

## DESCRIPTION

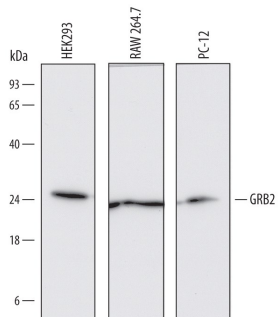
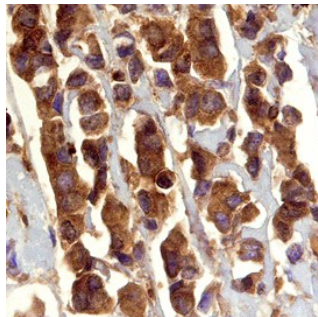
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human GRB2 (SH2 Domain) in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) GRAP2 (SH2 domain; aa 58-149), rhGRB7 (aa 130-274), or rhGRB14 (SH2 domain; aa 439-535) is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 669604
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human GRB2 (SH2 Domain) Trp60-Glu152 Accession # P62993
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human, Mouse, and Rat GRB2 by Western Blot.</b> 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 <i>Immunoblot Buffer Group 1</i>.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>GRB2 in Human Breast Cancer Tissue.</b> 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 &amp; Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to stromal and epithelial cells. View our protocol for <i>Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</i>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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.