Recombinant Mouse IL-23/IL-12B&IL-23A Protein

Catalog No.: RP02928S

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Sequence Information

Species	Gene ID
Mouse	16160&83430

Swiss Prot	Tags
P43432 & Q9EQ14	N-His(IL-23a) &No tag(IL-12b)

Synonyms

p40; Il-12b; Il12p40; Il-12p40; IL12B;p19; IL-23;il23A

Product Information

Source	Purification
HEK293 cells	≥ 90% as determined by SDS-PAGE.

Calculated MW	Observed MW
19.73 kDa(IL-23A) , 35.79 kDa (IL-12B)	20-25 kDa(IL-23A) , 45-50 kDa (IL-12B)

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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 R beta 1) 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-gamma production by human T?cells. While IL-12 acts on both na?ve and memory human Tnbsp;cells, the effects of IL-23 is restricted to memory Tcells. 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.

Basic Information

Description

Recombinant Mouse IL-23/IL-12B&IL-23A Protein is produced by HEK293 expression system. The target protein is expressed with sequence (N-His(IL-23a)&No tag(IL-12b)) of mouse Met23-Ser335 & Ala21-Ala196 (Accession #) fused with a 6×His tag at the N-terminus(IL23A).

Activity

Measured by its ability to induce IL-17 secretion by mouse splenocytes. The ED_{50} for this effect is 29.1-116.4 pg/mL, corresponding to a specific activity of 8.59×10^{6}~3.44×10^{7} units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20℃

Operational Notes

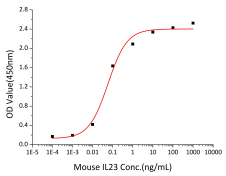
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

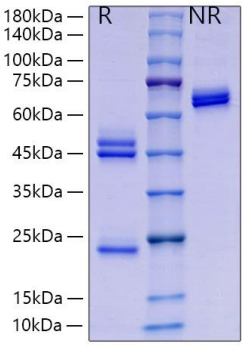
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Validation Data



Recombinant Mouse IL12B & IL23A induce IL-17 secretion by mouse splenocytes. The ED_{50} for this effect is 29.1-116.4 pg/mL, corresponding to a specific activity of 8.59×10^{6}~3.44×10^{7} units/mg.



Recombinant Mouse IL-23/IL-12B&IL-23A Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.