

DESCRIPTION	
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat GRP75/HSPA9B in Western blots. In Western blots, no cross-reactivity with recombinant human HSPA1A (HSP70), HSPA2, HSPA6, HSPA8, or GRP78 is observed.
Source	Monoclonal Mouse IgG ₃ Clone # 419612
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human GRP75/HSPA9B Glu542-Gln679 Accession # P38646
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 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	0.25 µg/mL	See Below
Simple Western	2.5 µg/mL	See Below


DATA

Western Blot

Detection of Human/Mouse/Rat GRP75/HSPA9B by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line, NIH-3T3 mouse embryonic fibroblast cell line, and L6 rat myoblast cell line. PVDF membrane was probed with 0.25 µg/mL of Mouse Anti-Human/Mouse/Rat GRP75/HSPA9B Monoclonal Antibody (Catalog # MAB3584) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). 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.

Simple Western

Detection of Human and Mouse GRP75/HSPA9B by Simple Western™. Simple Western lane view shows lysates of Jurkat human acute T cell leukemia cell line and NIH-3T3 mouse embryonic fibroblast cell line, loaded at 0.2 mg/mL. A specific band was detected for GRP75/HSPA9B at approximately 70 kDa (as indicated) using 2.5 µg/mL of Mouse Anti-Human/Mouse/Rat GRP75/HSPA9B Monoclonal Antibody (Catalog # MAB3584). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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. <ul style="list-style-type: none"> ● 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

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.