Datasheet for ABIN411323

CCL22 ELISA Kit

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Overview

Quantity:	96 tests
Target:	CCL22
Binding Specificity:	AA 25-93
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human CCL22/MDC
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: G25-Q93
Specificity:	Expression system for standard: E.coli Immunogen sequence: G25-Q93
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<1pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	CCL22
Alternative Name:	CCL22 (CCL22 Products)
Background:	Protein Function: May play a role in the trafficking of activated/effector T-lymphocytes to inflammatory sites and other aspects of activated T-lymphocyte physiology. Chemotactic for monocytes, dendritic cells and natural killer cells. Mild chemoattractant for primary activated T-lymphocytes and a potent chemoattractant for chronically activated T-lymphocytes but has no chemoattractant activity for neutrophils, eosinophils, and resting T-lymphocytes. Binds to CCR4. Processed forms MDC(3-69), MDC(5-69) and MDC(7-69) seem not be active. Background: Macrophage-derived chemokine(MDC), also called Chemokine, cc motif, ligand 22(CCL22) or Small inducible cytokine subfamily A, member 22(SCY22). MDC is a recently identified member of the CC chemokine family. It is not closely related to other chemokines, sharing most similarity with thymus- and activation-regulated chemokine(TARC), which contains 37 % identical amino acids. In addition, MDC gene is mapped to chromosome 16q13, the same position reported for the TARC gene. MDC has the four-cysteine motif and other highly conserved residues characteristic of CC chemokines, but it shares<35 % identity with any of the known chemokines. Recombinant MDC was expressed in Chinese hamster ovary cells and purified by heparin-Sepharose chromatography. MDC is highly expressed in macrophages and in monocyte-derived dendritic cells, but not in monocytes, natural killer cells, or several cell lines of epithelial, endothelial, or fibroblast origin. High expression was also detected in normal thymus and less expression in lung and spleen. MDC is thus a unique member of the CC chemokine family that may play a fundamental role in the function of dendritic cells, natural killer cells, and monocytes. Synonyms: C-C motif chemokine 22,CC chemokine STCP-1,MDC(1-69),Macrophage-derived chemokine,Small-inducible cytokine A22,Stimulated T-cell chemotactic protein 1,MDC(3-69),MDC(5-69),MDC(7-69),CCL22,MDC, SCYA22,A-152E5.1, Full Gene Name: C-C motif chemokine 22 Cellular Localisation: Secreted.

Target Details

Gene ID:	6367
UniProt:	O00626

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the intercrine beta (chemokine CC) family. Tissue Specificity: Highly expressed in macrophage and in monocyte-derived dendritic cells, and thymus. Also found in lymph node, appendix, activated monocytes, resting and activated macrophages. Lower expression in lung and spleen. Very weak expression in small intestine. In lymph node expressed in a mature subset of Langerhans' cells (CD1a+ and CD83+). Expressed in Langerhans' cell histiocytosis but not in dermatopathic lymphadenopathy. Expressed in atopic dermatitis, allergic contact dermatitis skin, and psoriasis, in both the epidermis and dermis. .
Plate:	Pre-coated
Protocol:	human MDC ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for MDC has been precoated onto 96-well plates. Standards(E.coli, G25-Q93) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MDC is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human MDC amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL,1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL human MDC standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human MDC standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 178, Standard deviation: 8.2, CV(%): 4.6 • Sample 2: n=16, Mean(pg/ml): 726, Standard deviation: 38.5, CV(%): 5.3 • Sample 3: n=16, Mean(pg/ml): 1322, Standard deviation: 82, CV(%): 6.2,

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Application Details

- Sample 1: n=24, Mean(pg/ml): 242, Standard deviation: 12.1, CV(%): 5
- Sample 2: n=24, Mean(pg/ml): 997, Standard deviation: 63.81, CV(%): 6.4
- Sample 3: n=24, Mean(pg/ml): 1634, Standard deviation: 114.4, CV(%): 7

Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

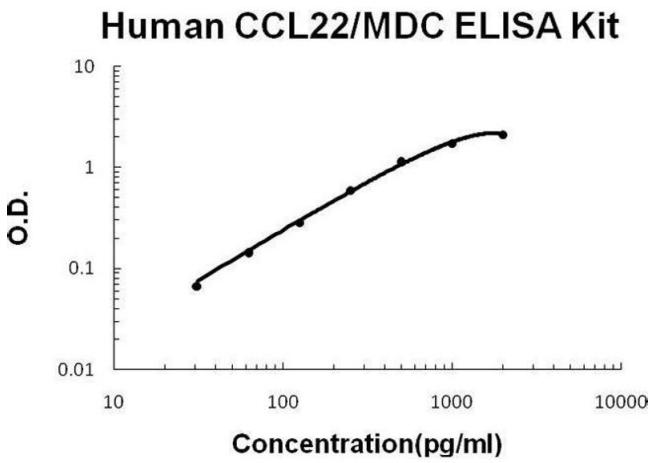
Publications

Product cited in:

Bi, Zeng, Zhao, Wei, Yu, Wang, Yu, Cao, Shan, Wei: "miR-181a Induces Macrophage Polarized to M2 Phenotype and Promotes M2 Macrophage-mediated Tumor Cell Metastasis by Targeting KLF6 and C/EBPα." in: **Molecular therapy. Nucleic acids**, Vol. 5, Issue 9, pp. e368, (2016) (PubMed).

Chen, Hu, Mao, Jiao, Wang, Yu, Xu, Dai, Yin, Xu: "Increased IL-17-producing CD4(+) T cells in patients with esophageal cancer." in: **Cellular immunology**, Vol. 272, Issue 2, pp. 166-74, (2011) (PubMed).

Images



ELISA

Image 1. Human CCL22/MDC PicoKine ELISA Kit standard curve

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