

Gab 3 (E-1): sc-271475



The Power to Question

BACKGROUND

The Gab (GRB2-associated binder)/DOS (daughter of sevenless) (Gab) 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 1-3 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. The human Gab3 gene maps to chromosome Xq28 and encodes a 586 amino acid protein.

REFERENCES

1. Araki, E., et al. 1994. Alternative pathway of Insulin signaling in mice with targeted disruption of the IRS-1 gene. *Nature* 372: 186-190.
2. Holgado-Madruga, M., et al. 1996. A GRB2-associated docking protein in EGF- and Insulin-receptor signalling. *Nature* 379: 560-564.
3. Zhao, C., et al. 1999. Gab2, a new Pleckstrin homology domain-containing adapter protein, acts to uncouple signaling from ERK kinase to Elk-1. *J. Biol. Chem.* 274: 19649-19654.
4. Lock, L.S., et al. 2000. Identification of an atypical GRB2 carboxyl-terminal SH3 domain binding site in Gab docking proteins reveals GRB2-dependent and -independent recruitment of Gab1 to receptor tyrosine kinases. *J. Biol. Chem.* 275: 31536-31545.
5. Wolf, I., et al. 2002. Gab 3, a new DOS/Gab family member, facilitates macrophage differentiation. *Mol. Cell. Biol.* 22: 231-244.

CHROMOSOMAL LOCATION

Genetic locus: GAB3 (human) mapping to Xq28.

SOURCE

Gab 3 (E-1) is a mouse monoclonal antibody raised against amino acids 101-400 mapping within an internal region of Gab 3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Gab 3 (E-1) is available conjugated to agarose (sc-271475 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271475 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271475 PE), fluorescein (sc-271475 FITC), Alexa Fluor® 488 (sc-271475 AF488), Alexa Fluor® 546 (sc-271475 AF546), Alexa Fluor® 594 (sc-271475 AF594) or Alexa Fluor® 647 (sc-271475 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271475 AF680) or Alexa Fluor® 790 (sc-271475 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Gab 3 (E-1) is recommended for detection of Gab 3 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Gab 3 siRNA (h): sc-40608, Gab 3 shRNA Plasmid (h): sc-40608-SH and Gab 3 shRNA (h) Lentiviral Particles: sc-40608-V.

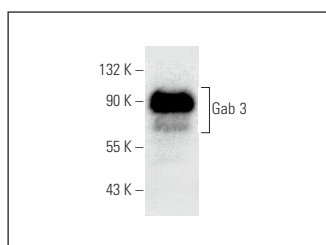
Molecular Weight of Gab 3: 75 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or GMCSF-treated K-562 whole cell lysate.

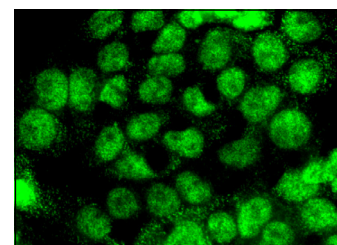
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Gab 3 (E-1): sc-271475. Western blot analysis of Gab 3 expression in GMCSF-treated K-562 whole cell lysate.



Gab 3 (E-1): sc-271475. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Jia, P., et al. 2017. Gab 3 overexpression in human glioma mediates Akt activation and tumor cell proliferation. *PLoS ONE* 12: e0173473.

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.