

IL-23 alpha (175a.a) & IL-12 beta (313a.a) Heterodimer Protein, Mouse (HEK293)

Cat. No.:	HY-P70709
Synonyms:	SGRF; IL-23p19; CLMF p40; IL-12 subunit p40; NKSF2
Species:	Mouse
Source:	HEK293
Accession:	Q9EQ14 (V22-A196)&P43432 (M23-S335)
Gene ID:	83430&16160
Molecular Weight:	18-27kDa&40-55 kDa

PROPERTIES

AA Sequence

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

Biological Activity Measured by its ability to induce IL17 secretion by mouse CTLL-2 cells. The ED₅₀ for this effect is ≤ 20.75 ng/mL, corresponding to a specific activity is ≥ 4.82 × 10⁴ U/mg.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 μm filtered solution of PBS, 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 alpha, as a crucial component, associates with IL12B to form the IL-23 interleukin, a heterodimeric cytokine playing key roles in both innate and adaptive immunity. Operating in peripheral tissues, IL-23, in conjunction with IL-17, constitutes an acute response to infections. It binds to a heterodimeric receptor complex composed of IL12RB1 and IL23R, activating the Jak-Stat signaling cascade, preferentially stimulating memory T-cells, and fostering the production of pro-inflammatory cytokines. This cytokine induces autoimmune inflammation, potentially contributing to autoimmune inflammatory diseases and playing a significant role in tumorigenesis. Released by antigen-presenting cells such as dendritic cells or macrophages, IL-23 binds to its receptor complex, initiating signaling pathways that activate various cellular responses, including the production of interleukin-17A/IL17A and promoting early and effective intracellular bacterial clearance. Additionally, IL-23 supports the expansion and survival of T-helper 17 cells, a CD4-positive helper T-cell subset known for producing IL-17, along with other IL-17-producing cells.

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

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