

Recombinant Mouse Interleukin 27

Cat. No. II27-75M Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Mouse Interleukin-27 produced in *E. Coli* is a single, non-glycosylated polypeptide chain containing 207 amino acids and having a molecular mass of 23.7 kDa. The Murine IL-27 is purified by proprietary chromatographic techniques.

Species Mouse

Source E.coli

Description

Interleukin-27 protein is related to IL-12A & is one of the subunits of a heterodimeric cytokine complex. IL-27 interacts with EBV induced gene 3 also called EB13, and forms a complex that drives rapid expansion of CD4 (+) T cells. IL-27 complex synergizes with IL-12 in order to trigger the cytokine production of IFN-Gamma of CD4 (+) T cells. The biological effect of IL-27 is mediated by class-I cytokine receptor (WSX1/TCRR). The pro-inflammatory activity of IL-27 is mediated through the growing expression of key molecules involved in the MHC class-I & MHC class-II pathways. Both MHC class-I and MHC-class-II expression are increased in endothelial cells after Interleukin-27 stimulation which suggests that it may play an important role in conferring the immune function on vascular endothelium IL-27p28 subunit can be induced by IFN-beta and during LPS-induced maturation of dendritic cells in type-I IFN-dependent manner through IFN regulatory factor-1 activation. Interleukin-27 regulates Interleukin-12 responsiveness of CD4+ T cells through Stat1-dependent and -independent mechanisms. IL-17 & IL-23 play an important IL-17 role in inflammation. Interleukin-27 possesses potent anti-angiogenic activity that plays an important role in its antitumor and antimetastatic activities. EBV induced gene 3 plays

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a role, independently from IL-27, in regulating anti-viral or anti-tumoral immune responses. Interleukin-27 is a potent inhibitor of HIV-1 replication in macrophages, CD4+ T cells, peripheral blood mononuclear cells. Interleukin-27 triggers STAT activation and gene transcription.

Amino Acid Sequence

MFP TDPLSLQELR REFTVSLYLA RKLLSEVQGY VHSFAESRLP GVNLDLLPLG YHLPNVSLTF QAWHHLSLSDSE RLCFLATTLR PFPAMLGGLG TQGTWTSSER EQLWAMRLDL RDLHRHLRFQ VLAAGFKCSK EEEDKEEEEE EEEEEKKLP GALGGPNQVS SQVSWPQLLY TYQLLHSLEL VLSRAVRDLL LLSLPRRPGS AWDS.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation

Lyophilized from 10mM sodium phosphate buffer pH-7.5.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-27 in sterile 18 MΩ-cm H₂O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Interleukin-27 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL27 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name

IL27 interleukin 27 [*Mus musculus*]

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Synonyms	Il27; interleukin 27; p28; Il30; IL-27; IL-27p28; interleukin 30 ; IL-27 p28 subunit
Gene ID	246779
mRNA Refseq	NM_145636
Protein Refseq	NP_663611
UniProt ID	Q8K3I6
Chromosome Location	7 F3
Function	cytokine activity; interleukin-27 receptor binding; protein binding; receptor binding

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