

## Recombinant Human MIG (CXCL9)

<b>Alternate names:</b>	CXCL9
<b>Catalog No.:</b>	PA1163
<b>Quantity:</b>	5 µg
<b>Concentration:</b>	1 mg/ml
<b>Background:</b>	CXCL9 is a chemoattractant for activated T cells and possess angiostatic activity. Both CXCL9 and CXCL10 have been considered as important components for the anti-tumour activities of interferon-gamma (IFN $\gamma$ ) and interleukin-12 in animal models. HuMIG is induced in THP-1 cells and in peripheral blood mononuclear cells by interferon-gamma but not by interferon-alpha or by lipopolysaccharide. Analysis of mouse and human genomic DNAs suggested that the Mumig and Humig genes are true mouse-human homologues.
<b>Species:</b>	Human
<b>Source:</b>	E. coli, E.coli
<b>Format:</b>	<b>State:</b> Sterile Filtered White lyophilized (freeze-dried) powder. <b>Purity:</b> >98% Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Anion-exchange FPLC. (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained. <b>Buffer System:</b> Lyophilized from a concentrated solution in water containing no additives. <b>Endotoxin Level:</b> Less than 0.1 ng/µg (IEU/µg) of Human MIG. <b>Dimers:</b> Less than 1% as determined by silver-stained SDS-PAGE gel analysis. <b>Reconstitution:</b> It is recommended to reconstitute the lyophilized MIG in sterile 18M $\Omega$ -cm H <sub>2</sub> O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.
<b>Description:</b>	Recombinant Human MIG (monokine induced by gamma-interferon ) produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 103 amino acids. Recombinant Human MIG is purified by proprietary chromatographic techniques. <b>AA Sequence:</b> The sequence of the first five N-terminal amino acids was determined and was found to be, Thr-Pro-Val-Val-Arg. <b>Biological Activity:</b> ED50 range= 10.0-100.0 ng/mL, determined by the dose dependent chemotaxis with human lymphocytes cultured in the presence of IL-2. The optimal concentration for each specific application should be determined by an initial dose response assay. Molecular weight: 11700 Dalton. <b>Molecular weight:</b> 12 kDa
<b>Add. Information:</b>	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 Human MIG as a Reference Standard.

**Storage:**

Lyophilized MIG although stable at room temperature for 3 weeks, should be stored desiccated below -180C. Upon reconstitution MIG 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.

**General Readings:**

1. Egesten A, Eliasson M, Johansson HM, Olin AI, Morgelin M, Mueller A, et al. The CXC chemokine MIG/CXCL9 is important in innate immunity against Streptococcus pyogenes. *J Infect Dis.* 2007 Mar 1;195(5):684-93. Epub 2007 Jan 18. PubMed PMID: 17262710.
2. Levy-Strumpf N, Culotti JG. VAB-8, UNC-73 and MIG-2 regulate axon polarity and cell migration functions of UNC-40 in *C. elegans*. *Nat Neurosci.* 2007 Feb;10(2):161-8. Epub 2007 Jan 21. PubMed PMID: 17237777.
3. Wu M, Herman MA. Asymmetric localizations of LIN-17/Fz and MIG-5/Dsh are involved in the asymmetric B cell division in *C. elegans*. *Dev Biol.* 2007 Mar 15;303(2):650-62. Epub 2006 Dec 15. PubMed PMID: 17196955.
4. Ranjbaran H, Wang Y, Manes TD, Yakimov AO, Akhtar S, Kluger MS, et al. Heparin displaces interferon-gamma-inducible chemokines (IP-10, I-TAC, and Mig) sequestered in the vasculature and inhibits the transendothelial migration and arterial recruitment of T cells. *Circulation.* 2006 Sep 19;114(12):1293-300. Epub 2006 Aug 28. PubMed PMID: 16940188.
5. Zhang R, Tian L, Xiao F, Wen YJ, li J, Hou JM, et al. [Construction of pORF-mIG and activity evaluation of MIG in vitro]. *Sichuan Da Xue Xue Bao Yi Xue Ban.* 2006 Jul;37(4):502-5. PubMed PMID: 16909588.
6. Evidence that MIG-6 is a tumor-suppressor gene. *Oncogene* 2007 Jan 11;26(2):269-76

**Pictures:**

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