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# SCIENTIFIC

## GRO a Rat

**Description:**CXCL1 Rat Recombinant produced in E.Coli is a single,non-glycosylated, polypeptide chain containing 73 amino acids and having a molecular mass of 7.8 kDa. The Rat CXCL1is purified by proprietary chromatographic techniques.

**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.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: APVANELRCQ CLQTVAGIHF KNIQSLKVMP PGPHCTQTEV IATLKNGREA CLDPEAPMVQ KIVQKMLKGV PK.

**Purity:**Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

### Formulation:

Lyophilized from a 0.2m filtered concentrated (1mg/ml) solution in 20mM PB, pH 7.4, and150mM NaCl.

### 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.

### Usage:

NeoBiolab"s products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Solubility:

It is recommended to reconstitute the lyophilized CXCL1 in sterile 18M-cm H2O not less than  $100\mu g/ml$ , which can then be further diluted to other aqueous solutions.

### 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-). 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.







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# **Biological Activity:**

Determined by its ability to chemoattract rat neutrophils using a concentration range of

10-100ng/ml corresponding to a Specific Activity of 10,000-100,000IU/mg.

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