

### **Synonym**

CD38,T10,cADPr hydrolase 1

#### Source

FITC-Labeled Human CD38, His Tag (Cat. No. CD8-HF2H5) is expressed from human HEK293 cells. It contains AA Val 43 - Ile 300 (Accession # NP\_001766). It is the FITC labeled form of Human CD38 Protein, His Tag (Cat. No. CD8-H5224).

Predicted N-terminus: Val 43

### **Molecular Characterization**

CD38(Val 43 - Ile 300) NP\_001766

Poly-his

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

The protein has a calculated MW of 30.69 kDa. The protein migrates as 40-50 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Conjugate

FITC

Excitation source: 488 nm spectral line, argon-ion laser

Excitation Wavelength: 488 nm

Emission Wavelength: 535 nm

## Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with FITC using standard chemical labeling method. The residual FITC is removed by molecular sieve treatment during purification process.

## **Protein Ratio**

The FITC to protein molar ratio is 2-4.

## **Purity**

>90% as determined by SDS-PAGE.

>90% 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**

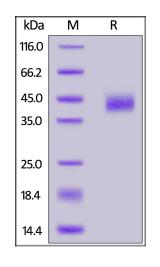
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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

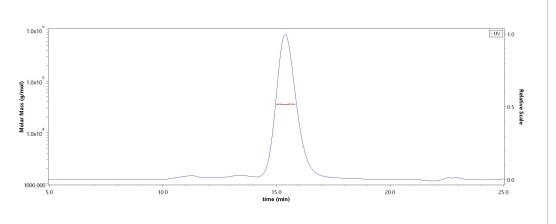
This product is stable after storage at:

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

## **SDS-PAGE**



## **SEC-MALS**





## FITC-Labeled Human CD38 Protein, His Tag (MALS verified)

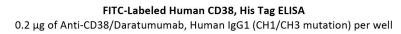
Catalog # CD8-HF2H5

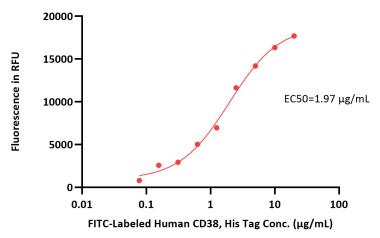


FITC-Labeled Human CD38, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

The purity of FITC-Labeled Human CD38, His Tag (Cat. No. CD8-HF2H5) is verified by SEC-MALS.

# **Bioactivity-ELISA**





Immobilized Anti-CD38/Daratumumab, Human IgG1 (CH1/CH3 mutation) at 2 μg/mL (100 μL/well) can bind FITC-Labeled Human CD38, His Tag (Cat. No. CD8-HF2H5) with a linear range of 0.078-5 μg/mL (QC tested).

more than 90% and the molecular weight of this protein is around 35-50 kDa Report

# 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 NAD+ to ADP-ribose. These reaction products are essential for the regulation of intracellular Ca2+. 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.

