

GRB2 (H-68): sc-28839

BACKGROUND

The superfamily of GTP binding proteins, of which Ras proteins are prototypes, has been implicated in a broad range of biological activities. A family of guanine nucleotide releasing factors (GRFs) activate Ras in mammalian cells and growth factor receptor-bound protein 2 (GRB2), an adaptor protein (also referred to as Sem 5) that appears to mediate the interaction of GRFs with activated receptor molecules. GRB2 forms a complex with activated EGFR (epidermal growth factor receptor) and the Ras-specific guanine nucleotide exchange factor SOS1, and, together, they regulate the growth factor-induced activation of Ras. GRB2 exhibits both structural and functional homology to the *C. elegans* protein sem-5. GRB2 is necessary during embryogenesis for the differentiation of endodermal cells and formation of the epiblast.

REFERENCES

1. Lowenstein, E.J., et al. 1992. The SH2 and SH3 domain-containing protein GRB2 links receptor tyrosine kinases to Ras signaling. *Cell* 40: 431-442.
2. Skolnik, E.Y., et al. 1993. The function of GRB2 in linking the Insulin receptor to Ras signaling pathways. *Science* 260: 1953-1955.
3. Chardin, P., et al. 1993. Human Sos 1: a guanine nucleotide exchange factor for Ras that binds to GRB2. *Science* 260: 1338-1343.
4. Simon, M.A., et al. 1993. An SH3-SH2-SH3 protein is required for p21 Ras 1 activation and binds to Sevenless and Sos proteins *in vitro*. *Cell* 73: 169-177.
5. Egan, S.E., et al. 1993. Association of Sos Ras exchange protein with Grb2 is implicated in tyrosine kinase signal transduction and transformation. *Nature* 363: 45-51.
6. Buday, L., et al. 1993. Epidermal growth factor regulates p21 Ras through the formation of a complex of receptor, Grb2 adaptor protein, and Sos nucleotide exchange factor. *Cell* 73: 611-620.

CHROMOSOMAL LOCATION

Genetic locus: GRB2 (human) mapping to 17q25.1, GRAP (human) mapping to 17p11.2; Grb2 (mouse) mapping to 11 E2, Grap (mouse) mapping to 11 B2.

SOURCE

GRB2 (H-68) is a rabbit polyclonal antibody raised against amino acids 1-68 mapping at the N-terminus of GRB2 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.

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

GRB2 (H-68) is recommended for detection of GRB2, and to a lesser extent, Grap of mouse, rat 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).

GRB2 (H-68) is also recommended for detection of GRB2, and to a lesser extent, Grap in additional species, including equine, canine, bovine, porcine and avian.

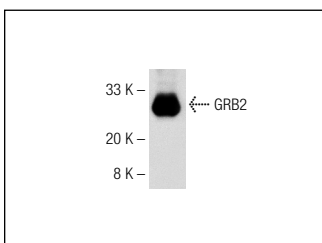
Molecular Weight of GRB2: 25-31 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, PC-12 cell lysate: sc-2250 or KNRK whole cell lysate: sc-2214.

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 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 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.

DATA



GRB2 (H-68): sc-28839. Western blot analysis of GRB2 expression in PC-12 whole cell lysate.

PROTOCOLS

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



Try **GRB2 (C-7): sc-8034** or **GRB2 (F-3): sc-137074**, our highly recommended monoclonal alternatives to GRB2 (H-68). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **GRB2 (C-7): sc-8034**.