



Recombinant Human IL-27

20180504BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

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|------------------|----------------------------|
| Cat.-no.: | 100-114S |
| Size: | 2 µg |
| Lot. No.: | According to product label |

Scientific Background

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|------------------------|--|
| Gene-ID (NCBI): | 246778/10148 |
| Synonyms: | Interleukin-27, Interleukin-27 subunit alpha, IL-27-A, Interleukin-27 subunit beta, IL-27B, Epstein-Barr virus-induced Gene 3 protein, EBV-induced gene 3 protein, EB13, p28, Interleukin-30, IL30 |

As a member of the IL-12 family of heterodimeric cytokines that also includes IL-12, IL-23, and IL-35, IL-27 is formed by the association of an IL-27-p28 subunit (also known as IL-30) with the Epstein-Barr Virus (EBV)-induced Gene 3 (EBI3) subunit (also known as IL-27B). Expressed by antigen-presenting cells (APCs) in the early phases of antigen-mediated activation, IL-27 acts as a critical initiator of adaptive immune responses by promoting the rapid clonal expansion of naïve CD4+ T cells, IFN- γ production, and Th1 polarization. IL-27 elicits its effects through receptor complexes IL-27R (also known as TCCR/WSX-1) and gp130, a receptor shared by IL-6. Mainly expressed in monocytes, endothelial cells, and dendritic cells, IL-27 plays an important role alongside IL-6 in the regulation of inflammation and autoimmunity; directly antagonizing IL-6's stimulation of CD4+ T cell proliferation and Th17 differentiation. Recombinant Human IL-27 produced from HEK293 cells is a non-disulfide-linked, heterodimeric protein composed of a 209 amino acid length EBI3 subunit and a 215 amino acid length IL-27-p28 subunit, for a total sequence length of 424 amino acid residues. The calculated molecular weight of the associated IL-27 subunits is 47.8 kDa.

Sequence

P28 SUBUNIT: FPRPPGRPQL SLQELRREFT VSLHLARKLL SEVRGQAHRF AESHLPGVNL YLLPLGEQLP DVSLTFQAWR RLSDPERLCF ISTTLQPFHA LLGGLGTQGR WTNMERMQLW AMRLDLRDLQ RHLRFQVLAA GFNLPEEEEE EEEEEEEERK GLLPGALGSA LQGPAQVSWP QLLSTYRLLH SLELVLSRAV RELLLLSKAG HSVWPLGFPT LSPQP

EBI3 subunit: RKGPP AALTLPVQC RASRYPIAVD CSWTLPPAPN STSPVFSFIAT YRLGMAARGH SWPCLQQTPT STSCTITDVQ LFSMAPYVLN VTAVHPWGSS SSFVPFITEH I IKPDPPEGV RLSPLAERQL QVQWEPGWSW PFPEIFSLKY WIRYKRQGAA RFHRVGPPIEA TSFILRAVRP RARYVQVAA QDLTDYGELS DWSLPATATM SLGK

Database References

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|------------------------|-------------------------|
| Protein RefSeq: | NP_663634.2/NP_005746.2 |
| Uniprot ID: | Q8NEV9/Q14213 |
| mRNA RefSeq: | NM_145659.3/NM_005755.2 |

Product Specifications

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|------------------------|------------------------------------|
| Expressed in | HEK293 cells |
| Purity | > 90% by SDS-PAGE & HPLC analyses |
| Endotoxin level | < 0.1 ng /µg of protein (<1EU/µg). |
| Formulation | lyophilized |
| Length (aa): | 424 |
| MW: | 47.8 kDa |

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

Reconstitution: Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1 – 1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by its ability to stimulate the proliferation of human TF-1 cells. The expected ED₅₀ range is 400-500 ng/ml.