

Synonym

SHPS1,SIRPA,CD172A,BIT,MFR,MYD1,P84,PTPNS1

Source

Rat SIRP alpha, Fc Tag(SIA-R5255) is expressed from human 293 cells (HEK293). It contains AA Lys 32 - Asn 373 (Accession # [BAA20368.1](#)).

Predicted N-terminus: Lys 32

Molecular Characterization

SIRP alpha(Lys 32 - Asn 373) BAA20368.1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus

The protein has a calculated MW of 64.0 kDa. The protein migrates as 100-116 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

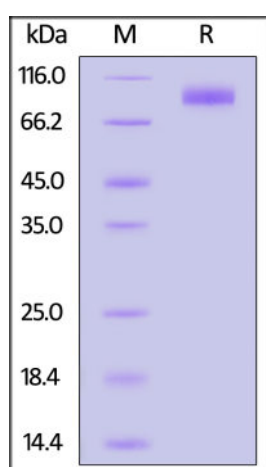
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

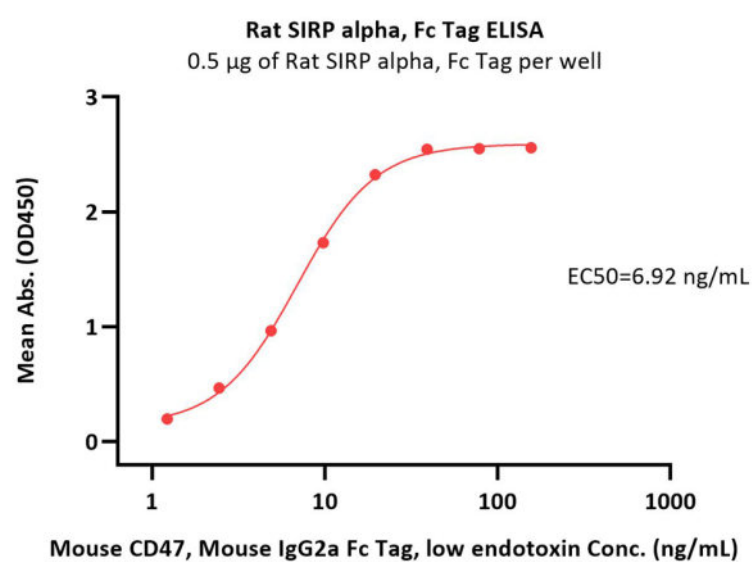
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

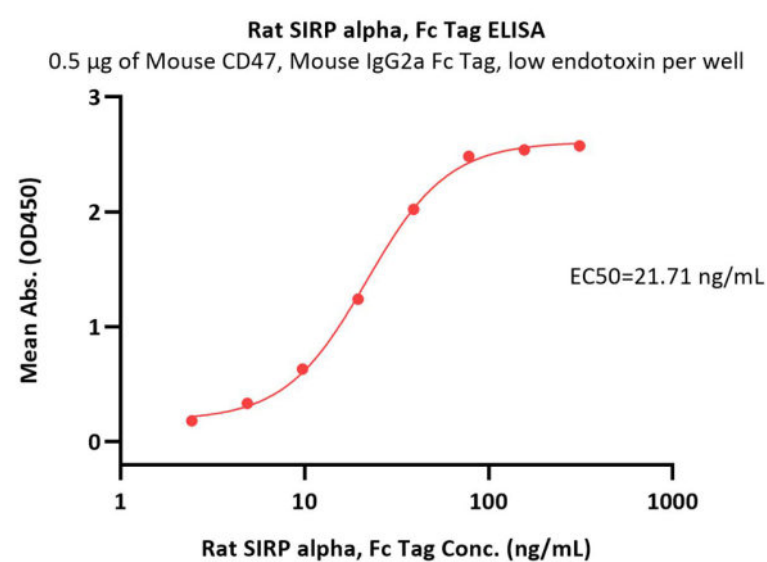
SDS-PAGE

Rat SIRP alpha, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Immobilized Rat SIRP alpha, Fc Tag (Cat. No. SIA-R5255) at 5 µg/mL (100 µL/well) can bind Mouse CD47, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. CD7-M525a) with a linear range of 1-20 ng/mL (QC tested).



Immobilized Mouse CD47, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. CD7-M525a) at 5 µg/mL (100 µL/well) can bind Rat SIRP alpha, Fc Tag (Cat. No. SIA-R5255) with a linear range of 2-39 ng/mL (Routinely tested).

Background

Tyrosine-protein phosphatase non-receptor type substrate 1 (SHPS1) is also known as CD172 antigen-like family member A (CD172a), Macrophage fusion receptor, MyD-1 antigen, Signal-regulatory protein alpha (SIRPA or SIRP alpha) or p84, is a member of the SIRP family, and also belongs to the immunoglobulin superfamily. SIRP alpha is Ubiquitous and highly expressed in brain. SIRPA / CD172a is immunoglobulin-like cell surface receptor for CD47 and acts as docking protein and induces translocation of PTPN6, PTPN11 and other binding partners from the cytosol to the plasma membrane. SIRPA / SHPS-1 supports adhesion of cerebellar neurons, neurite outgrowth and glial cell attachment and may play a key role in intracellular signaling during synaptogenesis and in synaptic function. By similarity, SIRPA / MyD1 involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors or insulin and mediates negative regulation of phagocytosis, mast cell activation and dendritic cell activation. CD47 binding prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.