

Gab 1 (m): 293T Lysate: sc-120377

BACKGROUND

Growth factor triggering of protein tyrosine kinase receptors induces signals that cascade to the nucleus, activating mitogenic as well as other responses. Critical components of this process include adapter proteins such as Shc, IRS-1 and Gab 1 (GRB-associated binder-1) that lack detectable catalytic activity. These are immediate substrates of receptor tyrosine kinase activity and serve to link activated receptors to downstream signaling components. Whereas Shc has been implicated in signaling by diverse receptor families, IRS-1 serves primarily as the major Insulin receptor substrate. Shc and Gab 1 also participate in Insulin signaling by linking the Insulin receptor to Ras by forming complexes with GRB2 (another adapter protein) and Sos independently of IRS-1. Gab 1 is also thought to be involved in the EGF receptor signaling pathway.

REFERENCES

- McGlade, J., Cheng, A., Pelicci, G., Pelicci, P.G. and Pawson, T. 1992. Shc proteins are phosphorylated and regulated by the v-Src and v-Fps protein-tyrosine kinase. *Proc. Natl. Acad. Sci. USA* 89: 8869-8873.
- Pelicci, G., Lanfrancone, L., Grignani, F., McGlade, J., Cavallo, F., Forni, G., Nicoletti, I., Pawson, T. and Pelicci, P.G. 1992. A novel transforming protein (Shc) with an SH2 domain is implicated in mitogenic signal transduction. *Cell* 70: 93-104.
- Ravichandran, K.S., Lee, K.K., Songyang, Z., Cantley, L.C., Burn, P. and Burakoff, S.J. 1993. Interaction of Shc with the ζ chain of the T cell receptor upon T cell activation. *Science* 262: 902-905.
- Lee, C.H., Li, W., Nishimura, R., Zhou, M., Batzer, A.G., Myers, M.G., Jr., White, M.F., Schlessinger, J. and Skolnik, E.Y. 1993. Nck associates with the SH2 domain-docking protein IRS-1 in Insulin-stimulated cells. *Proc. Natl. Acad. Sci. USA* 90: 11713-11717.
- Myers, M.G., Jr., Wang, L.M., Sun, X.J., Zhang, Y., Yenush, L., Schlessinger, J., Pierce, J.H. and White, M.F. 1994. Role of IRS-1/GRB-2 complexes in Insulin signaling. *Mol. Cell. Biol.* 14: 3577-3587.
- Tamemoto, K., Kadowaki, T., Tobe, K., Yagi, T., Sakura, H., Hayakawa, T., Terauchi, Y., Ueki, K., Kaburagi, Y. and Satoh, S. 1994. Insulin resistance and growth retardation in mice lacking Insulin receptor-substrate 1. *Nature* 372: 182-186.
- Araki, E., Lipes, M.A., Patti, M.E., Bruning, J.C., Haag, B., Johnson, R.S. and Kahn, C.R. 1994. Alternative pathway of Insulin signaling in mice with targeted disruption of the IRS-1 gene. *Nature* 372: 186-190.
- Holgado-Madruga, M., Emler, D.R., Moscatello, D.K., Godwin, A.K. and Wong, A.J. 1996. A GRB2-associated docking protein in EGF- and Insulin-receptor signalling. *Nature* 379: 560-564.

CHROMOSOMAL LOCATION

Genetic locus: Gab1 (mouse) mapping to 8 C2.

PRODUCT

Gab-1 (m): 293T Lysate represents a lysate of mouse Gab-1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Gab-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Gab-1 antibodies. Recommended use: 10-20 μ l per lane.

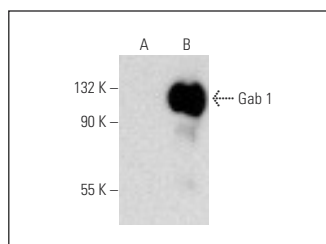
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Gab 1 (G-9): sc-271848 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Gab-1 expression in Gab-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

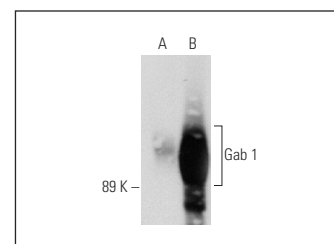
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



Gab 1 (G-9): sc-271848. Western blot analysis of Gab 1 expression in non-transfected: sc-117752 (A) and mouse Gab 1 transfected: sc-120377 (B) 293T whole cell lysates.



Gab 1 (H-7): sc-133191. Western blot analysis of Gab 1 expression in non-transfected: sc-117752 (A) and mouse Gab 1 transfected: sc-120377 (B) 293T whole cell lysates.

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.

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.