

## IL-10R alpha/IL-10RA Protein, Rhesus, Recombinant (hFc)

### General Information

Synonyms:	interleukin 10 receptor, alpha;interleukin 10 receptor, $\alpha$
Protein Construction:	A DNA sequence encoding the rhesus IL10RA (XP_001092736.1) (Thr9-Asn245) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Phe 29
Species:	Rhesus
Expression Host:	HEK293 Cells
Accession:	XP_001092736.1
Molecular Weight:	51.8 kDa (predicted)

### QC Testing

Biological Activity:	<ol style="list-style-type: none"><li>1. Measured by its binding ability in a functional ELISA. Immobilized Rhesus IL10RA-Fc at 10 <math>\mu\text{g/ml}</math> (100 <math>\mu\text{l/well}</math>) can bind biotinylated human IL10, The EC50 of biotinylated human IL10 is 39.0-92.0 ng/ml.</li><li>2. Measured by its ability to inhibit IL-10 dependent proliferation of MC/9 mouse mast cells. Approximately 0.1-0.4 <math>\mu\text{g/mL}</math> of IL-10R<math>\alpha</math> will inhibit 50% of the biological response induced by 10 ng/mL of recombinant human IL-10.</li></ol>
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu\text{g}$ of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu\text{m}$ filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	<p>It is recommended to store recombinant proteins at <math>-20^{\circ}\text{C}</math> to <math>-80^{\circ}\text{C}</math> for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at <math>-80^{\circ}\text{C}</math>. For reconstituted protein solutions, the solution can be stored at <math>-20^{\circ}\text{C}</math> to <math>-80^{\circ}\text{C}</math> for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.</p> <p><small>Actual storage temperature shall be subject to the COA.</small></p>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

IL10RA (Interleukin 10 Receptor Subunit Alpha, also known as CD210) is a Protein Coding gene. The protein encoded by this gene is a receptor for interleukin 10. Two transcript variants, one protein-coding, and the other, not protein-coding have been found for this gene. CD210 belongs to the type II cytokine receptor family. This protein is structurally related to interferon receptors. It has been shown to mediate the immunosuppressive signal of interleukin 10, and thus inhibits the synthesis of proinflammatory cytokines. Activation of CD210 leads to tyrosine phosphorylation of JAK1 and TYK2 kinases. CD210 is broadly expressed in the spleen, bone marrow, and other tissues. Diseases associated with IL10RA include Inflammatory Bowel Disease 28, Autosomal Recessive, and Inflammatory Bowel Disease 28.

### Reference

- Josephson K, et al. (2001) Purification, crystallization and preliminary X-ray diffraction of a complex between IL-10 and soluble IL-10RA. *Acta Crystallogr D Biol Crystallogr.* 57(Pt 12): 1908-11.
- Tan, J C, et al. (1995) Characterization of recombinant extracellular domain of human interleukin-10 receptor. *J Biol Chem.* 270(21):12906-11.
- Josephson, K, et al. (2001) Crystal structure of the IL-10/IL-10R1 complex reveals a shared receptor binding site. *Immunity.* 15(1):35-46.

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