

## Product datasheet for **TP723758**

### IL27 (NM\_145636) Mouse Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse interleukin 27 (IL27)
Species:	Mouse
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	Secreted mIL-27 protein consists of mouse EB13 (Tyr19-Pro228) from gene Accession# NM_015766, and mouse p28, the region of Phe29-Ser234) from gene Accession (NM_145636), linked via GS bridge
Tag:	Tag Free
Predicted MW:	49 kDa
Concentration:	lot specific
Purity:	Purity is >95%, as determined by Coomassie stained SDS-PAGE.
Buffer:	0.22 µm filtered protein solution is in 20 mM HEPES, 300 mM NaCl, 2 mM CHAPS, pH 7.2
Bioactivity:	The ED50 is 5 - 10 ng/ml, corresponding to a specific activity of 1.0 - 2.0 x 10 <sup>5</sup> units/mg, determined by inhibition of IL-2 production induced by mouse IL-27 in mouse splenocytes activated with anti-CD3 and anti-CD28 antibodies.
Endotoxin:	Less than 0.01 ng per µg protein as determined by the LAL method
Storage:	Store at -80°C.
Stability:	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to 6 months, or at -70°C or below until the expiration date. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
RefSeq:	<a href="#">NP_663611</a>
Locus ID:	246779
UniProt ID:	<a href="#">Q8K3I6</a>
RefSeq Size:	705
Cytogenetics:	7 F3
RefSeq ORF:	702

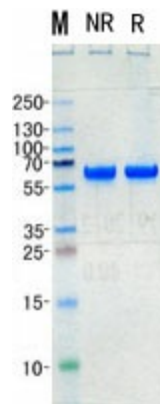


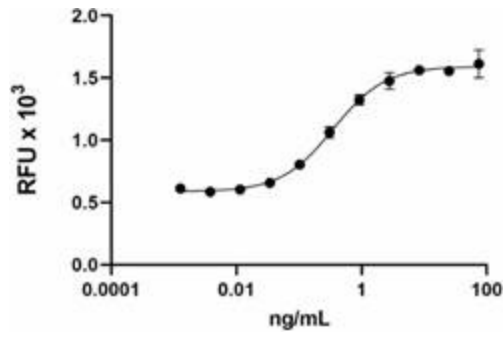
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**Synonyms:** IL-27; IL-27p28; IL30; p28

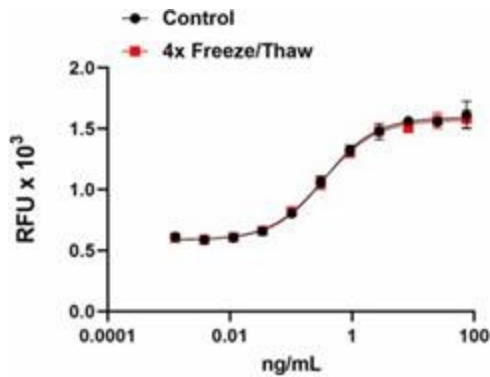
**Summary:** Associates with EB13 to form the IL-27 interleukin, a heterodimeric cytokine which functions in innate immunity. IL-27 has pro- and anti-inflammatory properties, that can regulate T-helper cell development, suppress T-cell proliferation, stimulate cytotoxic T-cell activity, induce isotype switching in B-cells, and that has diverse effects on innate immune cells. Among its target cells are CD4 T-helper cells which can differentiate in type 1 effector cells (TH1), type 2 effector cells (TH2) and IL17 producing helper T-cells (TH17). It drives rapid clonal expansion of naive but not memory CD4 T-cells. It also strongly synergizes with IL-12 to trigger interferon-gamma/IFN-gamma production of naive CD4 T-cells, binds to the cytokine receptor WSX-1/TCCR which appears to be required but not sufficient for IL-27-mediated signal transduction. IL-27 potentiates the early phase of TH1 response and suppresses TH2 and TH17 differentiation. It induces the differentiation of TH1 cells via two distinct pathways, p38 MAPK/TBX21- and ICAM1/ITGAL/ERK-dependent pathways. It also induces STAT1, STAT3, STAT4 and STAT5 phosphorylation and activates TBX21/T-Bet via STAT1 with resulting IL12RB2 up-regulation, an event crucial to TH1 cell commitment. It suppresses the expression of GATA3, the inhibitor TH1 cells development. In CD8 T-cells, it activates STATs as well as GZMB. IL-27 reveals to be a potent inhibitor of TH17 cell development and of IL-17 production. Indeed IL27 alone is also able to inhibit the production of IL17 by CD4 and CD8 T-cells. While IL-27 suppressed the development of proinflammatory Th17 cells via STAT1, it inhibits the development of anti-inflammatory inducible regulatory T-cells, iTreg, independently of STAT1. IL-27 has also an effect on cytokine production, it suppresses proinflammatory cytokine production such as IL2, IL4, IL5 and IL6 and activates suppressors of cytokine signaling such as SOCS1 and SOCS3. Apart from suppression of cytokine production, IL-27 also antagonizes the effects of some cytokines such as IL6 through direct effects on T-cells. Another important role of IL-27 is its antitumor activity as well as its antiangiogenic activity with activation of production of antiangiogenic chemokines such as IP-10/CXCL10 and MIG/CXCL9.[UniProtKB/Swiss-Prot Function]

### Product images:





Recombinant mouse IL-27 induces the proliferation of TF-1 human erythroleukemic cells in a dose-dependent manner. The ED50 for this effect is 0.2 - 1 ng/mL



Recombinant mouse IL-27 was aliquoted in 20mM HEPES, 300mM NaCl, 2mM CHAPS, pH 7.2 at 0.2 mg/mL and one aliquot was kept at 4°C (Control), and another was frozen and thawed four times (4x Freeze/Thaw). The samples were tested by their property to induce the proliferation of TF-1 human erythroleukemic cells in a dose-dependent manner. The ED50 for this effect is 0.2 - 1 ng/mL