

Synonym

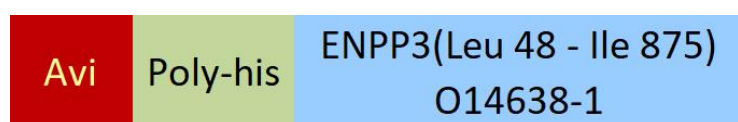
ENPP3,CD203c,NPP3,E-NPP3,PD-Ibeta,NPPase,PDNP3

Source

Biotinylated ENPP3, His,Avitag (EN3-H82E5) is expressed from human 293 cells (HEK293). It contains AA Leu 48 - Ile 875 (Accession # [O14638-1](#)).

Predicted N-terminus: Gly

Molecular Characterization



This protein carries an Avi tag at the N-terminus, followed by a polyhistidine tag.

The protein has a calculated MW of 98.6 kDa. The protein migrates as 100-140 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Biotinylation

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotin:Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL 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. Normally trehalose is added as protectant before lyophilization.

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.

Storage

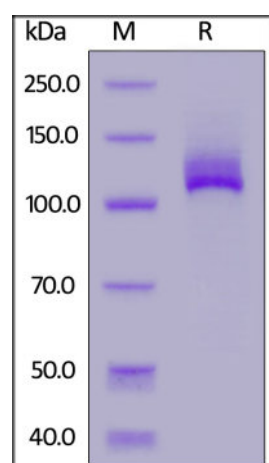
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

SDS-PAGE



Biotinylated ENPP3, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity

Measured by its ability to hydrolyze the Pyrophosphate (PPi) from the substrate adenosine-5'-triphosphate (ATP). The specific activity is > 100 pmol/min/µg (QC tested).

Background

The human NPP family contains seven members which can be classified into two groups according to their substrate preferences. The first class comprises the nucleotide-degrading proteins NPP1, 3 and 4. NPP3 (CD203c, ENPP3) is expressed in multiple organs, including on epithelial and mucosal surfaces, and notably on basophils and mast cells. Activation of basophils by antigen-bound IgE leads to release of inflammatory mediators and rapid upregulation of NPP3 to the cell surface. This protein is in fact a common marker for diagnosing allergen sensitivity with patient basophils by flow cytometry. Basophils and mast cells mediate the response to certain pathogens, as well as acute and chronic allergic reactions. Following activation, these cells release ATP, which further stimulates them in an autocrine manner. NPP3 upregulation serves to degrade ATP and suppress chronic allergic inflammation (but not the acute response).

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.