

Recombinant human IL-23

Mammalian cell-expressed human interleukin-23

Cat. code: rcyc-hil23; rcyc-hil23-5

<https://www.invivogen.com/cytokines-human-il-23-recombinant-protein>

For research use only

Version 25A30-NJ

PRODUCT INFORMATION

Contents

Recombinant human IL-23 is provided as a lyophilized powder and is available in two quantities:

- **rcyc-hil23:** 10 µg
- **rcyc-hil23-5:** 50 µg (5 x 10 µg)

Note: This product is sterile filtered prior to lyophilization.

- 1.5 ml endotoxin-free water for rcyc-hil23 and rcyc-hil23-5

Storage and stability

- Recombinant human IL-23 is shipped at room temperature. Upon receipt, it should be immediately stored at -20 °C.
- Upon resuspension, prepare aliquots of recombinant human IL-23 and store at 4 °C for 1 week or at -20 °C to -80 °C for 12 months.

Note: Avoid repeated freeze-thaw cycles.

Quality control

- Purity: ≥ 95% (SDS-PAGE)
- Endotoxin level: ≤ 0.1 EU/µg (LAL assay)
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) is verified using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The biological activity of IL-23 is confirmed using HEK-Blue™ IL-23 cells.

Characteristics

- Source: Mammalian; Chinese hamster ovary (CHO) cells
- Carrier: Carrier-free
- Tag: Tag-free
- Construction: Heterodimer linked by 10 amino acids (a.a.)
- Accession number: P29460.1 (IL-12p40), Q9NPF7 (IL-23p19)
- Protein size: 486 a.a (I23-S328(p40)-Linker-R20-P189(p19))
- Molecular weight: ~ 61 kDa (SDS-PAGE)
- Solubility: 100 µg/ml in water
- Formulation: Recombinant human IL-23 was lyophilized from a 0.2 µm filtered phosphate buffer saline (pH 7.4), 5% saccharose.

APPLICATIONS

- Cellular assays

PRODUCT DESCRIPTION

Interleukin 23 (IL-23) is a pro-inflammatory cytokine produced by macrophages and dendritic cells in response to microbial infections¹. IL-23 contributes to Th17 differentiation and activation of group 3 innate lymphoid cells (ILC3)¹. Dysregulated IL-23 production is linked to immune-mediated inflammatory diseases such as psoriasis, Crohn's disease, and ulcerative colitis^{2,3}.

Recombinant human IL-23 is a high-quality and biologically active cytokine, validated using proprietary reporter cells. This heterodimeric cytokine is composed of two subunits, IL-23p19 and IL-12p40 (common subunit shared with IL-12), linked with a 10 amino acid sequence.

Recombinant human IL-23 is produced in CHO cells to ensure protein glycosylation and *bona fide* 3D structure. It is purified by size-exclusion chromatography.

Recombinant human IL-23 can be used together with HEK-Blue™ IL-23 cells for the screening of inhibitory molecules, such as Ustekinumab, a therapeutic monoclonal antibody targeting the IL-12p40 subunit.

1. Floss D.M., et al., 2020. IL-12 and IL-23-Close Relatives with Structural Homologies but Distinct Immunological Functions. *Cells*, 9(10): 2184.
2. Moschen, A.R., et al., 2019. IL-12, IL-23 and IL-17 in IBD: immunobiology and therapeutic targeting. *Nat rev Gastroenterol Hepatol*. 16(3):185-196.
3. Parigi T.L., et al., 2022. Blockade of IL-23: What is in the pipeline? *J Crohns Colitis*. 16 (suppl 2):ii64-ii72.

METHODS

Preparation of stock solution (100 µg/ml):

1. Add 100 µl of endotoxin-free water (provided) to 10 µg of recombinant human IL-23.
2. Mix gently by pipetting until completely resuspended.
3. Use immediately or prepare aliquots and store at -20 °C or -80 °C. Avoid freeze-thaw cycles.
4. Further dilutions can be prepared in the appropriate aqueous buffer, such as cell culture medium containing serum.

RELATED PRODUCTS

Product	Cat. Code
HEK-Blue™ IL-23 Cells	hkb-il23
Anti-hIL-12/IL-23-p40-hlgG1	hil12p40-mab1

TECHNICAL SUPPORT

InvivoGen USA (Toll-Free): 888-457-5873

InvivoGen USA (International): +1 (858) 457-5873

InvivoGen Europe: +33 (0) 5-62-71-69-39

InvivoGen Asia: +852 3622-3480

E-mail: info@invivogen.com