

## IL-10 Protein, Human (HEK293)

<b>Cat. No.:</b>	HY-P70751
<b>Synonyms:</b>	Interleukin-10; IL-10; Cytokine synthesis inhibitory factor; CSIF; IL10; RP11-262N9.1; IL10A; MGC126450; MGC126451; TGIF
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P22301 (S19-N178)
<b>Gene ID:</b>	3586
<b>Molecular Weight:</b>	16-20 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>S P G Q G T Q S E N      S C T H F P G N L P      N M L R D L R D A F      S R V K T F F Q M K</p> <p>D Q L D N L L L K E      S L L E D F K G Y L      G C Q A L S E M I Q      F Y L E E V M P Q A</p> <p>E N Q D P D I K A H      V N S L G E N L K T      L R L R L R R C H R      F L P C E N K S K A</p> <p>V E Q V K N A F N K      L Q E K G I Y K A M      S E F D I F I N Y I      E A Y M T M K I R N</p>
<b>Biological Activity</b>	Immobilized human IL10 at 10 µg/mL (100 µL/well) can bind Cynomolgus IL10RA-Fc. The EC <sub>50</sub> for this effect is 0.3113 µg/mL.
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or 20 mM PB, 150 mM NaCl, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years from date of receipt. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	IL-10 Protein, a key immune regulatory cytokine, exerts potent anti-inflammatory effects to prevent excessive tissue damage caused by inflammation. It engages its heterotetrameric receptor, composed of IL10RA and IL10RB, triggering JAK1 and STAT2-mediated phosphorylation of STAT3. This leads to STAT3 translocation into the nucleus, driving the expression of anti-inflammatory mediators. IL-10 Protein targets antigen-presenting cells like macrophages and monocytes, inhibiting the release of pro-inflammatory cytokines. It also hinders antigen presentation by reducing MHC-class II and co-stimulatory molecule expression, thereby dampening T cell activation. Additionally, it reprograms metabolic pathways, including mTOR
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signaling, to control the inflammatory response of macrophages. The protein forms homodimers and interacts with IL10RA and IL10RB.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite F, Monmouth Junction, NJ 08852, USA