

Anti-Rat IL-1 alpha Antibody [PSH18-37] - BSA and Azide free (Detector)

HA723990



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Rat
Applications:	ELISA(Det)
Clone number:	PSH18-37

Description: Interleukin-1 alpha (IL-1 alpha) also known as hematopoietin 1 is a cytokine of the interleukin 1 family that in humans is encoded by the IL1A gene. In general, Interleukin 1 is responsible for the production of inflammation, as well as the promotion of fever and sepsis. IL-1 α inhibitors are being developed to interrupt those processes and treat diseases. IL-1 α is produced mainly by activated macrophages, as well as neutrophils, epithelial cells, and endothelial cells. It possesses metabolic, physiological, haematopoietic activities, and plays one of the central roles in the regulation of the immune responses. It binds to the interleukin-1 receptor. It is on the pathway that activates tumor necrosis factor- α .

Immunogen: Recombinant protein within Rat IL-1 alpha aa 115-270 (HA211058).

Positive control: Recombinant Rat IL-1 alpha protein (HA211058).

Subcellular location: Nucleus, Cytoplasm, Secreted.

Database links: SwissProt: P16598 Rat

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH18-36] to Rat IL-1 alpha antibody (Capture) (HA723989) and Recombinant Rat IL-1 alpha protein (HA211058) as the standard. The reference range value is 3.9-1,000 pg/mL.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

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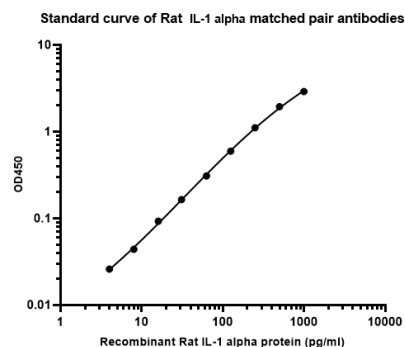
Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Sandwich ELISA analysis of rat IL-1 α matched pair antibodies

Capture: HA723989, Rat IL-1 alpha Rabbit mAb [PSH18-36]

Detector: HA723990, Rat IL-1 alpha Rabbit mAb [PSH18-37]

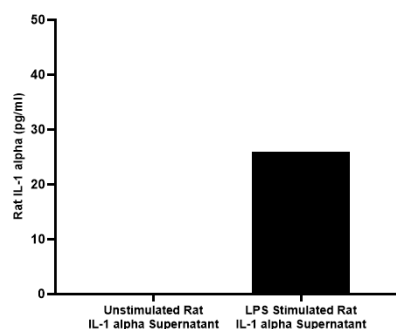


Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA723989) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Rat IL-1 alpha protein (HA211058) starting from 1,000 pg/ml to 0 pg/ml and detect antibody (HA723990, 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.

Fig2: Rat spleen cells were cultured unstimulated or stimulated with 100 ng/mL LPS.

Capture: HA723989, Rat IL-1 alpha Rabbit mAb [PSH18-36]

Detector: HA723990, Rat IL-1 alpha Rabbit mAb [PSH18-37]

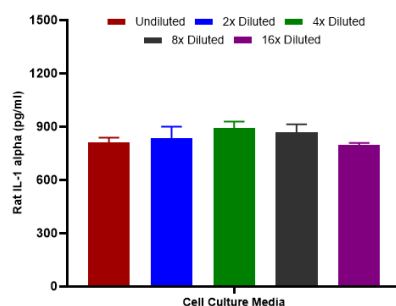


Conditioned media was harvested after 72 hours. IL-1 α was measured in 100% unstimulated and LPS stimulated rat spleen cell supernatant. The concentrations of IL-1 α were interpolated from the IL-1 α standard curves. The mean IL-1 α concentration was determined to be 26 pg/mL in LPS stimulated rat spleen cell supernatant. There was no detectable signal in unstimulated supernatant.

Fig3: Interpolated concentrations of spiked IL-1 α in cell culture media samples.

Capture: HA723989, Rat IL-1 alpha Rabbit mAb [PSH18-36]

Detector: HA723990, Rat IL-1 alpha Rabbit mAb [PSH18-37]



The concentrations of IL-1 α were measured in duplicates, interpolated from the IL-1 α standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2).

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

Background References

1. Harati-Sadegh M et al. IL1A and IL1B gene polymorphisms and keratoconus susceptibility: evidence from an updated meta-analysis. *Ophthalmic Genet.* 2021 Oct
2. Zhang N et al. IRF1 and IL1A associated with PANoptosis serve as potential immune signatures for lung ischemia reperfusion injury following lung transplantation. *Int Immunopharmacol.* 2024 Sep

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