

# Macrophage Inflammatory Protein 2-alpha

Human, Recombinant (rHuGRO-beta/rHuCXCL2)

Expressed in *E. coli*

Cat. No. CRP08143

Lot. No. (See product label)

## PRODUCT INFORMATION

**Description:** The three GRO cDNAs encode 107 amino acid precursor proteins from which the N-terminal 34 amino acid residues are cleaved to generate the mature GROs. There are no potential N-linked glycosylation sites in the amino acid sequences. GRO expression is inducible by serum or PDGF and/or by a variety of inflammatory mediators, such as IL-1 and TNF, in monocytes, fibroblasts, melanocytes and epithelial cells. In certain tumor cell lines, GRO is expressed constitutively. Similar to other alpha chemokines, the three GRO proteins are potent neutrophil attractants and activators. In addition, these chemokines are also active toward basophils. All three GROs can bind with high affinity to the IL-8 receptor type B.

**Amino-Acid Sequence:** 73aa, non-glycosylated

**M. W. :** 7.9 kDa

**Recombinant:** Expressed in *E. coli*

**Purity:** >97% by SDS-PAGE and HPLC analyses.

**Formulation:** Lyophilized from a 0.2 µm filtered concentrated (1mg/ml) solution in 20mM PB, pH 7.4, 50mM NaCl.

**Specific Activity:** Fully biologically active when compared to standard. Determined by its ability to chemoattract hCXCR2 transfected 293 cells using a concentration range of 10.0-100.0 ng/ml.

**Endotoxin:** Less than 1EU/µg of rHuGRO-beta/CXCL2 as determined by LAL method.

**Reconstitution:** We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at <-20° C. Further dilutions should be made in appropriate buffered solutions.

**Storage:** This lyophilized preparation is stable for several weeks at 2-8° C, but should be kept at -20° C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8° C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20° C to -70° C. Avoid repeated freeze/thaw cycles.

## GENE INFORMATION

**Gene Name:** [CXCL2 chemokine \(C-X-C motif\) ligand 2](#)

**Synonyms:** GRO2; GROb; MIP2; MIP2A; SCYB2; MGSA-b; MIP-2a; CINC-2a; MIP2-alpha; MIP-2a; Gro-beta; C-X-C motif chemokine 2; GRO2 oncogene; Growth-regulated protein beta; MGSA beta; chemokine (C-X-C motif) ligand 2; melanoma growth stimulatory activity beta; MIP2A\_HUMAN; Macrophage inflammatory protein 2-alpha [Precursor]; Gro-beta.

**GeneID:** [2920](#)

**mRNA Refseq:** [NM\\_002089](#)

**Protein Refseq:** [NP\\_002080](#)

**MIM:** [139110](#)

**UniProt ID:** P19875

**Chromosome Location:** 4q21

**Pathway:** Cytokine-cytokine receptor interaction

**Function:** chemokine activity

## REFERENCES

1. Wolpe, S. D., Sherry, B., Juers, D., Davatellis, G., Yurt, R. W., Cerami, A. Identification and characterization of macrophage inflammatory protein 2. Proc. Nat. Acad. Sci. 86: 612-616, 1989.
2. Iida N., Grotendorst G.R. Cloning and sequencing of a new gro transcript from activated human monocytes: expression in leukocytes and wound tissue. Mol. Cell. Biol. 10:5596-5599, 1990.
3. Pelus LM, Fukuda S. Peripheral blood stem cell mobilization: the CXCR2 ligand GRObeta rapidly mobilizes hematopoietic stem cells with enhanced engraftment properties. Exp Hematol. 2006 Aug;34(8):1010-20.

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