

Homer-1b/c (C-16): sc-8923

BACKGROUND

Homer (also designated Ves1, for VASP/Ena-related gene upregulated during seizure and LTP) family proteins are immediate early gene products that bind to group 1 metabotropic glutamate receptors (mGluRs), proteins involved in triggering intracellular calcium release. Unlike Homer-1a, the prototype member of the Homer family, other Homer family members (Homer-1b and -1c, Homer-2a, -2b and -2c, and Homer-3) are constitutively expressed and contain a coiled-coil (CC) domain that mediates self-multimerization. Homer-1a is enriched at excitatory synapses, does not multimerize and appears to block the association of mGluRs to CC-Homer proteins. Homer proteins have also been shown to link mGluRs with the inositol triphosphate receptors (IP3R).

REFERENCES

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2. Kato, A., et al. 1997. Ves1, a gene encoding VASP/Ena family related protein, is upregulated during seizure, long-term potentiation and synaptogenesis. *FEBS Lett.* 412: 183-189.
3. Kato, A., et al. 1998. Novel members of the Ves1/Homer family of PDZ proteins that bind metabotropic glutamate receptors. *J. Biol. Chem.* 273: 23969-23975.
4. Xiao, B., et al. 1998. Homer regulates the association of group 1 metabotropic glutamate receptors with multivalent complexes of Homer-related, synaptic proteins. *Neuron* 21: 707-716.
5. Tu, J.C., et al. 1998. Homer binds a novel proline-rich motif and links group 1 metabotropic glutamate receptors with IP3 receptors. *Neuron* 21: 717-726.
6. Soloviev, M.M., et al. 2000. Molecular characterisation of two structurally distinct groups of human homers, generated by extensive alternative splicing. *J. Mol. Biol.* 295:1185-1200.
7. Soloviev, M.M., et al. 2000. Mouse brain and muscle tissues constitutively express high levels of Homer proteins. *Eur. J. Biochem* 267: 634-639.
8. Ishiguro, K., et al. 2004. Homer-3 regulates activation of serum response element in T cells via its EVH1 domain. *Blood* 103: 2248-2256.

CHROMOSOMAL LOCATION

Genetic locus: HOMER1 (human) mapping to 5q14.1; Homer1 (mouse) mapping to 13 C3.

SOURCE

Homer-1b/c (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Homer-1b of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8923 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Homer-1b/c (C-16) is recommended for detection of Homer-1b and Homer-1c of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

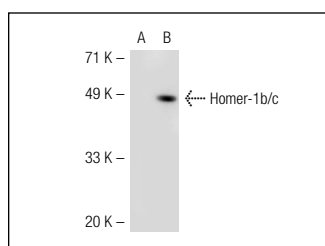
Homer-1b/c (C-16) is also recommended for detection of Homer-1b and Homer-1c in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Homer-1 siRNA (h): sc-35581, Homer-1 siRNA (m): sc-35582, Homer-1 shRNA Plasmid (h): sc-35581-SH, Homer-1 shRNA Plasmid (m): sc-35582-SH, Homer-1 shRNA (h) Lentiviral Particles: sc-35581-V and Homer-1 shRNA (m) Lentiviral Particles: sc-35582-V.

Molecular Weight of Homer-1b/c: 45 kDa.

Positive Controls: Homer (h): 293 Lysate: sc-113176, BC₃H1 cell lysate: sc-2299 or mouse brain extract: sc-2253.

DATA



Homer-1b/c (C-16): sc-8923. Western blot analysis of Homer-1b/c expression in non-transfected: sc-110760 (A) and human Homer transfected: sc-113176 (B) 293 whole cell lysates.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Homer (D-3): sc-17842** or **Homer-1b/c (B-5): sc-25271**, our highly recommended monoclonal alternatives to Homer-1b/c (C-16). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Homer (D-3): sc-17842**.