

# GRB10 (G-3): sc-74508

## 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 GRB7 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.

## SOURCE

GRB10 (G-3) is a mouse monoclonal antibody raised against amino acids 1-130 of GRB10 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain 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

GRB10 (G-3) is recommended for detection of GRB10 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 GRB10 siRNA (h): sc-35509, GRB10 shRNA Plasmid (h): sc-35509-SH and GRB10 shRNA (h) Lentiviral Particles: sc-35509-V.

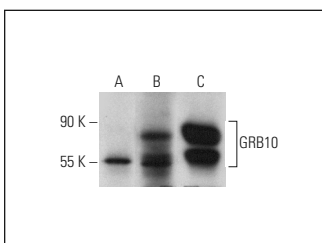
Molecular Weight of GRB10: 60 kDa.

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

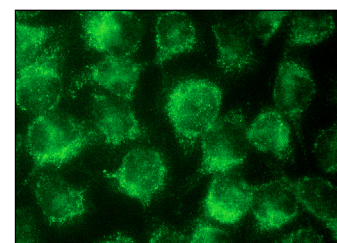
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



GRB10 (G-3): sc-74508. Western blot analysis of GRB10 expression in human pancreas (A) and human spleen (B) tissue extracts and HeLa whole cell lysate (C).



GRB10 (G-3): sc-74508. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Yu, W., et al. 2010. Genes regulated by Nkx2-3 in sporadic and inflammatory bowel disease-associated colorectal cancer cell lines. *Dig. Dis. Sci.* 55: 3171-3180.
- Higashi, S., et al. 2010. GIGYF2 is present in endosomal compartments in the mammalian brains and enhances IGF-1-induced ERK1/2 activation. *J. Neurochem.* 115: 423-437.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.