

GRB2 (C-23): sc-255

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 Sos 1, 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.

CHROMOSOMAL LOCATION

Genetic locus: GRB2 (human) mapping to 17q25.1; Grb2 (mouse) mapping to 11 E2.

SOURCE

GRB2 (C-23) is available as either rabbit (sc-255) or goat (sc-255-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of GRB2 of human origin.

PRODUCT

Each vial contains either 100 µg (sc-255) or 200 µg (sc-255-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-255 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-255 PE, 100 tests.

Available as agarose conjugate for immunoprecipitation, sc-255 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

GRB2 (C-23) is recommended for detection of GRB2 p25 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GRB2 (C-23) is also recommended for detection of GRB2 p25 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GRB2 siRNA (h): sc-29334, GRB2 siRNA (m): sc-29335, GRB2 shRNA Plasmid (h): sc-29334-SH, GRB2 shRNA Plasmid (m): sc-29335-SH, GRB2 shRNA (h) Lentiviral Particles: sc-29334-V and GRB2 shRNA (m) Lentiviral Particles: sc-29335-V.

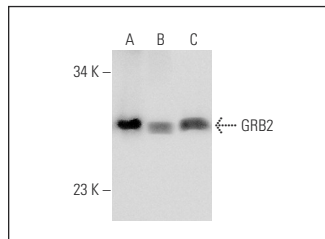
Molecular Weight of GRB2: 25-31 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, NIH/3T3 whole cell lysate: sc-2210 or A-431 whole cell lysate: sc-2201.

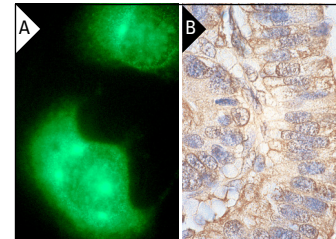
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



GRB2 (C-23): sc-255. Western blot analysis of GRB2 expression in COLO 320DM (A), NIH/3T3 (B) and A-431 (C) whole cell lysates.



GRB2 (C-23): sc-255. Immunofluorescence staining of methanol-fixed HeLa cells showing specific staining of membrane ruffles (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon carcinoma tissue showing membrane staining of mucosal epithelia (B).

SELECT PRODUCT CITATIONS

1. Mainiero, F., et al. 1997. The coupling of $\alpha 6 \beta 4$ integrin to Ras-MAP kinase pathways mediated by Shc controls keratinocyte proliferation. *EMBO J.* 16: 2365-2375.
2. Orcajo-Rincón, Á.L., et al. 2011. Development of non-peptide ligands of growth factor receptor-bound protein 2-SRC homology 2 domain using molecular modeling and NMR spectroscopy. *J. Med. Chem.* 54: 1096-1100.
3. Büchse, T., et al. 2011. CIN85 interacting proteins in B cells-specific role for SHIP-1. *Mol. Cell. Proteomics* 10: M110.
4. Amaddii, M., et al. 2012. Flotillin-1/reggie-2 protein plays dual role in activation of receptor-tyrosine kinase/mitogen-activated protein kinase signaling. *J. Biol. Chem.* 287: 7265-7278.
5. Anselmi, F., et al. 2012. c-ABL modulates MAP kinases activation downstream of VEGFR-2 signaling by direct phosphorylation of the adaptor proteins GRB2 and NCK1. *Angiogenesis* 15: 187-197.
6. Rodríguez-Ramiro, I., et al. 2012. Procyanidin B2 induces Nrf2 translocation and glutathione S-transferase P1 expression via ERKs and p38-MAPK pathways and protect human colonic cells against oxidative stress. *Eur. J. Nutr.* 51: 881-892.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **GRB2 (C-7): sc-8034** or **GRB2 (F-3): sc-137074**, our highly recommended monoclonal alternatives to GRB2 (C-23). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **GRB2 (C-7): sc-8034**.