

Macrophage Inflammatory Protein-2-beta

Human, Recombinant (rHuGRO-gamma/rHuCXCL3)

Expressed in *E. coli*

Cat. No. CRP08144

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 0.2µm 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-gamma/CXCL3 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: [CXCL3 chemokine \(C-X-C motif\) ligand 3](#)

Synonyms: GRO3; GROg; MIP2B; SCYB3; MIP-2b; CINC-2b; GRO-gamma; GRO-gamma(1-73); MIP2-beta; SCYB3; C-X-C motif chemokine 3; GRO3 oncogene; Growth-regulated protein gamma; MGSA gamma; chemokine (C-X-C motif) ligand 3; melanoma growth stimulatory activity gamma; Macrophage inflammatory protein 2-beta [Precursor]; MIP2B_HUMAN.

GeneID: [2921](#)

mRNA Refseq: [NM_002090](#)

Protein Refseq: [NP_002081](#)

MIM [139111](#)

UniProt ID: P19876

Chromosome Location: 4q21

Pathway: Cytokine-cytokine receptor interaction

Function: chemokine activity

REFERENCES

1. Smith DF, Galkina E, Ley K, Huo Y. GRO family chemokines are specialized for monocyte arrest from flow. *Am J Physiol Heart Circ Physiol.* 2005, 289(5):H1976-84.
2. Ahuja SK, Murphy PM. The CXC chemokines growth-regulated oncogene (GRO) alpha, GRObeta, GROgamma, neutrophil-activating peptide-2, and epithelial cell-derived neutrophil-activating peptide-78 are potent agonists for the type B, but not the type A, human interleukin-8 receptor. *J Biol Chem.* 1996, 271(34):20545-50.
3. O'Donovan, N., Galvin, M. Morgan, J.G. Physical mapping of the CXC chemokine locus on human chromosome 4. *Cytogenet. Cell Genet.* 84: 39-42, 1999.

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