Data Sheet (Cat.No.TMPY-02104)

TargetMol

MCP-2/CCL8 Protein, Mouse, Recombinant (His & NusA)

General Information

Synonyms:	MCP-2;Mcp2;chemokine (C-C motif) ligand 8;HC14;1810063B20Rik;Scya8;AB023418
Protein Construction:	A DNA sequence encoding the mature form of mouse CCL8 (Q9Z121) (Gly 24-Pro 94) was fused with the polyhistidine-tagged NusA tag at the N-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	Q9Z121
Molecular Weight:	66 kDa (predicted); 66 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:	> 85 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

Chemokines are a family of small chemotactic cytokines, or proteins secreted by cells. Chemokines share the same structure similarities such as small size, and the presence of four cysteine residues in conserved locations in order to form their 3-dimensional shape. Some of the chemokines are considered pro-inflammatory which can be induced to recruit cells of the immune system to a site of infection during an immune response, while others are considered homeostatic and are implied in controlling the migration of cells during normal processes of tissue

maintenance and development. There are four members of the chemokine family: C-C kemokines, C kemokines, CXC kemokines and CX3C kemokines. The C-C kemokines have two cysteines nearby the amino terminus. There have been at least 27 distinct members of this subgroup reported for mammals, called C-C chemokine ligands-1 to 28. Chemokine ligand 8 (CCL8), also known as monocyte chemoattractant protein 2 (MCP-2), is a small cytokine belonging to the C-C chemokine family. CCL8 functions to activate different immune cells, including mast cells, eosinophils and basophils which are involved in allergic responses, monocytes, and T cells and NK cells which are involved in the inflammatory response. CCL8's ability achieves by binding to different cell surface receptors termed chemokine receptors including CCR1, CCR2B and CCR5. It has been reported that CCL8 is a potent inhibitor of HIV-1 by virtue of its binding to CCR5 which is one of the major co-receptors for HIV-1.

Reference

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Cocchi F,et al.(1995) Identification of RANTES, MIP-1a, and MIP-1b as the major HIV-suppressive factor produced by CD8+T cells. Science. 270 (5243): 1811-5.
Hori T,et al.(2008) CCL8 is a potential molecular candidate for the diagnosis of graft-versus-host disease. Blood. 111 (8): 4403-12.
Biber K,et al.(2003) Expression of L-CCR in HEK 293 cells reveals functional responses to CCL2, CCL5, CCL7, and CCL8. Journal of Leukocyte Biology. 74 (2): 243-51.

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