

p-Gab 1 (Tyr 627): sc-101685

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 (PI 3-K) 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 PI 3-K 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 stimulation and interacts with tyrosine-phosphorylated Shp-2, p85, GRB2 and Shc proteins.

REFERENCES

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- 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.

CHROMOSOMAL LOCATION

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

SOURCE

p-Gab 1 (Tyr 627) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 627 phosphorylated Gab 1 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.

APPLICATIONS

p-Gab 1 (Tyr 627) is recommended for detection of Tyr 627 phosphorylated Gab 1 of human and rat origin and correspondingly phosphorylated Tyr 628 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

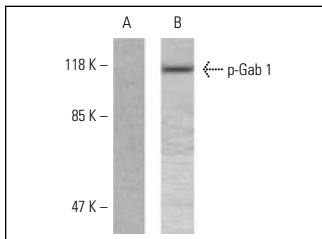
Molecular Weight of p-Gab 1: 110-115 kDa.

Positive Controls: EGF-treated HUVEC whole cell lysate.

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 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



p-Gab 1 (Tyr 627): sc-101685. Western blot analysis of phosphorylated Gab 1 expression in untreated (A) and EGF-treated (B) HUVEC whole cell lysates.

SELECT PRODUCT CITATIONS

- Aksamitiene, E., Achanta, S., Kolch, W., Kholodenko, B.N., Hoek, J.B. and Kiyatkin, A. 2011. Prolactin-stimulated activation of ERK1/2 mitogen-activated protein kinases is controlled by PI3-kinase/Rac/PAK signaling pathway in breast cancer cells. *Cell. Signal.* 23: 1794-1805.

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.