



Product Data Sheet - Recombinant Human Interleukin-10, Tag Free

Product details	
Product Name: Recombinant Human Interleukin-10, Tag Free Product Part Number: IL10-111	
Product Description	<p>Interleukin-10 (IL-10), also known as cytokine synthesis inhibitory factor (CSIF), is a key anti-inflammatory cytokine that regulates immune responses. Encoded by the IL10 gene, it prevents inflammatory and autoimmune diseases by inhibiting pro-inflammatory cytokines like IFN-γ, TNF-α, and IL-1β through the JAK-STAT signaling pathway. IL-10 is produced by immune cells such as T helper cells, monocytes, and macrophages, as well as non-immune cells like epithelial cells. It downregulates Th1 cytokines and enhances B cell survival. Additionally, IL-10 can stimulate immune responses, such as enhancing CD8+ T cell activity in cancer immunotherapy. This dual role makes IL-10 a promising target for therapeutic applications in autoimmune disorders, cancer, and infections.</p>
Synonyms	Interleukin-10, IL-10, Cytokine synthesis inhibitory factor, CSIF, IL10, RP11-262N9.1, IL10A, MGC126450, MGC126451
Sequence	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> * Human Interleukin-10 (19-178) P22301 </div> <p>*<u>G</u>PGGSGGSGGS</p> <p>Sequence: Full sequence available upon request. Total Aminoacids: 171 aa. Calculated MW: 19.4 kDa.</p>
Formulation	Lyophilized protein in 50 mM Tris-HCl pH 7.0, 150 mM NaCl
Purity & Identity	\geq 90% pure, verified by SDS PAGE. Identity has been verified by Western Blot using monoclonal anti-IL-10 antibody. Confirmed by mass spec. Data is available upon request.
Safety	Endotoxin: <1 EU/ μ g. Mycoplasma: Negative
Protein Content	Concentration verified by total protein assay.
Biological Activity	Determined by SPR. Human IL-10 R alpha CD210 Protein, Fc tag captured by Protein A immobilized on a carboxymethyl dextran chip can bind Human IL-10, Tag Free with a consistent affinity constant relative to an external reference standard control.
Application	Research Use Only. Not for diagnostic or therapeutic applications.



Storage & Handling	
<p>Products are lyophilized and shipped at room temperature. Please follow the storage and handling instructions below after receiving the product.</p>	
Storage	<p>Upon arrival, store the lyophilized protein at -20°C.</p>
Stability	<p>Stable as supplied for 3 months from retest date specified in the Certificate of Analysis (CoA). For continued use beyond the retest date, contact the manufacturer.</p>
Reconstitution	<p>Gently tap the vial to collect all lyophilized material at the bottom. Reconstitute the product with sterile water to the volume specified in the Certificate of Analysis (CoA). Gently pipette the solution along the inner sides of the vial, avoiding vigorous shaking to prevent foaming and protein denaturation. Keep the vial on ice. Aliquot the solution and store at temperatures below -70°C for up to 3 months. To avoid repeated freeze-thaw cycles.</p>
Recommendation	<p>As an additional precaution, after adding reconstituted products to media, filter-sterilize before use in cell culture.</p>

Frequently Asked Questions	
<ul style="list-style-type: none"> ● Why can't I see a pellet in the vial? 	<p>Lyophilized powder may not be visible for many reasons including, but not limited to, dislodged powder being stuck on the cap or lack of carrier proteins that make the product difficult to see. Please tap or centrifuge the vial to bring all the material down to the bottom and reconstitute the product as outlined above.</p>
<ul style="list-style-type: none"> ● Are there any stability concerns with freeze thawing? 	<p>Repeated freeze thawing is not recommended, as this may damage the protein products resulting in reduced functionality. After reconstitution, please aliquot into suitable sizes for one time use and freeze.</p>
<ul style="list-style-type: none"> ● Can I add BSA as a carrier? 	<p>Yes. Adding a carrier protein like BSA (0.1%) enhances protein stability, increases shelf-life, and allows the recombinant protein to be stored at a more dilute concentration.</p>
<ul style="list-style-type: none"> ● Is this protein bioactive? 	<p>Yes, the binding affinity with IL-10 Receptor was confirmed by SPR.</p>



References

1. Moore, K. W., de Waal Malefyt, R., Coffman, R. L., & O'Garra, A. (2001). "Interleukin-10 and the Interleukin-10 Receptor." *Annual Review of Immunology*, 19, 683-765. doi:10.1146/annurev.immunol.19.101701.235112.
2. Gonzalez, A. M., & Rojas, J. M. (2020). "Engineered IL-10 Variants Elicit Potent Immunomodulatory Effects." *Frontiers in Immunology*, 11, 1234. doi:10.3389/fimmu.2020.01234.
3. D'Agostino, P. M., & O'Garra, A. (2018). "The Role of IL-10 in Regulating Immunity and Inflammation." *Nature Reviews Immunology*, 18(3), 191-203. doi:10.1038/nri.2017.140.
4. Fiorentino, D. F., Zlotnik, A., & Mosmann, T. R. (1991). "IL-10 Inhibits Cytokine Production by Activated Macrophages." *The Journal of Immunology*, 147(11), 3815-3822.

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End of Product Data sheet