

Grp94 Polyclonal Antibody

Product Specifications

Catalog Number:	SPA-851														
Source:	Rabbit														
Species Reactivity:	Mouse, rat, bovine and human <i>(human reactivity weak compared to other species)</i> Other species not tested														
Applications:	WB: 1:1000 IP: 1:80 Other applications not tested. <i>The optimal dilution for a specific application must be determined by the investigator.</i>														
Predicted M.W.:	~ 94 kDa														
Concentration:	See product label														
Purification:	Protein A Affinity														
Format:	PBS, pH 7.2, 0.09% azide, 50% glycerol														
Storage:	-20 °C <i>Shipping conditions may differ from the recommended storage temperature</i>														
Immunogen:	Synthetic peptide derived from sequence near the carboxy-terminus of mouse Grp94														
Related Products:	<table border="0"> <tr> <td>SPP-766</td> <td>Grp94 Recombinant Protein</td> </tr> <tr> <td>LYT-RM100</td> <td>Rat Liver Microsome Extract</td> </tr> <tr> <td>LYT-MM100</td> <td>Mouse Liver Microsome Extract</td> </tr> <tr> <td>SPA-850</td> <td>Grp94 Monoclonal Antibody (9G10)</td> </tr> <tr> <td>SPA-850-488</td> <td>Grp94 mAb (9G10), DyLight™ 488</td> </tr> <tr> <td>SPA-850PE</td> <td>Grp94 mAb (9G10), PE Conjugate</td> </tr> <tr> <td>960-077</td> <td>Grp94 ImmunoSet</td> </tr> </table>	SPP-766	Grp94 Recombinant Protein	LYT-RM100	Rat Liver Microsome Extract	LYT-MM100	Mouse Liver Microsome Extract	SPA-850	Grp94 Monoclonal Antibody (9G10)	SPA-850-488	Grp94 mAb (9G10), DyLight™ 488	SPA-850PE	Grp94 mAb (9G10), PE Conjugate	960-077	Grp94 ImmunoSet
SPP-766	Grp94 Recombinant Protein														
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Background:

Glucose-regulated protein 94, also known as Grp94 or gp96, is an abundant resident endoplasmic reticulum (ER) luminal stress protein which, together with cytosolic Hsp90, belongs to the Hsp90 family of molecular chaperones. Grp94 and other resident soluble proteins of the ER, such as members of the Ca²⁺ binding protein subfamily (CaBP), CaBPI and CaBP2 as well as calreticulin, possess the COOH-terminal tetrapeptide Lys-Asp-Glu-Leu (KDEL), a sorting signal believed to result in the retention of these proteins in the pre-Golgi compartments¹. Grp94 expression is upregulated by stress conditions, such as glucose starvation and heat shock, which promote protein misfolding or unfolding². 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 cells³⁻⁴. Grp94 and Hsp90 share high sequence identity and presumably identical adenosine nucleotide-dependent modes of regulation. Earlier 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 to be established. Recent data has identified a ligand-dependent regulation of Grp94 function and suggest a model whereby Grp94 function is regulated through a ligand-dependent conversion of Grp94 from an inactive to an active conformation⁵⁻⁶.

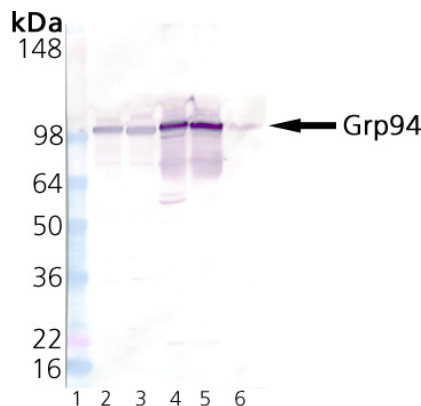
References:

1. Peter, F., et al. (1994) Crit Rev Eukaryot Gene Expr. **4**, 1-18.
2. Nicchitta, C.V. (1998) Curr Opin Immunol. **10**, 103-109.
3. Srivastava, P.K., et al. (1998) Immunity **8**, 657-665.
4. Wassenberg, J.J., et al. (2000) J Biol Chem Manuscript M001476200.
5. Rosser, M F.N., et al. (2000) J Biol Chem Manuscript M001477200.
6. Kobayashi, T., et al. (2000) Biochem Biophys Res Comm. **267**, 831-837.

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Western Blot Analysis of Grp94 pAb:

Lane 1: MW Marker, Lane 2: Rat Brain Extract (LYT-RB100), Lane 3: Mouse Brain Extract (LYT-MB100), Lane 4: Rat Liver Microsome Extract (LYT-RM100), Lane 5: Mouse Liver Microsome Extract (LYT-MM100), Lane 6: Human Liver Microsome Extract (LYT-HM100)



Assay Designs makes every effort to provide a consistent source of high quality polyclonal antibodies. However, due to variations inherent in this technology, investigators are urged to purchase sufficient quantities of a specific lot number if an identical antibody is required throughout a study.

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