

# Active Recombinant Mouse interleukin 12 Protein, Flag tagged

**Cat. No.** IL12b-175M    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant mouse IL-12B protein (P43432) (Met 23-Ser 335) and mouse IL-12A protein (P43431) (Arg 23-Ala 215) linked by a GSGSSRGGSGSGGSGGGGSK linker with a Flag tag at the C-terminus was expressed in HEK293.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>ProteinLength</b>    | IL-12B: 23-335aa<br>IL-12A: 23-215aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | Cytokine that can act as a growth factor for activated T and NK cells, enhance the lytic activity of NK/lymphokine-activated killer cells, and stimulate the production of IFN-gamma by resting PBMC. Associates with IL23A to form the IL-23 interleukin, a heterodimeric cytokine which functions in innate and adaptive immunity. IL-23 may constitute with IL-17 an acute response to infection in peripheral tissues. IL-23 binds to a heterodimeric receptor complex composed of IL12RB1 and IL23R, activates the Jak-Stat signaling cascade, stimulates memory rather than naive T-cells and promotes production of pro-inflammatory cytokines. IL-23 induces autoimmune inflammation and thus may be responsible for autoimmune inflammatory diseases and may be important for tumorigenesis. |
| <b>Tag</b>              | C-Flag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Bio-activity</b>     | Measured by its ability to induce Interferon gamma secretion by human natural killer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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lymphoma NK-92 cells. The ED50 for this effect is typically 15-90 ng/mL.

**Molecular Mass** 60.6 kDa

**Endotoxin** Less than 1.0 EU/μg by the LAL method.

**Purity** >95% as determined by SDS-PAGE.

**Storage** Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

**Storage Buffer** Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.

**Reconstitution** Reconstitute at 250 μg/mL in sterile water.

**GeneID 2** [16159](#)

## GENE INFORMATION

**Gene Name** [IL12b interleukin 12b \[ Mus musculus \(house mouse\) \]](#)

**Official Symbol** [IL12b](#)

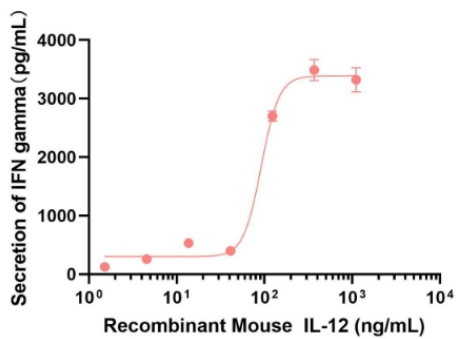
**Synonyms** IL12B; interleukin 12b; interleukin-12 subunit beta; CLMF p40; IL-12 p40; IL-12 subunit p40; IL-23 subunit p40; cytotoxic lymphocyte maturation factor 40 kDa subunit; p40; IL-12b; IL12p40; IL-12p40;

**Gene ID** [16160](#)

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| mRNA Refseq                     | NM_008352                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                                |                 |      |                 |      |                 |       |                 |       |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------|-----------------|------|-----------------|------|-----------------|-------|-----------------|-------|
| Protein Refseq                  | NP_032378                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| UniProt ID                      | P43432                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| Gene Name 2                     | Il12a interleukin 12a [ Mus musculus (house mouse) ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| Official Symbol 2               | IL12A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| Synonyms 2                      | IL12A; interleukin 12a; interleukin-12 subunit alpha; CLMF p35; IL-12 subunit p35; interleukin 12a p35 subunit; cytotoxic lymphocyte maturation factor 35 kDa subunit; p35; LI12a; IL-12a; IL-12p35; MGC151228; MGC151232;                                                                                                                                                                                                                                                                                                         |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| mRNA Refseq 2                   | NM_001159424                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| Protein Refseq 2                | NP_001152896                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| UniProt ID 2                    | P43431                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| Activity                        |  <table border="1"> <caption>Approximate data points from the IFN gamma secretion graph</caption> <thead> <tr> <th>Recombinant Mouse IL-12 (ng/mL)</th> <th>Secretion of IFN gamma (pg/mL)</th> </tr> </thead> <tbody> <tr> <td>10<sup>0</sup></td> <td>~200</td> </tr> <tr> <td>10<sup>1</sup></td> <td>~300</td> </tr> <tr> <td>10<sup>2</sup></td> <td>~2800</td> </tr> <tr> <td>10<sup>3</sup></td> <td>~3500</td> </tr> </tbody> </table> | Recombinant Mouse IL-12 (ng/mL) | Secretion of IFN gamma (pg/mL) | 10 <sup>0</sup> | ~200 | 10 <sup>1</sup> | ~300 | 10 <sup>2</sup> | ~2800 | 10 <sup>3</sup> | ~3500 |
| Recombinant Mouse IL-12 (ng/mL) | Secretion of IFN gamma (pg/mL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| 10 <sup>0</sup>                 | ~200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| 10 <sup>1</sup>                 | ~300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| 10 <sup>2</sup>                 | ~2800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                                |                 |      |                 |      |                 |       |                 |       |
| 10 <sup>3</sup>                 | ~3500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                 |                                |                 |      |                 |      |                 |       |                 |       |

Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED50 for this effect is typically 15-90 ng/mL.

**Protein on SDS-PAGE under reducing (R) condition.**

