SANTA CRUZ BIOTECHNOLOGY, INC.

GRB7 (B-9): sc-373982

SANTA CRUZ BIOTECHNOLOGY

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 the 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. GRB7 maps to the region on mouse chromosome 11 containing the Neu gene. This region of mouse chromosome 11 is syntenic to an area of human chromosome 17q that is frequently amplified in breast cancer. Moreover, GRB7 is amplified and over-expressed in breast cancer and is found in a complex with Neu gp185.

REFERENCES

1. Slamon, D.J., et al. 1987. Human breast cancer: a correlation of relapse and survival with amplification of the HER-2/Neu oncogene. Science 235: 177-182.
2. Schlessinger, J., et al. 1992. Growth factor signalling by receptor tyrosine kinases. Neuron 9: 383-391.
3. Margolis, B. 1992. Proteins with SH2 domains: transducers in the tyrosine kinase signalling pathway. Cell Growth Differ. 3: 73-80.
4. 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.
5. Fantl, W.J., et al. 1993. Signalling by receptor tyrosine kinases. Annu. Rev. Biochem. 62: 453-481.
6. Pawson, T., et al. 1993. SH2 and SH3 domains. Curr. Biol. 3: 434-442.
7. Stein, D., et al. 1994. The SH2 domain protein GRB-7 is co-amplified, overexpressed and in a tight complex with HER2 in breast cancer. EMBO J. 13: 1331-1340.

CHROMOSOMAL LOCATION

Genetic locus: GRB7 (human) mapping to 17q12.

SOURCE

GRB7 (B-9) is a mouse monoclonal antibody raised against amino acids 1-70 of GRB7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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

GRB7 (B-9) is recommended for detection of GRB7 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 GRB7 siRNA (h): sc-35510, GRB7 shRNA Plasmid (h): sc-35510-SH and GRB7 shRNA (h) Lentiviral Particles: sc-35510-V.

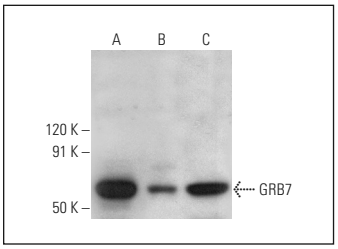
Molecular Weight of GRB7: 65 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, Hep G2 cell lysate: sc-2227 or MDA-MB-231 cell lysate: sc-2232.

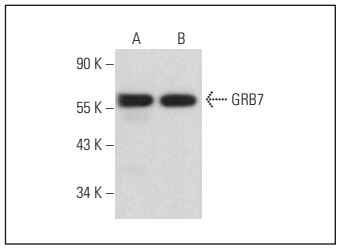
RECOMMENDED SUPPORT REAGENTS

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



GRB7 (B-9): sc-373982. Western blot analysis of GRB7 expression in Hep G2 (**A**), MDA-MB-231 (**B**) and ZR-75-1 (**C**) whole cell lysates.



GRB7 (B-9): sc-373982. Western blot analysis of GRB7 expression in JAR (**A**) and MCF7 (**B**) whole cell lysates.

PROTOCOLS

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