

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

Catalog No.: RP029285 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	16160&8343	P43432
	0	□Q9EQ14

Tags

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	

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

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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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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 Tnb?;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 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.

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).

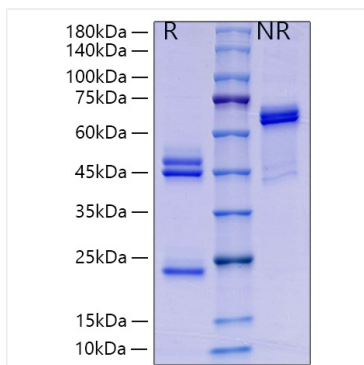
Bio-Activity

Measured by its ability to induce IL-17 secretion by mouse splenocytes. The ED₅₀ for this effect is 29.1-116.4 pg/mL, corresponding to a specific activity of 8.59×10⁶~3.44×10⁷ units/mg.

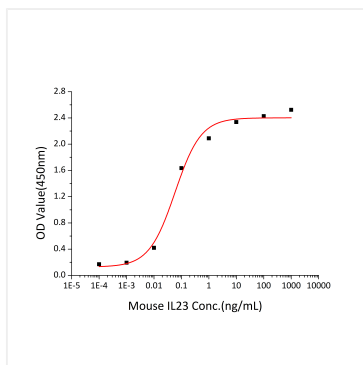
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Mouse IL-23/IL-12B&IL-23A Protein was resolved with SDS PAGE under reducing (R) and non-reducing (NR) conditions showing single bands at 20-25(IL-23A) ,45-50(IL-12B)kDa and 65-75 kDa, respectively.



Recombinant Mouse IL12B&IL23A induce IL-17 secretion by mouse splenocytes. The ED₅₀ for this effect is 29.1-116.4 pg/mL, corresponding to a specific activity of 8.59×10⁶~3.44×10⁷ units/mg.