

Homer 1/2/3

Cat.No. 160 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 200 up to 1 : 500 (see remarks) IHC: 1 : 500 IHC-P/FFPE: 1 : 500 EM: yes
Immunogen	Recombinant protein corresponding to AA 1 to 196 and 1 to 176 and 1 to 177 from human Homer1/2/3
Reactivity	Reacts with: human (Q86YM7, Q9NSB8, Q9NSC5), rat (Q9Z214, O88801, Q9Z2X5), mouse (Q9Z2Y3, Q9QWW1, Q99JP6), zebrafish. Other species not tested yet.
Specificity	The first 120 aa were used for affinity purification. According to Soloviev et al. (2000) , they are homologous in Ho
Remarks	ICC: PFA fixation recommended. Methanol fixation leads to a complete loss of the signal.

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

Homer is a scaffolding protein of the post synaptic density (PSD) and enriched at excitatory 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

Metabotropic glutamate receptor 5/Homer interactions underlie stress effects on fear.
Tronson NC, Guzman YF, Guedea AL, Huh KH, Gao C, Schwarz MK, Radulovic J
Biological psychiatry (2010) 68(11): 1007-15. **WB, IHC**

Homer is concentrated at the postsynaptic density and does not redistribute after acute synaptic stimulation.
Tao-Cheng JH, Thein S, Yang Y, Reese TS, Gallant PE
Neuroscience (2014) 266: 80-90. **WB, EM**

Thrombospondin-4 and excitatory synaptogenesis promote spinal sensitization after painful mechanical joint injury.
Crosby ND, Zaucke F, Kras JV, Dong L, Luo ZD, Winkelstein BA
Experimental neurology (2015) 264: 111-20. **ICC**

Selected General References

Homer2 and Homer3 interact with amyloid precursor protein and inhibit Abeta production.
Parisiadou L, Bethani I, Michaki V, Krousti K, Rapti G, Efthimiopoulos S
Neurobiology of disease (2008) 30(3): 353-64.

Differential expression of Homer family proteins in the developing mouse brain.
Shiraishi Y, Mizutani A, Yuasa S, Mikoshiba K, Furuichi T
The Journal of comparative neurology (2004) 473(4): 582-99.

Molecular characterisation of two structurally distinct groups of human homers, generated by extensive alternative splicing.
Soloviev MM, Ciruela F, Chan WY, McIlhinney RA
Journal of molecular biology (2000) 295(5): 1185-200.