Data Sheet (Cat.No.TMPY-03002)

TargetMol

CD47 Protein, Rat, Recombinant (hFc)

General Information

Synonyms:	CD47 molecule
Protein Construction:	Gln19-Lys140
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	P97829-1
Molecular Weight:	40.40 kDa (predicted); 50-70 kDa (reducing conditions)

QC Testing

Biological Activity:	mmobilized Mouse SIRP alpha, His Tag at 5 μg/ml (100 μl/well) on the plate. Dose response curve for Rat CD47, hFc Tag with the EC50 of 47.6 ng/ml determined by ELISA (QC Test).
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

CD47 (Cluster of Differentiation 47) also known as integrin associated protein (IAP) is a transmembrane protein that in humans is encoded by the CD47 gene. CD47 belongs to the immunoglobulin superfamily and partners with membrane integrins and also binds the ligands thrombospondin-1 (TSP-1) and signal-regulatory protein alpha (SIRPα).CD-47 acts as a don't eat me signal to macrophages of the immune system which has made it a potential therapeutic target in some cancers.

Reference

Brown EJ, et al. (2001) Integrin-associated protein (CD47) and its ligands. Trends Cell Biol. 11(3): 130-5.
Oldenborg PA. (2004) Role of CD47 in erythroid cells and in autoimmunity. Leuk Lymphoma. 45(7): 1319-27.
Kaczorowski DJ, et al. (2007) Targeting CD47: NO limit on therapeutic potential. Circ Res. 100(5): 602-3.

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