

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

BACKGROUND

Homer family proteins, also designated Vesl (for VASP/ENA-related gene up-regulated 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., Lanahan, A.A., O'Brien, R., Roche, K., Barnes, C.A., Huganir, R.L. and Worley, P.F. 1997. Homer: a protein that selectively binds metabotropic glutamate receptors. *Nature* 386: 284-288.
2. Kato, A., Ozawa, F., Saitoh, Y., Hirai, K. and Inokuchi, K. 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., Ozawa, F., Saitoh, Y., Fukazawa, Y., Sugiyama, H. and Inokuchi, K. 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., Tu, J.C., Petralia, R.S., Yuan, J.P., Doan, A., Breder, C.D., Ruggiero, A., Lanahan, A.A., Wenthold, R.J. and Worley, P.F. 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., Xiao, B., Yuan, J.P., Lanahan, A.A., Leoffert, K., Li, M., Linden, D.J. and Worley, P.F. 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., Ciruela, F., Chan, W.Y. and McIlhinney, R.A. 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., Ciruela, F., Chan, W.Y. and McIlhinney, R.A. 2000. Mouse brain and muscle tissues constitutively express high levels of Homer proteins. *Eur. J. Biochem.* 267: 634-639.
8. Ishiguro, K. and Xavier, R. 2004. Homer-3 regulates activation of serum response element in T cells via its EVH1 domain. *Blood* 103: 2248-2256.

CHROMOSOMAL LOCATION

Genetic locus: HOMER2 (human) mapping to 15q24.3.

PRODUCT

Homer-2a/b (h2): 293T Lysate represents a lysate of human Homer-2a/b transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Homer-2a/b (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Homer-2a/b antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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