

Recombinant Human Macrophage-Derived Chemokine (rh MDC / CCL22)

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, SCYA22, ABCD-1, DC/B-CK, MGC34554, A-152E5.1.

Introduction: MDC (CCL22) is a small cytokine that belongs to the CC chemokine family. It is one of several Cys-Cys (CC) cytokine genes clustered on the q arm of chromosome 16. It 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. MDC is vastly expressed in macrophage and in monocyte-derived dendritic cells, and thymus, and is also found in the lymph node, appendix, activated monocytes, resting and activated macrophages. Lower expression of MDC can be seen in the lung and the spleen and very weak expression in the small intestine. In the lymph node MDC is expressed in a mature subset of Langerhans' cells (CD1a+ and CD83+). Furthermore, it 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 MDC expression is linked to gastric cancer.

Description: Recombinant human MDC produced in E.Coli is a non-glycosylated, Polypeptide chain containing 69 amino acids and having a molecular mass of 8.1 kDa. The MDC is purified by proprietary chromatographic techniques. The MDC is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized(freeze dried) powder.

Formulation: filtered (0.4µm) and lyophilized from a concentrated solution containing 20mM phosphate buffer & 500mM NaCl pH-7.4. The samples of 1µg contain Trehalose 5% (w/vol) for better recovery

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

Stability: Lyophilized rh MDC although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh 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 RP-HPLC and by SDS-PAGE .

Amino acid Sequence: GPYGANMEDS VCCR DYVRYR LPLRVVKH FY WTSDSCPRPG VLLTFRDKE ICADPRVPWV KMILNKLSQ.

Biological Activity: Determined by its ability to chemoattract human T cells using a concentration range of 10-100 ng/ml corresponding to a Specific Activity of 10,000-100,000IU/mg.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	5 µg	Cat.N°	11344330
<i>medium</i>	20 µg	Cat.N°	11344334

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