

Homer-3 (C-18): sc-8925

BACKGROUND

Homer family proteins, also designated Vesl (for VASP/Ena-related gene upregulated during seizure) and LTP, 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

1. Brakeman, P.R., et al. 1997. Homer: a protein that selectively binds metabotropic glutamate receptors. *Nature* 386: 284-288.
2. Kato, A., et al. 1997. Vesl, 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 Vesl/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.

CHROMOSOMAL LOCATION

Genetic locus: HOMER3 (human) mapping to 19p13.11; Homer3 (mouse) mapping to 8 B3.3.

SOURCE

Homer-3 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Homer-3 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-8925 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Homer-3 (C-18) is recommended for detection of Homer-3a and Homer-3b 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).

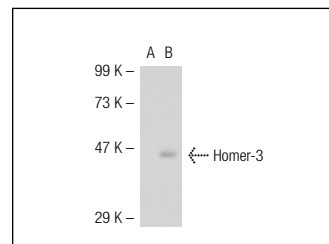
Homer-3 (C-18) is also recommended for detection of Homer-3a and Homer-3b in additional species, including equine and canine.

Suitable for use as control antibody for Homer-3 siRNA (h): sc-43850, Homer-3 siRNA (m): sc-42193, Homer-3 shRNA Plasmid (h): sc-43850-SH, Homer-3 shRNA Plasmid (m): sc-42193-SH, Homer-3 shRNA (h) Lentiviral Particles: sc-43850-V and Homer-3 shRNA (m) Lentiviral Particles: sc-42193-V.

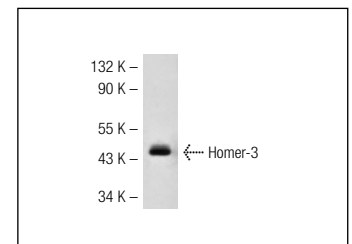
Molecular Weight of Homer-3: 47 kDa.

Positive Controls: Homer-3 (m): 293T Lysate: sc-120874 or rat brain extract: sc-2392.

DATA



Homer-3 (C-18): sc-8925. Western blot analysis of Homer-3 expression in non-transfected: sc-117752 (A) and mouse Homer-3 transfected: sc-120874 (B) 293T whole cell lysates.



Homer-3 (C-18): sc-8925. Western blot analysis of Homer-3 expression in rat brain tissue extract.

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-3 (E-2): sc-376154** or **Homer-3 (H-5): sc-271653**, our highly recommended monoclonal alternatives to Homer-3 (C-18).