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Product Information

Macrophage Derived Chemokine

Human, Recombinant

Product Number **M-251**

Storage Temperature -20°C

Product Description

MDC (Macrophage-Derived Chemokine), also named stimulated T cell chemotactic protein (STCP-1), was isolated from clones of monocyte-derived macrophages. cDNA encodes a precursor protein of 93 amino acid residues with a 24 residue predicted signal peptide that is cleaved to yield a 69 residue mature protein. MDC shows less than 35% identity to other CC chemokine family members. It is expressed in dendritic cells, macrophages and activated monocytes. Expression is also detected in the tissues of thymus, lymph node and appendix. The gene has been mapped to chromosome 16. A CD8⁺ T lymphocyte-derived secreted soluble activity that suppresses infection by primary non-syncytium-inducing and syncytium-inducing HIV-1 isolates and the T-cell line-adapted isolate HIV-1_{IIIB}, has been identified as MDC. The T lymphocyte-derived MDC protein yielded an amino-terminal sequence which is two amino acid residues shorter than the predicted mature MDC. The difference in potency between the two mature MDC isoforms has not been determined.

Preparation Instructions

Reconstitute the contents of the vial using sterile phosphate buffered saline (PBS) containing at least 0.1% human serum albumin or bovine serum albumin to prepare a stock solution of no less than 25 $\mu\text{g}/\text{ml}$.

Storage/Stability

Prior to reconstitution, store tightly sealed at -20°C . After reconstitution and for continuous use, store at $2 - 8^{\circ}\text{C}$ for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers is not recommended. Repeated freezing and thawing is not recommended.

Procedure

The biological activity of MDC was measured by its ability to chemoattract human lymphocytes cultured in the presence of IL-2. The ED₅₀ for this effect is typically 0.002 - 0.006 $\mu\text{g}/\text{ml}$.

Product Profile

Source: A DNA sequence encoding mature MDC was expressed in *E. coli*.¹

Molecular Weight: Approx. 8 kDa recombinant protein containing 69 amino acids

Purity: >97% purity as determined by SDS-PAGE

Formulation: Lyophilized from a sterile filtered solution in 30% acetonitrile and 0.1% TFA, containing 50 μg of bovine serum albumin per 1 μg of cytokine

References

1. Godiska, R., et al. *J. Exp. Med.* **185**, 1595-1604 (1997).
2. Chang, M., et al. *J. Biol. Chem.* **272**, 25229-25237 (1997).
3. Pal, R., et al. *Science* **278**, 695-698 (1997).
4. Imai, T., et al. *J. Biol. Chem.* **273**, 1764-1768 (1998).

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