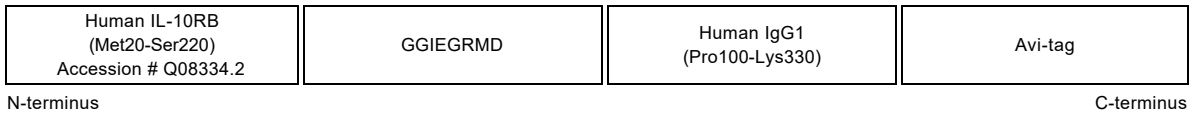
Biotinylated Recombinant Human IL-10 R beta Fc Chimera Avi-tag

Catalog Number: AVI11460

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human IL-10 R beta protein



N-terminal Sequence Analysis	Met20
Structure / Form	Disulfide-linked homodimer Biotinylated via Avi-tag
Predicted Molecular Mass	52 kDa

SPECIFICATIONS

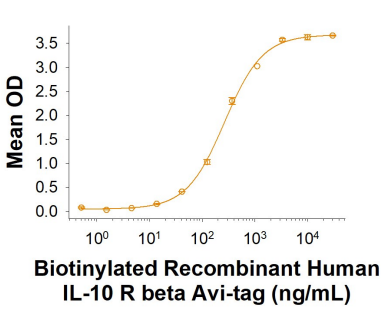
SDS-PAGE	78-88 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human IL-10 R beta Fc Chimera Avi-tag (Catalog # AVI11460) binds Recombinant Human IL-28 Rα/IFN-λ R1 Fc Chimera (Catalog # 5260-MR) in the presence of Recombinant Human IL-28B/IFN-λ3 (Catalog # 5259-IL) with an ED_{50} of 50.0-750 ng/mL.
Endotoxin Level	<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.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in sterile water.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & 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.

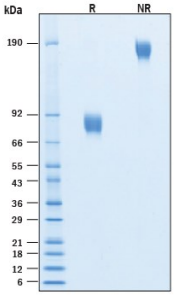
DATA

Binding Activity



Biotinylated Recombinant Human IL-10 R beta Fc Chimera Avi-tag Protein Binding Activity. Biotinylated Recombinant Human IL-10 R beta Fc Chimera Avi-tag (Catalog # AVI11460) binds Recombinant Human IL-28 Rα/IFN-λ R1 Fc Chimera (Catalog # 5260-MR) in the presence of Recombinant Human IL-28B/IFN-λ3 (Catalog # 5259-IL) with an ED_{50} of 50.0-750 ng/mL.

SDS-PAGE



Biotinylated Recombinant Human IL-10 R beta Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human IL-10 R beta Fc Chimera Avi-tag Protein (Catalog # AVI11460) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 78-88 kDa and 160-170 kDa, respectively.

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Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475

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Catalog Number: AVI11460

BACKGROUND

Interleukin-10 Receptor beta (IL-10 Rβ), also known as IL-10 R2 and CRF2-4, is a 60 kDa transmembrane glycoprotein that functions as a co-receptor for several class 2 cytokines including Interleukins-10, -22, -26, -28A/IFN-λ2, -28B/IFN-λ3, and -29/IFN-λ (1, 2). IL-10 Rβ associates with ligand-specific receptor subunits to form signaling receptor complexes, e.g. IL-10 Rα for IL-10 (3, 4), IL-20 Rα for IL-26 (5, 6), IL-22 Rα for IL-22 (7, 8), and IL-28 Rα for IL-28A, IL-28B, and IL-29 (9, 10). IL-10 Rβ is widely expressed, while the associated receptor subunits exhibit differential expression patterns (1). The ligand-specific subunits are responsible for the divergent functions of these cytokines, encompassing immune suppression, promotion or inhibition of inflammation, mucosal defense, antiviral immunity, and hematopoiesis (1). IL-10 Rβ deficient mice lack responsiveness to each of those cytokines. IL-10 Rβ contributes to ligand binding, but effective signaling is only triggered in the presence of the ligand-specific subunit (8, 9, 11). In the case of IL-10, a cytokine dimer binds to two IL-10 Rα/IL-10R1 chains, resulting in recruitment of two IL-10 Rβ/IL-10R2 chains (3, 12). Some members of the IL-10 family are monomeric cytokines and interact with single molecules of IL-10 Rβ and their ligand-specific subunit (1). Mature human IL-10 Rβ consists of a 201 amino acid (aa) extracellular region with two fibronectin type-III domains, a 22 aa transmembrane segment and a 83 aa cytoplasmic domain (13). Within the ECD, human IL-10 Rβ shares 75% and 78% aa sequence identity with mouse and rat IL-10 Rβ, respectively. Our Avi-tag Biotinylated human IL-10 Rβ 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.

References:

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