

## CCL20 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	CKb4;exodus-1;MIP-3[a];ST38;MIP3A;LARC;MIP-3A;chemokine (C-C motif) ligand 20;Scya20
Protein Construction:	A DNA sequence encoding the mouse CCL20 (O89093-1) (Met 1-Met 97) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ala 28
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	O89093-1
Molecular Weight:	9.3 kDa (predicted); 14 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:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 20 mM Tris, 500 mM NaCl, pH 7.4, 10% gly. 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 20 (CCL20) or liver activation regulated chemokine (LARC) or Macrophage Inflammatory Protein-3 (MIP3A) is a small cytokine belonging to the CC chemokine family that attracts immature dendritic cells and memory T lymphocytes, both expressing CCR6. Depending on the cell type, this chemokine was found to be inducible by cytokines (IL-1 $\beta$ ) and by bacterial, viral, or plant products (including LPS, dsRNA, and PMA). MIP3A / CCL20 is Expressed predominantly in the liver, lymph nodes, appendix, peripheral blood

lymphocytes, and fetal lung. Low levels of MIP3A / CCL20 has been seen in thymus, prostate, testis, small intestine and colon. As a chemotactic factor, MIP3A / CCL20 attracts lymphocytes and, slightly, neutrophils, but not monocytes. This chemokine may inhibit proliferation of myeloid progenitors in colony formation assays and it may be involved in formation and function of the mucosal lymphoid tissues by attracting lymphocytes and dendritic cells towards epithelial cells. Its C-terminal processed forms have been shown to be equally chemotactically active for leukocytes. Chemokine CCL20 was shown to play a role in colorectal cancer (CRC) pathogenesis.

### Reference

Vicinus B, et al. (2012) miR-21 functionally interacts with the 3'UTR of chemokine CCL20 and down-regulates CCL20 expression in miR-21 transfected colorectal cancer cells. *Cancer Lett.* 316(1): 105-12.

Ding X, et al. (2012) High Expression of CCL20 Is Associated with Poor Prognosis in Patients with Hepatocellular Carcinoma after Curative Resection. *J Gastrointest Surg.* 16(4): 828-36.

Iverson SM, et al. (2010) Oxidative stress enhances IL-8 and inhibits CCL20 production from intestinal epithelial cells in response to bacterial flagellin. *Am J Physiol Gastrointest Liver Physiol.* 299(3): 733-41.

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