



Macrophage-Derived Chemokine (CCL22), rat recombinant (rrMDC)

Catalog No: 97540
Lot No: XXXXX
Source: *E. coli*
Synonyms: C-C motif chemokine 22, Small-inducible cytokine A22, Macrophage-derived chemokine, MDC(1-69), Stimulated T-cell chemotactic protein 1, CC chemokine STCP-1, CCL22, MDC, SCYA22, ABCD-1, DC/B-CK, MGC34554, A-152E5.1, CC chemokine ABCD-1, Activated B and dendritic cell-derived, DCBCK

Background

MDC (CCL22) is a small cytokine that belongs to the CC chemokine family. CCL22 is one of several Cys-Cys (CC) cytokine genes clustered on the q arm of chromosome 16. MDC shows chemotactic activity for natural killer cells, chronically activated T lymphocytes, monocytes and dendritic cells. On the other hand, MDC shows a mild activity for primary activated T lymphocytes and has no chemoattractant activity for neutrophils, eosinophils and resting T lymphocytes. MDC may also have a role in the trafficking of activated T lymphocytes to inflammatory sites and other aspects of activated T lymphocyte physiology. MDC interacts with cell surface chemokine receptors CCR4. CCL22 is vastly expressed in macrophage and in monocyte-derived dendritic cells, and thymus. CCL22 is also found in the lymph node, appendix, activated monocytes, resting and activated macrophages. Lower expression of CCL22 can be seen in the lung and the spleen and very weak expression in the small intestine. In the lymph node CCL22 is expressed in a mature subset of Langerhans' cells (CD1a+ and CD83+). Furthermore, CCL22 is expressed in atopic dermatitis, allergic contact dermatitis skin, and psoriasis, in both the epidermis and dermis. In addition, MDC has a role in hindering progression of lung cancer. Moreover, significantly higher CCL22 expression is linked to gastric cancer.

Description

CCL22 rat recombinant produced in *E. coli* is a non-glycosylated, polypeptide chain containing 68 amino acids and having a molecular mass of 7.9 kDa. Rat CCL22 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a 0.2 µm filtered concentrated solution in 1xPBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized MDC in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized MDC, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MDC should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

GPYGANVEDS ICCQDYIRHP LPPRFVKEFY WTSKSCRKPG VVLITIKNRD ICADPRMLWV KKILHKLA

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Activity

Fully biologically active when compared to standard. Determined by its ability to chemoattract human activated lymphocytes using a concentration range of 10.0 - 100.0 ng/ml.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.