Data Sheet (Cat.No.TMPY-05210)

TargetMol

CD68 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Scard1;CD68 molecule;Lamp4;gp110
Protein Construction:	A DNA sequence encoding the mouse CD68 (NP_001277987.1) (Met1-Ser291) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 21
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	P31996-1
Molecular Weight:	30.2 kDa (predicted)

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:	> 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 150 mM NaCl, pH 8.0, 10% glycerol. 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Macrosialin, also known as CD68 and Gp11, is a single-pass type I membrane protein which belongs to theLAMP family. CD68 is highly expressed by blood monocytes and tissue macrophages. It is also expressed in lymphocytes, fibroblasts and endothelial cells. CD68 is expressed in many tumor cell lines which could allow them to attach to selectins on vascular endothelium, facilitating their dissemination to secondary sites. CD68 plays a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular

cell-cell and cell-pathogen interactions. It is a commonly used marker for macrophages. However, a number of studies have shown that CD68 antibodies react with other hematopoietic and non-hematopoietic cell types, suggesting that CD68 may not be a macrophage-specific antigen. CD68 binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin-bearing substrates or other cells.

Reference

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Strojnik T. et al., 2009, Anticancer Res. 29 (8): 3269-79.

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