SANTA CRUZ BIOTECHNOLOGY, INC.

p-Gab 1 (Tyr 627): sc-16794

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Insulin receptor substrate (IRS) family of proteins mediate a variety of intracellular signaling pathways by serving as signaling platforms downstream of several receptor tyrosine kinases, including the Insulin and Insulin-like growth factor (IGF-1) receptors. Gab 1 (GRB2-associated binder 1), one such member of the IRS family, plays an important role in cellular growth response, transformation and apoptosis. Gab 1 is a multi-substrate docking protein that functions downstream in the signaling pathways of different receptor kinases, including EGFR. Gab1 is tyrosine phosphorylated normally in response to Insulin and consequently enhances phosphatidylinositol 3-kinase (PI3K) binding. In response to osmotic shock, tyrosine-phosphorylated Gab 1 (p-Gab 1) also binds and activates phosphatidylinositol 3-kinase, suggesting that Gab 1 is the major site for PI3K recruitment following osmotic shock stimulation. In the Flt-3 ligand-responsive cells, Gab 1 is also rapidly tyrosine phosphorylated after receptor tyrosine kinase Flt-3 ligand simulation and interacts with tyrosine-phosphorylated Shp-2, p85, GRB2 and Shc proteins.

REFERENCES

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5. Lehr, S., Kotzka, J., Herkner, A., Sikmann, A., Meyer, H.E., Krone, W. and Muller-Wieland, D. 2000. Identification of major tyrosine phosphorylation sites in the human Insulin receptor substrate Gab 1 by Insulin receptor kinase *in vitro*. Biochemistry 39: 10898-10907.
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CHROMOSOMAL LOCATION

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

SOURCE

p-Gab 1 (Tyr 627) is available as either goat (sc-16794) or rabbit (sc-16794-R) polyclonal antibody raised against a short amino acid sequence containing Tyr 627 phosphorylated 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-16794 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Gab 1 (Tyr 627) is recommended for detection of Tyr 627 phosphorylated 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).

p-Gab 1 (Tyr 627) is also recommended for detection of correspondingly phosphory-lated 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 p-Gab 1: 110-115 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-16794): 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), for rabbit primary antibody (sc-16794-R): 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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: for goat primary antibody (sc-16794): 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, for rabbit primary antibody (sc-16794-R): 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.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.