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## Product Data Sheet

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Product Name: GRO a Human  
 Cat. No.: GP21106  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Growth-regulated protein alpha; CXCL1; Melanoma growth stimulatory activity; MGSA; Neutrophil-activating protein 3; NAP-3; GRO-alpha (1-73); chemokine (C-X-C motif) ligand 1; GRO1; GROa; SCYB1; MGSA-a; MGSA alpha.		
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Ser-Val-Ala-Thr.		
Solubility	It is recommended to reconstitute the lyophilized CXCL1 in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	Lyophilized from a 0.2μm filtered concentrated (1mg/ml) solution in 20mM PB, pH 7.4, 50mM NaCl.		

### Introduction

Chemokine (C-X-C motif) ligand 1 (CXCL1) is a small cytokine belonging to the CXC chemokine family that was previously called GRO1 oncogene, Neutrophil-activating protein 3 (NAP-3) and melanoma growth stimulating activity, alpha (MSGa-a). It is secreted by human melanoma cells, has mitogenic properties and is implicated in melanoma pathogenesis. CXCL1 is expressed by macrophages, neutrophils and epithelial cells, and has neutrophil chemoattractant activity. CXCL1 plays a role in spinal cord development by inhibiting the migration of oligodendrocyte precursors and is involved in the processes of angiogenesis, inflammation, wound healing, and tumorigenesis. This chemokine elicits its effects by signaling through the chemokine receptor CXCR2. The gene for CXCL1 is located on human chromosome 4 amongst genes for other CXC chemokines.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Biological Activity

Determined by its ability to chemoattract human peripheral blood neutrophils using a concentration range of 10.0-100.0 ng/ml.

### Stability

Lyophilized GRO-alpha although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution CXCL1 should be stored at 4°C between 2-7 days and for future use below -18°C . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

GRO Alpha Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 73 amino acids and having a molecular mass of 7811 Dalton. The GRO-alpha is purified by proprietary chromatographic techniques.

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