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MCP-3/CCL7

Catalog # PVGS1233

Product Information

Primary Accession	Q9QXY8
Species	Rat
Sequence	Gln24-Pro97
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	
Biological Activity	Fully biologically active when compared to standard. The biologically active determined by a chemotaxis bioassay using human monocytes is in a concentration range of 10.0-100.0 ng/ml.
Expression System	E. coli
Theoretical Molecular Weight	8.5 kDa
Formulation	Lyophilized from a 0.2 μm filtered solution in 2 × PBS, pH 7.4.
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	287561
Other Names	C-C motif chemokine 7, Monocyte chemoattractant protein 3, Monocyte chemotactic protein 3, MCP-3, Small-inducible cytokine A7, Ccl7, Mcp3, Scya7
Target Background	Chemokine (C-C motif) ligand 7 (CCL7) is a small cytokine that was previously called monocyte-specific chemokine 3 (MCP-3). Due to CCL7 possessing two adjacent N-terminal cysteine residues in its mature form, it is classified within the subfamily of chemokines known as CC chemokines. CCL7 specifically attracts monocytes, and regulates macrophage function. It is produced by certain tumor cell lines and by macrophages. This chemokine is located on chromosome 17 in humans, within a large cluster containing many other CC chemokines and is most closely related to CCL2. CCL7 can signal through the CCR1, CCR2 and CCR3 receptors.

Protein Information

Name	Ccl7
Synonyms	Mcp3, Scya7
Function	Chemotactic factor that plays an important role in immune regulation. Attracts monocytes, eosinophils, basophils, and T-cells to sites of inflammation or infection. Upon binding to various chemokine receptors including CCR1, CCR2, CCR3, and CCR5, facilitates immune cell migration by guiding them to infected tissues. Interacts with CCR2 to facilitate the release of monocytes from the bone marrow into the bloodstream, maintaining monocyte homeostasis. In turn, monocytes recruited to inflamed or injured tissues can differentiate into macrophages or dendritic cells, which are essential for immune defense and tissue repair. Through CCR1, contributes to macrophage polarization via NF-kappa-B activation which leads to the release of inflammatory factors. In the trigeminal ganglion neurons, activates ERK via CCR2 and CCR3 to enhance neuronal excitability, which contributes to the maintenance of trigeminal neuropathic pain. Additionally, modulates the early immune response in the skin, preventing pathogen dissemination while maintaining cutaneous immune control.
Cellular Location	Secreted.