

Recombinant Human SIRP-alpha/CD172a Protein

Catalog No.: RP00171 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	140885	P78324

Tags

C-hFc&His

Synonyms

BIT; CD172A; MFR; MYD-1; P84; PTPNS1; SHPS1;
SIRP;SIRPA;CD172A;MFR;MYD-1;P84;PTP NS1;SHPS1;SIRP

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

The protein is a member of the signal-regulatory-protein (SIRP) family, and also belongs to the immunoglobulin superfamily. SIRP family members are receptor-type transmembrane glycoproteins known to be involved in the negative regulation of receptor tyrosine kinase-coupled signaling processes. This protein can be phosphorylated by tyrosine kinases. The phospho-tyrosine residues of this PTP have been shown to recruit SH2 domain containing tyrosine phosphatases (PTP), and serve as substrates of PTPs. This protein was found to participate in signal transduction mediated by various growth factor receptors. CD47 has been demonstrated to be a ligand for this receptor protein.

Basic Information

Description

Recombinant Human SIRP-alpha/CD172a Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Glu31-Arg370) of human SIRP alpha/CD172a (Accession #NP_542970.1) fused with an Fc, 6xHis tag at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human CD47 at 1 μg/mL (100 μL/well) can bind Recombinant Human SIRP alpha with a linear range of 1-6 ng/mL. 2. Loaded Human SIRP-alpha/CD172a Protein, C-hFc&His (Catalog: RP00171) on ProA Biosensor, can bind Human CD47 Protein, C-His Tag (Catalog: RP01306) with an affinity constant of 11.1 nM as determined in BLI assay (Gator). 3. Measured by the ability of the immobilized protein to support the adhesion of the OVCAR-3 cells. The ED₅₀ for this effect is 0.53-2.12 μg/mL.

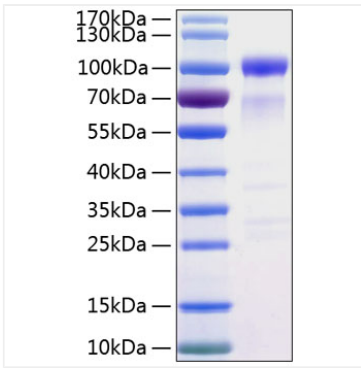
Storage

Store the lyophilized protein at -20°C to -80 °C for long term.

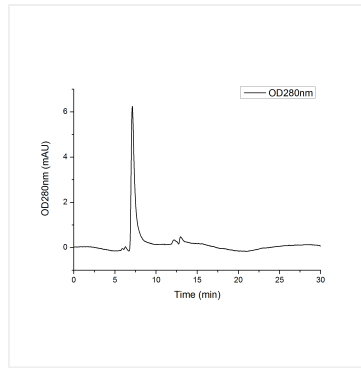
After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week.

Avoid repeated freeze/thaw cycles.

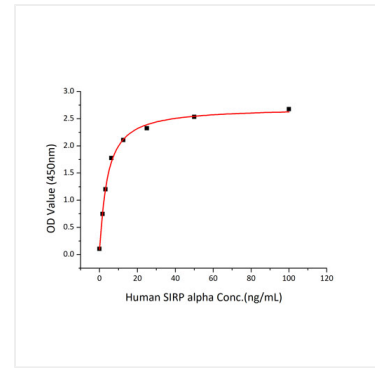
Validation Data



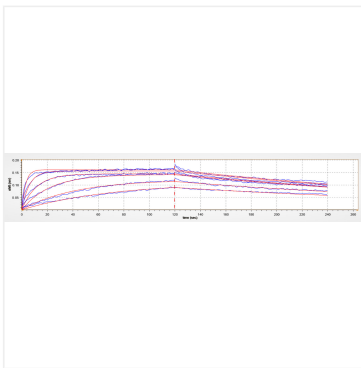
Recombinant Human SIRP-alpha/CD172a Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 80-100 kDa.



The purity of Human SIRP alpha/CD172a Protein (Cat.RP00171) was greater than 90% as determined by SEC-HPLC.



Immobilized Recombinant Human CD47 at 1 $\mu\text{g/mL}$ (100 $\mu\text{L/well}$) can bind Recombinant Human SIRP alpha with a linear range of 1-6 ng/mL.



Loaded Human SIRP-alpha/CD172a Protein, C-hFc&His(Catalog: RP00171) on ProA Biosensor, can bind Human CD47 Protein, C-His Tag (Catalog: RP01306) with an affinity constant of 11.1 nM as determined in BLI assay (Gator).