Miltenyi Biotec

Human GRO-α
research grade

Contents

1. Description

Products Human GRO-α, research grade.

Recombinant human growth-regulated oncogene α.

Content in µg	Order no.
5	130-094-620
25	130-093-869
100	130-108-974

Biological activity The ED_{50} is ≤50 ng/mL corresponding to an activity of ≥2×10^4 U/mg.

▲ **Note:** The ED_{50} is determined by the ability to chemoattract human neutrophils.

Primary structure Single, non-glycosylated polypeptide chain (73 amino acid residues).

Molecular mass 7.8 kDa.

Source Produced in *E. coli*.

Product format Lyophilized from a filtered (0.2 µm) buffer solution.

Stabilizer None.

Purity >97% 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 GRO-α, 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 GRO-α, 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

GRO-α also known as chemokine (C-X-C motif) ligand 1 (CXCL1), and melanoma growth-stimulating activity alpha (MSGA-α), belongs to the CXC chemokine family and acts as neutrophil and basophils chemoattractant. GRO-α is secreted by epithelial cells and myeloid cells, such as macrophages and neutrophils and can be induced by inflammatory mediators as IL-1 and TNF. It signals via the chemokine receptor CXCR2 and induces chemotaxis of granulocytes during process of inflammation, angiogenesis, and tumorigenesis. GRO-α is also secreted by melanoma cells and is involved in pathogenesis of tumors and inflammatory disorders of the neural system.

1.2 Applications

Human GRO-α can be used for a variety of applications, including:

- Study of granulocyte chemotaxis.
- Investigation of angiogenesis process and tumor growth.

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

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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140-002-409.08

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