

Recombinant Human GRO-Alpha/MGSA (CXCL1)

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CHM-329
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➤ **Background:**

Three human MGSA/GRO genes encode 3 highly related chemokines, MGSA/GRO alpha, -beta and -gamma. All 3 MGSA/GRO proteins bind to the same receptors, but with differing affinities, and stimulate a number of biological responses including chemotaxis, angiogenesis, and growth regulation. Melanoma growth stimulatory activity/gro alpha (MGSA), a member of the alpha-chemokine family, is produced by a variety of dermal and epidermal cells and can act in a paracrine and autocrine fashion.

➤ **Description :**

Recombinant Human GRO-alpha produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 73 amino acids and having a molecular mass of 7811 Dalton.

Recombinant Human GRO-alpha is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

The protein was lyophilized with no additives.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized GRO-alpha in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Lyophilized MGSA/GRO-a although stable at room temperature for 3 weeks, should be stored desiccated below -18⁰C. Upon reconstitution MGSA/GRO-alpha should be stored at 4⁰C between 2-7 days and for future use below -18⁰C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 98.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Anion-exchange FPLC.
- (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.

➤ **Amino-Acid Sequence :**

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Ser-Val-Ala-Thr.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver stained SDS-PAGE gel analysis.

➤ **Biological Activity:**

This Recombinant Melanoma growth stimulatory activity is fully biologically active when compared to standard. The Biological activity is calculated by its ability to chemoattract human neutrophils cells using a conc. of 10.0-50.0 ng/ml.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of GRO-alpha .

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm .
2. Analysis by RP-HPLC, using a calibrated solution of MGSA as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.