

## IL-12 Protein, Human (Biotinylated, HEK293, His)

Cat. No.:	HY-P77511
Synonyms:	IL-12; Interleukin 12; Interleukin-12 subunit alpha; IL-12A; Cytotoxic lymphocyte maturation factor 35 kDa subunit; CLMF p35; IL-12 subunit p35; Interleukin-12 subunit beta; IL-12B; Cytotoxic lymphocyte maturation factor 40 kDa subunit; CLMF p40; IL-12 subunit p40
Species:	Human
Source:	HEK293
Accession:	P29459 (R23-S219) & P29460 (I23-S328)
Gene ID:	3592&3593
Molecular Weight:	Approximately 24&36.2 kDa.

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	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.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> 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	<p>IL-12 beta Protein, as known as IL12 p40 subunit or IL-12B, heterodimerizes with the IL-12 p35 subunit (IL-12A) to form IL-12 and with the IL23 p19 subunit to form IL-23, exerting different regulating functions<sup>[1]</sup>.</p> <p>IL-12 and IL23 belong to IL-12 family, are involved in proinflammatory responses and expressed by activated macrophages that serve as an essential inducer of Th1 cells development<sup>[2]</sup>.</p> <p>IL-12 signals via IL-12Rβ1 and IL-12Rβ2 mediated by p-STAT4, whereas IL-23 signals via IL-12Rβ1 and IL-23R mediated by p-STAT1 and p-STAT3<sup>[3]</sup>.</p> <p>The sequence of amino acids in IL-12 beta proteins of human is very different from mouse (69.04%) and rat (69.04%). Interleukin 12 (IL-12) family have been known to be inflammatory factors, induce autoimmune inflammation and thus may be responsible for autoimmune inflammatory diseases and may be important for tumorigenesis<sup>[4]</sup>.</p>
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### REFERENCES

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

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