Data Sheet (Cat.No.TMPY-01246)

TargetMol

MARCO Protein, Mouse, Recombinant (His)

General Information

Synonyms:	AI323439;Ly112;macrophage receptor with collagenous structure;Scara2
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse MARCO (NP_034896.1) (Gln 70-Ser 518) was expressed, fused with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	A2RT24
Molecular Weight:	47.3 kDa (predicted); 55-60 kDa (reducing condition, due to glycosylation)

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:	> 92 % 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 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:

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

Macrophage receptor MARCO, also known as Macrophage receptor with collagenous structure and Marco, is a single-pass type II membrane protein. MARCO is a member of the class A scavenger receptor family and is part of the innate antimicrobial immune system. It is expressed in subpopulations of macrophages in the spleen and the medullary cord of lymph nodes. Although it is expressed on subsets of macrophages, it can be upregulated on

other macrophages after bacterial infection. The strategic position of MARCO-expressing cells in lymphoid organs suggests an important role for this bacteria-binding molecule in the removal of pathogens. MARCO has a short N-terminal cytoplasmic domain, a transmembrane domain, and a large extracellular part composed of a 75-residue long spacer domain, a 27-residue collagenous domain, and a 99-residue long scavenger receptor cysteine-rich (SRCR) domain. It is possible that cooperation between the SRCR domain and the collagenous domain is needed for high-affinity bacterial binding, or that the SRCR domain has to be in a trimeric form to effectively bind to bacteria

Reference

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Sankala, M., 2002, J Biol Chem. 277 (36): 33378-85.
Arredouani, MS., 2004, Cell Mol Biol. 50 Online Pub : OL657-65.
Thakur, SA., 2009, Toxicol Sci. 107 (1): 238-46.