

# Homer-2a/b (C-16): sc-8924

## 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).

## CHROMOSOMAL LOCATION

Genetic locus: HOMER2 (human) mapping to 15q25.2; Homer2 (mouse) mapping to 7 D3.

## SOURCE

Homer-2a/b (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Homer-2a 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-8924 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-2a/b (C-16) is recommended for detection of Homer-2a and Homer-2b 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-2a/b (C-16) is also recommended for detection of Homer-2a and Homer-2b in additional species, including equine, canine, bovine, porcine and avian.

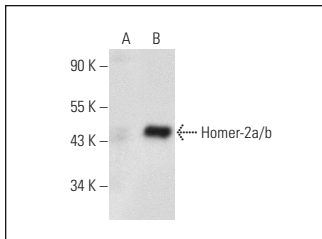
Suitable for use as control antibody for Homer-2 siRNA (h): sc-42188, Homer-2 siRNA (m): sc-42189, Homer-2 shRNA Plasmid (h): sc-42188-SH, Homer-2 shRNA Plasmid (m): sc-42189-SH, Homer-2 shRNA (h) Lentiviral Particles: sc-42188-V and Homer-2 shRNA (m) Lentiviral Particles: sc-42189-V.

Positive Controls: Homer-2a/b (h2): 293T Lysate: sc-176532.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Homer-2a/b (C-16): sc-8924. Western blot analysis of Homer-2a/b expression in non-transfected: sc-117752 (A) and human Homer-2a/b transfected: sc-176532 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Yang, L., et al. 2004. A novel Ca<sup>2+</sup>-independent signaling pathway to extracellular signal-regulated protein kinase by coactivation of NMDA receptors and metabotropic glutamate receptor 5 in neurons. *J. Neurosci.* 24: 10846-10857.
- Bortoloso, E., et al. 2006. Transition of Homer isoforms during skeletal muscle regeneration. *Am. J. Physiol. Cell Physiol.* 290: C711-C718.
- Salanova, M., et al. 2011. Expression and regulation of Homer in human skeletal muscle during neuromuscular junction adaptation to disuse and exercise. *FASEB J.* 25: 4312-4325.
- Salm, E.J. and Thayer, S.A. 2012. Homer proteins accelerate Ca<sup>2+</sup> clearance mediated by the plasma membrane Ca<sup>2+</sup> pump in hippocampal neurons. *Biochem. Biophys. Res. Commun.* 424: 76-81.
- Bakshi, K., et al. 2014. Prenatal cocaine exposure uncouples mGluR1 from Homer1 and G<sub>q</sub> proteins. *PLoS ONE* 9: e91671.

## RESEARCH USE

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



Try **Homer (D-3): sc-17842**, our highly recommended monoclonal alternative to Homer-2a/b (C-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Homer (D-3): sc-17842**.