



## Synonym

CD38, T10, cADPr hydrolase 1

## Source

Human CD38&Serum Albumin, His Tag(CDS-H52H7) is expressed from human 293 cells (HEK293). It contains AA Val 43 - Ile 300 (CD38) & Asp 25 - Leu 609 (Serum Albumin) (Accession # [P28907-1](#) (CD38) & [P02768-1](#) (Serum Albumin)).

Predicted N-terminus: Val 43

## Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 98.7 kDa. The protein migrates as 105-125 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.

## Purity

>90% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, 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

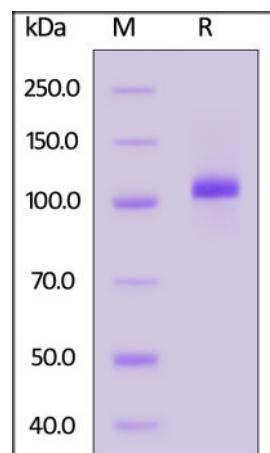
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

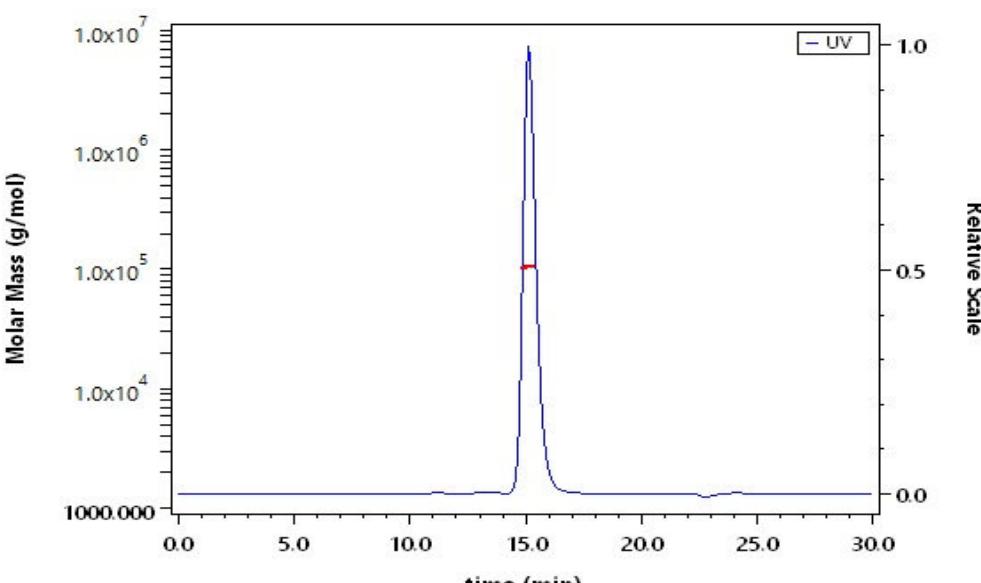
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Human CD38&Serum Albumin, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## SEC-MALS



The purity of Human CD38&Serum Albumin, His Tag (Cat. No. CDS-H52H7) is more than 95% and the molecular weight of this protein is around 98-118 kDa verified by SEC-MALS.

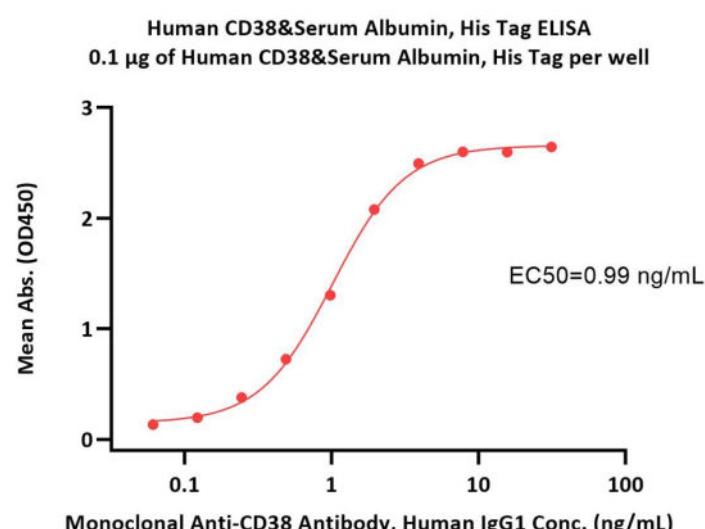
[Report](#)

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Immobilized Human CD38&Serum Albumin, His Tag (Cat. No. CDS-H52H7) at 1 µg/mL (100 µL/well) can bind Monoclonal Anti-CD38 Antibody, Human IgG1 with a linear range of 0.1-2 ng/mL (QC tested).

## Background

CD antigen CD38 is also known as ADP-ribosyl cyclase 1, which belongs to the ADP-ribosyl cyclase family. CD38 is expressed at high levels in pancreas, liver, kidney, brain, testis, ovary, placenta, malignant lymphoma and neuroblastoma. CD38 is a multifunctional ectoenzyme that catalyzes the synthesis and hydrolysis of cyclic ADP-ribose (cADPR) from D+ to ADP-ribose. These reaction products are essential for the regulation of intracellular Ca<sup>2+</sup>. The loss of CD38 function is associated with impaired immune responses, metabolic disturbances, and behavioral modifications. The CD38 protein is a marker of cell activation. It has been connected to HIV infection, leukemias, myelomas, solid tumors, type II diabetes mellitus and bone metabolism. CD38 has been used as a prognostic marker in leukemia.

serum albumin (SA) is also known as ALB, which is the main protein of plasma and has a good binding capacity for water, Ca<sup>2+</sup>, Na<sup>+</sup>, K<sup>+</sup>, fatty acids, hormones, bilirubin and drugs. The main function of SA is the regulation of the colloidal osmotic pressure of blood. As Major zinc transporter in plasma, SA typically binds about 80% of all plasma zinc. A variant structure of albumin could lead to increased binding of zinc resulting in an asymptomatic augmentation of zinc concentration in the blood. Defects in serum albumin can cause familial dysalbuminemic hyperthyroxinemia which is a form of euthyroid hyperthyroxinemia that is due to increased affinity of serum albumin for T4. It is the most common cause of inherited euthyroid hyperthyroxinemia in Caucasian population.

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