

## 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 $\alpha$ /CD172a;P84;SIRP $\alpha$       |
| 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 2 $\mu$ g/ml (100 $\mu$ l/well) on the plate. Dose response curve for Biotinylated Human SIRP alpha, hFc Tag with the EC50 of 0.22 $\mu$ g/ml determined by ELISA. |
| Purity:              | > 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC   |
| Endotoxin:           | < 1 EU/ $\mu$ g 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.

#### Shipping:

In general, Lyophilized powders are shipping with blue 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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