

Phospholipase A2, Lipoprotein Associated (LpPLA2) Active Protein | LpPLA2 active protein

Active Phospholipase A2, Lipoprotein Associated (LpPLA2)

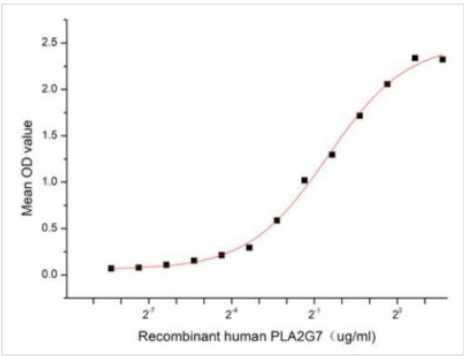
CATALOG # AAA21141	HOST E. coli	APPLICATIONS Cell Culture, Activity Assay
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PRODUCT SYNONYMS

Phospholipase A2; Lipoprotein Associated (LpPLA2); Active Phospholipase A2; PLA2G7; PAF-AH; PAFAH; Lp-PLA2; LDL-PLA2; Platelet Activating Factor Acetylhydrolase; Plasma; Group VII; LDL-associated phospholipase A2; LpPLA2 active protein

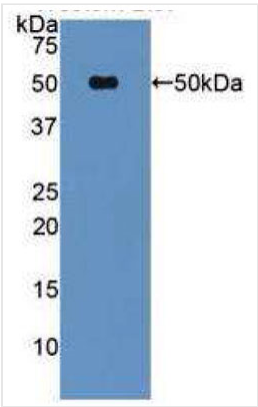
PRODUCT SPECIFICATIONS

Host	E. coli
Purity/Purification	>95%
Form/Format	PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Concentration	100ug/mL (varies by lot)
Applicable Applications for LpPLA2 active protein	Cell Culture, Activity Assay
Application Notes	(May be suitable for use in other assays to be determined by the end user.)
Source	Prokaryotic expression
Residues	Phe22~Asn441
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	7.1
Reconstitution	Reconstitute in ddH2O to a concentration of 0.1-0.5 mg/mL. Do not vortex
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8°C. Aliquot and store at -80°C. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.



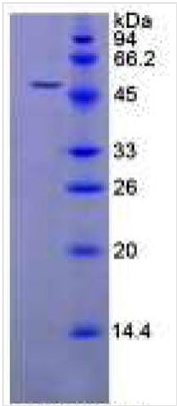
Activity

Phospholipase A2 Group VII (PLA2G7) which is also known as Lp-PLA2, is a plasma enzyme bound to lipoproteins: 80% bound to LDL, 15%-20% to HDL, and the remainder to VLDL. It is produced in major by mature macrophages and activated platelets and catalyzes the degradation of platelet-activating factor to biologically inactive products. Besides, Paraoxonase 1 (PON1) has been identified as an interactor of PLA2G7, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human PLA2G7 and recombinant rat PON1. Briefly, PLA2G7 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to PON1-coated microtiter wells and incubated for 1h at 37?. Wells were washed with PBST and incubated for 1h with anti-PLA2G7 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37?. Finally, add 50uL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human PLA2G7 and recombinant rat PON1 was shown in Figure 1, the EC50 for this effect is 0.7 ug/mL

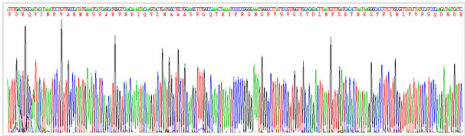


WB (Western Blot)

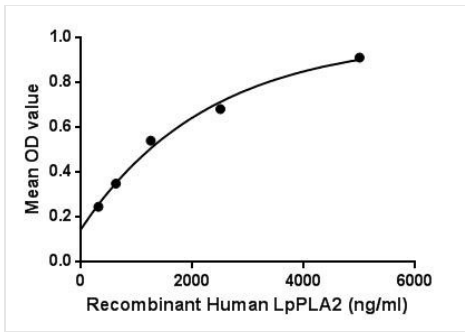
Western BlotSample: Recombinant LpPLA2, HumanAntibody: Rabbit Anti-Human LpPLA2 Ab



SDS-PAGE
SDS-PAGE



Gene Sequencing (extract)



	FDWQYINPV	AHMKSSAWVN	KIQVLMAAAS
FGQTKIPRGN	GPYSVGCTDL	MFDHTNKGTF	LRLYPSQDN
KEYFWGLSKF	LGTHWLMGNI	LRLLFGSMTT	PANWNSPLRP
HGLGAFRTLY	SAIGIDLASH	GFIVAAVEHR	DRSASATYFF
KSWLYLRTLK	QEEETHIRNE	QVRORAKECS	QALSILIDID
LKFDMEQLKD	SIDREKIAVI	GHSFGGATVI	QTLSEDQRFR
PLGDEVYSRI	PQPLFFINSE	YFQYPANIIK	MKKCYSPDKE
HQNFADFTFA	TGKIIGHMLK	LKGDIDSNVA	IDLSNKASLA
DFDQWDCLIE	GDDENLIPGT	NINTTNQHIM	LQNSSGIEKY
		N	

Sequence Information

Activity

Figure. The binding activity of LpPLA2 with PTPRN. Phospholipase A2, Lipoprotein Associated (LpPLA2) also known as platelet-activating factor acetylhydrolase (PAF-AH) is a phospholipase A2 enzyme. LpPLA2 is platelet-activating factor (PAF) acetylhydrolase, a secreted enzyme that catalyzes the degradation of PAF to inactive products by hydrolysis of the acetyl group at the sn-2 position, producing the biologically inactive products LYSO-PAF and acetate. Besides, Protein Tyrosine Phosphatase Receptor Type N (PTPRN) has been identified as an interactor of LpPLA2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human LpPLA2 and recombinant human PTPRN. Briefly, LpPLA2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to PTPRN-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-LpPLA2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of LpPLA2 and PTPRN was shown in Figure 1, and this effect was in a dose dependent manner.

ADDITIONAL INFORMATION

Product Categories/Family for LpPLA2 active protein	Enzyme & Kinase; Metabolic pathway; Infection immunity
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NCBI AND UNIPROT INFORMATION

NCBI GI #	1314246
NCBI GeneID	7941
UniProt Accession #	Q13093
Molecular Weight	Predicted Molecular Mass: 49.0kDa Accurate Molecular Mass: 50kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	LDL-phospholipase A2
NCBI Official Synonym Full Names	phospholipase A2 group VII
NCBI Official Symbol	PLA2G7
NCBI Official Synonym Symbols	PAFAD; PAFAH; LP-PLA2; LDL-PLA2
NCBI Protein Information	platelet-activating factor acetylhydrolase
UniProt Protein Name	Platelet-activating factor acetylhydrolase
UniProt Gene Name	PLA2G7
UniProt Synonym Gene Names	PAFAH; PAF acetylhydrolase; gVIIA-PLA2; LDL-PLA(2)
UniProt Entry Name	PAFA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

