

**IL-1 $\beta$  (D3H1Z) Rabbit mAb**

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

<b>Applications:</b> W, IHC-P	<b>Reactivity:</b> M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 17,31	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P10749	<b>Entrez-Gene Id:</b> 16176
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**Product Usage Information****Application**

Western Blotting  
Immunohistochemistry (Paraffin)

**Dilution**

1:1000  
1:50 - 1:200

**Storage**

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

**Specificity/Sensitivity**

IL-1 $\beta$  (D3H1Z) Rabbit mAb recognizes endogenous levels of total mouse IL-1 $\beta$  protein. This antibody can detect 500 pg of mature recombinant mouse IL-1 $\beta$ .

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding His124 of mouse IL-1 $\beta$  protein.

**Background**

Interleukin-1 $\beta$  (IL-1 $\beta$ ) is a proinflammatory cytokine produced predominantly by activated monocytes and epithelial cells (1). Precursor IL-1 $\beta$  is cleaved by caspase-1 and mature IL-1 $\beta$  is then secreted (1-3). Target cells include macrophages and many other cell types. Signaling by IL-1 $\beta$  involves IL-1 $\beta$  binding to IL-1 accessory protein (IL-1-AcP); the complex then binds to IL-1RI (1,2). Signaling occurs through activation of MAP kinase and NF- $\kappa$ B pathways (1,2). IL-1 $\beta$  also binds to IL-1RII, which lacks an intracellular signaling domain and thereby serves as a high affinity decoy receptor. IL-1 $\beta$  binding to IL-1RI is inhibited by the negative regulator, IL-1R antagonist (IL-1Ra). IL-1Ra binding to IL-1RI does not signal and serves to block IL-1 $\beta$  signaling. IL-1 $\beta$  plays critical roles in the acute phase response and sepsis (1-3).

**Background References**

1. Dinarello, C.A. (1996) *Blood* 87, 2095-147.
2. Allan, S.M. et al. (2005) *Nat Rev Immunol* 5, 629-40.
3. Kramer, F. et al. (2008) *Mol Immunol* 45, 2678-89.

**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 **IHC-P:** Immunohistochemistry (Paraffin)

**Cross-Reactivity Key**

**M:** Mouse

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