

Human IL-27 ELISA Kit

Catalog No :	KE1145
Reactivity :	Human
Applications :	ELISA
Gene Name :	IL27/EBI3
Protein Name :	Interleukin-27 subunit alpha/Interleukin-27 subunit beta
Human Gene Id :	246778/10148
Human Swiss Prot No :	Q8NEV9/Q14213
Specificity :	Sample Type for Cell Culture Supernates, Cell lysates, Tissue Lysates, Serum, EDTA Plasma, Heparin Plasma
Storage Stability :	2-8°C/6 months
Detection Method :	Colorimetric

Background :	<p>function:Cytokine with 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 potentiate the early phase of TH1 response and suppress 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 IL-27 subunit p28 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</p>
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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. In vein endothelial cells, it induces IRF1/interferon regulatory factor 1 and increase the expression of MHC class II transactivator/CIITA with resulting up-regulation of major histocompatibility complex class II. IL-27 also demonstrates antiviral activity with inhibitory properties on HIV-1 replivation.,induction:Transiently induced by LPS stimulation in monocytes.,online information:Interleukin-27 entry,PTM:O-glycosylated.,similarity:Belongs to the IL-6 superfamily.,subcellular location:Does not seem to be secreted without coexpression of EBI3.,subunit:Heterodimer with IL27B/EBI3. IL-27 is an heterodimer composed IL27 and EBI3. EBI3 is also a component of the IL-12 heterodimer.,tissue specificity:Expressed in monocytes and in placenta.,

Function :

regulation of cytokine production, regulation of leukocyte activation, regulation of immune effector process, regulation of adaptive immune response, regulation of adaptive immune response based on somatic recombination of immune receptors built from immunoglobulin superfamily domains, regulation of T-helper 1 type immune response, regulation of response to biotic stimulus, defense response, inflammatory response, immune response, response to wounding,positive regulation of biosynthetic process, positive regulation of macromolecule biosynthetic process, positive regulation of macromolecule metabolic process, positive regulation of cellular biosynthetic process, regulation of interferon-gamma production, regulation of mononuclear cell proliferation, regulation of cytokine biosynthetic process,positive regulation of cytokine biosynthetic process, regulation of cell proliferation, regulatio

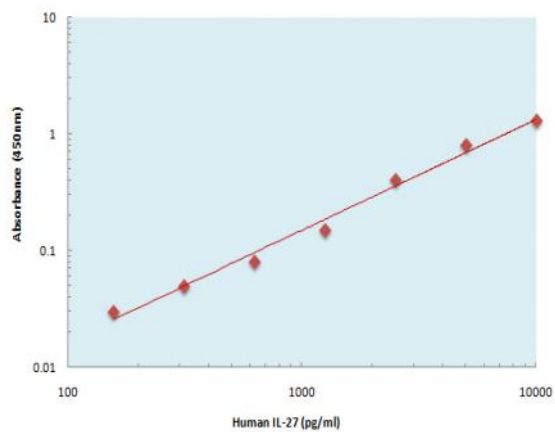
Subcellular Location :

Secreted . Does not seem to be secreted without coexpression of EBI3.

Expression :

Expressed in monocytes and in placenta.

Products Images



The Human IL-27 ELISA Kit allows for the detection and quantification of endogenous levels of natural and/or recombinant Human IL-27 proteins within the range of 157-10000 pg/ml.