

Rat CD73 / NT5E Protein (His Tag)

Catalog Number: 80335-R08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

NT5E

Protein Construction:

A DNA sequence encoding the rat NT5E(Q66HL0) (Met1-Lys549) was expressed with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to hydrolyze the 5'-phosphate group from the substrate adenosine-5'-monophosphate (AMP). The orthophosphate product is measured by a Malachite Green Phosphate Detection Kit (Catalog # DY996). The specific activity is >15,000 pmol/min/μg.

Endotoxin:

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

Stability:

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

Predicted N terminal: Trp 29

Molecular Mass:

The recombinant rat NT5E comprises 532 amino acids and predicts a molecular mass of 59.4 kDa. The apparent molecular mass of the recombinant protein is approximately 59 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 120 mM NaCl, 4 mM CaCl₂, 20 % glycerol, pH 7.5.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

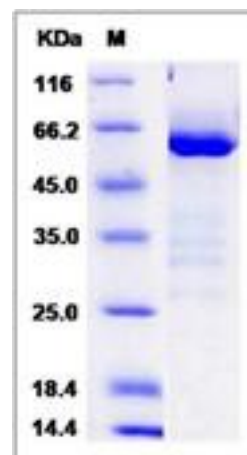
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

5'-nucleotidase, also known as NT5E, NTE, and CD73, is a cell membrane protein which belongs to the 5'-nucleotidase family. CD73 is a glycosyl phosphatidylinositol (GPI) anchored purine salvage enzyme expressed on the surface of human T and B lymphocytes. CD73 catalyzes the conversion of purine and pyrimidine ribo- and deoxyribonucleoside monophosphates to the corresponding nucleosides. CD73 serves as a costimulatory molecule in activating T cells. CD73 generated adenosine functions in cell signalling in many physiologic systems, including intestinal epithelium, ischemic myocardium, and cholinergic synapses. CD73 might mediate lymphocyte-stromal cell interactions or condition the local microenvironment to facilitate lymphocyte development and/or function. In CD73-depleted cells, surface levels of the leukocyte adhesion molecules ICAM-1, VCAM-1 and E-selectin increase. CD73 produces extracellular adenosine, which then acts on G protein-coupled purigenic receptors to induce cellular responses. CD73 has also been reported to regulate expression of pro-inflammatory molecules in mouse endothelium.

References

1. Resta R. et al., 1997, Cell Signal. 9 (2): 131-9.
2. Yamashita Y. et al., 1998, Eur J Immunol. 28 (10): 2981-90.
3. Louis NA. et al., 2008, J Immunol. 180 (6): 4246-55.

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