

## SIRP alpha V4 Protein, Human, Recombinant (His & Avi)

### General Information

Synonyms:	BIT;SIRP $\alpha$ V4;MFR;SHPS1;SIRPA;SIRP $\alpha$ ;P84;MYD1;MYD-1;PTPNS1;SIRP alpha;SHPS-1;CD172a
Protein Construction:	Glu31-Arg370(E33G, L44S, T50S, T52I, R54H)
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P78324 variant 4
Molecular Weight:	39.8 kDa (predicted). Due to glycosylation, the protein migrates to 50-70 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Immobilized Human SIRP alpha V4, His Tag at 1 $\mu$ g/ml (100 $\mu$ l/Well). Dose response curve for Human CD47, hFc Tag with the EC50 of 44.3ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m 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  $\mu$ g/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  $\alpha$  (SIRP $\alpha$ ) is a regulatory membrane glycoprotein from SIRP family expressed mainly by myeloid cells and also by stem cells or neurons. SIRP $\alpha$  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  $\alpha$  and inhibit macrophage-mediated destruction.

Reference

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

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