SANTA CRUZ BIOTECHNOLOGY, INC.

Gab 1 (G-12): sc-33892

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

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 zeta 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-GRB-2 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.

CHROMOSOMAL LOCATION

Genetic locus: GAB1 (human) mapping to 4q31.21; Gab1 (mouse) mapping to 8 C2.

SOURCE

Gab 1 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Gab 1 of human 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-33892 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.

APPLICATIONS

Gab 1 (G-12) is recommended for detection of Gab 1 of mouse, rat and 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).

Gab 1 (G-12) is also recommended for detection of Gab 1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Gab 1 siRNA (h): sc-35431, Gab 1 siRNA (m): sc-35432, Gab 1 shRNA Plasmid (h): sc-35431-SH, Gab 1 shRNA Plasmid (m): sc-35432-SH, Gab 1 shRNA (h) Lentiviral Particles: sc-35431-V and Gab 1 shRNA (m) Lentiviral Particles: sc-35432-V.

Molecular Weight of Gab 1: 110-115 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

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) 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.

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.