Datasheet for ABIN361653

anti-GRP94 antibody

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Overview

Quantity:	50 µg
Target:	GRP94 (HSP90B1)
Reactivity:	Chicken
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This GRP94 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Flow Cytometry (FACS), Immunoprecipitation (IP), Immunocytochemistry (ICC)

Product Details

Immunogen:	Purified Grp94 isolated from chicken oviducts
Clone:	9G10
Isotype:	IgG2a
Specificity:	Detects ~98 kDa. Does not detect human HSP90, Grp74, or GrpE from E.coli.
Cross-Reactivity:	Chicken, Cow, Dog, Guinea Pig, Hamster, Horse, Human, Monkey, Mouse, Pig, Rabbit, Rat, Sheep, Xenopus laevis
Purification:	Protein G Purified

Target Details

Target:	GRP94 (HSP90B1)

Target Details

Alternative Name:	GRP94 (HSP90B1 Products)
Background:	Grp94 (glucose regulated protein 94, gp96) is a constitutively expressed endoplasmic reticulum (ER) lumenal 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 (1). 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 (2). Grp94 is a member of the HSP90 family of stress proteins and shares sequence homology with its cytosolic equivalent, HSP90 (3). Both HSP90 and Grp94 are calcium binding proteins (4). 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 (5). 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 (6). Grp94 contains a carboxy terminal KDEL (Lys-Asp-Glu-Leu) sequence which is believed to aid in its retention in the ER (7).
Gene ID:	7184
NCBI Accession:	NP_003290
UniProt:	P14625
Pathways:	Thyroid Hormone Synthesis, Activation of Innate immune Response, ER-Nucleus Signaling, Toll-Like Receptors Cascades

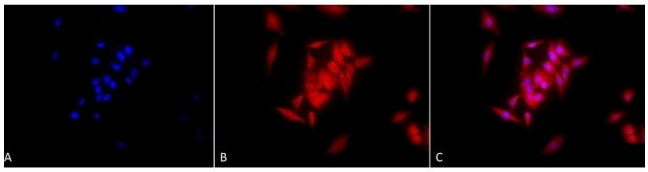
Application Details

Application Notes:	• WB (1:2000) • ICC/IF (1:100) • optimal dilutions for assays should be determined by the user.
Comment:	0.5 µg/ml of ABIN361653 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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.2, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Images



Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10 (ABIN361653 and ABIN361654). Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody (ABIN361653 and ABIN361654) 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.

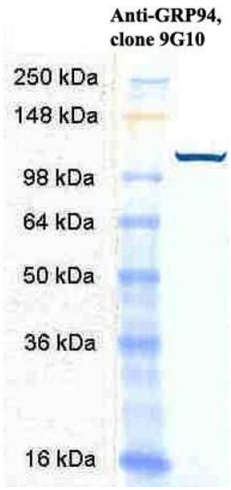
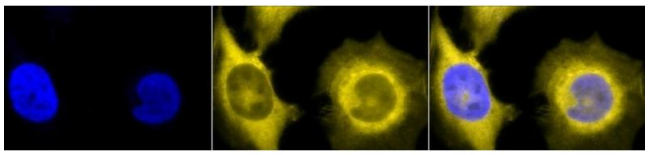


Image 2. GRP94 (9G10), heat shock Hela.



Immunocytochemistry

Image 3. Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10 (ABIN361653 and ABIN361654). Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody (ABIN361653 and ABIN361654) 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.