

**IL-1 $\beta$  (D4T2D) Rabbit mAb**

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

<b>Applications:</b> W	<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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<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	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 $-20^{\circ}\text{C}$ . Do not aliquot the antibody.	
<b>Specificity/Sensitivity</b>	IL-1 $\beta$ (D4T2D) Rabbit mAb recognizes endogenous levels of total mouse IL-1 $\beta$ protein. This antibody can detect 500 pg of mature recombinant mouse IL-1 $\beta$ .	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val175 of mouse IL-1 $\beta$ protein.	
<b>Background</b>	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).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Dinarello, C.A. (1996) <i>Blood</i> 87, 2095-147.</li> <li>2. Allan, S.M. et al. (2005) <i>Nat Rev Immunol</i> 5, 629-40.</li> <li>3. Kramer, F. et al. (2008) <i>Mol Immunol</i> 45, 2678-89.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	<b>IMPORTANT:</b> For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween $^{\circledR}$ 20 at $4^{\circ}\text{C}$ with gentle shaking, overnight.
<b>Applications Key</b>	<b>W:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>M:</b> Mouse
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