PE-Labeled Human SIRP alpha / CD172a Protein, Fc Tag (recommended for neutralizing assay) (Site-specific conjugation)

Catalog # SIA-HP252

Synonym

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

Source

PE-Labeled Human SIRP alpha, Fc Tag (Cat. No. SIA-HP252) is produced via site-specific conjugation of PE to Human SIRP alpha, Fc Tag under optimal conditions with a proprietary technology. Human SIRP alpha, Fc Tag is expressed from human 293 cells (HEK293). It contains AA Glu 31 - Arg 370 (Accession # P78324-1).
Predicted N-terminus: Glu 31

Molecular Characterization

SIRP alpha(Glu 31 - Arg 370) P78324-1	Fc(Pro 100 - Lys 330) P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 65.7 kDa.

Conjugate

PE

Excitation Wavelength: 488 nm / 561 nm

Emission Wavelength: 575 nm

Application

Flow Cytometry (Neutralizing assay), Please note that this product is NOT compatible to streptavidin detection system.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.5% BSA, pH7.4 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

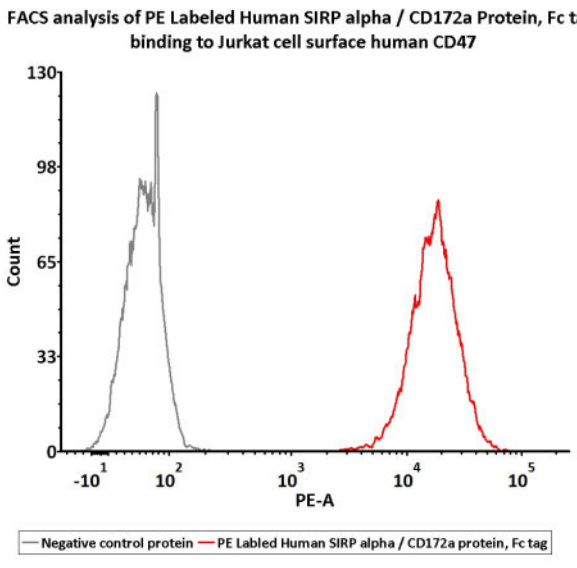
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please protect from light and avoid repeated freeze-thaw cycles.

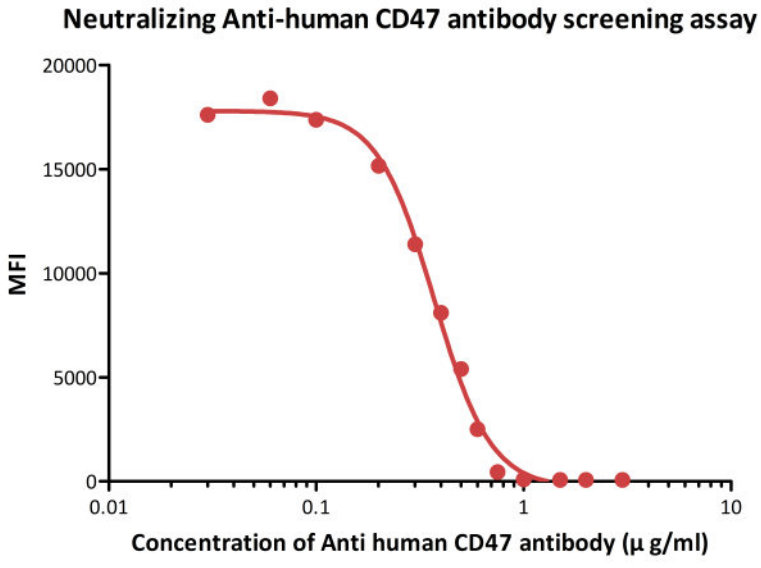
This product is stable after storage at:

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

Bioactivity-FACS



Flow Cytometry assay shows that PE-Labeled Human SIRP alpha, Fc Tag (Cat. No. SIA-HP252) can bind to Jurkat cells overexpressing human CD47. 1 μL stock solution per million cells (QC tested).



FACS analysis shows that the binding of PE-Labeled Human SIRP alpha, Fc Tag (Cat. No. SIA-HP252) to Jurkat cells overexpressing CD47 was inhibited by increasing concentration of neutralizing anti-human CD47 antibody. The IC50 is 0.37 μg/mL (QC tested).

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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