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IL27 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP14223c

Specification

IL27 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q8NEV9

IL27 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 246778

Other Names
Interleukin-27 subunit alpha, IL-27 subunit alpha, IL-27-A, IL27-A, Interleukin-30, p28, IL27, IL27A, IL30

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

IL27 Antibody (Center) Blocking Peptide - Protein Information

Name IL27

Synonyms IL27A, IL30

Function
Associates with EBI3 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 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 IL27 alone is also able to inhibit the production of IL17 by CD4 and CD8 T-cells. While IL-27 suppressed the development of pro-inflammatory 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 pro-inflammatory 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 replication.

Cellular Location
Secreted. Note=Does not seem to be secreted without coexpression of EBI3

Tissue Location
Expressed in monocytes and in placenta.

IL27 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

IL27 Antibody (Center) Blocking Peptide - Images

IL27 Antibody (Center) Blocking Peptide - Background

The protein encoded by this gene is one of the subunits ofa heterodimeric cytokine complex. This protein is related tointerleukin 12A (IL12A). It interacts with Epstein-Barr virusinduced gene 3 (EBI3), a protein similar to interleukin 12B(IL12B), and forms a complex that has been shown to drive rapidexpansion of naive but not memory CD4(+) T cells. The complex isalso found to synergize strongly with interleukin 12 to triggerinterferon gamma (IFNG) production of naive CD4(+) T cells. Thebiological effects of this cytokine are mediated by the class Icytokine receptor (WSX1/TCRR).

IL27 Antibody (Center) Blocking Peptide - References

Li, J.J., et al. J. Immunol. 185(7):4401-4409(2010)Guzzo, C., et al. J. Biol. Chem. 285(32):24404-24411(2010)Zhang, J., et al. J. Biol. Chem. 285(28):21269-21281(2010)Schuurhof, A., et al. Pediatr. Pulmonol. 45(6):608-613(2010)Morishima, N., et al. J. Biomed. Biotechnol. 2010, 605483 (2010) :