Human SIRP alpha Protein (His & AVI Tag), Biotinylated

Catalog Number: 11612-H27H-B

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

BIT; CD172A; MFR; MYD-1; P84; PTPNS1; SHPS1; SIRP; SIRP alpha

Protein Construction:

A DNA sequence encoding the human SIRPA (NP_542970.1) (Met1-Arg370) was expressed with a c-terminal polyhistidine tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed.

Source: Human

Expression Host: Human Cells

QC Testing

Biotin/Protein Ratio:

0.7-1 as determined by the HABA assay.

Purity: > 90 % as determined by SDS-PAGE.

Bio-activity:

Measured by its binding ability in a functional ELISA. Immobilized CD47-Fc (Cat:12283-H02H) at 10 μg/mL (100 μL/well) can bind SIRPA-AvihL (Cat:11612-H27H-B), the EC_{50} of SIRPA-AvihL (Cat:11612-H27H-B) is 200-500 ng/mL.

Endotoxin:

<1.0 EU per μg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 31

Molecular Mass:

The recombinant human SIRPA consists of 366 amino acids and predicts a molecular mass of 40.6 kDa.

Formulation: Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

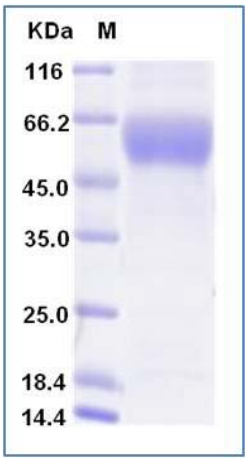
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Tyrosine-protein phosphatase non-receptor type substrate 1, also known as SHP substrate 1, Inhibitory receptor SHPS-1, Brain Ig-like molecule with tyrosine-based activation motifs, Macrophage fusion receptor, CD172 antigen-like family member A, SIRPA and CD172a, is a single-pass type I membrane protein which contains two Ig-like C1-type (immunoglobulin-like) domains and one Ig-like V-type (immunoglobulin-like) domain. SIRPA is ubiquitously expressed. It is highly expressed in brain and detected at lower levels in heart, placenta, lung, testis, ovary, colon, liver, small intestine, prostate, spleen, kidney, skeletal muscle and pancreas. It is also detected on myeloid cells, but not T-cells. SIRPA is an immunoglobulin-like cell surface receptor for CD47. SIRPA acts as docking protein and induces translocation of PTPN6, PTPN11 and other binding partners from the cytosol to the plasma membrane. SIRPA supports adhesion of cerebellar neurons, neurite outgrowth and glial cell attachment. It may play a key role in intracellular signaling during synaptogenesis and in synaptic function. SIRPA is involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors or insulin. It mediates negative regulation of phagocytosis, mast cell activation and dendritic cell activation.

References

1.Timms JF. et al., 1999, Curr Biol. 9: 927-30. 2.Stofega MR. et al., 2000, J Biol Chem. 275: 28222-9. 3.Liu T. et al., 2005, J Proteome Res. 4: 2070-80.