



# SZABO SCANDIC

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# Homer-3 (m): 293T Lysate: sc-120874

## 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., 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.
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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: Homer3 (mouse) mapping to 8 B3.3.

## PRODUCT

Homer-3 (m): 293T Lysate represents a lysate of mouse Homer-3 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-3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Homer-3 antibodies. Recommended use: 10-20 µl per lane.

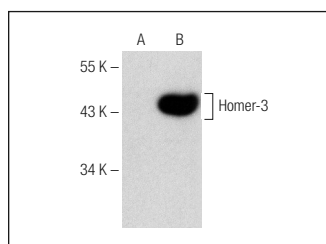
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Homer-3 (E-2): sc-376154 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Homer-3 expression in Homer-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

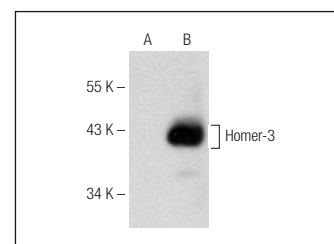
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



Homer-3 (E-2): sc-376154. 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 (E-6): sc-376155. 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.