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Products	Human IL-38, research grade. Recombinant human interleukin 38.										
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10	130-132-868										
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1000	130-132-871										
Biological activity	IL-38 biological activity is currently not determined, due to no suitable cell-based bioassay being available.										
Primary structure	Single, non-glycosylated polypeptide chain (152 amino acid residues).										
Molecular mass	16.9 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-38, 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-38, 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

Interleukin (IL)-38 (IL-1F10) belongs to the IL-1 family of cytokines and is secreted by various immune and non-immune cell types, including B cells and epithelial cells. Based on its binding to the IL-36 receptor (IL-1R6), it is categorized into the IL-36 subfamily. IL-38 is predominantly expressed in barrier tissues and is thought to bridge the innate and adaptive immune response. In this context, IL-38 has been reported to exhibit immunomodulatory properties by inhibiting LPS-induced proinflammatory cytokine secretion, both *in vitro* and in mouse models of systemic inflammation. In addition, IL-38 has been shown to inhibit the production the T cell cytokines IL-17 and IL-22. Because of its immunomodulatory properties and disease-associated changes in expression levels, IL-38 is thought to play a role in autoimmune diseases, such as systemic lupus erythematosus, rheumatoid arthritis, and inflammatory bowel disease. Furthermore, IL-38 is downregulated in skin tissue of psoriasis patients, correlating with disease severity. Studying the IL-38/IL-36R axis may thus provide novel choices for the treatment of autoimmune diseases.

1.2 Applications

- Human IL-38 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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