

## Recombinant Murine Interleukin 12a, P35-P40

**Cat. No.** IL12a-210M    **Lot. No.** (See product label)

### SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Product Overview</b>  | Recombinant mouse IL-12 produced in <i>Sf9 insect cells</i> is a glycosylated disulfide-linked heterodimeric polypeptide chain of 506 amino acids having a molecular mass of 75 kDa consisting of disulfide-linked 35 kDa (p35) and 40 kDa (p40) subunits. It has been purified by using proprietary chromatographic techniques. It is expressed in Sf9 cells. MW=75kDa.                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>           | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>            | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>       | IL-12 is a potent regulator of cell mediated immune responses and it induces IFN-gamma production by NK and T cells. It is produced by activated monocytes/macrophage cells, B lymphocytes and connective tissue type mast cells. Among its biological activities IL-12 promotes the growth and activity of activated NK, CD4+ and CD8+ cells and induces the development of IFN-gamma producing Th1 cells. Recombinant mouse IL-12 produced in Sf9 insect cells is a glycosylated disulfide-linked heterodimeric polypeptide chain of 506 amino acids having a molecular mass of 75 kDa consisting of disulfide-linked 35 kDa (p35) and 40 kDa (p40) subunits. It has been purified by using proprietary chromatographic techniques. |
| <b>Purity</b>            | Greater than 95% (determined by SDS-PAGE and HPLC analysis).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Specific Activity</b> | NA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Endotoxin Level</b>   | < 0.1 ng per g of rMu IL-12-p40 (1EU/g).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>Biological Activity</b> | The ED <sub>50</sub> , as determined by the dose dependent secretion of interferon-gamma from PHA and IL-2 activated mouse splenocytes that have been co-stimulated with PMA, is 0.01- 0.05 ng/ml.                                                                                                                                                    |
| <b>Formulation</b>         | Lyophilized from a sterile-filtered solution with no additives.                                                                                                                                                                                                                                                                                       |
| <b>Reconstitution</b>      | Please Note: Always centrifuge product before opening vial. The lyophilized protein should be reconstituted with distilled, sterile water to a concentration of 0.1-1.0 mg/ml. For further dilution, carrier protein (0.1% BSA or HSA) should be added to avoid loss of bioactivity.                                                                  |
| <b>Storage</b>             | The lyophilized protein, though stable at room temperature for up to 3 weeks, is best stored desiccated at -20°C. Reconstituted protein should be used immediately or stored long-term in undiluted working aliquots at -20°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid repeated freeze-thaw cycles. |

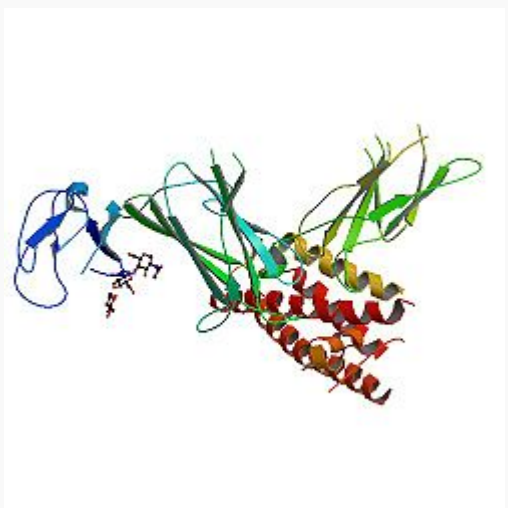
## GENE INFORMATION

|                       |                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>      | <b>IL12a interleukin 12a [ Mus musculus ]</b>                                                                            |
| <b>Synonyms</b>       | IL12a; interleukin 12a; p35; LI12a; IL-12a; IL-12p35; MGC151228; MGC151232; interleukin 12a p35 subunit; interleukin 12a |
| <b>Gene ID</b>        | <b>16159</b>                                                                                                             |
| <b>mRNA Refseq</b>    | <b>NM_001159424</b>                                                                                                      |
| <b>Protein Refseq</b> | <b>NP_001152896</b>                                                                                                      |
| <b>UniProt ID</b>     | <b>P43431</b>                                                                                                            |

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| <b>Chromosome Location</b>          | 3 E1; 3 37.0 cM                                                                                                                                                                                |
| <b>Pathway</b>                      | Allograft rejection; Cytokine-cytokine receptor interaction; RIG-I-like receptor signaling pathway; Jak-STAT signaling pathway; Toll-like receptor signaling pathway; Type I diabetes mellitus |
| <b>Function</b>                     | cytokine activity; growth factor activity; interleukin-12 beta subunit binding; interleukin-12 receptor binding                                                                                |
| <b>PDB rendering based on 1f45.</b> |                                                                                                             |