Synaptic Systems

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Homer 3

Cat.No. 160 303; 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_2O 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 : 250 **IHC**: 1 : 500 **IHC-P/FFPE**: 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 177 from rat Homer3 (UniProt Id: Q9Z2X5)
Reactivity	Reacts with: rat (Q9Z2X5). Other species not tested yet.
Specificity	AA 122-177, unique for homer 3, were used for affinity purification. According to Soloviev et al. (2000), they are p
matching control	160-3P

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

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**

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.