

**DESCRIPTION**

<b>Source</b>	Human embryonic kidney cell, HEK293-derived human IL-17RA/IL-17R protein		
	Human IL-17RA (Leu33-Trp320) Accession # Q96F46.2	Avi-tag	6-His tag
	N-terminus		C-terminus
<b>N-terminal Sequence</b>	Leu33		
<b>Analysis</b>			
<b>Structure / Form</b>	Biotinylated via Avi-tag		
<b>Predicted Molecular Mass</b>	38 kDa		

**SPECIFICATIONS**

<b>SDS-PAGE</b>	63-69 kDa, under reducing conditions.
<b>Activity</b>	Measured by its binding ability in a functional ELISA. Recombinant Human IL-17RA/IL-17R Avi-tag His-tag binds to IL-17A (Human Cell-expressed) Protein (Catalog # 7955-IL) with an ED <sub>50</sub> of 3.00-30.0 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**

<p><b>Binding Activity</b></p> <p><b>Recombinant Human IL-17RA/IL-17R Avi-tag His-tag Protein Binding Activity.</b> Recombinant Human IL-17RA/IL-17R Avi-tag His-tag Protein (Catalog # AV111234) binds to IL-17A (Human Cell-expressed) Protein (Catalog # 7955-IL) with an ED<sub>50</sub> of 3.00-30.0 ng/mL.</p>	<p><b>SDS-PAGE</b></p> <p><b>Recombinant Human IL-17RA/IL-17R Avi-tag His-tag Protein SDS-PAGE.</b> 2 µg/lane of Recombinant Human IL-17RA/IL-17R Avi-tag His-tag Protein (Catalog # AV111234) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 63-69 kDa, under reducing conditions.</p>
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**BACKGROUND**

IL-17 R, also known as IL-17 RA, is a 120 kDa type I transmembrane glycoprotein protein that plays a central role in inflammatory responses (1-3). Mature human IL-17 R consists of a 288 amino acid (aa) extracellular domain, a 21 aa transmembrane segment, and a 525 aa cytoplasmic domain (4). The cytoplasmic domain contains a region homologous to the TIR domain of the TLR/IL-1 R family (5). Human IL-17 R shares 72% aa sequence identity with mouse and rat IL-17 R. Within the extracellular domain, it shares 18%-25% sequence identity with human IL-17 RB, C, D, and E. While the expression of IL-17 is restricted to activated T cells, IL-17 R exhibits a broad tissue distribution (4). Even in the absence of ligand, IL-17 R exists on the cell surface as a multimer (6). IL-17 R can bind IL-17 but must associate with IL-17 RC to transduce signals (7, 8). Interestingly, human IL-17 R does not appear to form productive complexes with mouse IL-17 RC (8). The IL-17 R can also signal in response to IL-17F (9). IL-17 R ligation promotes T cell activation and the production of IL-6, G-CSF, SCF, and multiple pro-inflammatory chemokines (4, 7, 9, 10). IL-17A and IL-17F synergize with TNF- $\alpha$  in the induction of CXCL1, G-CSF, and IL-6 (9, 11). This effect requires the presence of both TNF RI and TNF RII (9). IL-17 interactions with IL-17 R also inhibit the TNF- $\alpha$  induced up-regulation of fibroblast CCL5 and VCAM-1 (11). CCL5 and VCAM-1 induced effects are differentially sensitive to blockade with IL-17 R specific antibodies, suggesting that IL-17 R triggers divergent intracellular signals (11). In vivo, IL-17 R activity is important for increased generation of neutrophils and their recruitment to sites of inflammation (10, 12, 13). IL-17 R is required for host defense against microbial infection and for the progression of arthritis from inflammation to destructive joint erosion (10, 13). Our Avi-tag Biotinylated human IL-17R Fc chimera 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.

**References:**

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