

## Active Recombinant Human IL12A protein

**Cat. No.** IL12A-4327HG    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Product Overview</b> | Recombinant Human IL12 Protein is produced by CHO expression system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>      | <p>Interleukin-12 (IL-12), also known as NKSF or CLMF, is a pleiotropic cytokine originally identified in the medium of activated human B lymphoblastoid cell lines. The p40 subunit of IL-12 has been shown to have extensive amino acid sequence homology to the extracellular domain of the human IL-6 receptor while the p35 subunit shows distant but significant sequence similarity to IL-6, G-CSF, and chicken MGF. These observations have led to the suggestion that IL-12 might have evolved from a cytokine/soluble receptor complex. Human and murine IL-12 share 70 % and 60 % amino acid sequence homology in their p40 and p35 subunits, respectively. IL-12 apparently shows species specificity with human IL-12 reportedly showing minimal activity in the murine system.</p> |
| <b>Form</b>             | Lyophilized from a 0.2 µ filtered concentrated solution in PBS, pH 7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Bio-activity</b>     | Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using PHA-activated human T lymphoblasts is less than 0.05 ng/ml, corresponding to a specific activity of $> 2.0 \times 10^7$ IU/mg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Molecular Mass</b>   | 75 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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| <b>AA Sequence</b>      | <p>p35Subunit :RNLPVATPD PGMFPC LHHS QNLLRAVS NM LQKARQTLEF<br/> YPCTSEEIDH EDITKDKTST VEACLPLELT KNESCLNSRE TSFITNGSCL<br/> ASRKTSFMMA LCLSSIEDL KMYQVEFKTM NAKLLMDPKR QIFLDQNMLA<br/> VIDELMQALN FNSETVPQKS SLEEPDFYKT KIKLCILLHA FRIRAVTIDR<br/> VMSYLNASp4 0Subunit:I WELKKDVYVV ELDWYPDAPG EMVVLTC DTP<br/> EEDGITWTLD QSSEVLGSGK TLTIQVKEFG DAGQYTCHKG GEVLSHSLLL<br/> LHKKEDGIWS TDILKDQKEP KNKTFLRCEA KNYSGRFTCW WLTISTDLT<br/> FSVKSSRGSS DPQGVTCGAA TLSAERVGRD NKEYEYSVEC QEDSACPAAE<br/> ESLPIEVMVD AVHKLKYENY TSSFFIRDII KPDPPKNLQL KPLKNSRQVE<br/> VSWEYPDTWS TPHSYFSLTF CVQVQGKSKR EKKDRVFTDK TSATVICRKN<br/> ASISVRAQDR YYSSSWSEWA SVPCS</p> |
| <b>Endotoxin</b>        | Less than 1 EU/g of rHuIL-12 as determined by LAL method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purity</b>           | > 95 % by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Storage</b>          | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> <li>- 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>- 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>- 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>                                                                                                                                                                                                                                                                                                    |
| <b>Reconstitution</b>   | <p>We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.</p>                                                                                                                                                                                                                                                                 |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Gene Name</b>        | IL12A interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | maturation factor 1, p35) [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Official Symbol</b> | <a href="#">IL12A</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>        | IL12A; interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35); NKSF1; interleukin-12 subunit alpha; CLMF; cytotoxic lymphocyte maturation factor 1; p35; IL 12; subunit p35; IL 12A; IL35 subunit; interleukin 12; interleukin 12 alpha chain; natural killer cell stimulatory factor 1; 35 kD subunit; NF cell stimulatory factor chain 1; NFSK; CLMF p35; IL-12 subunit p35; IL-12, subunit p35; interleukin 12, p35; interleukin-12 alpha chain; NK cell stimulatory factor chain 1; cytotoxic lymphocyte maturation factor 1, p35; cytotoxic lymphocyte maturation factor 35 kDa subunit; natural killer cell stimulatory factor 1, 35 kD subunit; P35; IL-12A; |
| <b>Gene ID</b>         | <a href="#">3592</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>mRNA Refseq</b>     | <a href="#">NM_000882</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Protein Refseq</b>  | <a href="#">NP_000873</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>MIM</b>             | <a href="#">161560</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>UniProt ID</b>      | <a href="#">P29459</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |