# Recombinant Human Phospholipase A2, Group V, His-tagged

**Cat. No.** PLA2G5-71H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human Secreted Phospholipase A2-V expressedin*E.Coli*was produced with N-terminal His-Tag. sPLA2-V His-Tagged Fusion protein is 15.5 kDa containing 118 amino acid residues of the human secreted phospholipase A2-V and 16 additional amino acid residues – His-Tag. |
| **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 lysophosholipids, 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. |

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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| **Amino Acid Sequence** | MRGSHHHHHH GMASHMGLLD LKSMIEKVTG KNALTNYGFY GCYCGWGGRG TPKDGTDWCC WAHDHCYGRLEEKGCNIRTQ SYKYRFAWGV VTCEPGPFCH VNLCACDRKL VYCLKRNLRS YNPQYQYFPN ILCS. |
| **Physical Appearance** | Sterile Filtered lyophilized (freeze-dried) powder. |
| **Purification Method** | Ni-NTA affinity chromatography. |
| **Purity** | Greater than 95% as determined by SDS PAGE. |
| **Formulation** | Sterile filtered and lyophilized from 0.5mg/ml in 0.05M Acetate buffer pH-4. |
| **Reconstitution** | Add 0.2 ml of 0.1M Acetate buffer pH-4 and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10 µg/ml. In higher concentrations the solubility of this antigen is limited. |
| **Specificity** | The amino acid sequence of the recombinant human Secreted Phospholipase A2-V is 100% homologous to the amino acid sequence of the human Secreted Phospholipase A2-V without signal sequence. |
| **Applications** | Western blotting. |
| **Storage** | 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

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| **Gene Name** | PLA2G5 phospholipase A2, group V [ Homo sapiens ] |

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| **Synonyms** | GV-PLA2; PLA2-10; MGC46205; hVPLA(2); DKFZp686C2294; PLA2G5 |
| **Gene ID** | 5322 |
| **mRNA Refseq** | NM_000929 |
| **Protein Refseq** | NP_000920 |
| **MIM** | 601192 |
| **UniProt ID** | P39877 |
| **Chromosome Location** | 1p36-p34 |
| **Pathway** | Arachidonic acid metabolism; Ether lipid metabolism; Fc epsilon RI signaling pathway; Glycerophospholipid metabolism; 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 |
| **Function** | calcium ion binding; calcium-dependent phospholipase A2 activity; heparin binding; hydrolase activity |

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