

# Recombinant Mouse Macrophage-Derived Chemokine (rm CCL22 / MDC)

**Synonyms:** C-C motif chemokine 22 (CCL22), Stimulated T-cell chemotactic protein 1 (STCP-1).

**Introduction:** MDC 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 and on the other hand it 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 and 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 MDC 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 mouse MDC produced in E.Coli is a non-glycosylated, Polypeptide chain containing 68 amino acids and having a molecular mass of 7.8 kDa. The MDC is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

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

**Formulation:** Lyophilized from a 0.2µm filtered solution in 20mM PB, pH7.4, 150mM NaCl  
The sample size of 1µg contains Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rm MDC in sterile H<sub>2</sub>O not less than 100 µg/ml which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rm MDC although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rm 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:** GPYGANVEDS ICCQDYIRHP LPSRLVKEFF WTSKSCRKPG VVLITVKNRD  
ICADPRQVWV KLLHKLS.

**Biological Activity:** Determined by its ability to chemoattract human T cells using a concentration range of 10ng-100ng/ml.

This material is offered for **research 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° | 12344330 |
| <i>medium</i> | 20 µg | Cat.N° | 12344334 |

**ImmunoTools** Excellent Quality - Advantageously priced

Gladiolenweg 2; 26169 Friesoythe; Germany  
phone:+49-(0)4491-400997, fax:+49-(0)4491-400998, [info@immunotools.com](mailto:info@immunotools.com)  
[www.immunotools.com](http://www.immunotools.com)