Human CD47 Protein, Fc Tag (MALS verified)

Catalog # CD7-H5256

Synonym

CD47,MER6,IAP,OA3

Source

Human CD47, Fc Tag(CD7-H5256) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Pro 139 (Accession # Q08722-3).
Predicted N-terminus: Gln 19

Molecular Characterization

CD47(Gln 19 - Pro 139) Q08722-3	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 40.4 kDa. The protein migrates as 55-66 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.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 100 mM Glycine, 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

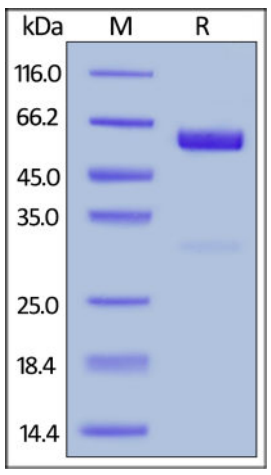
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

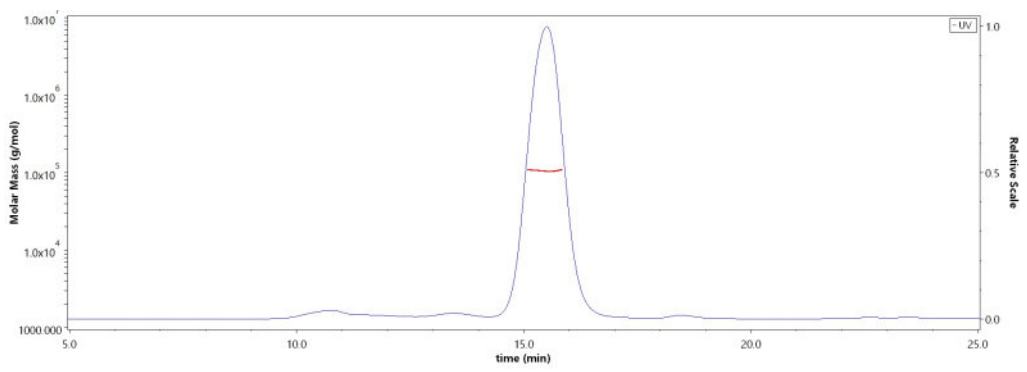
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



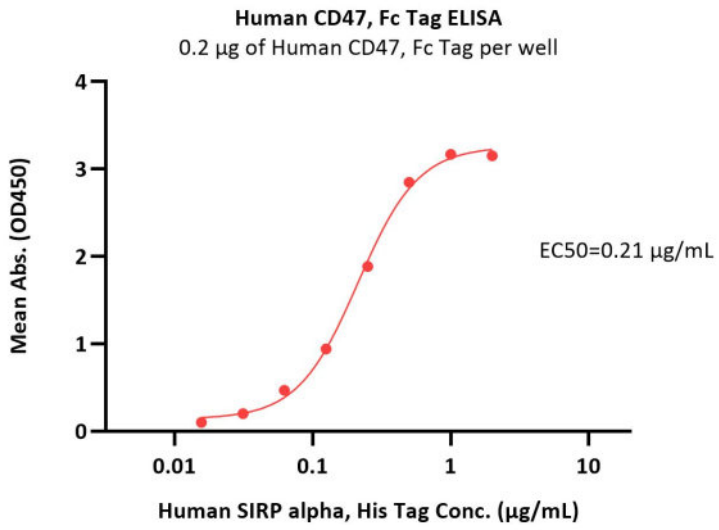
Human CD47, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

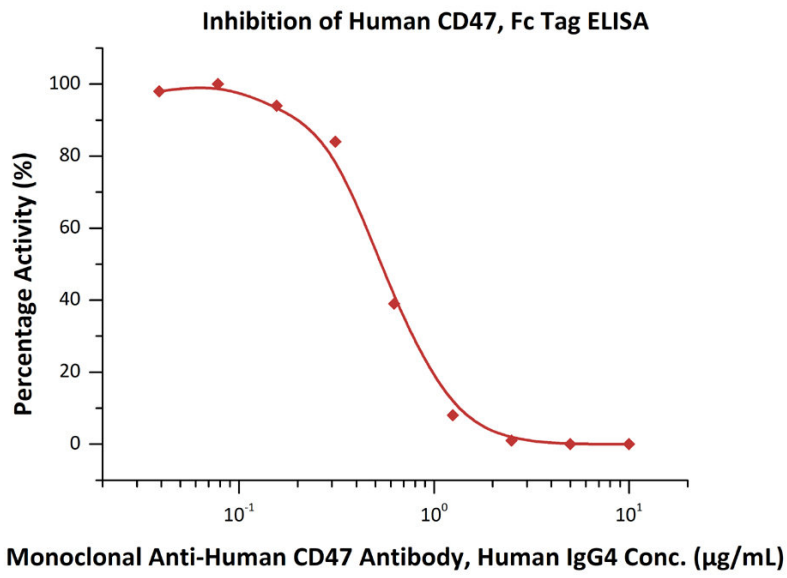


The purity of Human CD47, Fc Tag (Cat. No. CD7-H5256) is more than 90% and the molecular weight of this protein is around 95-110 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

