

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

**Synonyms:** IL-27/p28, IL-30, IL-27 subunit alpha

**Introduction:** 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<sup>+</sup> T cells.

IL-27 complex is synergized with IL-12 in order to trigger the cytokine production of IFN-Gamma of CD4<sup>+</sup> 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<sup>+</sup> 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<sup>+</sup> 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 NaHCO<sub>3</sub> buffer pH-8.5

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 SDS-PAGE.

**Amino acid sequence:** MFPTDPLSLQ ELRREFTVSL YLARKLLSEV QGYVHSFAES RLPGVNLDLL  
PLGYHLPNVS LTFQAWHHLS DSERLCFLAT TLRPFAMLG GLGTQGTWTS SEREQLWAMR LDLRDLHRHL  
RFQVLAAGFK CSKEEEDKEE EEEEEEEEEK LPLGALGGPN QVSSQVSWPQ LLYTYQLLHS LELVLSRAVR  
DLLLLSLPRR PGSAWDS

**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.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

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

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