

## IL-4R alpha/CD124 Protein, Human (HEK293, Fc)

<b>Cat. No.:</b>	HY-P70712
<b>Synonyms:</b>	Interleukin-4 receptor subunit alpha; IL-4 receptor subunit alpha; IL-4R subunit alpha; IL-4R-alpha; IL-4RA; CD124; IL-4-binding protein; IL4-BP; IL4R; IL4RA
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P24394 (M26-Q231)
<b>Gene ID:</b>	3566
<b>Molecular Weight:</b>	60-70 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>M K V L Q E P T C V    S D Y M S I S T C E    W K M N G P T N C S    T E L R L L Y Q L V</p> <p>F L L S E A H T C I    P E N N G G A G C V    C H L L M D D V V S    A D N Y T L D L W A</p> <p>G Q Q L L W K G S F    K P S E H V K P R A    P G N L T V H T N V    S D T L L L T W S N</p> <p>P Y P P D N Y L Y N    H L T Y A V N I W S    E N D P A D F R I Y    N V T Y L E P S L R</p> <p>I A A S T L K S G I    S Y R A R V R A W A    Q C Y N T T W S E W    S P S T K W H N S Y</p> <p>R E P F E Q</p>
<b>Biological Activity</b>	<p>1.The ability to inhibit IL-4-dependent proliferation of TF1 human erythroleukemic cells has an ED<sub>50</sub> value of 5-20 ng/mL.</p> <p>2.Immobilized Human IL-4 RA-Fc at 5 µg/mL (100 µl/well) can bind Human IL-4 *: Biotinylated by NHS-biotin prior to testing.The ED<sub>50</sub> of Human IL-4 is 2.43 ng/mL.</p> <p>3.Loaded Human IL-4-His on HIS1K Biosensor, can bind Human IL-4RA-Fc with an affinity constant of 0.12 nM as determined in BLI assay.</p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

## Background

Interleukin-4R alpha (IL-4R $\alpha$ ), also known as CD124 and B cell stimulatory factor (BSF) receptor, is one of the anti-inflammatory cytokines, and highly expressed in activated T-cells<sup>[1]</sup>.

IL-4R alpha participates in forming two interleukin receptors in different cell types. For the type I receptor, depends on IL-4R alpha binding IL-4 to recruit IL-2R gamma chain in immune cells. IL-2R gamma is the common subunit for a variety of interleukin receptors, involved in the stimulation of neutrophil phagocytosis by IL-15. For the type II receptor, depends on IL-4R alpha binding IL-4 to recruit IL-13R alpha 1 chain. IL-13R alpha 1 is an alternate accessory protein to the common cytokine receptor gamma chain in non-immune cells<sup>[2][3]</sup>.

The sequence of amino acids in IL-4R alpha proteins in human is very different from mouse (53.35%), or rat (52.82%). IL-4 R alpha generates a soluble form by alternate splicing or proteolysis, maintaining ligand binding properties and inhibiting IL-4 bioactivity. IL-4 R alpha soluble isoform 1 can be produced by proteolytic cleavage at the cell surface (shedding) by a metalloproteinase<sup>[4]</sup>.

IL-4 R alpha plays an important role in Th2-biased immune responses, alternative macrophage activation, mucosal immunity, allergic inflammation, tumor progression, and atherogenesis<sup>[5]</sup>.

## REFERENCES

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