

Anti-Mouse IL-1 beta Antibody [PSH04-66] - BSA and Azide free (Capture)

HA722166



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse
Applications:	ELISA(Cap)
Molecular Wt:	Predicted band size: 31 kDa
Clone number:	PSH04-66

Description: Interleukin-1 beta (IL-1 β) also known as leukocytic pyrogen, leukocytic endogenous mediator, mononuclear cell factor, lymphocyte activating factor and other names, is a cytokine protein that in humans is encoded by the IL1B gene. There are two genes for interleukin-1 (IL-1): IL-1 alpha and IL-1 beta (this gene). IL-1 β precursor is cleaved by cytosolic caspase 1 (interleukin 1 beta convertase) to form mature IL-1 β . IL-1 β is a member of the interleukin 1 family of cytokines. This cytokine is produced by activated macrophages, monocytes, and a subset of dendritic cells known as slanDC, 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.

Immunogen: Recombinant protein within Mouse IL-1 beta aa 118-269 (P10749).

Positive control: Recombinant Mouse IL-1 β protein (HA210706).

Subcellular location: Cytoplasm, cytosol, Secreted, Lysosome, extracellular exosome.

Database links: SwissProt: P10749 Mouse

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH04-67] to Mouse IL-1 beta (Detector) (HA722167) and recombinant standard Mouse IL-1 beta (HA210706). The reference range value is 12.3-3000 pg/ml.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4 $^{\circ}$ C after thawing. Aliquot store at -20 $^{\circ}$ C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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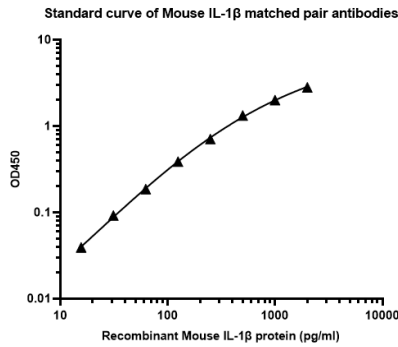
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Fig1: Sandwich ELISA analysis of Mouse IL-1 β matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA722166) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Mouse IL-1 β protein (HA210706) starting from 2000 pg/ml to 0 pg/ml and detect antibody (HA722167, Biotin, 0.2 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100 μ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Bertoni A et al. Spontaneous NLRP3 inflammasome-driven IL-1- β secretion is induced in severe COVID-19 patients and responds to anakinra treatment. *J Allergy Clin Immunol.* 2022 Oct
2. Zhang J et al. NLRP3 inflammasome mediates M1 macrophage polarization and IL-1 β production in inflammatory root resorption. *J Clin Periodontol.* 2020 Apr

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