

Active Recombinant Human IL12RB1 protein, Fc-Avi-tagged, Biotinylated

Cat. No. IL12RB1-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human IL12RB1(Cys24-Glu540) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Cys24-Glu540
Description	<p>IL12RB1 (Interleukin-12 receptor subunit beta-1; IL-12 R beta 1), also known as CD212, is a type I transmembrane protein with similarities with the gp130/G-CSF R subgroup in the cytokine receptor superfamily. IL12RB1, along with IL12RB2, are two receptor subunits for IL12. Individually, the two subunits bind IL12 with low affinity, but when combined they form a high-affinity receptor complex (1). Human IL12RB1 contains 5 fibronectin domains in the extracellular domain (ECD), a single transmembrane domain and a box 1 motif in the cytoplasmic region. The mature ECD of human IL12RB1 shares 51% amino acid identity with mouse and rat IL12RB1. Interleukin 12 (IL12) is a pro-inflammatory cytokine and key mediator of cellular-immunity and induces the differentiation of Th1 cells from precursor T helper cells (2). Binding of IL12RB1, along with IL12RB2, is required for IL12 signal transduction and subsequent activity (1,2). Expression of IL12RB1 been detected in activated T cells, NK cells and B cells (1). The expression of IL12RB2 is more restricted and appears to be limited to Th2 cells.</p>

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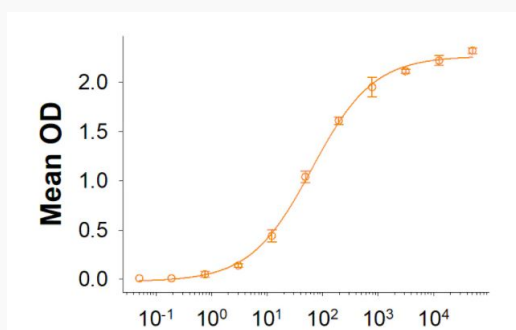
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	IL12RB1 has been reported to interact with IL23R to form the functional receptor complex for IL23 and probably activation of the Jak-Stat signaling cascade (3).
Predicted N Terminal	Cys24
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human IL12 is immobilized at 1 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human IL12RB1 Fc Chimera Avi-tag that produces 50% of the optimal binding response is found to be approximately 15-90 ng/mL.
Molecular Mass	95-115 kDa, under reducing conditions
Endotoxin	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	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 200 µg/mL in PBS.
Conjugation	Biotin

GENE INFORMATION

Gene Name	IL12RB1 interleukin 12 receptor, beta 1 [Homo sapiens]
Official Symbol	IL12RB1
Synonyms	IL12RB1; interleukin 12 receptor, beta 1; IL12RB; interleukin-12 receptor subunit beta-1; CD212; IL-12RB1; IL-12R-beta-1; IL-12R subunit beta-1; IL-12 receptor beta component; IL-12 receptor subunit beta-1; interleukin-12 receptor beta-1 chain; IL-12R-BETA1; MGC34454;
Gene ID	3594
mRNA Refseq	NM_005535
Protein Refseq	NP_005526
MIM	601604
UniProt ID	P42701

Binding Activity

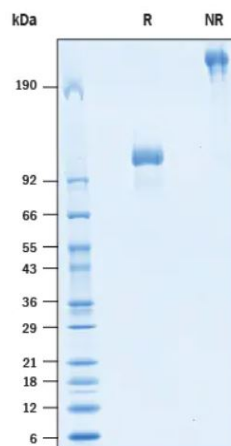


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SDS-PAGE



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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