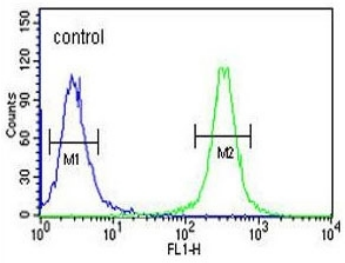
HSP90B1 Antibody / GRP94 Polyclonal Antibody (F54810)

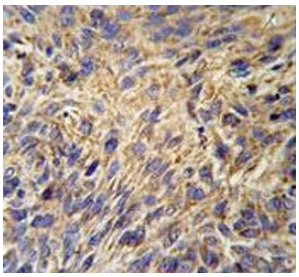
Catalog No.	Formulation	Size
F54810-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54810-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

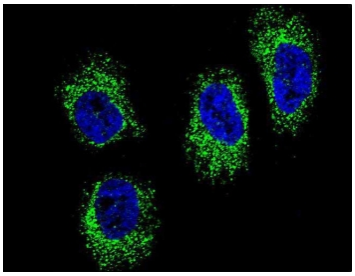
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P14625
Localization	Cytoplasmic
Applications	Immunofluorescence: 1:10-1:50 Flow cytometry: 1:10-1:50 (1x10e6 cells) Immunohistochemistry (FFPE): 1:50-1:100 Western blot: 1:500-1:1000
Limitations	This HSP90B1 Antibody / GRP94 Polyclonal Antibody is available for research use only.



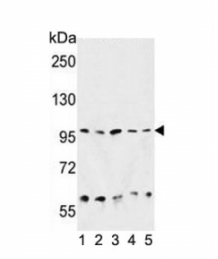
HSP90B1 Antibody FACS Staining of Human K562 Cells. Flow cytometry analysis of human K562 cells using GRP94 Polyclonal Antibody. The green histogram represents HSP90B1 antibody staining, while the blue histogram represents the isotype control. A pronounced rightward fluorescence shift is observed in the antibody-stained population relative to the control.



HSP90B1 Antibody IHC Staining in Human Lung Carcinoma Tissue. Immunohistochemical analysis of FFPE human lung carcinoma tissue using GRP94 Polyclonal Antibody. Brown DAB staining is visible throughout the carcinoma tissue, predominantly in the cytoplasm of tumor cells, with hematoxylin nuclear counterstaining. Heat-mediated antigen retrieval was performed by steaming sections in citrate buffer (pH 6.0) for 20 minutes, followed by cooling before staining.



HSP90B1 Antibody IF Staining in Human NCI-H460 Cells. Immunofluorescence staining of human NCI-H460 cells using GRP94 Polyclonal Antibody. HSP90B1 is visualized in green, with DAPI nuclear counterstaining in blue. Green fluorescence is concentrated in the perinuclear cytoplasm and extends throughout the cytoplasmic compartment, consistent with the endoplasmic reticulum localization of GRP94.



HSP90B1 Antibody Western Blot Analysis of Human, Mouse, and Hamster Samples. Western blot analysis using GRP94 Polyclonal Antibody. Lane 1: human HepG2 cell lysate; lane 2: mouse liver lysate; lane 3: hamster CHO cell lysate; lane 4: human K562 cell lysate; lane 5: human HeLa cell lysate. An immunoreactive band is detected near 95 kDa in all five samples, consistent with the predicted molecular weight of HSP90B1/GRP94. An additional band near 60 kDa is also observed across the samples.

Description

HSP90B1 Antibody / GRP94 Polyclonal Antibody targets heat shock protein 90 beta family member 1 (HSP90B1), also known as glucose-regulated protein 94 (GRP94), gp96, and endoplasmin. HSP90B1 is an ATP-dependent molecular chaperone located primarily within the endoplasmic reticulum (ER), where it facilitates the folding and maturation of selected secretory and membrane proteins. Unlike cytosolic HSP90 family members, HSP90B1 operates within the specialized environment of the ER and contributes to the quality control mechanisms required for normal protein trafficking and cellular homeostasis.

HSP90B1 is essential for the maturation of several proteins involved in immune recognition, cell adhesion, and growth regulation. Its established clients include Toll-like receptors, multiple integrin subunits, and insulin-like growth factors. Through ATP-dependent conformational changes, HSP90B1 assists these proteins in achieving functional structures before they proceed through the secretory pathway. The ER cochaperone CNPY3 participates in Toll-like receptor maturation alongside HSP90B1, illustrating how specialized accessory proteins contribute to substrate recognition and folding.

HSP90B1 expression is regulated by the unfolded protein response (UPR), which is activated when improperly folded proteins accumulate within the ER. This adaptive signaling system increases chaperone capacity, modifies protein synthesis, and promotes clearance of proteins that cannot be successfully folded. HSP90B1 works alongside other ER-resident proteins, including BiP/GRP78 and protein disulfide isomerases, to maintain proteostasis. Persistent ER stress can disrupt these protective mechanisms and contribute to inflammation, metabolic dysfunction, and apoptosis.

Beyond intracellular protein folding, HSP90B1 has important functions in immunity and disease. Its requirement for Toll-like receptor maturation connects ER quality control directly to innate immune signaling, while its role in integrin assembly influences cellular adhesion and migration. Altered HSP90B1 expression has been documented in several cancers and may support tumor cell adaptation to proteotoxic stress. Research involving HSP90B1 Antibody contributes to understanding how ER chaperone activity coordinates protein maturation, immune receptor function, and cellular

responses to physiological and pathological stress.

For researchers interested in a published monoclonal reagent targeting the same protein, explore our GRP94 Antibody 9G10.F8.2

Application Notes

The stated application concentrations are suggested starting points. Titration of the HSP90B1 Antibody / GRP94 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 16-43 from the human protein was used as the immunogen for the HSP90B1 antibody.

Storage

Aliquot the HSP90B1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

HSP90B1 antibody, GRP94 antibody, gp96 antibody, Endoplasmin antibody, Glucose-regulated protein 94 antibody, Glucose-regulated protein 96 antibody, Heat shock protein 90 beta family member 1 antibody, HSP90 beta 1 antibody, GRP96 antibody, Tumor rejection antigen gp96 antibody

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