

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

<b>Cat. No.:</b>	HY-P74814
<b>Synonyms:</b>	IL-23 p19/IL-12 p40; IL23; IL-23A; Interleukin 23; SGRF
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	Q9EQ14 (V22-A196)&P43432 (M23-S335)
<b>Gene ID:</b>	83430&16160
<b>Molecular Weight:</b>	Approximately 47&45&26 kDa

### PROPERTIES

<b>Biological Activity</b>	<ol style="list-style-type: none"> <li>1. Immobilized Human IL23 Receptor hFc at 2 µg/mL (100 µL/well) can bind Mouse IL-23 His, the EC<sub>50</sub> of Mouse IL-23 His is 50-250 ng/mL.</li> <li>2. Measured by its ability to induce IL17 secretion by mouse splenocytes and the ED<sub>50</sub> is 0.5-4 ng/mL.</li> </ol>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	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.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>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.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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