

**DESCRIPTION**

**Source** *E. coli*-derived  
Ser23-Leu119  
Accession # Q5UW37.1

**N-terminal Sequence Analysis** Ser31

**Predicted Molecular Mass** 10.3 kDa

**SPECIFICATIONS**

**Activity** Measured by its ability to induce VEGF expression in mouse endothelial cells. Weinstein, E.J. *et al.* (2006) BBRC **350**:74.  
The ED<sub>50</sub> for this effect is 1-5 µg/mL.

**Endotoxin Level** <0.01 EU per 1 µg of the protein by the LAL method.

**Purity** >97%, 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 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**

Dendritic cell and monocyte chemokine-like protein (DMC), also known as VEGF-correlated chemokine-1 (VCC-1), is a secreted molecule with a size and predicted three-dimensional folding pattern similar to that of chemokines CXCL8/IL-8 and CXCL14/BRAK (1, 2). It has no predicted N-glycosylation sites, so cleavage of a 22 amino acid (aa) signal sequence likely results in a mature mouse DMC molecule of 97 aa and 11 kDa size. DMC is constitutively produced by airway and intestinal epithelium (1). It induces the chemotaxis of quiescent, but not LPS-activated peripheral blood monocytes and dendritic cells, and also binds these cells specifically (1). DMC expression is increased in endothelial cells when they are induced to form tubes *in vitro* (2). Transgenic overexpression in NIH3T3 cells causes up-regulation of proteins such as VEGF and FGF basic, and increases cell growth rate and tumorigenicity (2). DMC and two other chemokines that play roles in angiogenesis, CXCL1/GRO and CXCL8/IL-8, show significantly correlated expression with that of VEGF in primary lung, breast and esophageal tumors (2). DMC is therefore suggested to play a role in tumor angiogenesis. Mature mouse DMC shares 82%, 71% and 66% amino acid sequence identity with rat, human and bovine DMC, respectively.

**References:**

1. Pisabarro, M. T. *et al.* (2006) J. Immunol. **176**:2069.
2. Weinstein, E. J. *et al.* (2006) Biochem. Biophys. Res. Commun. **350**:74.