

## Product Information

**MIG, HUMAN**  
**Recombinant,**  
**Expressed in *E. coli***

Product Number **M252**

### Product Description

MIG, human is a member of the  $\alpha$  (CXC) chemokine family of inflammatory and immunoregulatory cytokines. It is also a chemoattractant for activated T lymphocytes and TIL.

MIG, human is an approximately 11.7 kDa recombinant protein containing 103 amino acids. MIG, human is derived from a DNA sequence encoding mature MIG protein sequence that was expressed in *E. coli*.

MIG human was initially identified as a lymphokine-activated gene in mouse macrophages. The MIG gene is induced in macrophages and in primary glial cells of the central nervous system, specifically, in response to IFN- $\gamma$ . MIG is not a chemoattractant for neutrophils or monocytes. MIG cDNA encodes a 125 amino acid residue precursor protein with a 22 residue signal peptide that is cleaved to yield a 103 residue mature protein. MIG has an extended carboxy-terminus containing greater than 50% basic amino acid residues and is larger than most other chemokines. The carboxy-terminal residues are prone to proteolytic cleavage resulting in size heterogeneity of natural and recombinant MIG. MIG with large carboxy-terminal deletions has been shown to have diminished activity in the calcium flux assay. A chemokine receptor (CXCR3) specific for MIG and IP-10 (Product No. I154) has recently been cloned and shown to be highly expressed in IL-2-activated T-lymphocytes. The *E. coli*-expressed MIG contains greater than 80% full length MIG.

### Reagents

MIG, human is lyophilized from a sterile-filtered solution in 30% CH<sub>3</sub>CN and 0.1% TFA containing 50  $\mu$ g of bovine serum albumin per 1  $\mu$ g of cytokine.

### Precautions and Disclaimer

While no human toxicity is available for this substance, it should be handled with care. Precautions should be taken to avoid contact by all routes of exposure.

### Storage/Stability

Store MIG, human tightly sealed at -20 °C. After reconstitution and for continuous use, store at 2-8 °C for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers is not recommended. Repeated freezing and thawing is not recommended.

### Reconstitution

For reconstitution of MIG, human it is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 20  $\mu$ g/ml.

### Product Profile

MIG, human is measured by its ability to chemoattract lymphocytes cultured in the presence of IL-2 for 8-10 days. The ED<sub>50</sub> for this effect is typically 0.2 – 0.6  $\mu$ g/ml.

### References

1. Farber, J. Biochem. Biophys. Res. Commun. **192**, 223 (1993).
2. Liao, F. et al. J. Exp. Med. **182**, 1301 (1995).
3. Loetscher, M. et al. J. Exp. Med. **184**, 963 (1996).
4. Vanguri, P. J. Neuroimmunol. **56**, 35 (1995).

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