Human GRB2 (SH2 Domain) Antibody

Monoclonal Mouse IgG_{2B} Clone # 669604

Catalog Number: MAB38461

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GRB2 (SH2 Domain) in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) GRAP2 (SH2 domain; aa 58-149), rhGRB7 (aa 130-274), or rhGRB14 (SH2 domain; aa 439-535) is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 669604
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human GRB2 (SH2 Domain) Trp60-Glu152 Accession # P62993
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

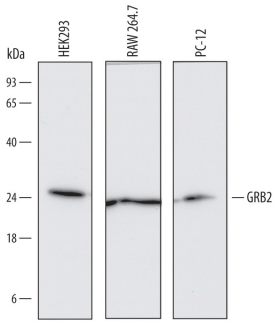
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

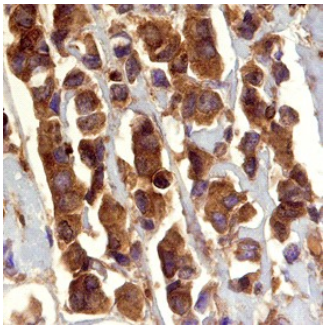
DATA

Western Blot



Detection of Human, Mouse, and Rat GRB2 by Western Blot. Western blot shows lysates of HEK293 human embryonic kidney cell line, RAW 264.7 mouse monocyte/macrophage cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF Membrane was probed with 1 µg/mL of Human GRB2 (SH2 Domain) Monoclonal Antibody (Catalog # MAB38461) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for GRB2 at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



GRB2 in Human Breast Cancer Tissue. GRB2 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Human GRB2 (SH2 Domain) Monoclonal Antibody (Catalog # MAB38461) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to stromal and epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

GRB2 (growth factor receptor-bound 2; also Ash) is a ubiquitously-expressed, 27 kDa member of the GRB2/sem-5 family of adaptor molecules. It serves as a linker for many intracellular proteins. Upon BCR ligation, LAB is phosphorylated, binds to GRB2, which subsequently recruits signaling factors. Upon InsR ligation, GRB2 binds to phosphorylated IRS-1, and serves as a linker to ras-activation. Human GRB2 is 217 amino acids (aa) in length. It contains one N-terminal SH3 domain (aa 3-54), a central SH2 domain (aa 60-152), and a C-terminal SH3 domain (aa 160-212). SH2 domains bind phosphotyrosine motifs; SH3 domains bind proline-rich regions. There is one splice form that shows a deletion of aa 60-100. This removes the SH2 domain and initiates apoptosis. Human GRB2 is over 99% aa identical to mouse and dog GRB2.

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