

Grp94 Monoclonal Antibody (9G10), DyLight™ 488 Conjugate

New Conjugate Forms
Now Available!
DyLight™ 488 & PE

Product Specifications

Catalog Number:	SPA-850-488
Source:	Rat
Isotype:	IgG _{2a}
Species Reactivity:	Human, monkey, mouse, rat, rabbit, hamster, guinea pig, canine, bovine, sheep, pig, chicken, and <i>Xenopus</i> <i>Other species not tested.</i>
Applications:	Flow: 1:20 <i>Other applications not tested. The optimal dilution for a specific application must be determined by the investigator</i>
Predicted M.W.:	~98 kDa
Concentration:	See product label
Purification:	Protein G Affinity
Format:	PBS, pH 7.2, 0.09% azide
Storage:	-20 °C <i>Shipping conditions may differ from the recommended storage temperature</i>
Immunogen:	Native chicken Grp94 protein
Related Products:	
	SPP-766 Grp94 Recombinant Protein
NEW!	SAB-601-488 IgG _{2a} DyLight™ 488 Isotype Control
NEW!	SPA-850PE Grp94 mAb PE Conjugate
	SPA-850 Grp94 Monoclonal Antibody (9G10)
	SPA-851 Grp94 Polyclonal Antibody
	SPA-827 KDEL (Grp78, Grp94) Monoclonal Antibody (10C3)

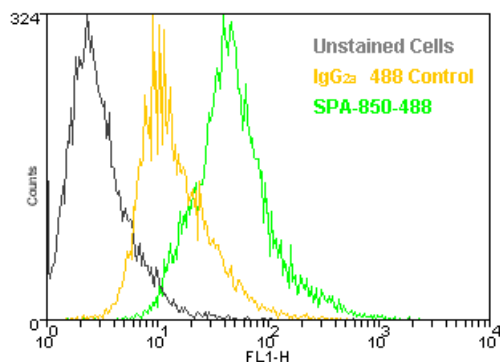
Background:

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 Ca²⁺ binding protein subfamily (CaBP, CaBPI, CaBP2 and calreticulin) possess the C-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 unfolding increase Grp94 expression². 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 nucleotidedependent 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}.

References:

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- Nicchitta, C.V. (1998) Curr Opin Immunol. **10**, 103-109.
- Srivastava, P.K., et al. (1998) Immunity **8**, 657-665.
- Wassenberg, J.J., et al. (2000) J Biol Chem. **275**, 22806-22814.
- Rosser, M.F.N. and Nicchitta, C.V. (2000) J Biol Chem. **275**, 22798-22805.

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Flow Cytometry Analysis: 10⁶ Jurkat cells stained using Grp94 Monoclonal Antibody (9G10), DyLight™ 488 Conjugate (SPA-850-488) at a concentration of 50 µg/mL.

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5777 Hines Drive • Ann Arbor, MI • 48108 | Tel: 800-833-8651 or 800-668-6113 | Fax: 734-668-2793
www.assaydesigns.com | orders@assaydesigns.com | technical@assaydesigns.com