

## Active Recombinant Human IL23 (IL12B & IL23A Heterodimer), His-tagged

**Cat. No.** IL23A&IL12B-208H    **Lot. No.** (See product label)

### SPECIFICATION

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b>     | A DNA sequence encoding the IL23A (Q9NPF7) (Met 1-Pro 189) was fused with a polyhistidine tag at the C-terminus, constructed the plasmid 1; A DNA sequence encoding the p40 subunit of human IL12, termed as IL12B (NP_002178.2) (Met 1-Ser 328) was fused with a polyhistidine tag at the C-terminus, constructed the plasmid 2. The two plasmids were co-expressed and the IL23 heterodimer was purified.                                                                                                                 |
| <b>Species</b>              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>               | Human Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>ProteinLength</b>        | 1-189;1-328 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>          | This gene encodes a subunit of the heterodimeric cytokine interleukin 23 (IL23). IL23 is composed of this protein and the p40 subunit of interleukin 12 (IL12B). The receptor of IL23 is formed by the beta 1 subunit of IL12 (IL12RB1) and an IL23 specific subunit, IL23R. Both IL23 and IL12 can activate the transcription activator STAT4, and stimulate the production of interferon-gamma (IFNG). In contrast to IL12, which acts mainly on naive CD4(+) T cells, IL23 preferentially acts on memory CD4(+) T cells. |
| <b>Predicted N Terminal</b> | Arg 20 & Ile 23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Form</b>                 | Lyophilized from sterile PBS, pH 7.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Bio-activity</b>   | 1. Measured by its ability to bind biotinylated recombinant human IL12RB1 in a functional ELISA.2. Measured by its binding ability in a functional ELISA. Immobilized human IL23A-His+IL12B-His at 10 µg/ml (100 µl/well) can bind human IL23R-Fc. The EC50 of human IL23R-Fc is 0.28-0.66 µg/ml.3.Measured by its binding ability in a functional ELISA. Immobilized human IL23A-His+IL12B-His at 10 µg/ml (100 µl/well) can bind Cynomolgus IL23R-Fc. The EC50 of Cynomolgus IL23R-Fc is 0.14-0.35 µg/ml. |
| <b>Molecular Mass</b> | The recombinant IL23 heterodimer of human IL23A/IL12B comprises 498 (181 + 317) amino acids and has a calculated molecular mass of 56.3 (20.1 + 36.2) kDa. The apparent molecular mass of rhIL23 heterodimer is approximately 22 & 45 kDa respectively in SDS-PAGE under reducing conditions.                                                                                                                                                                                                               |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purity</b>         | > 90 % as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Stability</b>      | Samples are stable for up to twelve months from date of receipt at -70°C                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Storage</b>        | Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                |
| <b>Reconstitution</b> | A hardcopy of COA with reconstitution instruction is sent along with the products.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Shipping</b>       | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.                                                                                                                                                                                                                                                   |

## GENE INFORMATION

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | IL23A interleukin 23, alpha subunit p19 [ Homo sapiens (human) ]                                                                                 |
| <b>Official Symbol</b>     | IL23A                                                                                                                                            |
| <b>Synonyms</b>            | IL23A; interleukin 23, alpha subunit p19; interleukin-23 subunit alpha; IL 23; IL 23A; IL23P19; interleukin six; G CSF related factor; P19; SGRF |
| <b>Gene ID</b>             | 51561                                                                                                                                            |
| <b>mRNA Refseq</b>         | NM_016584                                                                                                                                        |
| <b>Protein Refseq</b>      | NP_057668                                                                                                                                        |
| <b>MIM</b>                 | 605580                                                                                                                                           |
| <b>UniProt ID</b>          | Q9NPF7                                                                                                                                           |
| <b>Chromosome Location</b> | 12q13.13                                                                                                                                         |
| <b>Pathway</b>             | Cytokine-cytokine receptor interaction; IL23-mediated signaling events; Inflammatory bowel disease (IBD)                                         |
| <b>Function</b>            | cytokine activity; contributes_to interleukin-23 receptor binding; protein binding                                                               |