Recombinant Human CCL22/MDC

Catalog Number: 336-MD

DESCRIPTION

Source	*E. coli*-derived human CCL22/MDC protein Gly25-Gln93 Accession # O00626.1
N-terminal Sequence Analysis	Gly25
Predicted Molecular Mass	8 kDa

SPECIFICATIONS

Activity	Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with human CCR4. The ED_{50} for this effect is 0.5-3 ng/mL.
Endotoxin Level	<0.01 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 Acetonitrile and TFA with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 25 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

CCL22, also named stimulated T cell chemotactic protein (STCP-1), is a CC chemokine initially isolated from clones of monocyte-derived macrophages. Human CCL22 cDNA encodes a precursor protein of 93 amino acid residues with a 24 amino acid residue predicted signal peptide that is cleaved to yield a 69 amino acid residue mature 8 kDa protein. At the amino acid sequence level, CCL22 shows less than 35% identity to other CC chemokine family members. Human CCL22 is expressed in dendritic cells, macrophages and activated monocytes. In addition, CCL22 expression is also detected in the tissues of thymus, lymph node and appendix. The gene for human CCL22 has been mapped to chromosome 16 rather than chromosome 17 where the genes for many human CC chemokines are clustered. Recombinant or chemically synthesized mature CCL22 has been shown to induce chemotaxis or Ca^{2+} mobilization in dendritic cells, IL-2 activated NK cells, and activated T lymphocytes. 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 $HIV\text{-}1_{IIIB}$, has been identified as CCL22. Based on amino-terminal sequence analysis, the major $CD8^+$ T lymphocyte-derived CCL22 protein yielded an amino-terminal sequence of YGANM, which is two amino acid residues shorter than the predicted mature CCL22. The difference in potency between the two mature CCL22 isoforms has not been determined.

References:

1. Godiska, R. *et al.* (1997) J. Exp. Med. **185**:1595.
2. Chang, M-S. *et al.* (1997) J. Biol. Chem. **272**:25229.
3. Pal, R. *et al.* (1997) Science **278**:5338.

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