

Active Recombinant Human IL15RA protein, Fc/Avi-tagged, Biotinylated

Cat. No. IL15RA-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human IL15RA(Ile31-Thr205) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Ile31-Thr205
Description	Interleukin 15 Receptor alpha (IL-15 R alpha), also known as CD215, is a widely expressed 60-kDa transmembrane glycoprotein that plays an important role in the homeostasis and activation of NK cells and CD8+ memory T cells and participates in the development and function of many other hematopoietic cell types and non-immune cell types (1-3). Mature human IL-15 R alpha consists of a 175 amino acid (aa) extracellular domain (ECD) containing one N-linked glycosylation site, a 23 aa transmembrane segment, and a 39 aa cytoplasmic tail (4). Within the ECD, human IL-15 R alpha shares approximately 60% aa sequence identity with mouse and rat IL-15 R alpha. Alternate splicing of human IL-15 R alpha generates additional isoforms with variable length deletions in the ECD and/or substitutions in the cytoplasmic domain (4, 5). IL-15 R alpha binds to Interleukin-15 with high affinity (6). IL-15 additionally interacts with lower affinity to a complex of IL-2 R beta and the common gamma chain (gamma c) which are also subunits of the IL-2 receptor complex (7, 8). The use of shared receptor

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components contributes to the overlapping biological effects of IL-15 and IL-2. The dominant mechanism of IL-15 action is known as transpresentation in which IL-15/IL-15 R alpha complexes are expressed on the surface of one cell and interact with complexes of IL-2 R beta / gamma c on adjacent cells (9). This enables cells to respond to IL-15 even if they do not express IL-15 R alpha (10-12). IL-15/IL-15 R alpha complexes can transmit reverse signaling that promotes cellular adhesion, tyrosine phosphorylation of intracellular proteins, and cytokine secretion by the IL-15/IL-15 R alpha expressing cells (13, 14). Shed soluble forms of IL-15 R alpha retain the ability to bind tightly to IL-15 and can inhibit IL-15 bioactivity (6, 15, 16). Our Avi-tag Biotinylated Recombinant Human IL-15 R alpha features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

Predicted N Terminal	Ile31
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 binding ability in a functional ELISA. When Biotinylated Recombinant Human IL15RA Fc Chimera Avi-tag is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human IL15 binds with an ED50 of 0.02-0.16 ng/mL.
Molecular Mass	70-80 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.

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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.
Reconstitution	Reconstitute at 400 µg/mL in PBS.
Conjugation	Biotin

GENE INFORMATION

Gene Name	IL15RA interleukin 15 receptor, alpha [Homo sapiens]
Official Symbol	IL15RA
Synonyms	IL15RA; interleukin 15 receptor, alpha; interleukin-15 receptor subunit alpha; CD215; IL 15RA; MGC104179;
Gene ID	3601
mRNA Refseq	NM_001243539
Protein Refseq	NP_001230468
MIM	601070

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UniProt ID Q13261**Binding Activity****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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