

PLA2G7 Protein, Human (HEK293, His)

Cat. No.:	HY-P70993
Synonyms:	Platelet-Activating Factor Acetylhydrolase; PAF Acetylhydrolase; 1-Alkyl-2-Acetylglycerophosphocholine Esterase; 2-Acetyl-1-Alkylglycerophosphocholine Esterase; Group-VIIA Phospholipase A2; gVIIA-PLA2; LDL-Associated Phospholipase A2; LDL-PLA(2); PAF 2-Acylhydrol
Species:	Human
Source:	HEK293
Accession:	AAH38452.1 (F22-N441)
Gene ID:	7941
Molecular Weight:	Approximately 57 kDa

PROPERTIES

AA Sequence	<pre> FDWQYINPVA HMKSSAWVNK IQVLMAAASF GQTKIPRGNG PYSVGCTDLM FDHTNKGTFLL RLYYPSQDND RLDTLWIPNK EYFWGLSKFL GTHWLMGNIL RLLFGSMTTP ANWNSPLRPG EKYPLVVFSH GLGAFRTLYS AIGIDLASHG FIVAAVEHRD RSASATYYFK DQSAAEIGDK SWLYLRTLKQ EEETHIRNEQ VRQRAKECSQ ALSLILDIDH GKPVKNALDL KFDMEQLKDS IDREKIAVIG HSFGGATVIQ TLEDQRFRC GIALDAWMFP LGDEVYSRIP QPLFFINSEY FQYPANI IKM KKCYS PDKER KMITIRGSVH QNFADFTFAT GKIIGHMLKL KGDIDSNAAI DLSNKASLAF LQKHLGLHKD FDQWDCLEIG DDENLIPGTN INTTNQHIML QNSSGIEKYN </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM NaAc, 150 mM NaCl, 10% Glycerol, pH 5.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

Platelet-activating factor acetylhydrolase (PLA2G7) is a lipoprotein-associated calcium-independent phospholipase A2 involved in phospholipid catabolism during inflammatory and oxidative stress responses. At the lipid-aqueous interface, PLA2G7 hydrolyzes the ester bond of fatty acyl group attached at sn-2 position of phospholipids, that specifically targets phospholipids with a short-chain fatty acyl group at sn-2 position. It also hydrolyzes and inactivates platelet-activating factor (PAF, 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine), a potent pro-inflammatory signaling lipid that acts through PTAFR on various innate immune cells. In addition, PLA2G7 hydrolyzes oxidatively truncated phospholipids carrying an aldehyde group at omega position, preventing their accumulation in low-density lipoprotein (LDL) particles and uncontrolled pro-inflammatory effects. As part of high-density lipoprotein (HDL) particles, PLA2G7 can hydrolyze phospholipids having long-chain fatty acyl hydroperoxides at sn-2 position and protect against potential accumulation of these oxylipins in the vascular wall. PLA2G7 catalyzes the release from membrane phospholipids of F2-isoprostanes, lipid biomarkers of cellular oxidative damage^{[1][2][3][4][5]}.

Caution: Product has not been fully validated for medical applications. For research use only.

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