

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

Cat. No.:	HY-P74816
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 55.8 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 ₂ 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-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.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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