

Human SIRP alpha/CD172a Protein

Cat. No. SRP-HM172

Description

Source	Recombinant Human SIRP alpha/CD172a Protein is expressed from HEK293 with His tag at the C-Terminus. It contains Glu31-Arg370.
Accession	P78324-1
Molecular Weight	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.
Endotoxin	Less than 1EU per μg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

Formulation and Storage

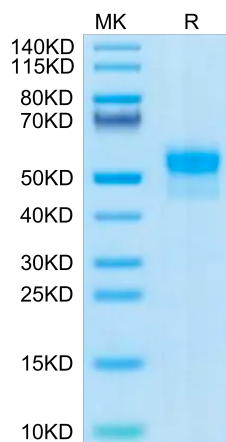
Formulation	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
Storage	-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 α (SIRP α) is a regulatory membrane glycoprotein from SIRP family expressed mainly by myeloid cells and also by stem cells or neurons. SIRP α 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.

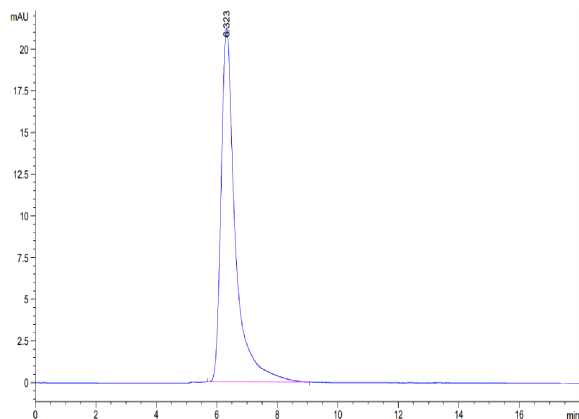
Assay Data

Bis-Tris PAGE



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

SEC-HPLC

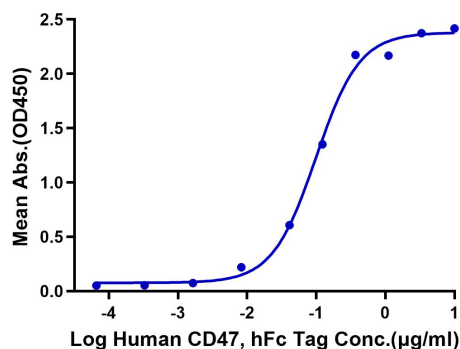


The purity of Human SIRP alpha is greater than 95% as determined by SEC-HPLC.

Assay Data

ELISA Data

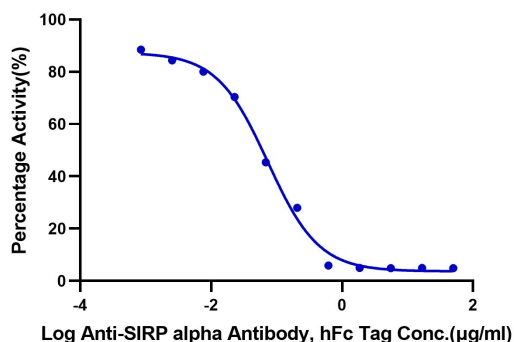
Human SIRP alpha, His Tag ELISA
0.05µg Human SIRP alpha, His Tag Per Well



Immobilized Human SIRP alpha, His Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Human CD47, hFc Tag with the EC50 of 99.1ng/ml determined by ELISA (QC Test).

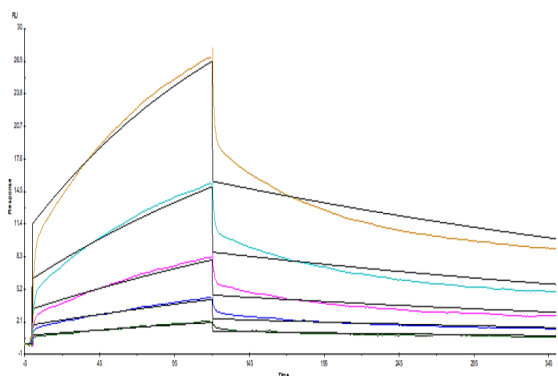
Blocking Data

Inhibition of Human SIRP alpha and CD47 Binding
0.05µg Human SIRP alpha, His Tag Per Well



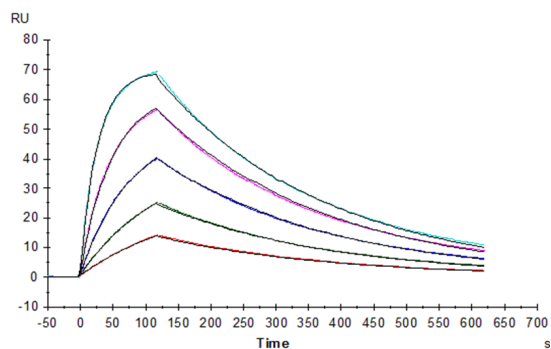
Serial dilutions of Anti-SIRP alpha Antibody were added into Human SIRP alpha, His Tag: Biotinylated Human CD47, His Tag binding reactions. The half maximal inhibitory concentration (IC50) is 73.46ng/ml.

SPR Data



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).

SPR Data



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).