Recombinant Mouse IL-23
Catalog Number: 1887-ML

DESCRIPTION

Source
Spodoptera frugiperda, Sf 21 (stably transfected)-derived mouse IL-23 protein

<table>
<thead>
<tr>
<th>N-terminal Sequence</th>
<th>C-terminus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouse IL-23 p40 (Met23-Ser335)</td>
<td>IGSGSSRGGSGGGGGSK</td>
</tr>
<tr>
<td>Accession # P43432</td>
<td></td>
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<tr>
<td>Mouse IL-23 p19 (Leu20-Ala196)</td>
<td>Accession # Q9EQ14</td>
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</tbody>
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N-terminal Sequence Analysis
Met23

Predicted Molecular Mass
57 kDa

SPECIFICATIONS

SDS-PAGE
(58-71) kDa, non-reducing conditions

Activity
Measured by its ability to induce IL-17 secretion by mouse splenocytes. Aggarwal, S. et al. (2003) J. Biol. Chem. 278:1910. The ED₅₀ for this effect is 0.05-0.25 ng/mL.

Endotoxin Level
<1.0 EU per 1 μg of the protein by the LAL method.

Purity
>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation
Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution
Reconstitute at 100 μg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt. -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin 23 (IL-23) is a heterodimeric cytokine composed of two disulfide-linked subunits, a p19 subunit that is unique to IL-23, and a p40 subunit that is shared with IL-12 (1-5). The p19 subunit has homology to the p35 subunit of IL-12, as well as to other single chain cytokines such as IL-6 and IL-11. The p40 subunit is homologous to the extracellular domains of the hematopoietic cytokine receptors. Mouse p19 cDNA encodes a 196 amino acid residue (aa) precursor protein with a putative 19 aa signal peptide and 177 aa mature protein. Human and mouse p19 share 70% aa sequence identity. Although p19 is expressed by activated macrophages, dendritic cells, T cells, and endothelial cells, only activated macrophages and dendritic cells express p40 concurrently to produce IL-23. The functional IL-23 receptor complex consists of two receptor subunits, the IL-12 receptor beta 1 subunit (IL-12 Rβ1) and the IL-23-specific receptor subunit (IL-23 R). IL-23 has biological activities that are similar to, but distinct from IL-12. Both IL-12 and IL-23 induce proliferation and IFN-γ production by human T cells. While IL-12 acts on both naïve and memory human T cells, the effects of IL-23 is restricted to memory T cells. In mouse, IL-23 but not IL-12, has also been shown to induce memory T cells to secrete IL-17, a potent proinflammatory cytokine. IL-12 and IL-23 can induce IL-12 production from mouse splenic DC of both the CD8⁻ and CD8⁺ subtypes, however only IL-23 can act directly on CD8⁺ DC to mediate immunogenic presentation of poorly immunogenic tumor/self peptide.

References:

Rev. 10/31/2018 Page 1 of 1