

PRODUCT INFORMATION



CCL20 (human, recombinant)

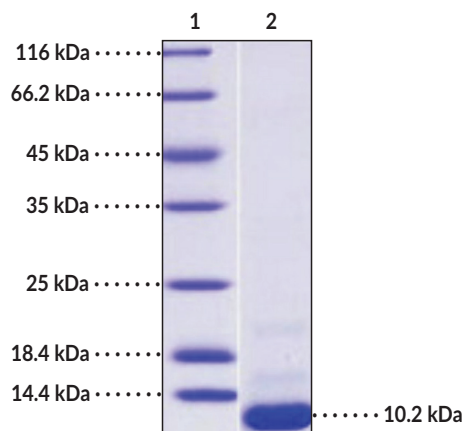
Item No. 32053

Overview and Properties

Synonyms: β -chemokine Exodus-1, Liver and Activation-regulated Chemokine, Macrophage Inflammatory Protein 3- α , MIP-3- α , Small-inducible Cytokine A20
Source: Recombinant human N-terminal His-tagged CCL20 expressed in *E. coli*
Amino Acids: 27-96
Uniprot No.: P78556-1
Molecular Weight: 10.2 kDa
Storage: -80°C (as supplied)
Stability: ≥ 1 year
Purity: $\geq 90\%$ estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.4

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers

Lane 2: CCL20

SDS-PAGE Analysis of CCL20.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Chemokine (C-C motif) ligand 20 (CCL20) is a cytokine of the C-C motif chemokine family.¹ CCL20 is a monomer comprised of an N-terminal region, a DCCL motif linked to the first β strand of a three-stranded antiparallel β sheet that forms a loop region, and a C-terminal α helix. The flexible N-terminal and loop regions are important for receptor binding. It is produced as a 96-amino acid precursor protein from which mature CCL20 is formed by proteolytic cleavage of a signal sequence. CCL20 is constitutively expressed primarily in the liver, lung, appendix, and tonsils, as well as in macrophages, dendritic cells, leukocytes, colonic epithelial cells, and keratinocytes. Its expression is induced in response to cytokines, bacteria, and viruses in epithelial cells of the tonsils and lower airway, a variety of immune cells, melanocytes, and dermal fibroblasts. It binds to chemokine (C-C motif) receptor 6 (CCR6) on leukocytes in a cell subtype-, maturation stage-, or differentiation stage-dependent manner and attracts immature dendritic cells or memory T or B cells. CCL20 is overexpressed in a variety of cancer cells and attracts immature dendritic cells to the tumor microenvironment.² Overexpression of CCL20 in triple-negative breast cancer (TNBC) cells increases proliferation *in vitro* and increases the tumor growth rate in mouse xenograft models. Its expression is increased in tumor tissue from patients with hepatocellular carcinoma, and the expression level is positively associated with a lower survival rate. CCL20 expression and protein levels are increased in a variety of other diseases, including in skin lesions of patients with atopic dermatitis or psoriasis and in inflamed-joint synovial fluid from patients with rheumatoid arthritis.¹ Cayman's CCL20 (human, recombinant) protein consists of 87 amino acids and has a calculated molecular weight of 10.2 kDa.

References

1. Schutyser, E., Struyf, S., and Van Damme, J. The CC chemokine CCL20 and its receptor CCR6. *Cytokine Growth Factor Rev.* **14(5)**, 409-426 (2003).
2. Chen, W., Qin, Y., and Liu, S. CCL20 signaling in the tumor microenvironment. *Tumor Microenvironments. The Role of Chemokines-Part A*. Birbrair, A., editor, 1st edition, Springer Nature Switzerland AG (2020).

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