

IL-23 alpha (170a.a) & IL-12 beta (306a.a) Heterodimer Protein, Human (HEK293, His)

Cat. No.:	HY-P73193
Synonyms:	IL-23 p19/IL-12 p40; IL23; IL-23A; Interleukin 23; SGRF
Species:	Human
Source:	HEK293
Accession:	Q9NPF7 (R20-P189)&P29460 (I23-S328)
Gene ID:	51561&3593
Molecular Weight:	approximately 22&40-50 kDa

PROPERTIES

AA Sequence

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IL - 23 A :
RAVPGGSSPA   WTQCQQLSQK   LCTLAWSAHP   LVGHMDLREE
GDEETTNDVP   HIQCGDGDGCDP   QGLRDNSQFC   LQR IHQGLIF
YEKLLGSDIF   TGEPSLLPDS   PVGQLHASLL   GLS QLLQPEG
HHWETQQIPS   LSPSQPWQRL   LLRFKILRSL   QAFVAVAAARV
FAHGAATLSP

IL - 12 B :
IWELKKD VY   VVELDWYPDA   PGEMVVLTC D   TPEEDGITWT
LDQSSEVLGS   GKTLTIQVKE   FGDAGQYTCH   KGG E VLSHSL
LLLHKKEDGI   WSTDILKDQK   EPKNKTF LRC   EAKNYSGRFT
CWWLTTISTD   LTF SVKSSRG   SSDPQGVTCG   AATLSAERVR
GDNKEYEYSV   ECQEDSACPA   AEESLPI EVM   VDAVHKLKYE
NYTSSFFIRD   IKPDPPKNL   QLKPLKNSRQ   VEVSWEYPDT
WSTPHSYFSL   TFCVQVQGKS   KREKKDRVFT   DKTSATVICR
KNASISVRAQ   DRYYS SSWSE   WASVPCS
  
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Biological Activity Measured by its ability to induce IL-17 secretion by CTLL-2 cells. The ED₅₀ for this effect is 14.92ng/mL, corresponding to a specific activity is 6.7×10⁴ U/mg.

Appearance Lyophilized powder

Formulation Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.

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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

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-23, in collaboration with IL12B, forms the pro-inflammatory cytokine IL-23, playing diverse roles in both innate and adaptive immunity. Released by antigen-presenting cells such as dendritic cells or macrophages, IL-23 binds to a heterodimeric receptor complex comprising IL12RB1 and IL23R, initiating a cascade involving JAK2 and TYK2 activation. These kinases phosphorylate the receptor, creating a docking site for the subsequent phosphorylation of STAT3 and STAT4. This process activates multiple pathways, including p38 MAPK or NF-kappa-B, fostering the production of pro-inflammatory cytokines, such as interleukin-17A/IL17A. Additionally, IL-23 actively participates in the early and effective clearance of intracellular bacteria. Notably, IL-23 promotes the expansion and survival of T-helper 17 cells, a CD4-positive helper T-cell subset known for producing IL-17, alongside other IL-17-producing cells. The heterodimeric association of IL-23 with IL12B, known as interleukin IL-23, is disulfide-linked. Furthermore, IL-23 interacts with IL23R, facilitating the recruitment of IL12RB1.

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

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