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Datasheet for 200-501-F39

GRP94 Antibody

Overview

Description:	Anti-GRP94 (RAT) Monoclonal Antibody - 200-501-F39
Item No.:	200-501-F39
Size:	200 µg
Applications:	FC, IF, IP, WB
Reactivity:	Human, Mouse, Rat, Bovine, Chicken, Dog, Guinea Pig, Hamster, Horse, Monkey, Pig, Rabbit, Sheep, Xenopus
Host Species:	Rat

Product Details

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. 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
Synonyms:	HSP90B1, GP96, TRA1, ECGP, Endoplasmin, 94 kDa glucose-regulated protein, GRP-94, Heat shock protein 90 kDa beta member 1, Tumor rejection antigen 1, gp96 homolog
Host Species:	Rat
Clonality:	Monoclonal
Clone ID:	9G10
Format:	IgG2a

Target Details

Gene Name:	HSP90B1
Reactivity:	Human, Mouse, Rat, Bovine, Chicken, Dog, Guinea Pig, Hamster, Horse, Monkey, Pig, Rabbit, Sheep, Xenopus
Immunogen Type:	Other
Immunogen:	Grp94 Antibody was produced in rat by repeated immunizations with purified Grp94 isolated from chicken oviducts.
Purity/Specificity:	Anti-GRP94 Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with GRP94 from Human, Mouse, Rat, Bovine, Canine, Chicken, Guinea pig, Hamster, Horse, Monkey, Pig, Rabbit, Sheep, Xenopus sources based on 100% homology with the immunizing sequence. Does not detect human Hsp90, Grp74, or GrpE from E.coli. Cross-reactivity with GRP94 from other sources has not been determined. Heat Shock research.
Relevant Links:	• NCBI - NP_989620.1 • GeneID - 374163 • UniProtKB - P08110

Application Details

Tested Applications:	FC, IF, IP, WB
Application Note:	Anti-Grp94 Antibody is tested for WB, IF, IP, and Flow cytometry. Expect a band approximately 98kDa protein corresponding to the molecular mass of Grp94 on SDS PAGE immunoblots. This monoclonal antibody reacts with purified Grp94. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
FC:	User Optimized
IP:	User Optimized
WB:	0.5µg/ml

Formulation

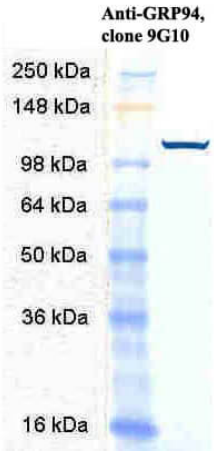
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Western Blot of rat anti-Grp94 antibody. Lane 1: molecular weight. Lane 2: HeLa Lysates. Load: 35 µg per lane. Primary antibody: Grp94 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rat secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 92.5 kDa, ~110 kDa for Grp94. Other band(s): none.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.