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MIP-3α/CCL20

Catalog # PVGS1112

Product Information

Primary Accession	P78556
Species	Human
Sequence	Ala27-Met96
Purity	> 97% as analyzed by SDS-PAGE > 97% as analyzed by HPLC
Endotoxin Level	
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human T-lymphocytes is in a concentration range of 10.0-50.0 ng/ml.
Expression System	E. coli
Theoretical Molecular Weight	8 kDa
Formulation	Lyophilized from a 0.2 μm filtered solution in 20 mM PB, pH 7.4, 100 mM NaCl.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	6364
Other Names	C-C motif chemokine 20, Beta-chemokine exodus-1, CC chemokine LARC, Liver and activation-regulated chemokine, Macrophage inflammatory protein 3 alpha, MIP-3-alpha, Small-inducible cytokine A20, CCL20(1-67), CCL20(1-64), CCL20(2-70), CCL20, LARC, MIP3A, SCYA20
Target Background	Macrophage Inflammatory Protein-3 (MIP-3α), also known as chemokine (C-C motif) ligand 20 (CCL20) or liver activation regulated chemokine (LARC), is a small cytokine belonging to the CC chemokine family. MIP-3α is expressed in the liver, lymph nodes, appendix, PBL and lung and can signal through the CCR6 receptor. It is strongly chemotactic for lymphocytes and weakly attracts neutrophils. MIP-3α is implicated in the formation and function of mucosal lymphoid tissues via chemoattraction of lymphocytes and dendritic cells

toward the epithelial cells surrounding these tissues. Additionally, it promotes the adhesion of memory $CD4^+$ T cells and inhibits colony formation of bone marrow myeloid immature progenitors.

Protein Information

Name	CCL20
Synonyms	LARC, MIP3A, SCYA20
Function	Acts as a ligand for C-C chemokine receptor CCR6. Signals through binding and activation of CCR6 and induces a strong chemotactic response and mobilization of intracellular calcium ions (PubMed:11035086, PubMed:11352563, PubMed:20068036). The ligand- receptor pair CCL20-CCR6 is responsible for the chemotaxis of dendritic cells (DC), effector/memory T-cells and B-cells and plays an important role at skin and mucosal surfaces under homeostatic and inflammatory conditions, as well as in pathology, including cancer and various autoimmune diseases (PubMed:21376174). CCL20 acts as a chemotactic factor that attracts lymphocytes and, slightly, neutrophils, but not monocytes (PubMed:11352563, PubMed:9038201). Involved in the recruitment of both the pro-inflammatory IL17 producing helper T-cells (Th17) and the regulatory T-cells (Treg) to sites of inflammation. Required for optimal migration of thymic natural regulatory T cells (nTregs) and DN1 early thymocyte progenitor cells (By similarity). C- terminal processed forms have been shown to be equally chemotactically active for leukocytes (PubMed:11035086). Positively regulates sperm motility and chemotaxis via its binding to CCR6 which triggers Ca2+ mobilization in the sperm which is important for its motility (PubMed:23765988, PubMed:25122636). Inhibits proliferation of myeloid progenitors in colony formation assays (PubMed:9129037). May be involved in formation and function of the mucosal lymphoid tissues by attracting lymphocytes and dendritic cells towards epithelial cells (By similarity). Possesses antibacterial activity towards E.coli ATCC 25922 and S.aureus ATCC 29213 (PubMed:12149255).
Cellular Location	Secreted.
Tissue Location	Expressed in the seminal plasma, endometrial fluid and follicular fluid (at protein level). Expressed predominantly in the liver, lymph nodes, appendix, peripheral blood lymphocytes, and fetal lung. Low levels seen in thymus, prostate, testis, small intestine and colon.