



# Recombinant Protein Technical Manual

**Recombinant Mouse ENTPD5 Protein (His Tag)(Active)**  
RPES1936

## Product Data:

**Product SKU:** RPES1936

**Size:** 10µg

**Species:** Mouse

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** Q9WUZ9

## Protein Information:

**Molecular Mass:** 46.6 kDa

**AP Molecular Mass:** 45 kDa

**Tag:** C-His

**Bio-activity:** Measured by its ability to hydrolyze the 5'phosphate groups from the substrate guanosine 5'diphosphate (GDP). The specific activity is > 15000 pmols/min/µg.

**Purity:** > 90 % 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, 3mM DTT, 10% glycerol, pH 7.4

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

**Application:**

**Synonyms:** AI196558;AI987697;Cd39I4;ER-UDPase;mNTPase;NTPDase-5;NTPDase5;Pcph

## Immunogen Information:

**Sequence:** Thr19-Ser427

## Background:

Ectonucleoside triphosphate diphosphohydrolase 5 (ENTPD5), also known as CD39 antigen-like 4, ER-UDPase, Guanosine-diphosphatase ENTPD5, Nucleoside diphosphatase Uridine-diphosphatase ENTPD5. This hydrolase is expressed in response to phosphoinositide 3-kinase (PI3K) signaling. Activation of PI3K results in FOXO phosphorylation by AKT1 and loss of ENTPD5 transcriptional repression. It is Up-regulated in PTEN-deficient cells. Uridine diphosphatase (UDPase) that promotes protein N-glycosylation and ATP level regulation. ENTPD5 promotes protein N-glycosylation and folding in the endoplasmic reticulum, as well as elevated ATP consumption in the cytosol via an ATP hydrolysis cycle. Together with CMPK1 and AK1, ENTPD5 constitutes an ATP hydrolysis cycle that converts ATP to AMP and results in a compensatory increase in aerobic glycolysis. ENTPD5 also hydrolyzes GDP and IDP but not any other nucleoside di-, mono- or triphosphates, nor thiamine pyrophosphate. This enzyme Plays a key role in the AKT1-PTEN signaling pathway by promoting glycolysis in proliferating cells in response to phosphoinositide 3-kinase (PI3K) signaling.