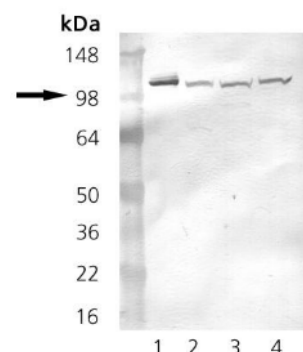


Grp94 Monoclonal Antibody (9G10)

Product Specifications	
Catalog Number:	SPA-850
Host:	Rat
Isotype:	IgG _{2a}
Species Reactivity:	Human, monkey, mouse, rat, rabbit, hamster, guinea pig, canine, bovine, sheep, pig, chicken, and <i>Xenopus</i>
Applications: <i>The optimal dilution for a specific application must be determined by the investigator</i>	WB ^{7,13-16} : 1:1000 (Colorimetric) IP ^{8,9-12} : 1:100 Flow : 1:100
Predicted m.w:	~98 kDa
Concentration:	See product label
Purification:	Protein G Affinity
Format:	PBS, pH 7.2, 0.09% azide, 50% glycerol
Storage: <i>Shipping conditions may differ from the recommended storage temperature</i>	Store at -20°C
Immunogen:	Native chicken Grp94 protein
Related Products:	
SPP-766	Grp94 Recombinant Protein
LYC-HL100	HeLa Cell Lysate
SAB-200	Rabbit anti-Rat IgG Polyclonal Antibody, HRP Conjugate
SPA-851	Grp94 Polyclonal Antibody
SPA-827	KDEL (Grp78, Grp94) Monoclonal Antibody (10C3)

Background:

Glucose-regulated protein 94 (Grp94, gp96), an abundant resident endoplasmic reticulum (ER) luminal stress protein, belongs to the Hsp90 family of molecular chaperones along with cytosolic Hsp90. Grp94 and such other resident soluble proteins of the ER as the Ca(2+) binding protein subfamily (CaBP, CaBPI, CaBP2 and calreticulin) possess the COOH-terminal tetrapeptide Lys-Asp-Glu-Leu (KDEL), a sorting signal considered responsible for the retention of these proteins in the pre-Golgi compartments¹. Stress conditions such as glucose starvation and heat shock which promote protein misfolding or unfolding² increase Grp94 expression. In addition to a homeostatic role in protein folding and assembly, Grp94 can function in the intracellular trafficking of peptides from the extracellular space to the MHC class I antigen processing pathway of antigen presentation cells^{3,4}. Grp94 and Hsp90 share high sequence identity and apparently identical adenosine nucleotide-dependent modes of regulation, although previous data suggests that Hsp90 and Grp94 may differ in their nucleotide binding properties. The N-terminal domain of eukaryotic Hsp90 proteins contains a conserved adenosine nucleotide binding pocket which also serves as the binding site for the Hsp90 inhibitors geldanamycin and radicicol. However, the molecular basis for adenosine nucleotide-dependent regulation of Grp94 remains unclear. Data supports a ligand dependent regulation of Grp94 function, and suggests a model whereby Grp94 function is regulated through a ligand-dependent conversion of Grp94 from an inactive to an active conformation^{5,6}.



Western blot analysis of 100 ng of Grp94 Recombinant Protein (SPP-766) (1), 20 µg HeLa cell lysate (2), 20 µg mouse liver lysate (3), and 20 µg Vero cell lysate (4), probed with Grp94 Rat Monoclonal Antibody (9G10) at 1:1000

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