

GRB10 (C-11): sc-74509



The Power to Question

BACKGROUND

Many growth factors function by binding receptors with intrinsic tyrosine kinase activity. Signaling by such receptors involves a series of intermediates characterized by SH2 domains that bind tyrosine-phosphorylated receptors by a direct interaction between the SH2 domain and specific phospho-tyrosine-containing receptor sequences. GRB7, a SH2 domain protein, has a single SH2 domain at its C-terminal, a central region with similarity to Ras GAP and a proline-rich N terminus. A related SH2 domain-containing protein, GRB10, exhibits a high degree of homology with GRB7. GRB10 undergoes serine but not tyrosine phosphorylation in response to EGF treatment, but appears to bind to the EGF receptor poorly. GRB10 maps to mouse chromosome 11, in close proximity to the EGF receptor. Similarly, GRB7 maps to the same mouse chromosome near the EGF receptor-related protein HER2.

CHROMOSOMAL LOCATION

Genetic locus: GRB10 (human) mapping to 7p12.1; Grb10 (mouse) mapping to 11 A1.

SOURCE

GRB10 (C-11) is a mouse monoclonal antibody raised against amino acids 1-130 of GRB10 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.

GRB10 (C-11) is available conjugated to agarose (sc-74509 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74509 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74509 PE), fluorescein (sc-74509 FITC), Alexa Fluor® 488 (sc-74509 AF488), Alexa Fluor® 546 (sc-74509 AF546), Alexa Fluor® 594 (sc-74509 AF594) or Alexa Fluor® 647 (sc-74509 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74509 AF680) or Alexa Fluor® 790 (sc-74509 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GRB10 (C-11) is recommended for detection of GRB10 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 GRB10 siRNA (h): sc-35509, GRB10 siRNA (m): sc-40962, GRB10 shRNA Plasmid (h): sc-35509-SH, GRB10 shRNA Plasmid (m): sc-40962-SH, GRB10 shRNA (h) Lentiviral Particles: sc-35509-V and GRB10 shRNA (m) Lentiviral Particles: sc-40962-V.

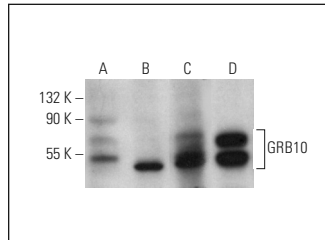
Molecular Weight of GRB10: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, human pancreas extract: sc-363770 or human spleen extract: sc-363779.

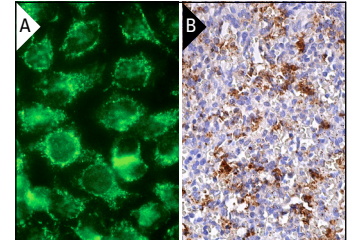
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GRB10 (C-11): sc-74509. Western blot analysis of GRB10 expression in human skeletal muscle (A), human pancreas (B) and human spleen (C) tissue extracts and HeLa whole cell lysate (D).



GRB10 (C-11): sc-74509. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subset of cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Wong, K.M., et al. 2018. Multiple lines of inhibitory feedback on Akt kinase in Schwann cells lacking TSC1/2 hint at distinct functions of mTORC1 and Akt in nerve development. *Commun. Integr. Biol.* 11: e1433441.
- Edick, A.M., et al. 2020. Role of GRB10 in mTORC1-dependent regulation of Insulin signaling and action in human skeletal muscle cells. *Am. J. Physiol. Endocrinol. Metab.* 318: E173-E183.
- Dollet, L., et al. 2022. Glutamine regulates skeletal muscle immunometabolism in type 2 diabetes. *Diabetes* 71: 624-636.
- Wang, X., et al. 2022. PINCH-1 promotes IGF-1 receptor expression and skin cancer progression through inhibition of the GRB10-NEDD4 complex. *Theranostics* 12: 2613-2630.

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 for detailed protocols and support products.