

Active Recombinant Human IL4R protein, Fc/Avi-tagged, Biotinylated

Cat. No. IL4R-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human IL4R(Gly24-His232) protein, fused to Fc/Avi tag at the C-terminus, was expressed in HEK293 cells .
Species	Human
Source	HEK293
ProteinLength	Gly24-His232
Description	Interleukin 4 Receptor alpha (IL-4R alpha), also known as CD124 and BSF receptor, is a widely expressed 140 kDa transmembrane glycoprotein in the class I cytokine receptor family. IL-4R alpha plays an important role in Th2-biased immune responses, alternative macrophage activation, mucosal immunity, allergic inflammation, tumor progression, and atherogenesis (1-5). Mature human IL-4R alpha consists of a 207 amino acid (aa) extracellular domain (ECD) that contains a cytokine binding region and one fibronectin type III domain, a 24 aa transmembrane segment, and a 569 aa cytoplasmic domain that contains one Box 1 motif and one ITIM motif (6, 7). Within the ECD, human IL-4R alpha shares 51% aa sequence identity with mouse and rat IL-4R alpha. Soluble forms of IL-4R alpha, generated by alternate splicing or proteolysis, retain ligand binding properties and inhibit IL-4 bioactivity (8-11). IL-4R alpha is a component of two distinct receptor complexes and shows species selectivity between human and mouse (6). It can associate with the common gamma chain (gamma c) to form the IL-4 responsive type I receptor in which gamma c

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increases the affinity for IL-4 and enables signaling (12, 13). It can alternatively associate with IL-13R alpha 1 to form the type II receptor which is responsive to both IL-4 and IL-13 (14, 15). The use of shared receptor components contributes to the overlapping biological effects of IL-4 and IL-13 as well as other cytokines that utilize gamma c (i.e. IL-2, IL-7, IL-9, IL-15, and IL-21) (16, 17).

Predicted N Terminal	Gly24
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	The biotin to protein ratio is greater than 0.7 as determined by the HABA assay. Measured by its ability to inhibit IL4-dependent proliferation of TF1 human erythroleukemic cells. The ED50 for this effect is 5-30 ng/mL in the presence 0.2 ng/mL of Recombinant Human IL4. When Biotinylated Recombinant Human IL4R Fc Chimera Avi-tag is captured, the concentration of Recombinant Human IL4 that produces 50% of the optimal binding response is approximately 3-20 ng/mL.
Molecular Mass	73-82 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Binding Activity, Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.

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Reconstitution Reconstitute at 250 µg/mL in PBS.

Conjugation Biotin

GENE INFORMATION

Gene Name IL4R interleukin 4 receptor [Homo sapiens]

Official Symbol IL4R

Synonyms IL4R; interleukin 4 receptor; interleukin-4 receptor subunit alpha; CD124; IL-4 receptor subunit alpha; interleukin-4 receptor alpha chain; IL4RA; IL-4RA;

Gene ID 3566

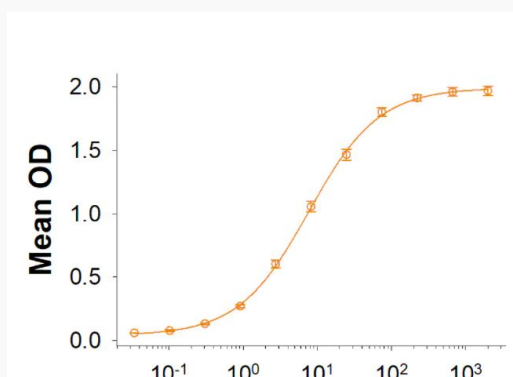
mRNA Refseq NM_000418

Protein Refseq NP_000409

MIM 147781

UniProt ID P24394

Binding Activity

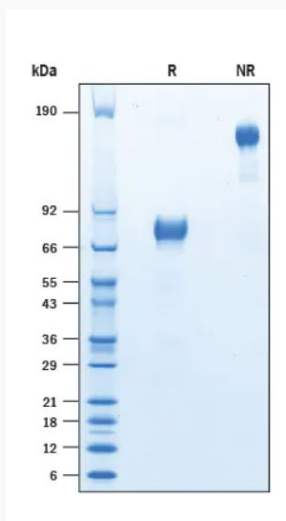


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SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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