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1. Description

Products	Human IL-27, research grade. Recombinant human interleukin 27.						
	<table border="1"> <thead> <tr> <th>Content in µg</th><th>Order no.</th></tr> </thead> <tbody> <tr> <td>2</td><td>130-108-960</td></tr> <tr> <td>10</td><td>130-108-961</td></tr> </tbody> </table>	Content in µg	Order no.	2	130-108-960	10	130-108-961
Content in µg	Order no.						
2	130-108-960						
10	130-108-961						
Biological activity	The ED ₅₀ is ≤500 ng/mL corresponding to an activity of ≥2×10 ³ U/mg. ▲ Note: The ED ₅₀ is determined by proliferation assay using human TF-1 cells.						
Primary structure	Two non-identical, glycosylated and non-disulfide-linked polypeptide chains without N-terminal methionine (209 amino acid residues for EBI3 subunit and 215 amino acid residues for IL-27p28 subunit).						
Molecular mass	47.8 kDa (dimer).						
Source	Produced in HEK293 cells.						
Product format	Lyophilized from a filtered (0.2 µm) buffer solution.						
Stabilizer	None.						
Purity	>90% as determined by SDS-PAGE analysis.						
Endotoxin level	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.						
Storage	Lyophilized Human IL-27, research grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.						
Reconstitution	It is recommended to reconstitute lyophilized Human IL-27, research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 20 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.						

1.1 Background information

Interleukin 27 (IL-27) is a heterodimeric protein consisting of EBI-3 (IL-27B) and IL-27p28 (IL-27A). IL-27 forms together with IL-12, IL-23, and IL-35 a family of heterodimeric proteins. Produced as an early product of antigen-presenting cells (APC), IL-27 plays a role in the adaptive immune response by promoting the clonal expansion of naive CD4⁺ T-cells. It has also been shown that IL-27 has the ability to induce CD8⁺ mediated tumor-specific protective immunity.

1.2 Applications

Human Interleukin 27 can be used for a variety of applications, including:

- Research on autoimmune diseases.
- Cancer Research.
- Study of dendritic cell development.

Optimal concentration for a specific application should be determined by a dose-response experiment.

2. References

1. Batten, M. *et al.* (2006) Interleukin 27 limits autoimmune encephalomyelitis by suppressing the development of interleukin 17-producing T cells. *Nat. Immunol.* 7 (9): 929–936.
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4. Hisada, M. *et al.* (2004) Potent antitumor activity of interleukin-27. *Cancer Res.* 64 (3): 1152–1156.
5. Pflanz, S. *et al.* (2002) IL-27, a heterodimeric cytokine composed of EBI3 and p28 protein, induces proliferation of naive CD4⁺ T cells. *Immunity* 16 (6): 779–790.
6. Seita, J. *et al.* (2008) Interleukin-27 directly induces differentiation in hematopoietic stem cells. *Blood* 111 (4): 1903–1912.

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