascent synapses reveals a novel regulator of cytoskeleton-mediated synaptic maturation.
Spence EF, Dube S, Uezu A, Locke M, Soderblom BJ, Soderling SH


In Vivo Protein Complementation Demonstrates Presynaptic α-Synuclein Oligomerization and Age-Dependent Accumulation of B-16-mer Oligomer Species.


Sepraphin/24404 Induces Inhibitory Synaptic Formation by Rapid Stabilization of Presynaptic Boutons via MET Coactivation.


AP1 controls dendrite development by promoting microtubule dynamics.
Kahn CI, Schütze P, van der Willige D, Tas RP, Lindbom W, Portegies S, Kapitein LC, Hoogenraad CC


Differential α2A- and α2C-adrenoceptor protein expression in presynaptic and postsynaptic density fractions of postmortem human prefrontal cortex.
Erdozain AM, Brcos-Mosquera I, Gabilondo AM, Meana JJ, Callas LF


Activity-Dependent Gating of Parvalbumin Interneuron Function by the Perineuronal Net Protein Brevican.


Identification of Two Classes of Somatosensory Neurons That Display Resistance to Retrograde Infection by Rabies Virus.
Albisetti GW, Pagani M, Platonova E, Hösli M, Johannsen HC, Fritschi JM, Wildner H, Zeilhofer HJ


Selected General References

Surface clustering of metabotropic glutamate receptor 1b induced by long Homer proteins.
Kammermeier PJ

BMC neuroscience (2006) 7: 1

Homer 1a enhances spike-induced calcium influx via L-type calcium channels in neocortex pyramidal cells.
Yamamoto K, Sakagami Y, Sugiura S, Mikoshiba K, Furuichi T


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