

# Mouse CXCL1 / MGSA / NAP-3 Protein



Sino Biological  
Biological Solution Specialist

Catalog Number: 50150-MNCE

## General Information

### Gene Name Synonym:

Fsp; gro; Gro1; KC; Mgsa; N51; Scyb1

### Protein Construction:

A DNA sequence encoding the mouse Cxcl1 (NP\_032202.1) (Arg20-Lys96) was expressed.

**Source:** Mouse

**Expression Host:** E. coli

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE.

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Arg 20

### Molecular Mass:

The recombinant mouse Cxcl1 consists 77 amino acids and predicts a molecular mass of 8.3 kDa.

### Formulation:

Lyophilized from sterile 20 mM Tris, 500 mM NaCl, pH 8.0.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

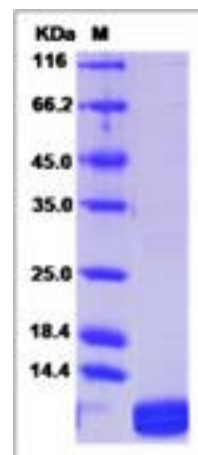
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

The Chemokine (C-X-C motif) Ligand 1, CXCL1, is a small cytokine belonging to the CXC chemokine family that was previously called GRO1 oncogene, GRO $\gamma$ , KC, Neutrophil-activating protein 3 (NAP-3) and melanoma growth stimulating activity, alpha (MSGA-a). CXCL1 already known to be important in osteoarthritis (OA), as a novel target gene of transcription factor AP-2 $\gamma$  in chondrocytes and support the important role of AP-2 $\gamma$  in cartilage. CXCL1 is a potent neutrophil chemoattractant with recognized roles in angiogenesis and inflammation. CXCL1 is a novel immediate PTH/PTHrP-responsive gene. CXCL1 may act as a chemoattractant for osteoclast precursors. CXCL1 may also have important pro-nociceptive effects via its direct actions on sensory neurons, and may induce long-term changes that involve protein synthesis. CXCL1 plays a critical nonredundant role in the development of experimental Lyme arthritis and carditis via CXCR2-mediated recruitment of neutrophils into the site of infection. CXCL1 functions through CXCR2 to transactivate the EGFR by proteolytic cleavage of HB-EGF, leading to activation of MAPK signalling and increased proliferation of epithelial ovarian cancer (EOC) cells. It might limit tumor growth by reinforcing senescence early in tumorigenesis. Thus, 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.

## References

- 1.Wang JG, *et al.* (2008) The chemokine CXCL1/growth related oncogene increases sodium currents and neuronal excitability in small diameter sensory neurons. *Mol Pain.* 4: 38.
- 2.Acosta JC, *et al.* (2009) A role for CXCR2 in senescence, but what about in cancer? *Cancer Res.* 69(6): 2167-70.
- 3.Onan D, *et al.* (2009) The chemokine Cxcl1 is a novel target gene of parathyroid hormone (PTH)/PTH-related protein in committed osteoblasts. *Endocrinology.* 150(5): 2244-53.

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