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**Grp94 (D6X2Q) XP® Rabbit mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P, IF-IC	H M R Mk	Endogenous	100	Rabbit IgG	#P14625	7184

**Product Usage Information****Application**

Western Blotting  
Immunohistochemistry (Paraffin)  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:800  
1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

Grp94 (D6X2Q) XP® Rabbit mAb recognizes endogenous levels of total Grp94 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu397 of human Grp94 protein.

**Background**

Secretory proteins are synthesized on polysomes and translocated into the endoplasmic reticulum (ER). Inside ER, these proteins are often modified by disulfide bond formation, amino-linked glycosylation and folding. The ER contains a pool of molecular chaperones, including Grp94, to help ensure correct protein folding. Grp94 is a glucose-regulated protein (1) with sequence homology to Hsp90 (2). In addition to its role in helping to facilitate folding of a number of secretory proteins to their correct conformation (3), studies suggest that Grp94 derived from cancer cells also induces anti-tumor immune responses in mouse tumor models (4, 5). One way in which Grp94 promotes tumor immunogenicity is its ability to bind to and present tumor-derived peptides as antigens (6). Furthermore, Grp94 has also been shown to induce maturation of dendritic cells (7). Taken together, Grp94 functions both as a tumor-specific antigen and as an activator of antigen-presenting cells to elicit an anti-cancer immune response (8).

**Background References**

1. Lee, A.S. et al. (1981) *Proc. Natl. Acad. Sci. USA* 78, 4922-4925.
2. Sorger, P.K. and Pelham, H.R. (1987) *J. Mol. Biol.* 194, 341-344.
3. Argon, Y. and Simen, B.B. (1999) *Semin. Cell Dev. Biol.* 10, 495-505.
4. Blachere, N.E. et al. (1997) *J. Exp. Med.* 186, 1315-1322.
5. Tamura, Y. et al. (1997) *Science* 278, 117-120.
6. Schild, H. and Rammensee, H.G. (2000) *Nat. Immunol.* 1, 100-101.
7. Singh-Jasuja, H. et al. (2000) *Eur. J. Immunol.* 30, 2211-2215.
8. Nicchitta, C.V. et al. (2004) *Cell Stress Chaperones* 9, 325-331.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)  
**IF-IC:** Immunofluorescence (Immunocytochemistry)

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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