

Datasheet

Biotinylated Human SIRP alpha / CD172a Protein, Fc Tag, Avi Tag (Avitag™)

Catalog # CDA-H82F2

For Research Use Only

Description

Source Biotinylated Human SIRP alpha / CD172a, Fc Tag (CDA-H82F2) is expressed from human 293 cells (HEK293). It contains AA Glu 31 - Arg 370 (Accession # P78324-1). Predicted N-terminus: Glu 31

Predicted N-terminus Glu 31

Protein Structure

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

Molecular Characterization This protein carries a human IgG1 Fc tag at the C-terminus, followed by a Avi tag (Avitag™). The protein has a calculated MW of 65.8 kDa. The protein migrates as 75-105 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Biotinylation Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotin:Protein Ratio The biotin to protein ratio is 0.5-1 as determined by the HABA assay.

Endotoxin Less than 1.0 EU per µg by the LAL method.

Purity >95% as determined by SDS-PAGE.

Bioactivity Measured by its binding ability in a functional ELISA. Immobilized Human CD47, His Tag (Catalog # CD7-H5227) at 5 µg/mL (100 µL/well) can bind Biotinylated Human SIRP alpha, Fc Tag (Catalog # CDA-H82F2) with a linear range of 5-205 ng/mL (QC tested).

Formulation and Storage

Formulation Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5. Normally trehalose is added as protectant before lyophilization.

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.

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Background

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.

References

- (1) Timms J.F., et al., 1999, Curr. Biol. 9:927-930.
- (2) Stofega M.R., et al., 2000, J. Biol. Chem. 275:28222-28229.
- (3) Latour S., et al., 2001, J. Immunol. 167:2547-2554.

Please contact us at TechSupport@acrobiosystems.com, if you have any questions about this product.

Datasheet

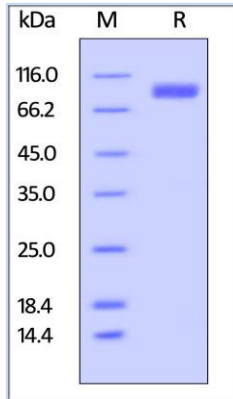
Biotinylated Human SIRP alpha / CD172a Protein, Fc Tag, Avi Tag (Avitag™)

Catalog # CDA-H82F2

For Research Use Only

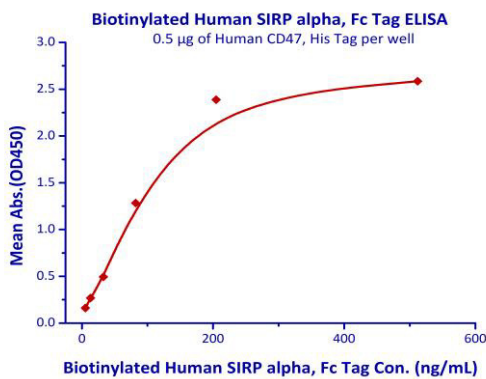
Assay Data

SDS-PAGE Data



Biotinylated Human SIRP alpha / CD172a, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized Human CD47, His Tag (Catalog # CD7-H5227) at 5 µg/mL (100 µL/well) can bind Biotinylated Human SIRP alpha, Fc Tag (Catalog # CDA-H82F2) with a linear range of 5-205 ng/mL (QC tested).