

MIP-3 alpha/CCL20 Protein, Mouse (sf9, His)

Cat. No.:	HY-P73813
Synonyms:	C-C motif chemokine 20; MIP3A; SCYA20
Species:	Mouse
Source:	Sf9 insect cells
Accession:	O89093 (M1-M97)
Gene ID:	20297
Molecular Weight:	Approximately 14 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	CCL20, also known as macrophage inflammatory protein 3 alpha (MIP-3-alpha) and liver-activated regulatory chemokine (LARC), is a small cytokine belonging to the CC chemokine family and is located on chromosome 2 in the human genome. It is expressed at lower levels in the thymus, testis, prostate and intestine. CCL20 binds to and acts as a chemokine receptor CCR6 and synergistically inhibits the function of CD8 T cells with CCR6. CCL20 has antimicrobial activity and has been implicated in autoimmune diseases such as inflammatory bowel disease, rheumatoid arthritis, and psoriasis, as well as oncological diseases. It can induce Tregs to invade tumor tissue, recruit dendritic cells to promote immunosuppression, and induce endothelial cell proliferation and neointima formation ^{[1][2]} .
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REFERENCES

- [1]. Louis Boafu Kwantwi, et al. Multifaceted roles of CCL20 (C-C motif chemokine ligand 20): mechanisms and communication networks in breast cancer progression. Bioengineered. 2021 Dec;12(1):6923-6934.
- [2]. M Baba, et al. Identification of CCR6, the specific receptor for a novel lymphocyte-directed CC chemokine LARC. J Biol Chem. 1997 Jun 6;272(23):14893-8.

[3]. Gisela Soboll, et al. Effect of oestradiol on PAMP-mediated CCL20/MIP-3 alpha production by mouse uterine epithelial cells in culture. Immunology. 2006 Jun;118(2):185-94.

[4]. Jinlin Liu, et al. Tumor-associated macrophages recruit CCR6+ regulatory T cells and promote the development of colorectal cancer via enhancing CCL20 production in mice. PLoS One. 2011 Apr 29;6(4):e19495.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA