Recombinant Human CXCL9/MIG

Catalog Number: 11106-MG

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human CXCL9/MIG protein Thr23-Thr125 Accession # Q07325.1
N-terminal Sequence Analysis	Thr23
Predicted Molecular Mass	12 kDa

SPECIFICATIONS

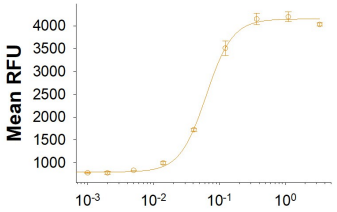
SDS-PAGE	12-17 kDa, under reducing conditions.
Activity	Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with mouse CXCR3. The ED_{50} for this effect is 0.020-0.300 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

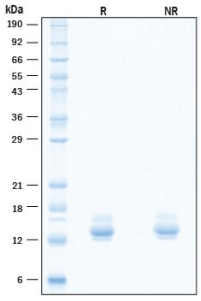
DATA

Bioactivity



Recombinant Human CXCL9/MIG Protein Bioactivity. Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with mouse CXCR3. The ED_{50} for this effect is 0.020-0.300 µg/mL.

SDS-PAGE



Recombinant Human CXCL9/MIG Protein SDS-PAGE. 2 µg/lane of Recombinant Human CXCL9/MIG Protein (Catalog # 11106-MG) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 12-17 kDa.

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 residue precursor protein with a 22 amino acid residue signal peptide that is cleaved to yield a 103 amino acid residue mature protein. CXCL9 has an extended carboxy-terminus containing greater than 50% basic amino acid 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. MIG also functions *in vivo* as a potent chemoattractant for tumor-infiltrating lymphocytes and activates peripheral blood lymphocytes, as well as NK cells and TH1 lymphocytes. Therefore, MIG could be a potential candidate for antiangiogenic and immunomodulation therapy for tumor disease. 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.

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.
4. Zhang, R. *et al.* (2006) Gene Ther. **13**:1263.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449