

MIP-3 alpha/CCL20 Protein, Human (CHO)

Cat. No.:	HY-P7260
Synonyms:	rHuMIP-3 α /CCL20; C-C motif chemokine 20; MIP3A; SCYA20
Species:	Human
Source:	CHO
Accession:	P78556-1 (A27-M96)
Gene ID:	6364
Molecular Weight:	Approximately 8 kDa

PROPERTIES

AA Sequence	A S N F D C C L G Y T D R I L H P K F I V G F T R Q L A N E G C D I N A I I F H T K K K L S V C A N P K Q T W V K Y I V R L L S K K V K N M
Biological Activity	The ED ₅₀ is <200 ng/mL as measured by CHO-K1/G α 15/hCCR6 cells (human G α 15 and human CCR6 stably expressed in CHO-K1 cells).
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<0.2 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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]. M Soledad Hielpos, et al. CCL20 and Beta-Defensin 2 Production by Human Lung Epithelial Cells and Macrophages in Response to *Brucella abortus* Infection. *PLoS One*. 2015 Oct 8;10(10):e0140408.
- [4]. A Izadpanah, et al. Regulated MIP-3alpha/CCL20 production by human intestinal epithelium: mechanism for modulating mucosal immunity. *Am J Physiol Gastrointest Liver Physiol*. 2001 Apr;280(4):G710-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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