Interleukin-17A/F Heterodimer, rat recombinant (rrIL-17A/F)

Catalog No: 97291
Lot No: XXXXX
Source: *E. coli*
Synonyms: IL17A/F, IL17 A/F, IL-17A/F, IL-17 A/F, IL17AF, IL-17 AF, Interleukin-17 A/F, Interleukin-17 AF

Background

Rat IL-17A/F is a glycoprotein which is secreted as a disulfide-linked heterodimer. IL-17A/F consists of two proteins of the IL-17 family, IL-17A and IL17F. Proteins of the 6 homodimeric IL17 family show a cysteine knot motif that contains two disulfide-bonds. Rat IL17A is produced as a 155 a.a precursor that includes a 23 amino acids signal sequence and a 132 amino acid chain that includes an N-linked glycosylation site. Rat IL17F is produced as a 153 amino acid precursor with a 20 amino acid signal sequence and a 133 amino acid region. Similar to IL17A, IL17F also has an N-linked glycosylation site. Both proteins (IL17A & IL17F) share 50% amino acid sequence identity. Human IL17A & IL17F show approximately 60% homology in their amino acid sequence to mouse IL-17A and IL-17F. Interleukin-17A/F and IL17A, IL17F homodimers are manufactured by activted CD4+ T cells, called Th17. IL-23 causes Th17 lymphocytes to manufacture IL-17A/F. IL17RA and IL17RC form a heterodimer for the binding of IL17A and IL17F. IL-17A/F binds IL-17RA. Interleukin-17A/F induces chemokine production and airway neutrophilia with intermediate potency between IL17A (most potent) and IL17F (least potent).

Description

Interleukin-17A/F rat recombinant produced in *E. coli* is a heterodimeric, non-glycosylated polypeptide chain containing 1 monomeric subunit of each IL-17A and IL-17F. The dimer contains 269 amino acids and having a total molecular mass of 30.7 kDa. IL-17A/F is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a concentrated (1 mg/ml) solution containing no additives.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-17A/F in sterile water not more than 1 mg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized IL-17A/F, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Rat IL-17A/F should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by (a) HPLC and (b) SDS-PAGE.

Amino Acid Sequence

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IL-17A:     MAVLIPQSSV CPNAEANNFL QNVKVNLKVL NSLSSKASSR RPSDYLNRST SPWTLSRNED PDRYPSVIWE
            AQCRHQRCVN AEGKLDHHMN SVLIQQEILV LKREPEKCPF TFRVEKMLVG VGCTCVSSIV RHAS
IL-17B:     MARRNPKVGL SALQKAGNCP PLEDNSVRVD IRIFNQNQGI SVPRDFQNRS SSPWDYNITR DPDRFPSEIA
            EAQCRHSGCI NAQGQEDGSM NSVPIQQEIL VLRREPQGCS NSFRLEKMLI KVGCTCVTPI VHHAA
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Biological Activity
The ED50 as determined by its ability to induce IL-6 production from NIH-3T3 cells is 15.3 – 23 ng/ml.

Usage
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