

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CXCL9/MIG in ELISAs and Western blots. In ELISAs, does not cross-react with recombinant mouse (rm) CXCL9, recombinant human CXCL10.
Source	Monoclonal Mouse IgG ₁ Clone # 49106
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human CXCL9/MIG Thr23-Thr125 Accession # Q07325
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

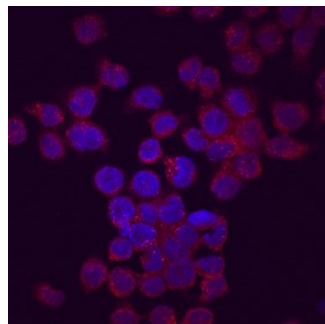
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human CXCL9/MIG (Catalog # 392-MG) under non-reducing conditions only
Immunocytochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10 ⁶ cells	THP-1 cells treated with Recombinant Human IFN-γ (Catalog # 285-IF), fixed with paraformaldehyde, and permeabilized with saponin
Human CXCL9/MIG Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Human CXCL9/MIG Antibody (Catalog # MAB392)
ELISA Detection Standard	0.1-0.4 µg/mL	Human CXCL9/MIG Biotinylated Antibody (Catalog # BAF392) Recombinant Human CXCL9/MIG (Catalog # 392-MG)
Neutralization	Measured by its ability to neutralize CXCL9/MIG-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with mouse CXCR3. The Neutralization Dose (ND ₅₀) is typically 4-20 µg/mL in the presence of 1 µg/mL Recombinant Human CXCL9/MIG.	

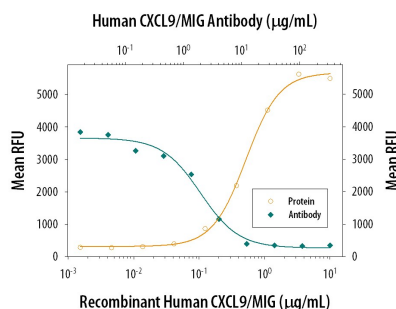
DATA

Immunocytochemistry



CXCL9/MIG in THP-1 Human Cell Line. CXCL9/MIG was detected in immersion fixed THP-1 human acute monocytic leukemia cell line stimulated with IFN-gamma for 24 hours using Human CXCL9/MIG Monoclonal Antibody (Catalog # MAB392) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Neutralization



Chemotaxis Induced by CXCL9/MIG and Neutralization by Human CXCL9/MIG Antibody. Recombinant Human CXCL9/MIG (Catalog # 392-MG) chemoattracts the BaF3 mouse pro-B cell line transfected with mouse CXCR3 in a dose-dependent manner (orange line). The amount of cells that migrated through to the lower chemotaxis chamber was measured by Resazurin (Catalog # AR002). Chemotaxis elicited by Recombinant Human CXCL9/MIG (1 µg/mL) is neutralized (green line) by increasing concentrations of Human CXCL9/MIG Monoclonal Antibody (Catalog # MAB392). The ND₅₀ is typically 4-20 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CXCL9, a member of the α subfamily of chemokines that lack the ELR domain, was initially identified as a lymphokine-activated gene in mouse macrophages. Human CXCL9 was subsequently cloned using mouse MIG cDNA as a probe. The CXCL9 gene is induced in macrophages and in primary glial cells of the central nervous system specifically in response to IFN- γ . CXCL9 has been shown to be a chemoattractant for activated T-lymphocytes and TIL but not for neutrophils or monocytes. The human CXCL9 cDNA encodes a 125 amino acid (aa) residue precursor protein with a 22 aa residue signal peptide that is cleaved to yield a 103 aa residue mature protein. CXCL9 has an extended carboxy-terminus containing greater than 50% basic aa residues and is larger than most other chemokines. The carboxy-terminal residues of CXCL9 are prone to proteolytic cleavage resulting in size heterogeneity of natural and recombinant CXCL9. CXCL9 with large carboxy-terminal deletions have been shown to have diminished activity in the calcium flux assay. A chemokine receptor (CXCR3) specific for CXCL9 and IP-10 has been cloned and shown to be highly expressed in IL-2-activated T-lymphocytes. The *E. coli*-expressed CXCL9 preparations produced at R&D Systems have been shown to contain greater than 80% full length CXCL9.

References:

1. Loetscher, M. *et al.* (1996) *J. Exp. Med.* **184**:963.
2. Liao, F. *et al.* (1995) *J. Exp. Med.* **182**:1301.
3. Vanguri, P. (1995) *J. Neuroimmunol.* **56**:35.