Data Sheet (Cat.No.TMPY-02055)

TargetMol

ENPP2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	PD-Ialpha;Pdnp2;ectonucleotide pyrophosphatase/phosphodiesterase 2;PD-Iα;E-NPP 2; Npps2;lysoPLD;ATX
Protein Construction:	A DNA sequence encoding the mature form of mouse ENPP2 (Q9R1E6-1) (Ser 49-Ile 862) was fused with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9R1E6-1
Molecular Weight:	96 kDa (predicted); 55-75 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 93 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 150 mM NaCl, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

ENPP2 (Ectonucleotide pyrophosphatase/phosphodiesterase family member 2), also referred as Autotaxin, is a secreted enzyme encoded by the ENPP2 gene. This gene product stimulates the motility of tumor cells, has angiogenic properties, and its expression is upregulated in several kinds of carcinomas. The Autotaxin protein is important for generating the lipid signaling molecule lysophosphatidic acid (LPA), which is a potent mitogen,

which facilitates cell proliferation and migration, neurite retraction, platelet aggregation, smooth muscle contraction, actin stress formation and cytokine and chemokine secretion. ATX has been found to catalyze the formation of cyclic phosphatidic acid (cPA), which have antitumor role by antimitogenic regulation of cell cycle, inhibition of cancer invasion and metastasis. LPA receptors and ATX are upregulated in numerous cancer cell types and show expression patterns that correlate with tumor cell invasiveness. Thus, Autotaxin has recently emerged as an attractive target for the development of anti-cancer chemotherapeutics. In addition, Serum ATX activity was found to be enhanced in relation to hepatic fibrosis in chronic liver disease due to hepatitis virus C infection.

Reference

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Boucher J,et al.(2005) Potential involvement of adipocyte insulin resistance in obesity-associated up-regulation of adipocyte lysophospholipase D/autotaxin expression. Diabetologia. 48: 569-77.