



# Recombinant Protein Technical Manual

**Recombinant Mouse CD39/ENTPD1 Protein (His Tag)(Active)**  
RPES2478

## Product Data:

**Product SKU:** RPES2478

**Size:** 10µg

**Species:** Mouse

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** P55772

## Protein Information:

**Molecular Mass:** 51 kDa

**AP Molecular Mass:**

**Tag:** C-His

**Bio-activity:** Measured by its ability to hydrolyze the 5'phosphategroups from the substrate adenosine 5'triphosphate(ATP). The specific activity is > 25,000 pmoles/min/µg.

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Ectonucleoside triphosphate diphosphohydrolase 1; NTPDase 1; NTPDase 1; Ecto-ATP diphosphohydrolase 1; Ecto-ATPDase 1; Ecto-ATPase 1; Ecto-apyrase; Lymphoid cell activation antigen; CD39

## Immunogen Information:

**Sequence:** Thr 38-Ile 478

## Background:

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.