

Recombinant Mouse Interleukin-27A (rm IL-27A)

Synonyms: IL-27/p28.

Introduction: Interleukin-27/IL-17D has two subunits IL-27A (IL-27/p28) and IL-27B (EBI3) 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 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.

Description: Recombinant mouse IL-27A 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-27A is purified by proprietary chromatographic techniques.

Source: *Escherichia coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from 10mM Sodium Phosphate (NaP) buffer pH-7.5. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rm IL-27A in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rm IL-27A although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rm IL-27A should be stored at 4°C between 2-7days, 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 95.0% as determined by (a) Analysis by RP-HPLC and (b) Analysis by SDS-PAGE.

Amino acid sequence: MFPTDPLSLQ ELRREFTVSL YLARKLLSEV QGYVHSFAES RLPGVNLDLL
PLGYHLPNVS LTFQAWHHLs DSERLCFLAT TLRPFAMLG GLGTQGTWTS SEREQLWAMR LDLRDLHRHL
RFQVLAAGFK CSKEEEDKEE EEEEEEEK LPLGALGGPN QVSSQVSWPQ LLYTYQLLHS LELVLSRAVR
DLLLLSLPRR PGS AWDS

Biological Activity: Measured via dose-dependent inhibition of TGF-beta and IL-6-induced IL-17A expression in mouse CD4 splenocytes. 50ng/ml of mouse IL-27A are capable of inhibiting >25% of IL-17A expression in this assay.

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<i>small</i>	2 µg	Cat.N°	12340272
<i>medium</i>	10 µg	Cat.N°	12340273

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