MDC/CCL22 Protein, Mouse (His)

Cat. No.:	HY-P7248
Synonyms:	rMuMDC/CCL22; C-C motif chemokine 22; Abcd1; SCYA22
Species:	Mouse
Source:	E. coli
Accession:	O88430 (G26-S92)
Gene ID:	20299
Molecular Weight:	Approximately 7.8 kDa

PROPERTIES

AA Sequence	G P Y G A N V E D S I C C Q D Y I R H P L P S R L V K E F F W T S K S C R K P G V V L I T V K N R D I C A D P R Q V W V K K L L H K L S
Appearance	Solution.
Formulation	Supplied as sterile 0.1 % TFA, 50 % acetonitrile.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	CCL22, also known as macrophage-derived chemokine (MDC), a CC chemokine located on chromosome 16 in the human genome, is a protein encoded by the CCL22 gene that shares 37% identity with CCL17 at the amino acid level. CCL22 is secreted by dendritic cells and macrophages and can be upregulated by a variety of stimulatory factors, such as lipopolysaccharides, cytokines. Among them, the Th2 cytokines IL-4 and IL-13 induce CCL22 production in myeloid cells and can be inhibited by the Th1 cytokine IFN-γ. In addition to acting as a potent chemotactic agent for CCR4-expressing Th2 lymphocytes, monocytes, monocyte-derived dendritic cells, and natural killer cells, CCL22 can also affect its target cells by interacting with the chemokine receptor CCR4. CCL22 is a potent inducer of CCR4 internalization, and CCL22 binding to CCR4 reduces the subsequent functional response of CCR4. The interaction of CCL22 with CCR4 is involved in a variety of pathologies, ranging from allergic reactions and autoimmunity to tumor growth. In contrast, small molecule compounds and antibodies capable of blocking CCL17 and CCL22-mediated recruitment of Th2 and Treg cells have been shown to have positive effects in various disease models of asthma, atopic disease and tumor growth. In addition, an important role of

CCL22 and its receptors in TH2 lymphocyte recruitment has been shown in models of allergic airway inflammation. It can also be involved in thymopoiesis by regulating the migration of mature thymocytes through this organ[1][2].

REFERENCES

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[2]. Stefanie Scheu, et al. The C-C Chemokines CCL17 and CCL22 and Their Receptor CCR4 in CNS Autoimmunity. Int J Mol Sci. 2017 Nov 2;18(11):2306.

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[4]. Jillian R Richter, et al. Macrophage-derived chemokine (CCL22) is a novel mediator of lung inflammation following hemorrhage and resuscitation. Shock. 2014 Dec;42(6):525-31.

[5]. Yano C, et al. Mechanism of Macrophage-Derived Chemokine/CCL22 Production by HaCaT Keratinocytes. Ann Dermatol. 2015 Apr;27(2):152-6.

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