

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse, and rat GRP75.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human GRP75 Glu542-Gln679 Accession # P38646
<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 either lyophilized or as a 0.2 µm filtered solution in PBS.

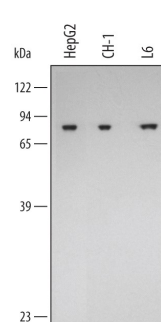
## APPLICATIONS

**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
<b>Western Blot</b>	0.5 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

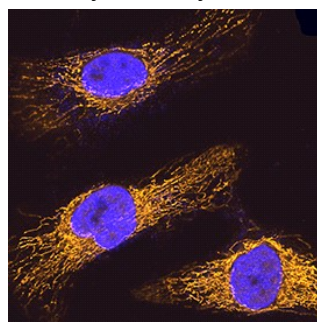
## DATA

### Western Blot



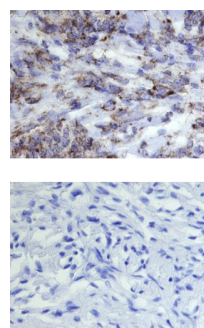
**Detection of Human/Mouse/Rat GRP75/HSPA9B by Western Blot.** Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line, CH-1 mouse B cell lymphoma cell line, and L6 rat myoblast cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human/Mouse/Rat GRP75/HSPA9B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3584) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for GRP75/HSPA9B at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 2](#).

### Immunocytochemistry



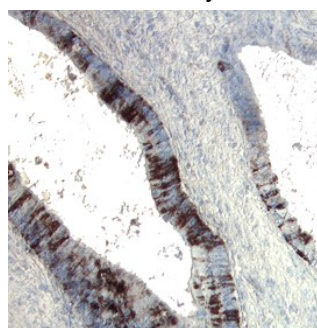
**GRP75/HSPA9B in HeLa Human Cell Line.** GRP75/HSPA9B was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Goat Anti-Human/Mouse/Rat GRP75/HSPA9B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3584) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (yellow; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to mitochondria. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Immunohistochemistry



**GRP75/HSPA9B in Human Meningioma.** GRP75/HSPA9B was detected in immersion fixed paraffin-embedded sections of human meningioma using 15 µg/mL Goat Anti-Human/Mouse/Rat GRP75/HSPA9B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3584) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Immunohistochemistry



**GRP75/HSPA9B in Human Colon Cancer Tissue.** GRP75/HSPA9B was detected in immersion fixed paraffin-embedded sections of human colon cancer tissue using Goat Anti-Human/Mouse/Rat GRP75/HSPA9B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3584) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the plasma membrane of epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<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

The 70 kDa heat shock proteins (HSP70s) are a highly conserved family of stress response proteins. The HSP70 family of proteins contains both heat/stress inducible and constitutively expressed members known as heat shock cognate proteins. Glucose Regulated 75 kDa Protein (GRP75, also known as HSPA9B, mitochondrial HSP70, and mortalin-2) is a 679 amino acid (aa) heat shock cognate protein. Many HSPs function as molecular chaperones, facilitating the folding of other cellular proteins. GRP75 is a mitochondrial protein involved in protein translocation into the mitochondria. Proteins crossing the mitochondrial membrane require unfolding before entering translocation pores in the mitochondrial outer membrane. GRP75 together with other inner membrane proteins of the mitochondria mediate this process. GRP75 also plays a role in the control of cell cycle progression.