

## CD73/5'-Nucleotidase Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	CD73;AI447961;2210401F01Rik;NT;5'-nucleotidase, ecto (CD73);eNT;Nt5
Protein Construction:	Trp29-Lys549
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q61503
Molecular Weight:	59.4 kDa (predicted); 59.4 kDa (reducing conditions)

### QC Testing

Biological 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 . The specific activity is >10,000 pmol/min/μg.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	1. Lyophilized from 20 mM Tris, 500 mM NaCl, pH 7.4.  2. Lyophilized from 0.22 μm filtered solution in 20 mM Tris, 120 mM NaCl (pH 7.5).  Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

5'-nucleotidase, also known as NT5E, NTE, and CD73, is a cell membrane protein that belongs to the 5'-nucleotidase family. CD73 is a glycosylphosphatidylinositol (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 signaling 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 purinergic receptors to induce cellular responses. CD73 has also been reported to regulate the expression of pro-inflammatory molecules in mouse endothelium.

### Reference

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Louis NA. et al., 2008, J Immunol. 180 (6): 4246-55.  
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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481