

Product Information

GRO α
human, recombinant
expressed in *E. coli*
cell culture tested

Catalog Number **G0657**
Storage Temperature -20°C

Synonyms: Melanoma Growth Stimulating Activity;
MGSA

Product Description

The *GRO* gene was originally identified by subtractive hybridization studies between normal and tumorigenic Chinese hamster embryo fibroblasts.¹ The hamster cDNA was cloned and used as a probe for cloning of the human *GRO* cDNA. The *GRO α* gene initially cloned from T24 cells¹ and the gene in melanoma cells encoding melanoma growth stimulating protein (MGSA) are identical.² Human cells contain three closely related, but distinct *GRO* genes, *GRO α* , *GRO β* , and *GRO γ* .³ *GRO β* and *GRO γ* share 90% and 86% identity, respectively, with *GRO α* at the nucleotide level. The *GRO* gene has been mapped to chromosome 4q21.²

GROs are members of the chemokine α family that is characterized by the separation with one amino acid of the first two cysteine residues, C-X-C, in the amino acid sequence.⁴ In normal cells, human mRNA *GRO* expression is found in foreskin fibroblasts,¹ synovial fibroblasts, chondrocytes, and osteocytes.⁵ Additionally, *GRO* mRNA has been detected in mammary fibroblasts, mammary epithelial cells,³ endothelial cells,³ activated monocytes, macrophages, and neutrophils.³ Characterization of the *GRO α* receptor indicates the presence of low and high affinity receptors on human neutrophils.⁴

The product is supplied lyophilized from 0.2 μm filtered solution in 25% acetonitrile and 0.1% trifluoroacetic acid (TFA) containing 50 μg bovine serum albumin per 1 μg of cytokine.

The biological activity of *GRO α* was measured by its ability to induce myeloperoxidase release from cytochalasin treated neutrophils⁶ or by the ability to induce chemotaxis of mouse BaF/3 cells transfected with hCXCR2.

Purity: $\geq 97\%$ (SDS-PAGE)

Endotoxin: ≤ 1.0 EU (endotoxin unit) per 1 μg of the cytokine (LAL method)

Molecular Mass: ~ 7.9 kDa

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 μm filtered 4 mM HCl containing at least 0.1% bovine serum albumin or human serum albumin to a concentration ≥ 10 $\mu\text{g}/\text{mL}$.

Storage/Stability

Prior to reconstitution, store at -20°C . After reconstitution, store at $2-8^{\circ}\text{C}$ for up to one month. For extended storage, freeze in working aliquots at -20°C . Repeated freezing and thawing is not recommended.

References

1. Anisowicz, A., et al., *Proc. Natl. Acad. Sci. USA*, **84**, 7188 (1987).
2. Richmond, A., et al., *EMBO J.*, **7**, 2025 (1988).
3. Haskill, S., et al., *Proc. Natl. Acad. Sci. USA*, **87**, 7732 (1990).
4. Sager, R., et al., *Cytokines*, Vol. **4**, 96 (1992).
5. Goldring, M., et al., *J. Bone Miner. Res.*, **4**, 402 (1989).
6. Shroder, J., et al., *J. Immunol.*, **139**, 3474 (1987).

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