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## Grp94 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

|                           |                                |                                   |                         |                                  |                               |                                |
|---------------------------|--------------------------------|-----------------------------------|-------------------------|----------------------------------|-------------------------------|--------------------------------|
| <b>Applications:</b><br>W | <b>Reactivity:</b><br>H M R Mk | <b>Sensitivity:</b><br>Endogenous | <b>MW (kDa):</b><br>100 | <b>Source/Isotype:</b><br>Rabbit | <b>UniProt ID:</b><br>#P14625 | <b>Entrez-Gene Id:</b><br>7184 |
|---------------------------|--------------------------------|-----------------------------------|-------------------------|----------------------------------|-------------------------------|--------------------------------|

### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

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

### Specificity/Sensitivity

Grp94 Antibody detects endogenous levels of total Grp94 protein.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence surrounding Met622 of human Grp94. Antibodies are purified by protein A and peptide affinity chromatography.

### 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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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