

Product Datasheet

GRP94 Antibody: HRP (orb146771)

Description

Rat monoclonal to GRP94 (HRP). Grp94 (glucose regulated protein 94, gp96) is a constitutively expressed endoplasmic reticulum (ER) luminal protein that is up-regulated in response to cellular stress such as heat shock, oxidative stress or glucose depletion. Grp94 is thought to play a role in protein translocation to the ER, in their subsequent folding and assembly, and in regulating protein secretion. Grp94 also plays a role in antigen presentation by accessing the endogenous pathway and eliciting specific CTL responses to chaperone bound peptides via MHC class I pathway Grp94 is a member of the Hsp90 family of stress proteins and shares sequence homology with its cytosolic equivalent, Hsp90. Both Hsp90 and Grp94 are calcium binding proteins. Despite sharing 50% sequence homology over its N domains and complete conservation in its ligand binding domains with Hsp90, Grp94 and Hsp90 differ in their interactions with regulatory ligands as Grp94 has weak ATP binding and hydrolysis activity. Grp94 exists as a homodimer and the two subunits interact at two distinct intermolecular sites, C terminal dimerization domains and the N-terminal interacts with the middle domain of opposing subunits. Grp94 contains a carboxy terminal KDEL (Lys-Asp-Glu-Leu) sequence which is believed to aid in its retention in the ER..

Species/Host

Rat

Reactivity

Bovine, Canine, Equine, Frog, Gallus, Guinea pig, Hamster, Human, Monkey, Mouse, Porcine, Rabbit, Rat, Sheep

Conjugation

HRP

Tested Applications

ELISA, IHC, WB

Immunogen

Purified Grp94 isolated from chicken oviducts

Target

GRP94

Preservatives

73.64mM Carbonate, 54.55mM Ethanolamine, 45.45mM Cyanoborohydride, 18.18mM Sodium Hydroxide and 0.23mM Citrate in dH2O

Concentration

1 mg/ml

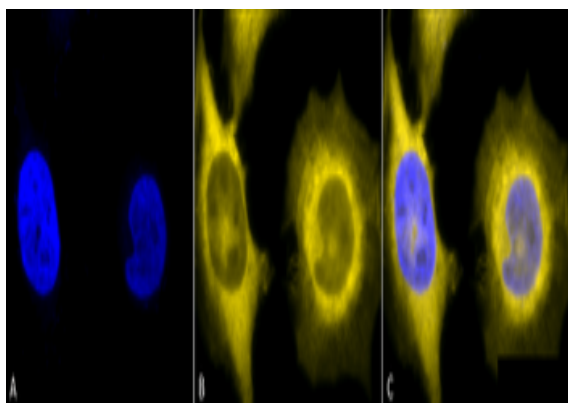
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Storage	Conjugated antibodies should be stored according to the product label
Note	For research use only
Application notes	0.5 µg/ml of SMC-105 was sufficient for detection of Grp94 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-rat IgG:HRP as the secondary antibody.
Isotype	IgG2a
Clonality	Monoclonal
Clone Number	9G10
MW	98kDa
Uniprot ID	P14625
NCBI	NP_003290.1
Entrez	7184
Dilution Range	WB (1:2000), ICC/IF (1:100)
Expiration Date	12 months from date of receipt.



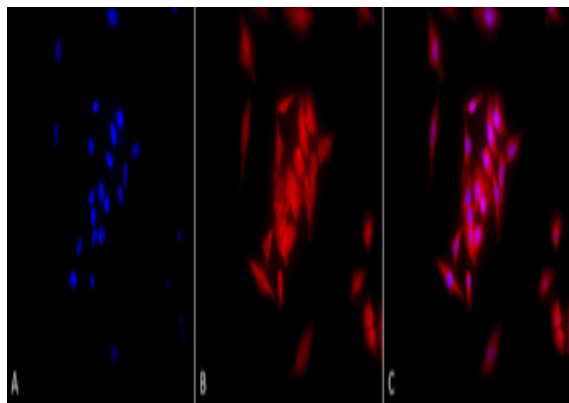
Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10. Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rat (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP94 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.

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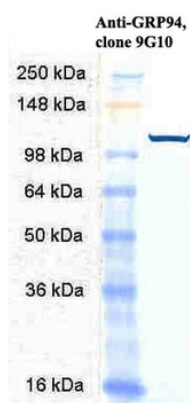
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Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10. Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: APC Goat Anti-Rat (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP94 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



Western Blot analysis of Human Cervical cancer cell line (HeLa) lysate showing detection of GRP94 protein using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody at 1:1000. Secondary Antibody: HRP Goat Anti-Rat.

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