Human ENPP1 Protein, His Tag (active enzyme)

Catalog # EN1-H5243

Synonyms

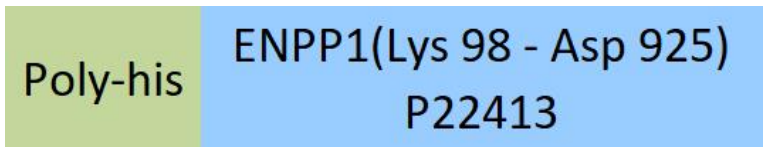
ENPP1

Source

Human ENPP1 Protein, His Tag (EN1-H5243) is expressed from human 293 cells (HEK293). It contains AA Lys 98 - Asp 925 (Accession # P22413).

Predicted N-terminus: His

Molecular Characterization



This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 97.0 kDa. The protein migrates as 110-130 kDa and >180 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Shipping and Storage

This product is shipped at ambient temperature.

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

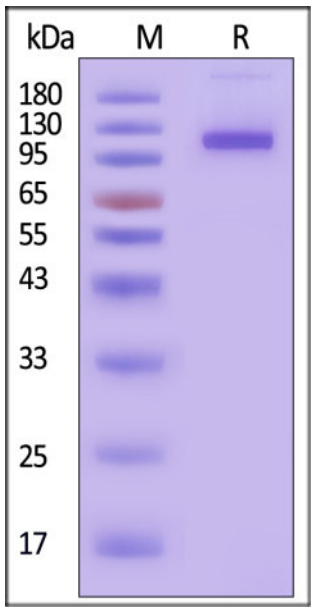
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

ACRO Quality Management System

- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



Human ENPP1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity

Measured by its ability to hydrolyze the Pyrophosphate (PPi) from the substrate adenosine-5’-triphosphate (ATP). The specific activity is > 150 pmol/min/μg (QC tested).

Background

ENPP1 (ectonucleotide pyrophosphatase/phosphodiesterase 1) is a membrane-bound glycoprotein that regulates extracellular nucleotide metabolism. It hydrolyzes ATP to AMP and pyrophosphate, thereby controlling mineralization processes and signaling pathways. ENPP1 plays a critical role in bone and cartilage development, insulin signaling, and vascular calcification. Mutations in ENPP1 are linked to rare genetic disorders such as generalized arterial calcification of infancy and autosomal recessive hypophosphatemic rickets. Because of its dual involvement in skeletal biology and metabolic regulation, ENPP1 has become an important target for both diagnostic research and therapeutic development.