



Gab 4 (N-16): sc-86134

BACKGROUND

The Gab (GRB2-associated binder)/DOS ("Daughter of Sevenless") family of adaptor proteins function as molecular scaffolds that mediate protein recruitment to RTKs. Cytokine/growth factor triggering of protein tyrosine kinase receptors (RTKs) initiates signaling cascades that progress to the nucleus where signals for activation, proliferation and differentiation occur. This scaffolding mechanism represents a critical link in cytokine/growth factor signaling routes. Gab 1-4 contain Pleckstrin homology and potential binding sites for SH2 and SH3 domain-containing proteins. The recruitment of signaling partners to Gab family members is phosphorylation-dependent. Insulin receptor and EGF receptor signaling are among the cascades that rely on Gab family members to elicit a nuclear response to an extracellular stimulus. Gab 4 (GRB2-associated-binding protein 4), also designated GRB2-associated-binding protein 2-like (Gab 2-like), is a 574 amino acid protein that shares 62% sequence similarity with Gab 2 and contains one Pleckstrin homology domain.

REFERENCES

- Holgado-Madruga, M., Emlet, 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.
- Zhao, C., Yu, D.H., Shen, R. and Feng, G.S. 1999. Gab 2, a new Pleckstrin homology domain-containing adapter protein, acts to uncouple signaling from ERK kinase to Elk-1. *J. Biol. Chem.* 274: 19649-19654.
- Kim, S.O., Loesch, K., Wang, X., Jiang, J., Mei, L., Cunnick, J.M., Wu, J. and Frank, S.J. 2002. A role for GRB2-associated binder-1 in growth hormone signaling. *Endocrinology* 143: 4856-4867.
- Daly, R.J., Gu, H., Parmar, J., Malaney, S., Lyons, R.J., Kairouz, R., Head, D.R., Henshall, S.M., Neel, B.G. and Sutherland, R.L. 2002. The docking protein Gab 2 is overexpressed and estrogen regulated in human breast cancer. *Oncogene* 21: 5175-5181.
- Zompi, S., Gu, H. and Colucci, F. 2004. The absence of GRB2-associated binder 2 (Gab 2) does not disrupt NK cell development and functions. *J. Leukoc. Biol.* 76: 896-903.
- Yu, M., Lowell, C.A., Neel, B.G. and Gu, H. 2006. Scaffolding adapter GRB2-associated binder 2 requires Syk to transmit signals from FcεRI. *J. Immunol.* 176: 2421-2429.
- Wang, Z., Ge, L., Wang, M. and Carr, B.I. 2007. GRB2-associated binder-1 plays a central role in the hepatocyte growth factor enhancement of hepatoma growth inhibition by K vitamin analog compound 5. *Hepatology* 46: 2003-2013.
- Brummer, T., Larance, M., Abreu, M.T., Lyons, R.J., Timpson, P., Emmerich, C.H., Fleuren, E.D., Lehrbach, G.M., Schramek, D., Guilhaus, M., James, D.E. and Daly, R.J. 2008. Phosphorylation-dependent binding of 14-3-3 terminates signalling by the Gab 2 docking protein. *EMBO J.* 27: 2305-2316.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: GAB4 (human) mapping to 22q11.1.

SOURCE

Gab 4 (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Gab 4 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86134 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Gab 4 (N-16) is recommended for detection of Gab 4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Gab 1, Gab 2, and Gab 3.

Suitable for use as control antibody for Gab 4 siRNA (h): sc-75080, Gab 4 shRNA Plasmid (h): sc-75080-SH and Gab 4 shRNA (h) Lentiviral Particles: sc-75080-V.

Molecular Weight of Gab 4: 62 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.