

Recombinant Human phospholipase A2, group X, His-tagged

Cat. No. PLA2G10-70H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human Secreted Phospholipase A2-X produced in *E. Coli* manufactured with N-terminal fusion His-tagged. sPLA2-X His-Tagged Fusion Protein, is 15.5 kDa containing 123 amino acid residues of the human secreted phospholipase A2-X and 16 additional amino acid residues – HisTag.

Species Human

Source E.coli

Description Phospholipase A2 (PLA2) catalyzes the hydrolysis of the sn-2 position of membrane glycerophospholipids to liberate arachidonic acid (AA), a precursor of eicosanoids including prostaglandins and leukotrienes. The same reaction also produces lysophospholipids, which represent another class of lipid mediators. The secretory PLA2 (sPLA2) family, in which 10 isozymes have been identified, consists of low molecular weight, Ca²⁺-requiring secretory enzymes that have been implicated in a number of biological processes, such as modification of eicosanoid generation, inflammation, and host defense. This enzyme has been proposed to hydrolyze phosphatidylcholine (PC) in lipoproteins to liberate lyso-PC and free fatty acids in the arterial wall, thereby facilitating the accumulation of bioactive lipids and modified lipoproteins in atherosclerotic foci. In mice, sPLA2 expression significantly influences HDL particle size and composition and demonstrate that an induction of sPLA2 is required for the decrease in plasma HDL cholesterol in response to inflammatory stimuli.

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Amino Acid Sequence	MRGSHHHHHHGMASHMGILELAGTVGCVGPRTPIAYMKYGCFGLGGHGQPRD A IDWCCHGHDCCYTRAEEAGCSPKTERYSWQCVNQSVLCGPAENKQCPELLCKC DQ EIANCLAQTEYNLKYLFYPQFLCEPDSPKCD.
Physical Appearance	Sterile Filtered lyophilized (freeze-dried) powder.
Purification Method	Single-step procedure using affinity Ni-NTA chromatography.
Purity	Greater than 95% as determined by SDS PAGE.
Formulation	Sterile filtered and lyophilized from 0.5 mg/ml in 0.01 M Tris buffer pH 7.2.
Solubility	Add 0.2 ml of distilled water and let the lyophilized pellet dissolve completely.
Specificity	The amino acid sequence of the recombinant human Secreted Phospholipase A2-X is 100% homologous to the amino acid sequence of the human Secreted Phospholipase A2-X without signal sequence and activation peptide.
Applications	Western blotting.
Stability	Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. The lyophilized protein remains stable until the expiry date when stored at -20°C.

GENE INFORMATION

Gene Name	PLA2G10 phospholipase A2, group X [Homo sapiens]
Synonyms	SPLA2; GXPLA2; GXPLA2; MGC119918; MGC119919; MGC133367; PLA2G10; Group 10 secretory phospholipase A2; EC3.1.1.4; Group X secretory

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	phospholipase A2; GX sPLA2; Phosphatidylcholine 2-acylhydrolase GX; sPLA2-X
Gene ID	8399
mRNA Refseq	NM_003561
Protein Refseq	NP_003552
MIM	603603
UniProt ID	O15496
Chromosome Location	16p13.1-p12
Pathway	Arachidonic acid metabolism; Ether lipid metabolism; Fc epsilon RI signaling pathway; GnRH signaling pathway; Linoleic acid metabolism; Long-term depression; MAPK signaling pathway; Metabolic pathways; VEGF signaling pathway; Vascular smooth muscle contraction; alpha-Linolenic acid metabolism; Glycerophospholipid metabolism
Function	calcium ion binding; hydrolase activity; phospholipase A2 activity

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