

## Recombinant murine Growth factor beta (rm GRO- $\beta$ / rm CXCL2 / rm MIP-2a)

**Synonyms:** GRO2, SCYB2, CINC-2a, MGSA beta, Macrophage Inflammatory Protein-2 alpha.

**Introduction:** Growth factor beta is a small cytokine belonging to the CXC chemokine family. GRO- $\beta$  is 90% identical in amino acid sequence as a related chemokine, GRO- $\alpha$ . This chemokine is secreted by monocytes and macrophages and is chemotactic for polymorphonuclear leukocytes and hematopoietic stem cells. The gene for GRO- $\beta$  is located on human chromosome 4 in a cluster of other CXC chemokines. GRO- $\beta$  mobilizes cells by interacting with a cell surface chemokine receptor called CXCR2.

**Description:** Recombinant murine GRO- $\beta$  produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 73 amino acids and having a molecular mass of 7849 Dalton. Rm GRO- $\beta$  is purified by proprietary chromatographic techniques.

**Source:** *E. coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** lyophilized from a concentrated solution in 20mM PB, pH7.4 and 150mM NaCl. The sample size of 1 $\mu$ g contains Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rm GRO- $\beta$  in sterile H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rm GRO- $\beta$  although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rm GRO- $\beta$  should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 97.0% as determined by RP-HPLC and by SDS-PAGE.

**Amino acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Val-Val-Ala-Ser.

**Biological Activity:** The biological activity was determined by ability to chemoattract total human neutrophils using a concentration range of 1.0 – 10.0 ng/ml.

**Protein content:** Protein quantitation was carried out by two independent methods:

- 1.) UV spectroscopy at 280 nm using the absorbency value of 0,015 as the extinction coefficient for a 0.1% (1 mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
- 2.) Analysis by RP-HPLC, using a calibrated solution of rm Gro-  $\beta$  as a Reference Standard.

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<i>small</i>	5 $\mu$ g	Cat.N°	12343710
<i>medium</i>	20 $\mu$ g	Cat.N°	12343714

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Gladiolenweg 2; 26169 Friesoythe; Germany  
phone:+49-(0)4491-400997, fax:+49-(0)4491-400998, [info@immunotools.com](mailto:info@immunotools.com)  
[www.immunotools.com](http://www.immunotools.com)