

IL-10 Protein, Human (HEK293, His-Avi)

Cat. No.:	HY-P78460
Synonyms:	Interleukin-10; IL-10; CSIF; IL10A; TGIF; B-TCGF; GVHDS; MGC126450; MGC126451
Species:	Human
Source:	HEK293
Accession:	P22301 (S19-N178)
Gene ID:	3586
Molecular Weight:	23-25 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μ m filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. 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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	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 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.

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