

Lp-PLA2/PLA2G7 Protein, Human, Recombinant (His)

General Information

Synonyms:	LP-PLA2;PAFAD;phospholipase A2 group VII;PAFAH;LDL-PLA2
Protein Construction:	A DNA sequence encoding the human PLA2G7 (Q13093-1) precursor (Met 1-Asn 441) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Phe 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q13093-1
Molecular Weight:	49.2 kDa (predicted); 50-55 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to cleave a colorimetric peptide substrate, 10-hexadecyl-2-deoxy-2-thio Sacetylsnglyceryl-3-phosphoryl choline (2-Thio-PAF), in the presence of 5, 5'Dithiobis(2-nitrobenzoic acid) (DTNB). The specific activity is >5000 pmoles/min/μg.
Purity:	> 88 % 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 50 mM NaAc, 150 mM NaCl, 10% glycerol, pH 5. 0. 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

Platelet-activating factor acetylhydrolase, also known as 1-alkyl-2-acetyl-glycerophosphocholine esterase, 2-acetyl-1-alkylglycero-phosphocholine esterase, Group-VIIA phospholipase A2, LDL-associated phospholipase A2, PAF 2-acylhydrolase, PLA2G7 and PAFAH, is a secreted protein that belongs to the AB hydrolase superfamily and Lipase family. PLA2G7 / PAFAH modulates the action of platelet-activating factor (PAF) by hydrolyzing the sn-2

ester bond to yield the biologically inactive lyso-PAF. It has specificity for substrates with a short residue at the sn-2 position. It is inactive against long-chain phospholipids. PLA2G7 / PAFAH is a potent pro- and anti-inflammatory molecule that has been implicated in multiple inflammatory disease processes, including cardiovascular disease. PLA2G7 also represents an important, potentially functional candidate in the pathophysiology of coronary artery disease (CAD). Defects in PLA2G7 are the cause of platelet-activating factor acetylhydrolase deficiency (PLA2G7 deficiency). It is a trait that is present in 27% of Japanese. It could have a significant physiologic effect in the presence of inflammatory bodily responses.

Reference

Stafforini D.M., et al., 1996, J. Clin. Invest. 97:2784-2791.

Yoshida H., et al., 1998, Thromb. Haemost. 80:372-375.

Yamada Y., et al., 1998, Metabolism 47:177-181.

Kruse S., et al., 2000, Am. J. Hum. Genet. 66:1522-1530.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481