

# GRB7 (A-12): sc-376069

## 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 17q12 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

GRB7 (A-12) is a mouse monoclonal antibody raised against amino acids 1-70 of GRB7 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRB7 (A-12) is available conjugated to agarose (sc-376069 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376069 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376069 PE), fluorescein (sc-376069 FITC), Alexa Fluor® 488 (sc-376069 AF488), Alexa Fluor® 546 (sc-376069 AF546), Alexa Fluor® 594 (sc-376069 AF594) or Alexa Fluor® 647 (sc-376069 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376069 AF680) or Alexa Fluor® 790 (sc-376069 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

GRB7 (A-12) 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), 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 GRB7 siRNA (h): sc-35510, GRB7 shRNA Plasmid (h): sc-35510-SH and GRB7 shRNA (h) Lentiviral Particles: sc-35510-V.

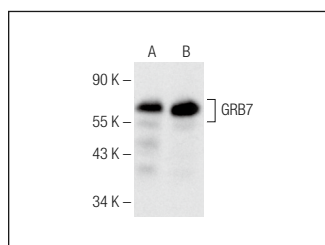
Molecular Weight of GRB7: 65 kDa.

Positive Controls: A-431 + EGF whole cell lysate: sc-2202 or Hep G2 cell lysate: sc-2227.

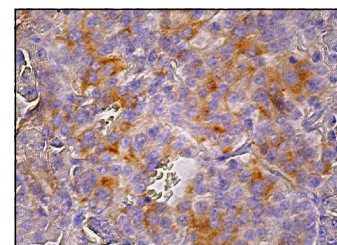
## RECOMMENDED SUPPORT REAGENTS

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



GRB7 (A-12): sc-376069. Western blot analysis of GRB7 expression in EGF treated A-431 (A) and Hep G2 (B) whole cell lysates.



GRB7 (A-12): sc-376069. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans.

## SELECT PRODUCT CITATIONS

- Krisenko, M.O., et al. 2015. Syk is recruited to stress granules and promotes their clearance through autophagy. *J. Biol. Chem.* 290: 27803-27815.
- Vaishnavi, A., et al. 2017. EGFR mediates responses to small-molecule drugs targeting oncogenic fusion kinases. *Cancer Res.* 77: 3551-3563.
- Ling, Y., et al. 2022. circCDYL2 promotes trastuzumab resistance via sustaining HER2 downstream signaling in breast cancer. *Mol. Cancer* 21: 8.
- Rey-Vargas, L., et al. 2022. Association of genetic ancestry with HER2, GRB7 AND estrogen receptor expression among Colombian women with breast cancer. *Front. Oncol.* 12: 989761.
- Rojhannezhad, M., et al. 2023. Functional analysis of a putative HER2-associated expressed enhancer, Her2-Enhancer1, in breast cancer cells. *Sci. Rep.* 13: 19516.

## RESEARCH USE

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

## PROTOCOLS

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA