

## MDC/CCL22 Protein, Human, Recombinant (His)

### General Information

Synonyms:	A-152E5.1;MDC;ABCD-1;SCYA22;STCP-1;DC/B-CK;chemokine (C-C motif) ligand 22
Protein Construction:	A DNA sequence encoding the secreted form of human CCL22 (O00626) (Gly 25-Gln 93) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	O00626
Molecular Weight:	9.7 kDa (predicted); 10 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 30% Acetonitrile, 0.1% TFA. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Chemokine (C-C motif) ligand 22(ABCD-1 / CCL22) is a kind of CC chemokine which is a family of secreted proteins involved in immunoregulatory and inflammatory processes. The cytokine displays chemotactic activity for monocytes, dendritic cells, natural killer cells and for chronically activated T lymphocytes. It also displays a mild activity for primary activated T lymphocytes and has no chemoattractant activity for neutrophils, eosinophils and resting T lymphocytes. This ABCD-1 / CCL22 chemokine binds to chemokine receptor CCR4. This chemokine may

play a role in the trafficking of activated / effector T lymphocytes to inflammatory sites and other aspects of activated T-lymphocyte physiology. ABCD-1 / CCL22 is highly expressed in macrophage and in monocyte-derived dendritic cells, and thymus, and in Langerhans' cell histiocytosis and atopic dermatitis but not in dermatopathic lymphadenopathy. This chemokine is also found in lymph node, appendix, activated monocytes, resting and activated macrophages. This protein is lower expressed in lung and spleen and very weakly expressed in small intestine.

### Reference

Vulcano M, et al. (2001) Dendritic cells as a major source of macrophage-derived chemokine/CCL22 in vitro and in vivo. *Eur J Immunol.* 31(3): 812-22.

Kwon DJ, et al. (2011) Casuarinin suppresses TARC/CCL17 and MDC/CCL22 production via blockade of NF- $\kappa$ B and STAT1 activation in HaCaT cells. *Biochem Biophys Res Commun.* 417(4):1254-9.

Hirota T, et al. (2011) Variants of C-C motif chemokine 22 (CCL22) are associated with susceptibility to atopic dermatitis: case-control studies. *PLoS One.* 6(11):e26987.

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