Anti-Human IL-5 Antibody [PSH04-65] - BSA and Azide free (Detector)

HA722165

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Molecular Wt:	Predicted band size: 15 kDa
Clone number:	PSH04-65

Description: Interleukin 5 (IL-5) is an interleukin produced by type-2 T helper cells and mast cells. Through binding to the interleukin-5 receptor, interleukin 5 stimulates B cell growth and increases immunoglobulin secretion—primarily IgA. It is also a key mediator in eosinophil activation. IL-5 is a 115-amino acid (in human, 133 in the mouse) -long Th2 cytokine that is part of the hematopoietic family. Unlike other members of this cytokine family (namely interleukin 3 and GM-CSF), this glycoprotein in its active form is a homodimer. The IL-5 gene is located on chromosome 11 in the mouse, and chromosome 5 in humans, in close proximity to the genes encoding IL-3, IL-4, and granulocyte-macrophage colony-stimulating factor (GM-CSF), which are often co-expressed in Th2 cells. IL-5 is also expressed by eosinophils and has been observed in the mast cells of asthmatic airways by immunohistochemistry.[5] IL-5 expression is regulated by several transcription factors including GATA3.

Immunogen: Recombinant protein within Human IL-5 aa 20-134 (P05113).

Positive control: Recombinant Human IL-5 protein (HA210594).

Subcellular location: Secreted.

Database links: SwissProt: P05113 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH04-64] to Human IL-5 (Capture) (HA722164) and recombinant standard Human IL-5 (HA210594). The reference range value is 12.3-1,000 pg/mL.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at 2-8℃. Avoid freeze.

Purity: Protein A affinity purified.

Images

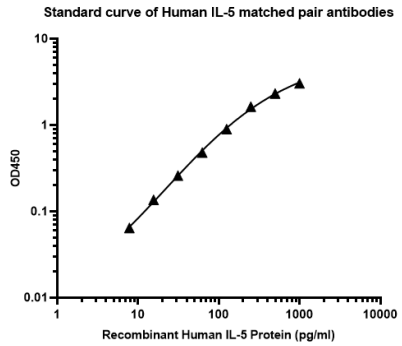


Fig1: Sandwich ELISA analysis of Human IL-5 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722164) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/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 Human IL-5 protein (HA210594) starting from 1000 pg/ml to 0 pg/ml and detect antibody (HA722165, 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.

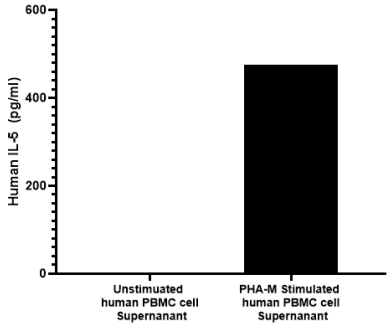


Fig2: Conditioned media was harvested after 6 days. IL-5 was measured in 100% unstimulated and PHA-M stimulated human PBMC cell supernatant. The concentrations of IL-5 were interpolated from the IL-5 standard curves. The mean IL-5 concentration was determined to be 475pg/mL in PHA-M stimulated human PBMC cell supernatant. There was no detectable signal in unstimulated supernatant.

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

Background References

1. Van Hulst G et al. Anti-IL5 mepolizumab minimally influences residual blood eosinophils in severe asthma. Eur Respir J. 2022 Mar
2. Laroche J et al. Anti-IL5/IL5R Treatment in COPD: Should We Target Oral Corticosteroid-Dependent Patients? Int J Chron Obstruct Pulmon Dis. 2023 May