Anti-Mouse IL-1 alpha Antibody [PSH13-41] - BSA and Azide free (Detector)

HA723527

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse
Applications:	ELISA(Det)
Clone number:	PSH13-41

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-1α inhibitors are being developed to interrupt those processes and treat diseases. IL-1α 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-alpha.

Immunogen: Recombinant protein within Mouse IL1 alpha aa 115-270 (HA210971).

Positive control: Recombinant Mouse IL-1 alpha protein (HA210971).

Subcellular location: Secreted.

Database links: SwissProt: P01582 Mouse

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH13-40] to Mouse IL-1 alpha antibody (Capture) (HA723526) and recombinant Mouse IL-1 alpha protein (HA210971) as the standard. The reference range value is 4.9-1,200 pg/mL.

Storage Buffer: 1*PBS (pH7.4).

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

Purity: Protein A affinity purified.

Images

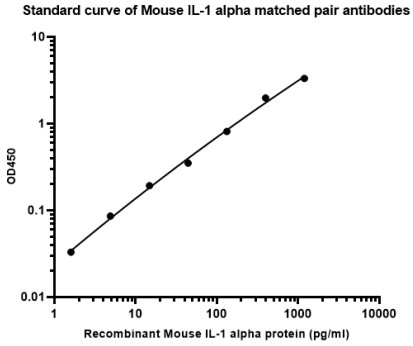

Fig1: Sandwich ELISA analysis of Mouse IL-1 alpha matched pair antibodies

Capture: HA723526, Mouse IL-1 alpha Rabbit mAb [PSH13-40]
Detector: HA723527, Mouse IL-1 alpha Rabbit mAb [PSH13-41]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723526) diluted in carbonate/bicarbonate buffer, at a concentration of 5ug/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Mouse IL-1 alpha protein (HA210971) starting from 1,200 pg/ml to 0 pg/ml and detect antibody (HA723527, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ 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.

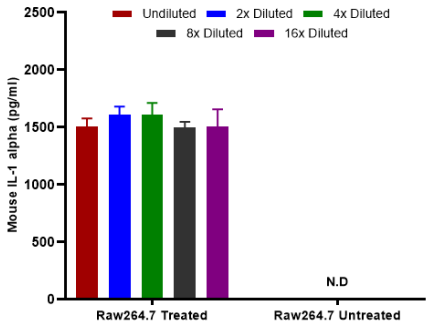

Fig2: Interpolated concentrations of native IL-1 alpha in Raw264.7 supernatant treated or untreated with LPS for 48 hours.

Capture: HA723526, Mouse IL-1 alpha Rabbit mAb [PSH13-40]
Detector: HA723527, Mouse IL-1 alpha Rabbit mAb [PSH13-41]

Interpolated concentration of native IL-1 alpha was measured in duplicate at different sample concentrations. Undiluted samples were 100% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean IL-1 alpha concentration was determined to be 1,546 pg/mL in neat Raw264.7 treated supernatant, undetectable in untreated Raw264.7 supernatant.

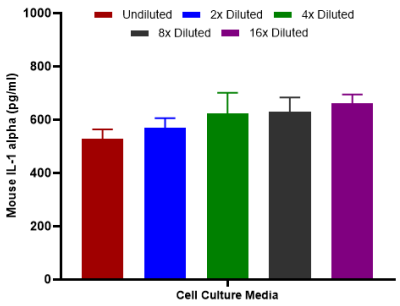

Fig3: Interpolated concentrations of spiked IL-1 alpha in cell culture media samples.

Capture: HA723526, Mouse IL-1 alpha Rabbit mAb [PSH13-40]
Detector: HA723527, Mouse IL-1 alpha Rabbit mAb [PSH13-41]

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

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