Anti-Human IL-4R Antibody [PSH11-46] - BSA and Azide free (Detector)

HA723337

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Clone number:	PSH11-46

Description: This gene encodes the alpha chain of the interleukin-4 receptor, a type I transmembrane protein that can bind interleukin 4 and interleukin 13 to regulate IgE production. The encoded protein also can bind interleukin 4 to promote differentiation of Th2 cells. A soluble form of the encoded protein can be produced by proteolysis of the membrane-bound protein, and this soluble form can inhibit IL4-mediated cell proliferation and IL5 upregulation by T-cells. Allelic variations in this gene have been associated with atopy, a condition that can manifest itself as allergic rhinitis, sinusitus, asthma, or eczema. Polymorphisms in this gene are also associated with resistance to human immunodeficiency virus type-1 infection. Alternate splicing results in multiple transcript variants. Receptor for both interleukin 4 and interleukin 13. Couples to the JAK1/2/3-STAT6 pathway. The IL4 response is involved in promoting Th2 differentiation. The IL4/IL13 responses are involved in regulating IgE production and, chemokine and mucus production at sites of allergic inflammation. In certain cell types, can signal through activation of insulin receptor substrates, IRS1/IRS2.

Immunogen: Recombinant protein within Human IL-4R aa 20-707 (HA210720).

Positive control: Recombinant Human IL-4R protein (HA210720).

Subcellular location: Cell membrane. Membrane. Secreted.

Database links: SwissProt: P24394 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH11-45] to Human IL-4R antibody (Capture) (HA723336) and Recombinant Human IL-4R protein (HA210720) as the standard. The reference range value is 15.6-2,000 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

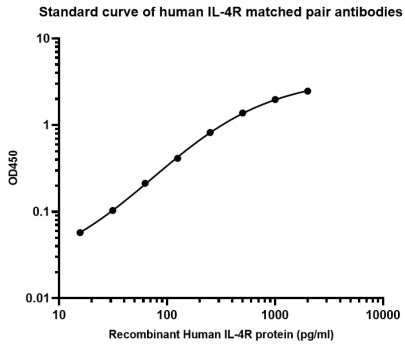

Fig1: Sandwich ELISA analysis of human IL-4R matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA723336) diluted in carbonate/bicarbonate buffer, at a concentration of 5 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-4R protein (HA210720) starting from 2,000 pg/ml to 0 pg/ml and detect antibody (HA723337, Biotin, 0.5 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 50 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.

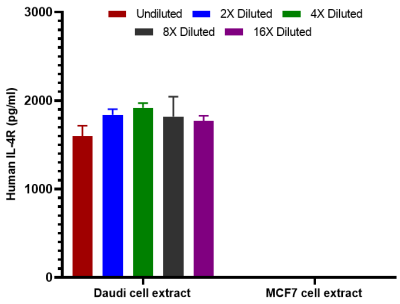

Fig2: Interpolated concentrations of native IL-4R in Daudi and MCF7 extract samples based on a 1,000 µg/ml extract load.

The concentrations of IL-4R were measured in duplicates, interpolated from the IL-4R standard curve and corrected for sample dilution. Undiluted samples are Daudi extract 100% and MCF7 extract 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IL-4R concentration was determined to be 1,789 pg/ml in Daudi extract and undetectable in MCF7 extract.

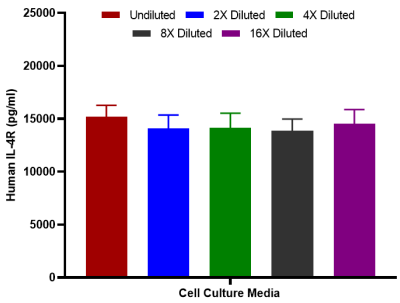

Fig3: Interpolated concentrations of spiked IL-4R in human cell culture media samples.

The concentrations of IL-4R were measured in duplicates, interpolated from the IL-4R 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. Andrews A.L., Nasir T., Bucchieri F., Holloway J.W., Holgate S.T., Davies D.E. IL-13 receptor alpha 2: a regulator of IL-13 and IL-4 signal transduction in primary human fibroblasts. J. Allergy Clin. Immunol. 118:858-865 (2006)
2. Keegan A.D., Nelms K., White M., Wang L.-M., Pierce J.H., Paul W.E. An IL-4 receptor region containing an insulin receptor motif is important for IL-4-mediated IRS-1 phosphorylation and cell growth. Cell 76:811-820 (1994)