

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

### General Information

Synonyms:	5'-nucleotidase, ecto (CD73)
Protein Construction:	A DNA sequence encoding the cynomolgus NT5E (EHH53214.1) (Met1-Lys547) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Trp 27
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	EHH53214.1
Molecular Weight:	59.2 kDa (predicted); 59 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 >20,000 pmol/min/μg.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 0.12 M NaCl, 4 mM CaCl <sub>2</sub> , 20% glycerol, 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:**  
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

**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

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