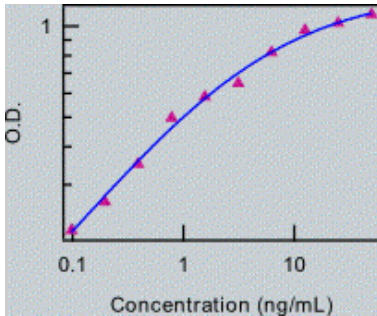


Human IL-23 Recombinant Protein Carrier-Free

Catalog Number: 34-8239

Also Known As: Interleukin-23, IL23, p40, p19

RUO: For Research Use Only. Not for use in diagnostic procedures.



Product Information

Contents: Human IL-23 Recombinant Protein Carrier-Free

REF **Catalog Number:** 34-8239

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in sterile environment.

Source: Insect cells infected with baculovirus: human p40, amino acids met 1-ser 328, accession # NM_002187 was co-expressed with human p19, amino acids met 1-pro 189, accession # NM_016584

Molecular Mass: The heterodimer of p40, amino acids ile 23-ser 328, cystine linked to p19, amino acids arg 20-pro 189, has a predicted molecular mass of 53,356. On non-reducing SDS-PAGE the heterodimeric cystine-linked protein migrates as a 55 kDa protein. The DTT reduced protein migrates as 43 kDa and 18 kDa polypeptides.

Purity: > 98% as determined by SDS-PAGE

Endotoxin Level: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED50 of this protein, as measured by induction of IL-17A in mouse splenocytes, is less than or equal to 3.5 ng/mL. This corresponds to a specific activity of greater than or equal to 2.9 x 10⁵ Units/mg.

Formulation: Sterile liquid; 20 mM phosphate, 0.2 M NaCl, pH 6.0. 0.22 um filtered.



Temperature Limitation: Store at less than or equal to -70°C.



Batch Code: Refer to Vial



Use By: Refer to Vial

Description

IL-23 is a heterodimeric cytokine composed of the p40 subunit of IL-12 disulfide-linked with a protein p19. p19, like p35 of IL-12, is biologically inactive by itself. IL-23 interacts with IL-12Rbeta1 and an additional, novel beta2-like receptor subunit with STAT4 binding domain, termed IL-23R. IL-23 is secreted by activated mouse and human dendritic cells. Biological activities of mouse IL-23 are distinct from those of mouse IL-12. Mouse IL-23 was found not to induce significant amounts of IFN- γ . Mouse IL-23 does induce strong proliferation of memory T cells (but not naive T cells), whereas IL-12 has no effect on memory cells. Additionally, mouse IL-23 (but not IL-12) can activate mouse memory T cells to produce the proinflammatory cytokine IL-17. Human IL-23 has biological properties which are less distinct from human IL-12; human IL-23 induces proliferation of memory T cells and induces moderate levels of IFN- γ production by naive and memory T cells, as compared to IL-12.

eBioscience's recombinant IL-23 is produced in baculovirus-infected insect cells as an authentic heterodimer of precursor p19 and p40 subunits using a dual promoter expression system. It is distinct from other available forms of the protein in that it is expressed as a true heterodimer, as opposed to a single-chain, pseudo-heterodimer in which the subunits are joined by an artificial linker.

Applications Reported

Recombinant human IL-23 is biologically active.

Applications Tested

The ED50 of this protein, as measured by induction of IL-17A in mouse splenocytes, is less than or equal to 3.5 ng/mL. This corresponds to a specific activity of greater than or equal to 2.9 x 10⁵ Units/mg.

References

- Brombacher, F., et al. 2003. Novel IL-12 family members shed light on the orchestration of Th1 responses. *Trends Immunol.* 24: 207-212.
- Oppmann, B., et al. 2000. Novel p19 protein engages IL-12p40 to form a cytokine, IL-23, with biological activities similar as well as distinct from IL-12. *Immunity.* 13: 715-725.
- Aggarwal, S., et al. 2003. IL-23 promotes a distinct CD4 T cell activation state characterized by the production of IL-17. *J. Biol. Chem.* 278: 1910-1914.

Related Products

- 88-7231 Mouse IL-23 (Interleukin-23, IL23) ELISA Ready-SET-Go! Kit (with Pre-Coated Plates)
- 88-7234 Mouse IL-23 ELISA Ready-SET-Go!® (Discontinued: Please see 88-7230 (2nd generation assay))
- 88-7921 Mouse IL-12 (Interleukin-12, IL12) p70 ELISA Ready-SET-Go! Kit (See replacement item BMS6004)

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