



Anti-GRP94 Antibody [9G10]

Rat Anti-Chicken GRP94
Monoclonal IgG2a
Catalog No. SMC-105



Product Name	GRP94 Antibody
Description	Rat Anti-Chicken GRP94 Monoclonal IgG2a
Species Reactivity	African clawed frog (<i>Xenopus laevis</i>), Bovine, Chicken, Dog, Guinea Pig (<i>Cavia porcellus</i>), Hamster, Horse, Human, Monkey, Mouse, Pig, Rabbit, Rat, Sheep
Applications	WB, ICC/IF, IP, FCM
Antibody Dilution	WB (1:2000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.
Host Species	Rat
Immunogen Species	Chicken
Immunogen	Purified Grp94 isolated from chicken oviducts
Concentration	1 mg/ml
Conjugates	APC, ATTO 390, ATTO 488, ATTO 594, Biotin, FITC, HRP, PerCP, RPE, Unconjugated
Field Of Use	Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

Properties

Storage Buffer	PBS pH7.2, 50% glycerol, 0.09% sodium azide *Storage buffer may change when conjugated
Storage Temperature	-20°C, Conjugated antibodies should be stored according to the product label
Shipping Temperature	Blue Ice or 4°C
Purification	Protein G Purified
Clonality	Monoclonal
Clone Number	9G10
Isotype	IgG2a
Specificity	Detects ~98kDa. Does not detect human HSP90, Grp74, or GrpE from E.coli.
Cite This Product	GRP94 Antibody (StressMarq Biosciences Victoria, BC CANADA, Catalog# SMC-105, RRID: AB_2233345)
Certificate Of Analysis	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 Goa anti-rat IgG:HRP as the secondary antibody.

Biological Description

Alternative Names	HSP90B1, GP96, TRA1, ECGP, 94 kDa glucose regulated protein, 94 kDa glucose-regulated protein, Endoplasmin, Endothelial cell (HBMEC) glycoprotein, ENPL_HUMAN, Glucose regulated protein 94kDa, gp96, gp96 homolog, GRP 94, GRP-94, Heat shock protein 90 kDa beta member 1, heat shock protein 90kDa beta (Grp94), member 1, Heat shock protein, 90 kDa, beta, 1, Stress inducible tumor rejection antigen GP96, tumor rejection antigen (gp96) 1, Tumor rejection antigen 1, Tumor rejection antigen gp96, Tumor rejection antigen-1 (gp96)
Research Areas	Cancer, Cancer Metabolism, Cell Signaling, ER Proteins, Heat Shock, Hypoxia, Metabolism, Metabolism processes, Organelle Markers, Protein Trafficking, Response to Hypoxia, Tags and Cell Markers
Cellular Localization	Endoplasmic Reticulum, Endoplasmic reticulum lumen, Melanosome
Accession Number	NP_003290.1
Gene ID	7184
Swiss Prot	P14625

Scientific Background

GRP94 (also known as gp96) is a constitutively expressed ER-resident chaperone and a member of the HSP90 family. It is upregulated in response to cellular stressors such as heat shock, oxidative damage, and glucose deprivation—conditions frequently observed in neurodegenerative diseases.

Functionally, GRP94 supports protein translocation, folding, and quality control within the ER. It also plays a key role in immune regulation by facilitating antigen presentation through the MHC class I pathway, linking ER stress to immune responses.

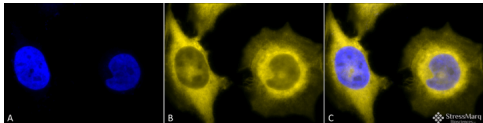
In the nervous system, GRP94 contributes to proteostasis and immune surveillance, both of which are disrupted in diseases like Alzheimer's and Parkinson's. Structurally, GRP94 forms homodimers and contains a KDEL sequence that ensures ER retention. Despite its homology with cytosolic HSP90, GRP94 exhibits distinct ATP-binding and hydrolysis characteristics, making it a unique therapeutic target.

Its dual role in stress adaptation and immune signaling positions GRP94 as a valuable biomarker and potential intervention point in neurodegenerative disease research.

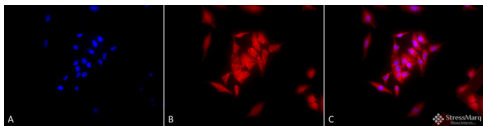
References

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Product Images



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10 (SMC-105). Tissue: Heat Shocked cervical cancer cells (HeLa) Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody (SMC-105) 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.



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10 (SMC-105). Tissue: Heat Shocked cervical cancer cells (HeLa) Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody (SMC-105) 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.

