



## IL-1 $\beta$ (PTR2541) Mouse mAb

<b>Catalog No</b>	YP-mAb-17647
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human, Mouse,Rat
<b>Applications</b>	WB,ELISA
<b>Gene Name</b>	IL1B IL1F2
<b>Protein Name</b>	Interleukin-1 beta (IL-1 beta) (Catabolin)
<b>Immunogen</b>	Synthesized peptide derived from human IL-1 $\beta$
<b>Specificity</b>	This antibody detects endogenous levels of IL-1 $\beta$ at Human, Mouse,Rat
<b>Formulation</b>	PBS, pH7.4, 50% glycerol, 0.03%Proclin 300
<b>Source</b>	Mouse,monoclonal:IgG1,kappa
<b>Purification</b>	Protein G
<b>Dilution</b>	WB 1:500-2000
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	$\geq 90\%$
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	Interleukin-1 beta (IL-1 beta) (Catabolin)
<b>Calculated Molecular Weight</b>	31kD
<b>Observed Band</b>	31kD,18kD
<b>Cell Pathway</b>	Cytoplasm, cytosol . Secreted . Lysosome . Secreted, extracellular exosome . The precursor is cytosolic (PubMed:15192144). In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted (PubMed:24201029, PubMed:33377178, PubMed:33883744). Mature form is secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore (PubMed:33883744). In contrast, the precursor form is not released, due to the presence of an acidic region that is proteolytically removed by CASP1 during maturation (PubMed:33883744). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10 (PubMed:32272059) . .
<b>Tissue Specificity</b>	Expressed in activated monocytes/macrophages (at protein level).
<b>Function</b>	domain:The similarity among the IL-1 precursors suggests that the amino ends of these proteins serve some as yet undefined function.,function:Produced by activated macrophages, IL-1 stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. IL-1 proteins are involved in the inflammatory response, being identified as



endogenous pyrogens, and are reported to stimulate the release of prostaglandin and collagenase from synovial cells.,online information:Interleukin-1 entry,online information:The Singapore human mutation and polymorphism database,similarity:Belongs to the IL-1 family.,subcellular location:The lack of a specific hydrophobic segment in the precursor sequence suggests that IL-1 is released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins.,subunit:Mono

#### Background

interleukin 1 beta(IL1B) Homo sapiens The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2. [provided by RefSeq, Jul 2008],

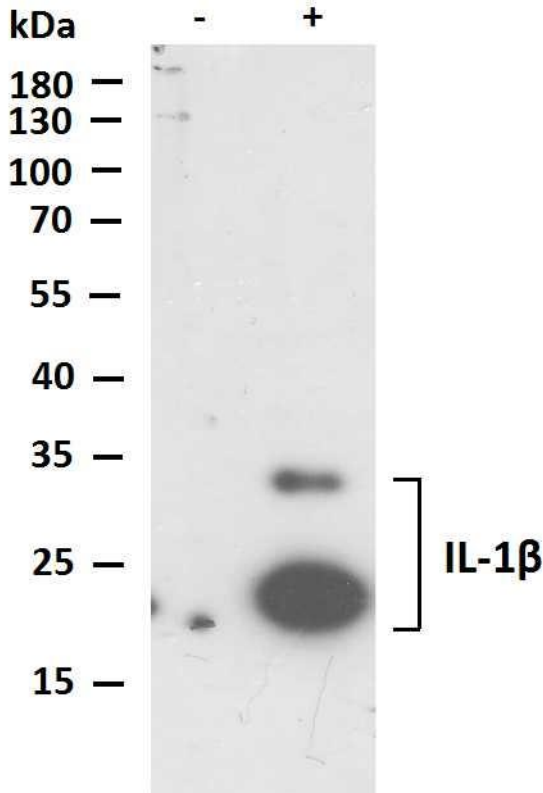
#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

## Products Images



Various whole cell lysates were separated by 10% SDS-PAGE, and the membrane was blotted with anti-IL-1 $\beta$  antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Untreated THP-1 Lane 2: THP-1 treated with LPS(100ng/ml) for 3h Predicted band size: 31,18kDa Observed band size: 31,18kDa