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1. Description

Products	Human IL-36RA, research grade. Recombinant human interleukin 36 receptor antagonist.						
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Content in µg	Order no.						
10	130-132-866						
25	130-132-867						
Biological activity	The ED ₅₀ is ≤1000 ng/mL corresponding to an activity of ≥1×10 ³ U/mg. ▲ Note: The ED ₅₀ is determined by IL-8 inhibition assay in the presence of IL-36 beta using A431 cells.						
Primary structure	Single, non-glycosylated polypeptide chain (154 amino acid residues).						
Molecular mass	16.8 kDa.						
Source	Produced in <i>E. coli</i> .						
Product format	Lyophilized from a filtered (0.2 µm) buffer solution.						
Stabilizer	Mannitol and trehalose.						
Purity	>95% 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-36RA, 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-36RA, research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 100 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

Human interleukin (IL)-36 receptor antagonist (IL-36RA; IL-1F5) is a secreted protein that belongs to the IL-1 family of cytokines and is involved in innate immunity and anti-inflammatory immune responses. IL-36RA inhibits the activity of IL-36 cytokines (IL-36α, IL-36β, and IL-36γ) by binding to the IL-36 receptor (IL-36R;

IL1RL2) and preventing the assembly of functional IL-36 receptor complexes. IL-36RA thus exerts its anti-inflammatory properties by inhibiting MAPK and NF-κB activation. IL-36 cytokines are expressed by a variety of cell types including monocytes, dendritic cells (DCs), and keratinocytes and are most prevalent in barrier tissues. In this regard, IL-36RA has been shown to play a role in regulating inflammation in skin, gastrointestinal tract, and the lungs. IL-36RA deficiency has been associated with delayed skin wound healing in mouse models and has been linked to the occurrence of pustular psoriasis in humans.

1.2 Applications

- Human IL-36RA is optimized for use in cell culture and functional assays.

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

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