Data Sheet (Cat.No.TMPK-00307)

TargetMol

SIRP alpha Protein, Human, Recombinant (aa 31-370, hFc & Avi), Biotinylated

General Information

Synonyms:	SHPS1;SIRP alpha;SHPS-1;SIRPA;MYD-1;BIT;CD172a;MYD1;MFR;PTPNS1;SIRP α/CD172a;P84;SIRP α
Protein Construction:	Glu31-Arg370
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P78324-1
Molecular Weight:	66.1 kDa (predicted). Due to glycosylation, the protein migrates to 78-90 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human CD47, His Tag at 2μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Human SIRP alpha, hFc Tag with the EC50 of 0.22μg/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent 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

Signal regulatory protein α (SIRPα) is a regulatory membrane glycoprotein from SIRP family expressed mainly by myeloid cells and also by stem cells or neurons.SIRPα acts as inhibitory receptor and interacts with a broadly expressed transmembrane protein CD47 also called the "don´t eat me" signal.Cancer cells highly expressed CD47 that activate SIRP α and inhibit macrophage-mediated destruction.

Reference

Weiskopf K, et al. Engineered SIRPα variants as immunotherapeutic adjuvants to anticancer antibodies[J]. Science, 2013, 341(6141):88-91.

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