

GRB10 (H-130): sc-13955

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 phosphotyrosine-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.

REFERENCES

- Schlessinger, J., et al. 1992. Growth factor signalling by receptor tyrosine kinases. *Neuron* 9: 383-391.
- Margolis, B. 1992. Proteins with SH2 domains: transducers in the tyrosine kinase signalling pathway. *Cell Growth Differ.* 3: 73-80.
- Margolis, B., et al. 1992. High-efficiency expression/cloning of epidermal growth factor-receptor-binding proteins with Src homology 2 domains. *Proc. Natl. Acad. Sci. USA* 89: 8894-8898.
- Fanti, W.J., et al. 1993. Signalling by receptor tyrosine kinases. *Annu. Rev. Biochem.* 62: 453-481.
- Stein, D., et al. 1994. The SH2 domain protein GRB-7 is co-amplified, over-expressed and in a tight complex with HER2 in breast cancer. *EMBO J.* 13: 1331-1340.
- Ooi, J., et al. 1995. The cloning of GRB10 reveals a new family of SH2 domain proteins. *Oncogene* 10: 1621-1630.
- Wandless, T.J. 1996. SH2 domains: a question of independence. *Curr. Biol.* 6: 125-127.

CHROMOSOMAL LOCATION

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

SOURCE

GRB10 (H-130) is a rabbit polyclonal antibody raised against amino acids 1-130 of GRB10 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.

APPLICATIONS

GRB10 (H-130) is recommended for detection of GRB10 of human and, to a lesser extent, mouse and rat 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).

GRB10 (H-130) is also recommended for detection of GRB10 in additional species, including equine.

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 or T-47D cell lysate: sc-2293.

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.

SELECT PRODUCT CITATIONS

- Murdaca, J., et al. 2004. GRB10 prevents NEDD4-mediated vascular endothelial growth factor receptor-2 degradation. *J. Biol. Chem.* 279: 26754-26761.
- Dong, S., et al. 2005. Histology-based expression profiling yields novel prognostic markers in human glioblastoma. *J. Neuropathol. Exp. Neurol.* 64: 948-955.
- Tezuka, N., et al. 2007. GRB10 binds to LRP6, the Wnt co-receptor and inhibits canonical Wnt signaling pathway. *Biochem. Biophys. Res. Commun.* 356: 648-654.

RESEARCH USE

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



Try **GRB10 (C-11): sc-74509** or **GRB10 (G-3): sc-74508**, our highly recommended monoclonal alternatives to GRB10 (H-130).