# Data Sheet (Cat.No.TMPY-02203)

TargetMol

## CXCL9 Protein, Mouse, Recombinant

### General Information

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|---|---|
| Synonyms: | BB139920;Scyb9;MuMIG;crg-10;CMK;chemokine (C-X-C motif) ligand 9;Mig |
| Protein Construction: | A DNA sequence encoding the mature form of mouse CXCL9 (P18340) (Thr 22-Thr 126) was expressed, with an initial Met at the C-terminus. Predicted N terminal: Met |
| Species: | Mouse |
| Expression Host: | E. coli |
| Accession: | P18340 |
| Molecular Weight: | 12.3 kDa (predicted); 16 kDa (reducing conditions) |

### QC Testing

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| 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: | > 95 % 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

Chemokine (C-X-C motif) ligand 9 (CXCL9), also known as Monokine induced by gamma interferon (MIG), is a small cytokine belonging to the CXC chemokine family. The function of this chemokine has not been specifically defined; however, it is thought to be involved in T cell trafficking. CXCL9/MIG functions as one of the three ligands of chemokine receptor CXCR3 which is a G protein-coupled receptor found predominantly on T cells. CXCL9/MIG, together with CXCL10 and CXCL11, may activate CXCR3 by binding to it. CXCL9 serves as a cytokine that affects the

growth, movement, or activation state of cells that participate in immune and inflammatory response. It has been observed that tumour endothelial cells secrete high levels of CXCL9 in all, and CXCL10 in most melanoma metastases. Experiment data represent novel mechanisms by which tumour cells in melanoma metastases might use the chemokine-expressing endothelium to leave the tumour and eventually to form additional metastases at distinct sites. Experiment results also improved that CXCL9/MIG plays an important role in CD4+ T lymphocyte recruitment and development of CAV, MOMA-2+ macrophages are the predominant recipient-derived source of CXCL9/MIG, and recipient CD4 lymphocytes are necessary for sustained CXCL9/MIG production and CAV development in this model. Neutralization of the chemokine CXCL9/MIG may have therapeutic potential for the treatment of chronic rejection after heart transplantation.

Reference

Ruehlmann JM,et al. (2001) MIG (CXCL9) chemokine gene therapy combines with antibody-cytokine fusion protein to suppress growth and dissemination of murine colon carcinoma. Cancer Res. 61(23): 8498-503.
Belperio JA,et al. (2003) Role of CXCL9/CXCR3 chemokine biology during pathogenesis of acute lung allograft rejection. J Immunol. 171(9): 4844-52.
Colvin RA,et al. (2004) Intracellular domains of CXCR3 that mediate CXCL9, CXCL10, and CXCL11 function. J Biol Chem. 279(29): 30219-27.
Valbuena G,et al. (2003) Expression analysis of the T-cell-targeting chemokines CXCL9 and CXCL10 in mice and humans with endothelial infections caused by rickettsiae of the spotted fever group. Am J Pathol. 163(4): 1357-69.



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