Human CXCL9/MIG Antibody

Monoclonal Mouse IgG_1 Clone # 49106

Catalog Number: MAB392

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	*E. coli*-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.

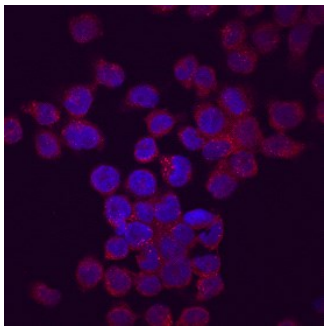
APPLICATIONS

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	0.1-0.4 µg/mL	Human CXCL9/MIG Biotinylated Antibody (Catalog # BAF392)
Standard		Recombinant Human CXCL9/MIG (Catalog # 392-MG)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
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 0.25 µg/mL Recombinant Human CXCL9/MIG.	

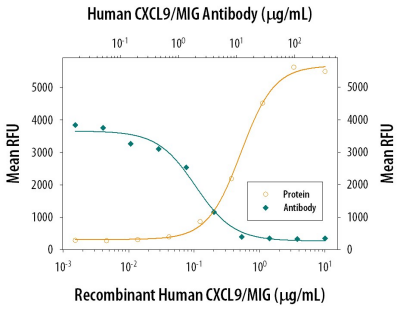
DATA

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 Mouse Anti-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 (0.25 µg/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human CXCL9/MIG Monoclonal Antibody (Catalog # MAB392). The ND_{50} is typically 4-20 µg/mL.

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Human CXCL9/MIG Antibody

Monoclonal Mouse IgG_1 Clone # 49106

Catalog Number: MAB392

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.** ● 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.

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