

## PLA2G7 Protein, Mouse (HEK293, N-His, C-Myc)

<b>Cat. No.:</b>	HY-P700568
<b>Synonyms:</b>	PLA2G7; phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma); platelet-activating factor acetylhydrolase; LDL PLA2; PAFAH; LDL-PLA(2); gVIIA-PLA2; PAF 2-acylhydrolase; PAF acetylhydrolase; group-VIIA phospholipase A2; LDL-associated phospholipase A2; lipoprotein-associated phospholipase A2; 1-alkyl-2-acetyl-1-alkylglycerophosphocholine esterase; 2-acetyl-1-alkylglycerophosphocholine esterase; PAFAD; LP-PLA2; LDL-PLA2;
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	Q60963 (F22-N440)
<b>Gene ID:</b>	27226
<b>Molecular Weight:</b>	51.9 kDa

### PROPERTIES

#### AA Sequence

FHWQDTSSFD	FRPSVMFHKL	QSVMSAAGSG	HSKIPKNGS
YPVGC TDLMF	GYGNESVFVR	LYYPAQDQGR	LDTVWIPNKE
YFLGLSIFLG	TPSIVGNILH	LLYGSLTTPA	SWNSPLRTGE
KYPLIVFSHG	LGAFRTIYSA	IGIGLASNGF	IVATVEHRDR
SASATYFFED	QVAAKVENRS	WLYLRKVKQE	ESESVRKEQV
QQRRAIECSRA	LSAILDIEHG	DPKENVLGSA	FDMKQLKDAI
DETKIALMGH	SFGGATV LQA	LSEDQRFRCG	VALDPWMPYV
NEELYSR TLQ	PLLFINS AKF	QTPKDIAKMK	KFYQPDKERK
MITIKGSVHQ	NFDDFTFVTG	KIIGNKLT LK	GEIDSRVAID
L TNKASMAFL	QKHLGLQKDF	DQWDPLVEGD	DENLIPGSPF
DAVTQVPAQQ	HSPG SQTQN		

#### Biological Activity

The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

#### Appearance

Lyophilized powder.

#### Formulation

Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O.

#### Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

#### Shipping

Room temperature in continental US; may vary elsewhere.

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## DESCRIPTION

### Background

PLA2G7 protein, a lipoprotein-associated calcium-independent phospholipase A2, plays a pivotal role in phospholipid catabolism during inflammatory and oxidative stress responses. Operating at the lipid-aqueous interface, it hydrolyzes the ester bond of fatty acyl groups at the sn-2 position of phospholipids, with a specific preference for those carrying short-chain fatty acyl groups. Additionally, PLA2G7 can target phospholipids with long fatty acyl chains if they bear oxidized functional groups. The enzyme's versatility extends to inactivating platelet-activating factor (PAF), a potent pro-inflammatory signaling lipid, and hydrolyzing oxidatively truncated phospholipids, preventing their accumulation and uncontrolled pro-inflammatory effects. When associated with high-density lipoprotein (HDL) particles, PLA2G7 contributes to the hydrolysis of phospholipids containing long-chain fatty acyl hydroperoxides, safeguarding against potential oxylipin accumulation in the vascular wall. Furthermore, PLA2G7 catalyzes the release of F2-isoprostanes, serving as lipid biomarkers for cellular oxidative damage.

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

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