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

Cat. No.:	HY-P72541
Synonyms:	Interleukin-4 receptor subunit alpha; IL-4RA; IL-4R-alpha; CD124; IL4-BP
Species:	Mouse
Source:	HEK293
Accession:	P16382 (I26-R233)
Gene ID:	16190
Molecular Weight:	32-45 kDa

PROPERTIES

AA Sequence	I K V L G E P T C F S D Y I R T S T C E W F L D S A V D C S S Q L C L H Y R L M F F E F S E N L T C I P R N S A S T V C V C H M E M N R P V Q S D R Y Q M E L W A E H R Q L W Q G S F S P S G N V K P L A P D N L T L H T N V S D E W L L T W N N L Y P S N N L L Y K D L I S M V N I S R E D N P A E F I V Y N V T Y K E P R L S F P I N I L M S G V Y Y T A R V R V R S Q I L T G T W S E W S P S I T W Y N H F Q L P L I Q R
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.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. 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]. 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 alternat 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 mouse shows low homology with human (52.82%) and rat (53.35%).
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

[1]. Keegan AD,et al. An IL-4 receptor region containing an insulin receptor motif is important for IL-4-mediated IRS-1 phosphorylation and cell growth. Cell. 1994 Mar 11;76(5):811-20.

[2]. Zurawski SM, et al. The primary binding subunit of the human interleukin-4 receptor is also a component of the interleukin-13 receptor. J Biol Chem. 1995 Jun 9;270(23):13869-78.

[3]. Rolling C, et al. IL4 and IL13 receptors share the gamma c chain and activate STAT6, STAT3 and STAT5 proteins in normal human B cells. FEBS Lett. 1996 Sep 9;393(1):53-6.

[4]. Jung T, et al. Soluble human interleukin-4 receptor is produced by activated T cells under the control of metalloproteinases. Int Arch Allergy Immunol. 1999 May;119(1):23-30.

[5]. HageT,etal.Crystalstructureoftheinterleukin-4/receptoralphachaincomplexrevealsamosaicbindinginterface.Cell.1999Apr16;97(2):271-81.

[6]. Shirey KA, Pletneva LM, Puche AC, Keegan AD, Prince GA, Blanco JC, Vogel SN. Control of RSV-induced lung injury by alternatively activated macrophages is IL-4R alpha-, TLR4-, and IFN-beta-dependent. Mucosal Immunol. 2010 May;3(3):291-300.

[7]. Myburgh E, et al. Murine IL-4 is able to signal via chimeric human IL-4Ralpha/mouse gamma-chain receptor. Mol Immunol. 2008 Mar;45(5):1327-36.

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