

## IL-35 Protein, Human (HEK293, Flag-His)

<b>Cat. No.:</b>	HY-P73880
<b>Synonyms:</b>	CLMF; IL-12A; IL-35; Interleukin-35; NFSK; NKSF1; P35
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P29459 (R23-S219)&Q14213 (R21-K229)
<b>Gene ID:</b>	3592&10148
<b>Molecular Weight:</b>	Approximately 48.3 kDa

### PROPERTIES

<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<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.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>IL-35 Protein plays a pivotal role in immune regulation, exhibiting versatility in its functions. It heterodimerizes with IL12B to form the IL-12 cytokine or with EBI3/IL27B to create the IL-35 cytokine. IL-12, primarily produced by professional antigen-presenting cells such as B-cells, dendritic cells, macrophages, and granulocytes, serves as a crucial link between innate resistance and adaptive immunity, regulating T-cell and natural killer-cell responses while inducing interferon-gamma production and favoring the differentiation of T-helper 1 cells. Mechanistically, IL-12 exerts its effects through a receptor composed of IL12R1 and IL12R2 subunits, leading to tyrosine phosphorylation of cellular substrates and subsequent regulation of cytokine/growth factor responsive genes by recruited phosphorylated STAT4. In the context of IL-35, IL-35 contributes significantly to maintaining immune homeostasis in the liver microenvironment and functions as an immune-suppressive cytokine. Notably, IL-35 mediates its effects through unconventional receptors composed of IL12RB2 and gp130/IL6ST heterodimers or homodimers, requiring the transcription factors STAT1 and STAT4 for signaling. Additionally, IL-35 interacts with NBR1, promoting IL-12 secretion. The IL-35 heterodimer with EBI3/IL27B, known as interleukin IL-35, is not disulfide-linked, distinguishing it from the disulfide-linked IL-12 heterodimer with IL12B.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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