

LYPLA2 Protein, Human, Recombinant (His)

General Information

Synonyms:	APT-2;lysophospholipase II;DJ886K2.4;APT2
Protein Construction:	A DNA sequence encoding the human LYPLA2 (O95372) (Met 1-Val 231) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	O95372
Molecular Weight:	26.2 kDa (predicted); 26.2 kDa (reducing conditions)

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:	> 96 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 0.05% Bring, pH 8.2. 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

Lysophospholipase II (LYPLA2, LPL-II, or LysoPLA II), also known as Acyl-protein thioesterase 2 (APT-2), belongs to the AB hydrolase 2 family. This enzyme has lysophospholipase activity and may hydrolyze fatty acids from S-acylated cysteine residues in proteins such as trimeric G alpha proteins or HRAS. Acyl-protein thioesterase 1 (APT-1) and Acyl-protein thioesterase 2 (APT-2) are cytosolic lysophospholipids hydrolyzing enzymes. The serum activity of APT-1 may play an important role in the determination of the concentration of des-acyl ghrelin in

circulation, especially under septic inflammation. APT-2/LYPLA2 is expressed both in CHO-K1 and HeLa cells and its overexpression increased the deacylation rate of single acylated GAP-43 and affected the steady-state localization of diacylated GAP-43 and H-Ras. Thus, the results demonstrate that APT-2/LYPLA2 is the protein thioesterase involved in the acylation/deacylation cycle operating in GAP-43 subcellular distribution.

Reference

Satou M, et al. (2010) Identification and characterization of acyl-protein thioesterase 1/lysophospholipase I as a ghrelin deacylation/lysophospholipid hydrolyzing enzyme in fetal bovine serum and conditioned medium. *Endocrinology*. 151(10): 4765-75.

Tomatis VM, et al. (2010) Acyl-protein thioesterase 2 catalyzes the deacylation of peripheral membrane-associated GAP-43. *PLoS One*. 5(11): e15045.

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