

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

Cat. No.:	HY-P74801
Synonyms:	Interleukin-4 receptor subunit alpha; IL4R alpha; IL4R
Species:	Rat
Source:	HEK293
Accession:	Q63257-1 (I26-R232)
Gene ID:	25084
Molecular Weight:	Approximately 66 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized mouse IL4-His at 10 µg/mL (100 µL/well) can bind rat IL4R-Fc and the EC ₅₀ is 0.12-0.29 µg/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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.
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-4R α), 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 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 rat shows low homology with human (52.82%) and mouse (79.53%). 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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