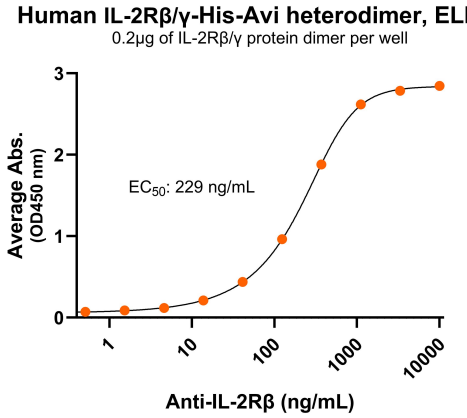
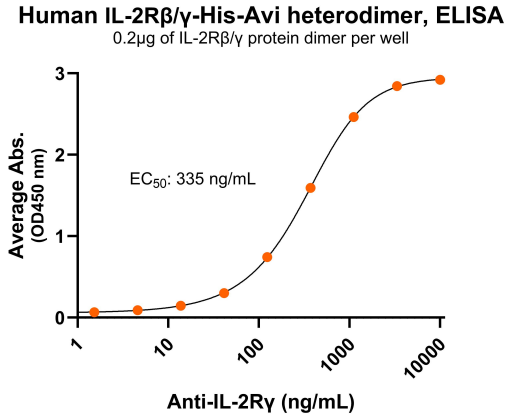
Bioactive, Human Interleukin-2 beta/gamma receptor protein Heterodimer, His-Avi Tag
Product Code: CSP-24045-A1B5

Bioactivity – Antibody Binding



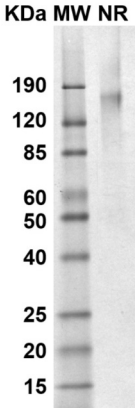
Immobilized human IL-2Rβ/γ heterodimer protein, His-Avi Tag (Cat. No. CSP-24045-A1B5) at 2 μg/mL (100 μL/well) can bind anti-human IL-2Rβ monoclonal antibody with half maximal effective concentration (EC50) range of 114.7-458.8 ng/mL (QC tested).

Bioactivity – Antibody Binding



Immobilized human IL-2Rβ/γ heterodimer protein, His-Avi Tag (Cat. No. CSP-24045-A1B5) at 2 μg/mL (100 μL/well) can bind anti-human IL-2Rγ monoclonal antibody with half maximal effective concentration (EC50) range of 167.6-670.4 ng/mL (QC tested).

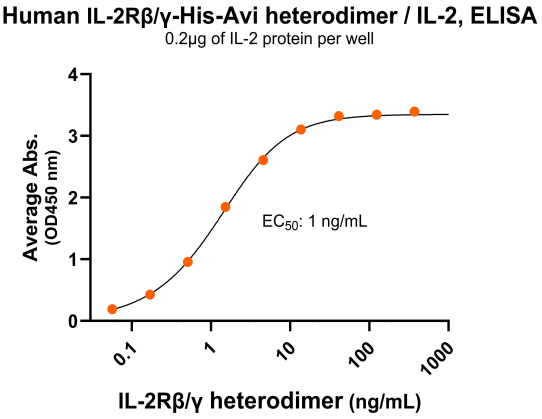
SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: IL-2Rβ/γ heterodimer under non-reduced condition

The migration range of the heterodimer with glycosylation under non-reduced condition is 120-190 kDa on SDS PAGE.

Bioactivity – Ligand Binding



Immobilized human IL-2Rβ/γ heterodimer protein, His-Avi Tag (Cat. No. CSP-24045-A1B5) at 2 μg/mL (100 μL/well) can bind Interleukin-2 (IL-2) with half maximal effective concentration (EC50) range of 0.6-2.6 ng/mL (QC tested).

Bioactive, Human Interleukin-2 beta/gamma receptor protein Heterodimer, His-Avi Tag
Product Code: CSP-24045-A1B5

Expression Host
HEK293T

Protein Name
IL-2Rβ/γ

Purity
Greater than 90% heterodimer form as determined by SDS-PAGE under non-reducing conditions.

Alternate Name(s)
IL2R, Cluster of Differentiation 25, CD25, IL2RB, IL-2RB, Cluster of Differentiation 122, CD122, IL15RB, P70-75, interleukin 2 receptor subunit beta, IMD63, SCIDX1, IMD4, Cluster of Differentiation 132, CD132, IL2RG, CIDX, IL-2RG, P64, SCIDX, interleukin 2 receptor subunit gamma

Protein Construct
IL-2Rβ/γ protein heterodimer contains IL-2Rβ and IL-2Rγ extracellular domains (Uniprot# P14784 and Uniprot# P31785) fused with a proprietary dimer motif followed by a His tag and an Avi tag at the IL-2Rβ C-terminus and IL-2Rγ C-terminus, respectively. Expressed in HEK293T cell line.

Amino Acid Range
A27-T240 ; L23-A262

SDS-Page Molecular Weight
69 kDa. The migration range of the heterodimer with glycosylation under non-reduced condition is 120-190 kDa on SDS PAGE.

Formulation
0.22μm filtered PBS, pH 7.4

Shipping Conditions
Frozen Dry Ice

Stability & Storage
-80^{0}C

Background

Human interleukin-2 beta/gamma receptor (IL-2Rβ/γ) is a member of the type I cytokine receptor family. IL-2Rβ/γ is also known as interleukin-2 β/γ receptor, IL-2RB/IL-2RG, and Cluster of Differentiation 25 (CD25). IL-2 receptor (IL-2R) can be composed of several combinations of three proteins or “chains”: IL-2 receptor alpha (IL-2Rα), IL-2 receptor beta (IL-2Rβ), and IL-2 receptor gamma (IL-2Rγ). This IL-2Rβ/γ protein heterodimer is composed of IL-2Rβ and IL-2Rγ subunits to form the IL-2Rβ/γ heterodimer. On the cell membrane, the beta chain is complexed with Janus kinase 1 (JAK1) and the gamma chain complexes with Janus kinase 3 (JAK3); through these interactions, upon Interleukin-2 (IL-2) binding, intracellular signaling pathways are initiated. Memory-phenotype CD8+ CD44+ T cells and NK cells highly express the IL-2Rβ/γ form of the receptor. Stimulation of IL-2Rβ/γ has shown promise as an antitumor immunity booster and a recombinant protein mimicking the IL-2Rβ/γ heterodimer conformation can be crucial for therapeutic discovery.