Data Sheet (Cat.No.TMPY-00306)

TargetMol

CD93/C1qR1 Protein, Rat, Recombinant (His)

General Information

Synonyms:	CD93 molecule
Protein Construction:	A DNA sequence encoding the rat CD93 (Q9ET61) (Met1-Lys571) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 24
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q9ET61
Molecular Weight:	60 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:	> 95 % 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

CD93 or C1q receptor 1 (C1qR) is an about 120 kDa O-sialoglycoprotein that within the hematopoietic system is selectively expressed on cells of the myeloid lineage. CD93/C1qR is a highly glycosylated transmembrane protein expressed on monocytes, neutrophils, endothelial cells, and stem cells. CD93 was originally identified as a myeloid cell-surface marker and subsequently associated with an ability to modulate phagocytosis of suboptimally opsonized immunoglobulin G and complement particles in vitro. CD93/C1qR, a receptor expressed

during early B-cell development, is reinduced during plasma-cell differentiation. High CD93/CD138 expression was restricted to antibody-secreting cells both in T-dependent and T-independent responses as naive, memory, and germinal-center B cells remained CD93-negative. CD93 was expressed on (pre)plasmablasts/plasma cells, including long-lived plasma cells that showed decreased cell cycle activity, high levels of isotype-switched Ig secretion, and modification of the transcriptional network. CD93 is important for the maintenance of plasma cells in bone marrow niches.

Reference

Bohlson SS, et al. (2005) CD93 is rapidly shed from the surface of human myeloid cells and the soluble form is detected in human plasma. J Immunol. 175(2): 1239-47.
Norsworthy PJ, et al. (2004) Murine CD93 (C1qRp) contributes to the removal of apoptotic cells in vivo but is not required for C1q-mediated enhancement of phagocytosis. J Immunol. 172(6): 3406-14.
Chevrier S, et al. (2009) CD93 is required for maintenance of antibody secretion and persistence of plasma cells in the bone marrow niche. Proc Natl Acad Sci U S A. 106(10): 3895-900.