SANTA CRUZ BIOTECHNOLOGY, INC.

Gab 1/2 (I-18): sc-9311

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 protein 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. The Gap1 related protein, Gab 2, associates with SH2 domain-containing proteins, such as SHP2, and it is involved in a novel pathway for cytokine-induced gene activation.

REFERENCES

1. McGlade, J., et al. 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.
2. Pelicci, G., et al. 1992. A novel transforming protein (Shc) with an SH2 domain is implicated in mitogenic signal transduction. Cell 70: 93-104.
3. Lee, C.H., et al. 1993. NCK associates with the SH2 domain-docking protein IRS-1 in Insulin-stimulated cells. Proc. Natl. Acad. Sci. USA 90: 11713-11717.
4. Ravichandran, K.S., et al. 1993. Interaction of Shc with the ζ chain of the T cell receptor upon T cell activation. Science 262: 902-905.
5. Myers, M.G., Jr., et al. 1994. Role of IRS-1–GRB2 complexes in Insulin signaling. Mol. Cell. Biol. 14: 3577-3587.
6. Tamemoto, K., et al. 1994. Insulin resistance and growth retardation in mice lacking Insulin receptor-substrate 1. Nature 372: 182-186.

SOURCE

Gab 1/2 (I-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Gab 2 of mouse 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-9311 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.

RESEARCH USE

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

APPLICATIONS

Gab 1/2 (I-18) is recommended for detection of Gab 1 and Gab 2 of mouse, rat and human origin and, to a lesser extent, Gab 3 of mouse 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).

Gab 1/2 (I-18) is also recommended for detection of Gab 1 and Gab 2 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Gab 1: 110-115 kDa.

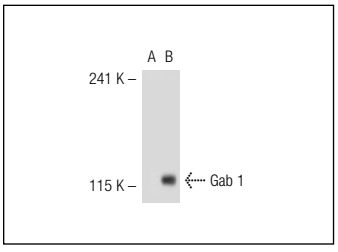
Molecular Weight of Gab 2: 88 kDa.

Positive Controls: Gab 1 (h): 293T Lysate: sc-111467, Gab 1 (m): 293T Lysate: sc-120377 or mouse brain extract: sc-2253.

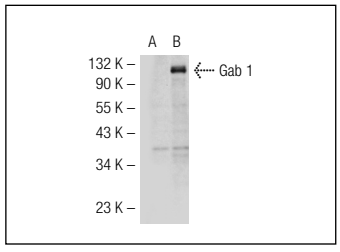
RECOMMENDED SECONDARY REAGENTS

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



Gab 1/2 (I-18): sc-9311. 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 1/2 (I-18): sc-9311. Western blot analysis of Gab 1 expression in non-transfected: sc-117752 (**A**) and human Gab 1 transfected: sc-111467 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Maus, M., et al. 2009. GRB2 associated binder 2 couples B-cell receptor to cell survival. Cell. Signal. 21: 220-227.