



## GRO-Alpha, rat recombinant (CXCL1) (rr(CXCL1))

**Catalog No:** 99969  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**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, GRO $\alpha$ , SCYB1, MGSA-a, MGSA alpha

### Background

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  $\alpha$  (MSG $\alpha$ - $\alpha$ ). 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 a 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.

### Description

CXCL1 Rat Recombinant, produced in *E. coli*, is a single, non-glycosylated polypeptide chain containing 73 amino acids. It has a molecular mass of 7.8 kDa. The Rat CXCL1 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered, white, lyophilized (freeze-dried) powder.

### Formulation

Lyophilized from a 0.2  $\mu$ m filtered, concentrated (1 mg/ml) solution in 20 mM PB (pH 7.4) and 150 mM NaCl.

### Solubility

It is recommended to reconstitute the lyophilized CXCL1 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized CXCL1, 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.

### Amino Acid Sequence

APVANELRCQ CLQTVAGIHF KNIQSLKVMP PGPHTQTEV IATLKNGREA CLDPEAPMVQ KIVQKMLKGV PK

### Activity

Determined by its ability to chemoattract rat neutrophils, using a concentration range of 10-100 ng/ml, corresponding to a specific activity of 10,000-100,000 IU/mg.

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### Usage

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