

## Recombinant Mouse IL-23 (carrier-free)

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|--------------------------|---|
| <b>Catalog# / Size</b>   | 589006 / 100 µg<br>589008 / 500 µg<br>589002 / 10 µg<br>589004 / 25 µg  |
| <b>Regulatory Status</b> | RUO   |
| <b>Other Names</b>       | Interleukine 23 (Interleukin 23, alpha subunit p19 and Interleukin-12 subunit beta p40)   |
| <b>Description</b>       | IL-23 is a member of the IL-6 family of cytokines, and it is constituted by two subunits, p19 and p40. The p19-p40 heterodimer is stabilized by a disulfide bond. The subunit p40 is shared by IL-23 and IL-12 cytokines. p19 mRNA is expressed in endothelial cells and polarized T cells; nevertheless, p40 is not expressed by these cells. Therefore, the availability of functional IL-23 is limited by the expression of p40 and not p19. IL-23 exerts its biological activities through the interaction with a heterodimeric receptor complex composed of IL-12Rb1 and IL-23R. IL-23 activates Janus kinase (JAK)/signal transducer and activator of transcription signaling molecules (STAT). JAK2 is constitutively associated with the IL-23R chain, and binding of IL-23 to its receptor leads to phosphorylation of STAT1, STAT3, STAT4, and STAT5. |

### Product Details

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| <b>Source</b>                   | The mouse IL-23 consists of two subunits linked via a disulphide bond: P19 (Accession# NM_031252: Met1-Ala 196) and P40 (Accession# NM_008352 : Met Met1-Ser 335). Mouse IL-23 was expressed in insect cells.   |
| <b>Molecular Mass</b>           | The total predicted molecular weight is 55.4 kD. The non-reduced protein migrates at approximately 60 kD and the DTT-reduced protein produces two bands at approximately 19 kD (Leu 20-Ala 196) and 40 kD (Met 23-Ser 335) by SDS-PAGE.   |
| <b>Purity</b>                   | Purity is >95%, as determined by Coomassie stained SDS-PAGE.  |
| <b>Formulation</b>              | 0.22 µm filtered protein solution is in PBS   |
| <b>Endotoxin Level</b>          | Less than 0.01 ng per µg cytokine as determined by the LAL method.  |
| <b>Preparation</b>              | For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in sterile buffer containing carrier protein such as 1% BSA or HSA or 10% FBS.   |
| <b>Concentration</b>            | 10 and 25 µg sizes are bottled at 100 µg/mL. 100 µg and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.   |
| <b>Storage &amp; Handling</b>   | Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. <b>Avoid repeated freeze/thaw cycles.</b> |
| <b>Activity</b>                 | ED <sub>50</sub> ≤1.5 ng/ml, corresponding to a specific activity of ≥0.66 x 10 <sup>6</sup> units/mg, as determined by mouse splenocytes IL-17A secretion induced by mIL-23 in a dose dependent manner.  |
| <b>Application</b>              | <a href="#">Bioassay</a>  |
| <b>Application Notes</b>        | BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our <a href="#">100% satisfaction guarantee</a> . If you have any concerns, contact us at <a href="mailto:tech@biolegend.com">tech@biolegend.com</a> .                 |
| <b>Additional Product Notes</b> | View more applications data for this product in our <a href="#">Scientific Poster Library</a> .<br><br>Get a 50% discount on this product when purchased in our Activation Bundles. Restrictions apply.   |

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## Product Citations

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## RRID

AB\_10663413 (BioLegend Cat. No. 589002)

## Antigen Details

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### Structure

Heterodimer

### Distribution

IL-23 is highly expressed by activated dendritic cells, macrophages, and epidermal Langerhans cells.

### Function

IL-23 promotes Th17 responses *in vivo*, and it is important for the survival and population expansion of Th17 cells. IL-23 induces proliferation of memory T cells and the induction of IL-17A and IL-17F in these cells. IL-23 induces the secretion of IL-17, IL-17F, IL-6, and TNF $\alpha$  in Th17 cells. In conjunction with IL-1, IL-23 is sufficient to induce naïve human T cells to produce IL-17A, IL-17F, IL-22, IL-26, IFN- $\gamma$  CCL20/MIP-3 $\alpha$  and the transcription factor ROR $\gamma$ t. PGE2 favors the production of IL-23 and inhibit IL-12 in dendritic cells. PGE2 synergizes with IL-23 in expanding Th17 cells from purified memory CD4+ T cells activated in the absence of accessory cells. IL-23 induces IFN- $\gamma$  production from T cells treated with PHA. In addition, IL-23 plays a key role in the pathogenesis of autoimmune and chronic inflammatory disorders. This role is supported by the identification of IL-23 receptor (IL-23R) susceptibility alleles associated with inflammatory bowel disease, psoriasis, and ankylosing spondylitis.

### Ligand/Receptor

IL-23 binds to L-12Rb1 and IL-23R

### Cell Targets

Memory T cells, Th17 cells, Inflammatory macrophages, NK cells, dendritic cells, and monocytes.

### Biology Area

Stem Cells, Immunology

### Molecular Family

Cytokines/Chemokines

### Antigen References

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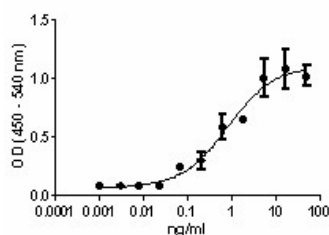
## Gene ID

[16160](#)

[83430](#)

## Product Data

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Mouse IL-23 induces IL-17A in mouse splenocytes.

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