Human CD39 / ENTPD1 Protein (ECD, His Tag)

Catalog Number: 16020-H08B

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ATPDase; CD39; NTPDase-1; SPG64

Protein Construction:

A DNA sequence encoding the human ENTPD1 (NP_001767.3) (Thr38-Val478) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE.

Bio-activity:

Measured by its ability to hydrolyze the 5'-phosphate groups from the substrate adenosine-5'-triphosphate (ATP). The specific activity is >5000 pmol/min/μg.

Endotoxin:

< 1.0 EU per μg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Thr 38

Molecular Mass:

The recombinant human ENTPD1 consists 452 amino acids and predicts a molecular mass of 51.8 kDa.

Formulation:

Supplied as sterile 20 mM Tris, 500 mM NaCl, 10 % glycerol, pH 8.1.

Usage Guide

Storage:

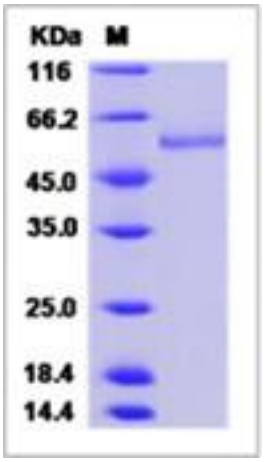
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD39, also known as ENTPD1, belongs to the GDA1/CD39 NTPase family. It is expressed primarily on activated lymphoid cells and can also be detected in endothelial tissues. The vascular isoform and the placental isoform II are present in both placenta and umbilical vein, whereas placental isoform I is present in placenta only. CD39 can hydrolyze both nucleoside triphosphates and diphosphates. It is the dominant ecto nucleotidase of vascular and placental trophoblastic tissues and appears to modulate the functional expression of type 2 purinergic (P2) G protein coupled receptors (GPCRs). CD39 transgenic mice exhibit impaired platelet aggregation, prolonged bleeding times, and resistance to systemic thromboembolism. There is a correlation between ATP hydrolysis and triglycerides in patients with chronic heart disease, suggesting a relationship between ATP diphosphohydrolase and thrombogenesis. In the nervous system, CD39 could hydrolyze ATP and other nucleotides to regulate purinergic neurotransmission.

References

1.Kunzli BM, *et al*. (2011) Variable impact of CD39 in experimental murine colitis. Dig Dis Sci. 2011 56 (5): 1393-403. 2.Clayton A, *et al*. (2011) Cancer exosomes express CD39 and CD73, which suppress T cells through adenosine production. J Immunol. 187 (2): 676-83. 3.Loza MJ, *et al*. (2011) T-cell specific defect in expression of the NTPDase CD39 as a biomarker for lupus. Cell Immunol. 271 (1): 110-7.