

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

Cat. No.:	HY-P70710
Synonyms:	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
Species:	Human
Source:	HEK293
Accession:	P24394 (M26-H232)
Gene ID:	3566
Molecular Weight:	40-60 kDa

PROPERTIES

AA Sequence	<pre> 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 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 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 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 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 R E P F E Q H </pre>
Biological Activity	<ol style="list-style-type: none"> The ability to inhibit IL-4-dependent proliferation of TF-1 human erythroleukemic cells has an ED₅₀ value of 5-20 ng/mL. Loaded Human IL-4-Fc on Protein A Biosensor, can bind Human IL-4 RA-His with an affinity constant of 0.78 nM as determined in BLI assay.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Interleukin-4R alpha (IL-4Rα), 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 ^[1] .
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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^{[2][3]}.

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^[4].

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

REFERENCES

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Caution: Product has not been fully validated for medical applications. For research use only.

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