

IL-12 Protein, Human (HEK293, His, Flag)

Cat. No.:	HY-P700462
Synonyms:	Cytotoxic lymphocyte maturation factor; CLMF; IL-12; NK cell stimulatory factor; NKSF
Species:	Human
Source:	HEK293
Accession:	P29460 (I23-S328)&P29459 (R23-S219)
Gene ID:	3593&3592
Molecular Weight:	39.7 kDa & 27.2 kDa

PROPERTIES

AA Sequence

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I W E L K K D V Y V   V E L D W Y P D A P   G E M V V L T C D T   P E E D G I T W T L
D Q S S E V L G S G   K T L T I Q V K E F   G D A G Q Y T C H K   G G E V L S H S L L
L L H K K E D G I W   S T D I L K D Q K E   P K N K T F L R C E   A K N Y S G R F T C
W W L T T I S T D L   T F S V K S S R G S   S D P Q G V T C G A   A T L S A E R V R G
D N K E Y E Y S V E   C Q E D S A C P A A   E E S L P I E V M V   D A V H K L K Y E N
Y T S S F F I R D I   I K P D P P K N L Q   L K P L K N S R Q V   E V S W E Y P D T W
S T P H S Y F S L T   F C V Q V Q G K S K   R E K K D R V F T D   K T S A T V I C R K
N A S I S V R A Q D   R Y Y S S S W S E W   A S V P C S & R N L   P V A T P D P G M F
P C L H H S Q N L L   R A V S N M L Q K A   R Q T L E F Y P C T   S E E I D H E D I T
K D K T S T V E A C   L P L E L T K N E S   C L N S R E T S F I   T N G S C L A S R K
T S F M M A L C L S   S I Y E D L K M Y Q   V E F K T M N A K L   L M D P K R Q I F L
D Q N M L A V I D E   L M Q A L N F N S E   T V P Q K S S L E E   P D F Y K T K I K L
C I L L H A F R I R   A V T I D R V M S Y   L N A S
  
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Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0

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 ddH₂O.

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-12 beta Protein, a multifunctional cytokine, serves as a growth factor for activated T and NK cells, amplifies the lytic activity of NK/lymphokine-activated killer cells, and induces the production of IFN-gamma by resting peripheral blood mononuclear cells (PBMC). When combined with IL23A, it forms the heterodimeric cytokine IL-23, which plays a pivotal role in both innate and adaptive immunity. This cytokine acts by binding to a receptor complex consisting of IL12RB1 and IL23R, initiating the Jak-Stat signaling cascade. Notably, IL-23 preferentially activates memory T-cells over naive T-cells and fosters the production of pro-inflammatory cytokines. The association of IL-23 with autoimmune inflammation suggests its potential involvement in autoimmune inflammatory diseases and underscores its significance in tumorigenesis.

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

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