**DESCRIPTION**

**Source**

E. coli-derived

Thr22-Thr126

Accession # P18340

**N-terminal Sequence Analysis**

Thr22

**Predicted Molecular Mass**

12 kDa

**SPECIFICATIONS**

**Activity**

Measured by its ability to chemoattract human peripheral blood lymphocytes (PBL) cultured in the presence of IL-2 for 21 days. The ED$_{50}$ for this effect is 0.1-0.3 µg/mL.

Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with mouse CXCR3.

The ED$_{50}$ for this effect is 0.1-0.5 µg/mL.

**Endotoxin Level**

<0.10 EU per 1 µg of the protein by the LAL method.

**Purity**

>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation**

Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution**

Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

**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.

**BACKGROUND**

CXCL9, also known as MIG, is a member of the α subfamily of chemokines that lacks the ELR domain, and was initially identified as a lymphokine-activated gene in mouse macrophages. Human CXCL9 was subsequently cloned using mouse CXCL9 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 mouse CXCL9 cDNA encodes a 126 amino acid residue precursor protein with a 21 amino acid residue signal peptide that is cleaved to yield a 105 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. 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 produced at R&D Systems has been shown to contain greater than 80% full length CXCL9.

**References:**