

Human gp96/HSP90B1 Antibody

Monoclonal Mouse IgG_{2A} Clone # 816803 Catalog Number: MAB7606

DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human gp96/HSP90B1 in direct ELISA and Western Blot. Detects mouse and rat gp96/HSP90B1 in Western Blot.		
Source	Monoclonal Mouse IgG _{2A} Clone # 816803		
Purification	Protein A or G purified from hybridoma culture supernatant		
Immunogen	E. coli-derived recombinant human gp96/HSP90B1 Arg503-Arg660 Accession # P14625		
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

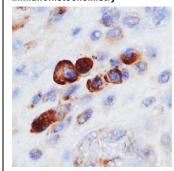
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 μg/mL	See Below
Immunohistochemistry	8-25 μg/mL	See Below
Simple Western	2 μg/mL	See Below

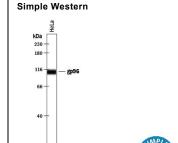
DATA

Detection of Human, Mouse, and Rat gp96/HSP90B1 by Western Blot. Western blot shows lysates of 293T human embryonic kidney cell line, HeLa human cervical epithelial carcinoma cell line, A20 mouse B cell lymphoma cell line, CH-1 mouse B cell lymphoma cell line, CH-1 mouse B cell lymphoma cell line, and L6 rat myoblast cell line. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human gp96/HSP90B1 Monoclonal Antibody (Catalog # MAB7606) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for gp96/HSP90B1 at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



gp96/HSP90B1 in Human Mesothelioma. gp96/HSP90B1 was detected in immersion fixed paraffin-embedded sections of human mesothelioma using Mouse Anti-Human gp96/HSP90B1 Monoclonal Antibody (Catalog # MAB7606) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heatinduced 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 plasma membranes and cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffinembedded Tissue Sections.



Detection of Human gp96/HSP90B1 by Simple WesternTM. Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line, loaded at 0.5 mg/mL. A specific band was detected for gp96/HSP90B1 at approximately 108 kDa (as indicated) using 2 μg/mL of Mouse Anti-Human gp96/HSP90B1 Monoclonal Antibody (Catalog # MAB7606). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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 $^{\circ}$ C

- 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.

R&D SYSTEMS®



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BACKGROUND

Glycoprotein 96 (gp96; also endoplasmin, GRP-94, TRA1 and HSP90B1) is a 94-100 kDa member of the HSP 90 family of proteins. gp96 is a ubiquitously-expressed ER resident protein that is found in a preformed complex with BiP, CaBP1 and UDP-glucosyltransferase. This is a chaperone complex that binds unfolded protein substrates. When folded properly, the substrate is forwarded to calnexin-containing chaperone complexes that promote its maturation. gp96 clients are restricted and include disulfide-bonded integrins, TLRs, LDLR and CD180. Within the complex, gp96 exists as a disulfide-linked homodimer that may form higher-order oligomers. gp96 also appears on the cell surface and may serve as a receptor for bacteria. Mature human gp96 is a 782 amino acid (aa) membrane-associated protein (aa 22-803). It is not a transmembrane protein but utilizes an ER retention signal (aa 800-803) to interact with the ER membrane. The molecule possesses a HATPase-C like region (aa 98-219) plus multiple ATP binding and two utilized phosphorylation sites. Over aa 503-660, human gp96 shares 98% aa sequence identity with mouse gp96.

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