



# Recombinant Protein Technical Manual

## Recombinant Human ENTPD3/NTPDase3/CD39L3 Protein (His Tag)(Active)

RPES2519

### Product Data:

**Product SKU:** RPES2519

**Size:** 10µg

**Species:** Human

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** O75355

### Protein Information:

**Molecular Mass:** 51 kDa

**AP Molecular Mass:** 50 kDa

**Tag:** C-His

**Bio-activity:** Measured by its ability to hydrolyze the 5'-phosphate group from the substrate adenosine-5'-triphosphate (ATP). The orthophosphate product is measured by a Malachite Green Phosphate Detection Kit. The specific activity is >70,000 pmol/min/µg.

**Purity:** > 97 % as determined by reducing 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:** CD39L3;HB6;NTPDase-3

## Immunogen Information:

**Sequence:** Gln 44-Pro 485

## Background:

The ADAMs (a disintegrin and metalloprotease) comprise a family of multidomain proteins with metalloprotease, cell adhesion, and signaling activities. Human ADAM12, which is implicated in diseases such as cancer, is expressed in two splice forms, the transmembrane ADAM12-L and the shorter and soluble ADAM12-S. ADAM12, also known as and Meltrin alpha, is a member of the ADAM protein family, which contains one disintegrin domain, one EGF-like domain and one peptidase M12B domain. ADAM12 is synthesized as a zymogen with the prodomain keeping the metalloprotease inactive through a cysteine-switch mechanism. Maturation and activation of the protease involves the cleavage of the prodomain in the trans-Golgi or possibly at the cell surface by a furin-peptidase. It is a membrane-anchored metalloprotease, which has been implicated in activation-inactivation of growth factors that play an important role in wound healing, including heparin-binding epidermal growth factor (EGF)-like growth factor (HB-EGF) and IGF binding proteins. ADAM12 may also regulate cell-cell and cell-extracellular matrix contacts through interactions with cell surface receptors - integrins and syndecans - potentially influencing the actin cytoskeleton. Moreover, ADAM12 interacts with several cytoplasmic signaling and adaptor molecules through its intracellular domain, thereby directly transmitting signals to or from the cell interior. These ADAM12-mediated cellular effects appear to be critical events in both biological and pathological processes. In addition to protease activity, ADAM12 possesses cell binding and cell signaling properties. In many studies, ADAM12 overexpression has been correlated with disease, and ADAM12 has been shown to promote tumor growth and progression in cancer. On the other hand, protective effects of ADAM12 in disease have also been reported.