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<b>Products</b>	Human GRO- $\alpha$ , research grade. Recombinant human growth-regulated oncogene $\alpha$ .								
	<table border="1"> <thead> <tr> <th>Content in <math>\mu</math>g</th><th>Order no.</th></tr> </thead> <tbody> <tr> <td>5</td><td>130-094-620</td></tr> <tr> <td>25</td><td>130-093-869</td></tr> <tr> <td>100</td><td>130-108-974</td></tr> </tbody> </table>	Content in $\mu$ g	Order no.	5	130-094-620	25	130-093-869	100	130-108-974
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5	130-094-620								
25	130-093-869								
100	130-108-974								
<b>Biological activity</b>	The ED <sub>50</sub> is $\leq 50$ ng/mL corresponding to an activity of $\geq 2 \times 10^4$ U/mg. <b>Note:</b> The ED <sub>50</sub> is determined by the ability to chemoattract human neutrophils.								
<b>Primary structure</b>	Single, non-glycosylated polypeptide chain (73 amino acid residues).								
<b>Molecular mass</b>	7.8 kDa.								
<b>Source</b>	Produced in <i>E. coli</i> .								
<b>Product format</b>	Lyophilized from a filtered (0.2 $\mu$ m) buffer solution.								
<b>Stabilizer</b>	None.								
<b>Purity</b>	>97% as determined by SDS-PAGE analysis.								
<b>Endotoxin level</b>	Low endotoxin (<1.0 EU/ $\mu$ g cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.								
<b>Storage</b>	Lyophilized Human GRO- $\alpha$ , 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.								
<b>Reconstitution</b>	It is recommended to reconstitute lyophilized Human GRO- $\alpha$ , research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 100 $\mu$ L. 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- $\alpha$  also known as chemokine (C-X-C motif) ligand 1 (CXCL1), and melanoma growth-stimulating activity alpha (MSG- $\alpha$ ), belongs to the CXC chemokine family and acts as neutrophil and basophils chemoattractant. GRO- $\alpha$  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- $\alpha$  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- $\alpha$  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.

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