DESCRIPTION

Source: Spodoptera frugiperda, Sf21 (stably transfected)-derived

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

N-terminal Sequence Analysis

Predicted Molecular Mass: 57 kDa

SPECIFICATIONS

SDS-PAGE: 66 kDa, 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: >90%, 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution: Reconstitute at 100 μg/mL in sterile PBS.

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 secret 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:

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