Homer 1
Cat.No. 160 006; Polyclonal chicken antibody, 50 µg specific antibody (lyophilized)

**Data Sheet**

<table>
<thead>
<tr>
<th>Reconstitution/Storage</th>
<th>50 µg purified IgY, lyophilized. Ovalbumin was added for stabilization. For reconstitution add 50 µl H₂O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Before storing at -20°C add 1 vol of glycerol.</th>
</tr>
</thead>
</table>
| Applications           | WB: 1 : 1000 (AP staining)  
                         | IP: not tested yet  
                         | IHC: 1 : 500 (see remarks)  
                         | 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 (Q92Z14), mouse (Q92ZY3). Other species not tested yet. |
| Specificity            | Specific for Homer 1. According to Soloviev et al. (2000), aa 1 - 180 are present in isoforms a, b, c and d. |
| matching control       | 160-0P |
| Remarks                | IHC: Fix for 15 min with 4% PFA and 15% picric acid in PBS |

**Selected References SYSY Antibodies**
P2Y1 receptor blockade normalizes network dysfunction and cognition in an Alzheimer’s disease model.  
IHC-P; tested species: mouse

**Selected General References**
Surface clustering of metabotropic glutamate receptor 1 induced by long Homer proteins.  
Kammermeier PJ.  
Homer 1a enhances spike-induced calcium influx via L-type calcium channels in neocortex pyramidal cells.  
Differential expression of Homer family proteins in the developing mouse brain.  
Shiraishi Y, Mizutani A, Yuasa S, Mikoshiba K, Furuichi T.  
Modulation of synaptic signalling complexes by Homer proteins.  
Thomas U.  
Homer-dependent cell surface expression of metabotropic glutamate receptor type 5 in neurons.  
Ango F, Robbe D, Tu JC, Xiao B, Worley PF, Pin JP, Boekaert J, Fagni L.  
An N-terminal sequence specific for a novel Homer1 isoform controls trafficking of group I metabotropic glutamate receptor in mammalian cells.  
Saito H, Kimura M, Inanobe A, Ohe T, Kurachi Y.  
Regulation of dendritic spine morphology and synaptic function by Shank and Homer.  
Sala C, Piëch V, Wilson NR, Passafaro M, Liu G, Sheng M.  
Homer-1c/Vesl-1L modulates the cell surface targeting of metabotropic glutamate receptor type 1alpha: evidence for an anchoring function.  
Ciruela F, Soloviev MM, Chan WY, McIlhinney RA.  
Homer: a link between neural activity and glutamate receptor function.  
Xiao B, Tu JC, Worley PF.  
Molecular characterisation of two structurally distinct groups of human homers, generated by extensive alternative splicing.  
Soloviev MM, Ciruela F, Chan WY, McIlhinney RA.  
Coupling of mGluR/Homer and PSD-95 complexes by the Shank family of postsynaptic density proteins.  
Homer: a protein that selectively binds metabotropic glutamate receptors.  

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.