

# MDC (4i23): sc-71555

## BACKGROUND

Chemokines have been implicated in the regulation of stem/progenitor cell proliferation and movement. The C-C chemokines TARC (for thymus and activation-regulated chemokine, also designated small inducible cytokine A17) and MDC (for macrophage-derived chemokine, also designated small inducible cytokine A22 or STCP-1, for stimulated T cell chemotactic protein 1), are expressed in the thymus and spleen. C-C chemokine receptor CCR4, expressed by T helper type 2 polarized cells, is a high affinity receptor for both TARC and MDC. TARC is important in the recognition of skin vasculature by circulating T cells and in directing lymphocytes that are involved in systemic as opposed to intestinal immunity to its target tissues. MDC is involved in chronic inflammation and dendritic cell and lymphocyte homing. MDC and TARC lack suppressive activity against immature subsets of myeloid progenitors, which have been stimulated to proliferate by multiple growth factors.

## REFERENCES

1. Broxmeyer, H.E., Kim, C.H., Cooper, S.H., Hangoc, G., Hromas, R. and Pelus, L.M. 1999. Effects of C-C, C-X-C, C and CX3C chemokines on proliferation of myeloid progenitor cells, and insights into SDF-1-induced chemotaxis of progenitors. *Ann. N.Y. Acad. Sci.* 872: 142-162.
2. Campbell, J.J., Haraldsen, G., Pan, J., Rottman, J., Qin, S., Ponath, P., Andrew, D.P., Warnke, R., Ruffing, N., Kassam, N., Wu, L. and Butcher, E.C. 1999. The chemokine receptor CCR4 in vascular recognition by cutaneous but not intestinal memory T cells. *Nature* 400: 776-780.
3. Chvatchko, Y., Hoogewerf, A.J., Meyer, A., Alouani, S., Juillard, P., Buser, R., Conquet, F., Proudfoot, A.E., Wells, T.N. and Power, C.A. 2000. A key role for C-C chemokine receptor 4 in lipopolysaccharide-induced endotoxic shock. *J. Exp. Med.* 191: 1755-1764.
4. Matsukawa, A., Hogaboam, C.M., Lukacs, N.W., Lincoln, P.M., Evanoff, H.L. and Kunkel, S.L. 2000. Pivotal role of the C-C chemokine, macrophage-derived chemokine, in the innate immune response. *J. Immunol.* 164: 5362-5368.
5. Galli, G., Chantry, D., Annunziato, F., Romagnani, P., Cosmi, L., Lazzeri, E., Manetti, R., Maggi, E., Gray, P.W. and Romagnani, S. 2000. Macrophage-derived chemokine production by activated human T cells *in vitro* and *in vivo*: preferential association with the production of type 2 cytokines. *Eur. J. Immunol.* 30: 204-210.

## CHROMOSOMAL LOCATION

Genetic locus: CCL22 (human) mapping to 16q13.

## SOURCE

MDC (4i23) is a mouse monoclonal antibody raised against recombinant MDC of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

MDC (4i23) is recommended for detection of MDC of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MDC siRNA (h): sc-39359, MDC shRNA Plasmid (h): sc-39359-SH and MDC shRNA (h) Lentiviral Particles: sc-39359-V.

Molecular Weight of MDC: 3 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.