

**Synonym**

CD39, ENTPD1, NTPDase 1, Entpd1, Ecto-ATPDase 1, Ecto-ATPase 1

SourceHuman CD39, His Tag(CD9-H52H4) is expressed from human 293 cells (HEK293). It contains AA Thr 38 - Val 478 (Accession # [P49961-1](#)).**Molecular Characterization**

CD39(Thr 38 - Val 478) P49961-1	Poly-his
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This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 52.3 kDa. The protein migrates as 65-80 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

EndotoxinLess than 1.0 EU per μ g by the LAL method / rFC method.**Purity**

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

FormulationLyophilized from 0.22 μ m filtered solution in Tris and NaCl, pH8.0 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

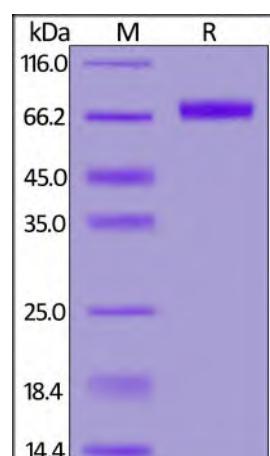
*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***Storage**

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

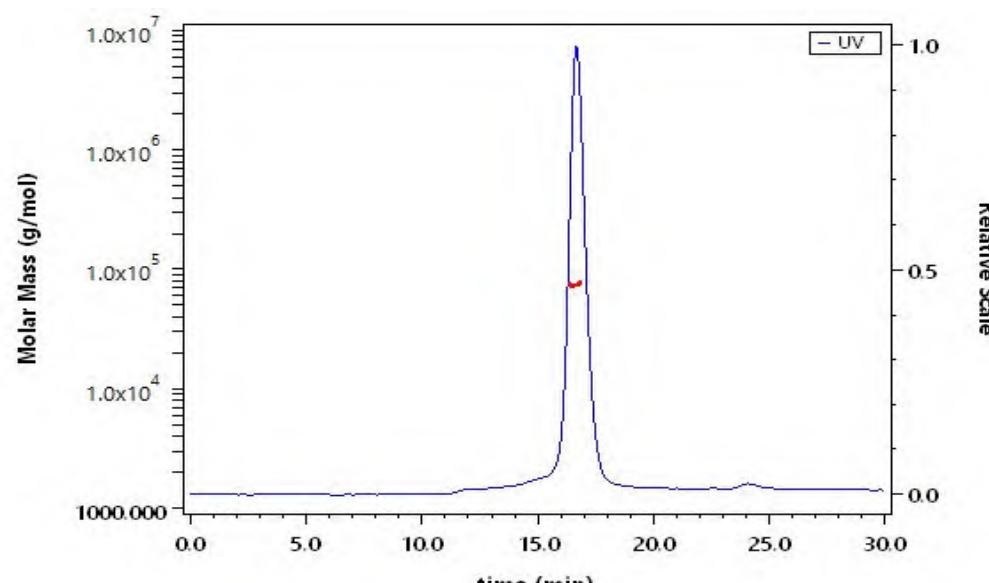
Please avoid repeated freeze-thaw cycles.

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.

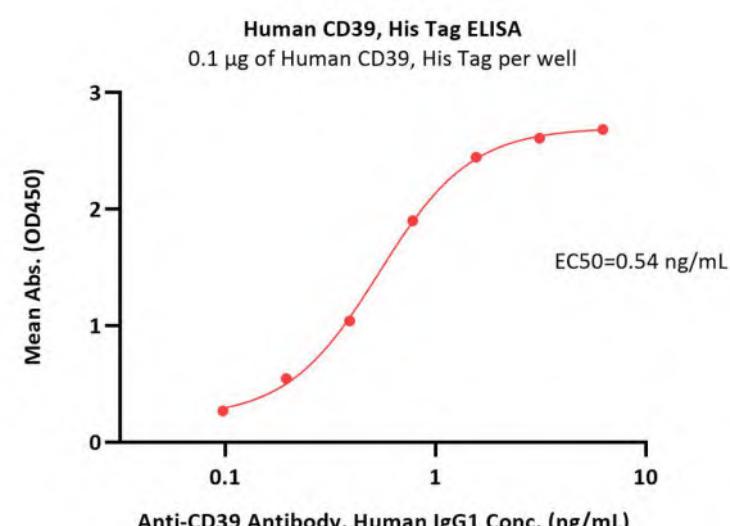
SDS-PAGE

Human CD39, His 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 CD39, His Tag (Cat. No. CD9-H52H4) is more than 95% and the molecular weight of this protein is around 60-80 kDa verified by SEC-MALS.

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Immobilized Human CD39, His Tag (Cat. No. CD9-H52H4) at 1 µg/mL (100 µL/well) can bind Anti-CD39 Antibody, Human IgG1 with a linear range of 0.1-0.8 ng/mL (QC tested).

Bioactivity

Measured by its ability to hydrolyze the 5'-phosphate group from the substrate adenosine-5'-triphosphate (ATP). The specific activity is > 6,000 pmol/min/µg (QC tested).

Background

CD39 is also known as Ectonucleoside triphosphate diphosphohydrolase 1, ENTPD1, NTPDase 1, Ecto-ATPDase 1, in the nervous system, could hydrolyze ATP and other nucleotides to regulate purinergic neurotransmission. Could also be implicated in the prevention of platelet aggregation by hydrolyzing platelet-activating ADP to AMP. Hydrolyzes ATP and ADP equally well. NTPDase-1 was originally described as CD39, a B lymphocyte cell surface marker, but it is also present on the surface of natural killer cells, T cells, and some endothelial cells. Regulatory T cells (Tregs) mediate immunosuppression through multiple, non-redundant, cell-contact dependent and independent mechanisms, a growing body of evidence suggests an important role for the CD39-CD73-adenosine pathway. CD39 ectonucleotidase is the rate-limiting enzyme of a cascade leading to the generation of suppressive adenosine that alters CD4 and CD8 T cell and natural killer cell antitumor activities.

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