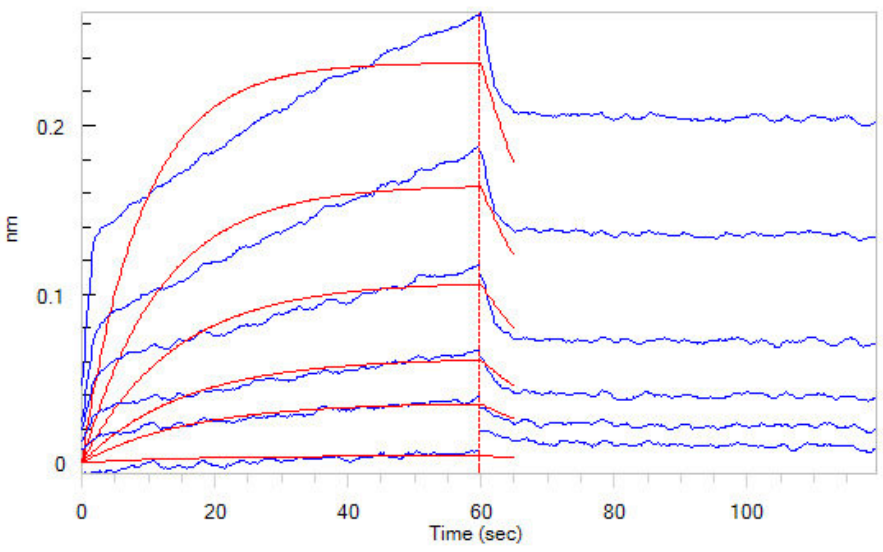


Immobilized Human CD47, Fc Tag (Cat. No. CD7-H5256) at 2 μg/mL (100 μL/well) can bind Human SIRP alpha, His Tag (Cat. No. SIA-H5225) with a linear range of 0.016-0.5 μg/mL (QC tested).



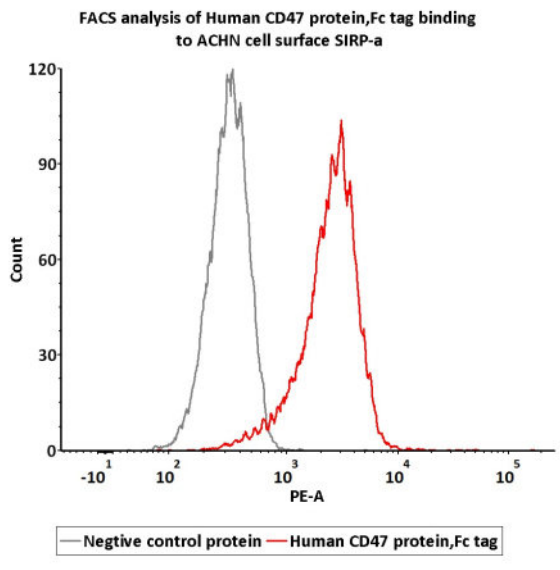
Serial dilutions of Anti-Human CD47 Neutralizing Antibody were added into Human CD47, Fc Tag (Cat. No. CD7-H5256): Biotinylated Human SIRP alpha, Fc,Avitag (Cat. No. CDA-H82F2) binding reactions. The half maximal inhibitory concentration (IC50) is 0.5431 μg/mL (Routinely tested).

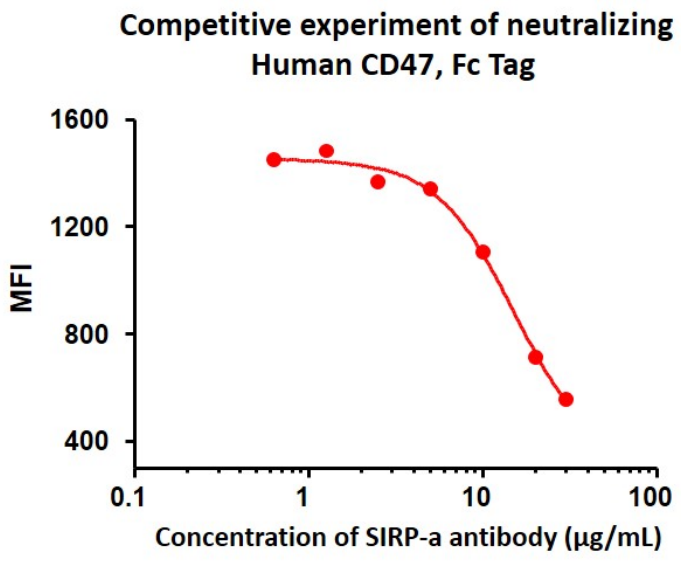
Bioactivity-BLI



Immobilized Human CD47, Fc Tag (Cat. No. CD7-H5256) on AHC Biosensor, can bind Human SIRP alpha, His Tag (Cat. No. SIA-H5225) with an affinity constant of 0.72 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-FACS





FACS assay shows that Human CD47, Fc Tag (Cat. No. CD7-H5256) can bind to ACHN cell expressing SIRP-a. The concentration of CD47 used is 10 μg/mL (Routinely tested).

FACS analysis shows that the binding of Human CD47 to ACHN expressing SIRP-a was inhibited by increasing concentration of neutralizing SIRP-a antibody. The concentration of Human CD47 used is 10 μg/mL. IC50=15.02 μg/mL (Routinely tested).

Background

Leukocyte surface antigen CD47 is also known as Antigenic surface determinant protein OA3, Integrin-associated protein (IAP) and Protein MER6. CD47 contains 1 Ig-like V-type (immunoglobulin-like) domain. CD47 is very broadly distributed on normal adult tissues. CD47 has a role in both cell adhesion by acting as an adhesion receptor for THBS1 on platelets, and in the modulation of integrins and plays an important role in memory formation and synaptic plasticity in the hippocampus by similarity. CD47 is the receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. CD47 Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation.

Clinical and Translational Updates

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