Active Recombinant Human IL13RA1 protein, Fc/Avi-tagged, Biotinylated

Cat. No. IL13RA1-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human IL13RA1(Ala27-Thr343) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Ala27-Thr343
Description	IL13 RA1, also known as IL13R and IL13 RA, is a type I transmembrane protein. Its cDNA encodes a 427 aa precursor protein, with 322 aa extracellular domain, 24 aa transmembrane domain and 60 aa intracellular domain. Within the extracellular domain, human IL13 RA1 shares 75% and 74% homology with mouse and rat IL13 RA1, respectively. IL13 RA1 expresses ubiquitously in all tissues with the highest level in heart, liver, skeletal muscle and ovary (1). As a receptor, IL13 RA1 can function alone or as a heterodimer with IL-4R. Although both IL-4 and IL-13 signal through IL-4R/IL-13 RA1 heterodimer, there are distinct differences. IL-4 binds IL-4R with high affinity then binds IL-13 RA1 with low affinity. In contrast, IL-13 binds IL-13 RA1 with decent affinity, then binds IL-4R with high affinity (2). In addition, the N-terminal Fibronectin type III domain (D1) of IL-13 RA1 is only required for the binding of IL-13 not IL-4 (3,4). After binding to IL-4 or IL-13, the Tyr residues in the cytoplasmic domain of IL-13 RA get phosphorylated and then activate signaling proteins including Jak1, Tyk1, Tyk2, IRS-1, and STAT6 (5, 6). Alternative splicing

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	generates soluble iL-13 RA1 missing the transmembrane domain (7). It not only functions as a decoy receptor for IL-13, but also is able to reduce fasting blood glucose, mediated by IL-4 (8). Higher expression of IL-13 RA1 are found in several cancers, often associated with poor prognosis in patients (9-11). Our Avi-tag Biotinylated human IL-13 RA1 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	Ala27
Form	Supplied as a 0.2 μm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Biotinylated Recombinant Human IL13RA1 Fc Chimera Avi-tag is immobilized at 1 μg/mL (100 μl/well), Recombinant Human IL13 binds with an ED50 of 10-80 ng/mL.
Molecular Mass	93-103 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	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.6 months from date of receipt, -20 to -70 °C as supplied.1 month, 2 to 8 °C under sterile conditions after opening.3 months, -20 to -70 °C under sterile conditions after opening.

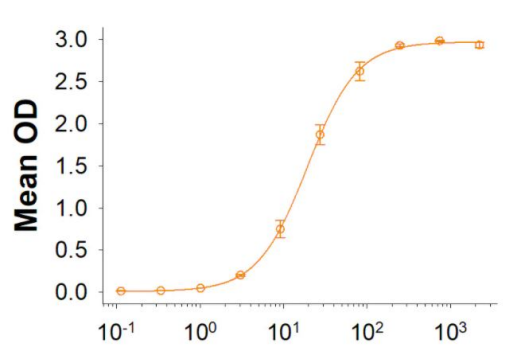
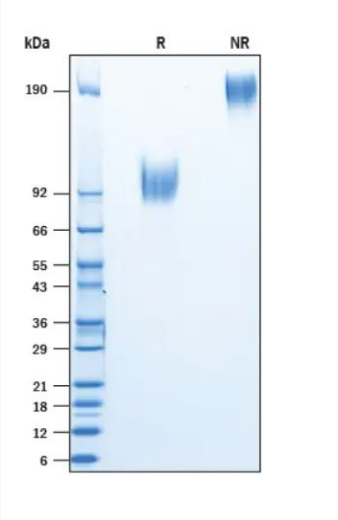
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Conjugation	Biotin

GENE INFORMATION

Gene Name	IL13RA1 interleukin 13 receptor, alpha 1 [Homo sapiens]
Official Symbol	IL13RA1
Synonyms	IL13RA1; interleukin 13 receptor, alpha 1; interleukin-13 receptor subunit alpha-1; CD213a1; CD213a1 antigen; IL 13Ra; IL13 receptor alpha 1 chain; NR4; CT19; IL-13RA1; IL-13R-alpha-1; IL-13R subunit alpha-1; cancer/testis antigen 19; IL13 receptor alpha-1 chain; IL-13 receptor subunit alpha-1; bB128O4.2.1 (interleukin 13 receptor, alpha 1); CD213A1; IL-13Ra;
Gene ID	3597
mRNA Refseq	NM_001560
Protein Refseq	NP_001551
MIM	300119
UniProt ID	P78552

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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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