

# Human SIRP alpha/CD172a Protein, Ultra Low Endotoxin

Cat. No. SRP-HM172-UL

## Description

<b>Source</b>	Recombinant Human SIRP alpha/CD172a Protein is expressed from HEK293 with His tag at the C-Terminus. It contains Glu31-Arg370.
<b>Accession</b>	P78324-1
<b>Molecular Weight</b>	The protein has a predicted MW of 38.1 kDa. Due to glycosylation, the protein migrates to 50-65 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.01 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

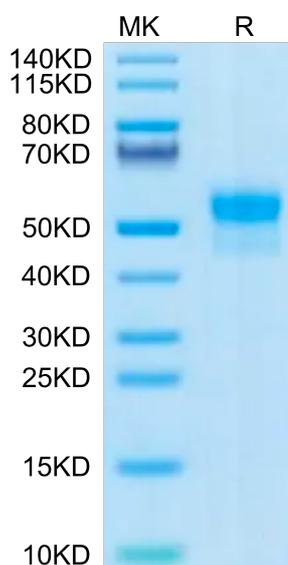
<b>Formulation</b>	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## 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.

## Assay Data

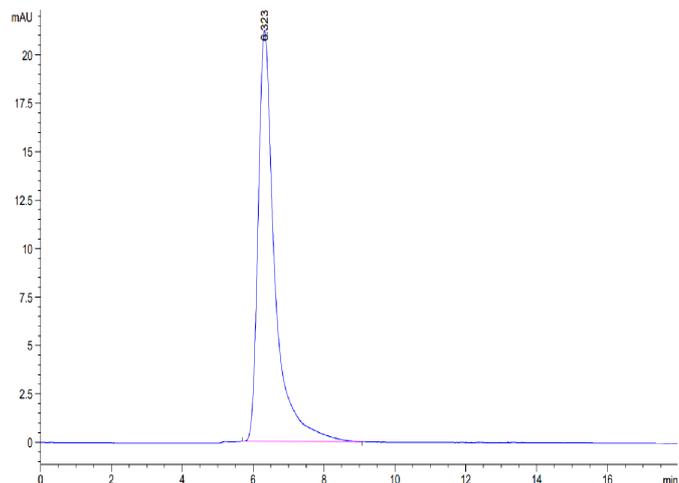
### Bis-Tris PAGE



Human SIRP alpha on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data

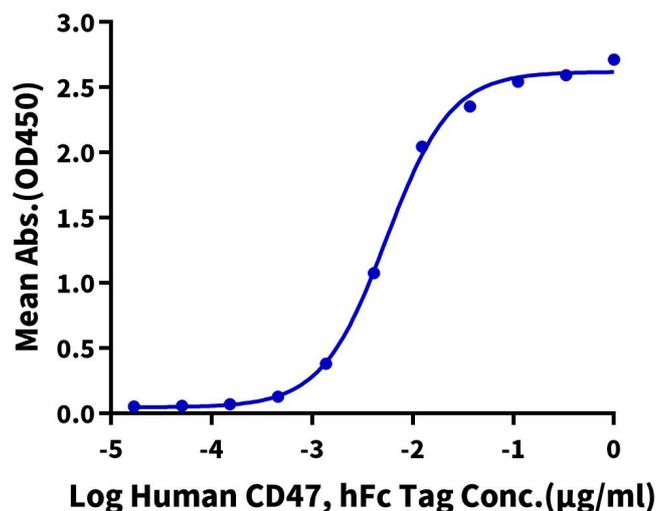


The purity of Human SIRP alpha is greater than 95% as determined by SEC-HPLC.

ELISA Data

**Human SIRP alpha, His Tag ELISA**

0.1µg Human SIRP alpha, His Tag Per Well

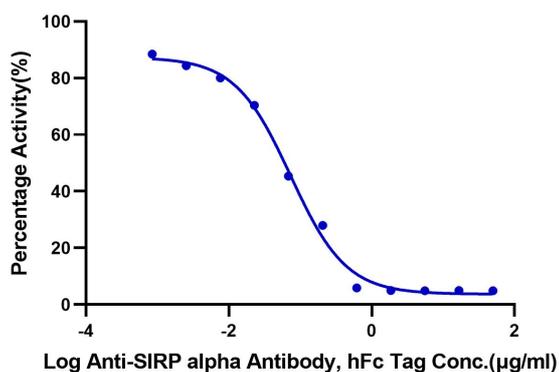


Immobilized Human SIRP alpha, His Tag at 1µg/ml (100µl/Well) on the plate. Dose response curve for Human CD47, hFc Tag with the EC50 of 5.4ng/ml determined by ELISA (QC Test).

Blocking Data

**Inhibition of Human SIRP alpha and CD47 Binding**

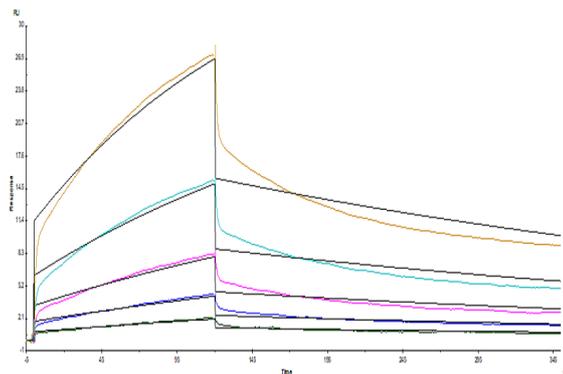
0.05µg Human SIRP alpha, His Tag Per Well



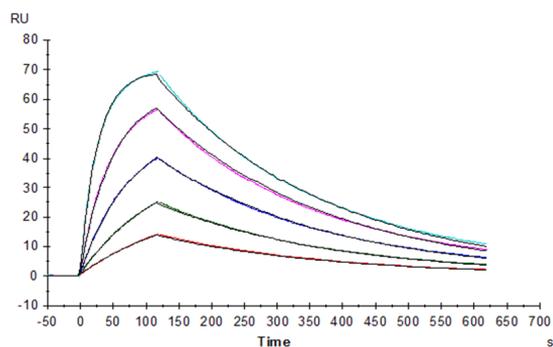
Serial dilutions of Anti-SIRP alpha Antibody were added into Human SIRP alpha, His Tag: Biotinylated Human CD47, His Tag binding reactions. The half maximal inhibitory concentration (IC50) is 73.46ng/ml.

SPR Data

Assay Data



Human SIRP alpha, His Tag captured on Protein A Chip via Anti-His Antibody can bind Human CD47, hFc Tag with an affinity constant of 20.6nM as determined in SPR assay (Biacore T200).



Anti-SIRP alpha Antibody captured on CM5 Chip via Protein A can bind Human Sirpa, His Tag with an affinity constant of 2.81 nM as determined in SPR assay (Biacore T200).