# Active Recombinant Human PLA2G2A protein, His-tagged

**Cat. No.** PLA2G2A-669H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human PLA2G2A(Asn21-Cys144) fused with His tag at C-terminal was expressed in Insect cells. |
| **Species** | Human |
| **Source** | Insect Cells |
| **ProteinLength** | Asn21-Cys144 |
| **Description** | Secretory phopholipase A2 is an enzyme that hydrolyzes the sn-2 ester bond of phospholipids, generating non-esterified free fatty acids and lysophospholipids. Most secretory PLA2s are stored in cytoplasmic granules and are released in the extracellular environment on appropriate cell activation. Thus, they are present at higher concentration in the plasma and biologic fluids of patients with systemic inflammatory, autoimmune, or allergic disease, such as acute pancreatitis, rheumatoid arthritis, bronchial asthma, and allergic rhinitis. PLA2G2A is a calcium dependent phospholipase expressed in many cell types associated with inflammation, including platelets, neutrophils, and mast cells. It has been recognized as an acute phase reactant and its concentration increases during systemic inflammation such as sepsis, rheumatoid arthritis, and cardiovascular disease. It may function as an enzymatic component of the host defense mechanism. For example, human tears contain a high concentration of PLA2G2A and this is the principal bactericidal factor against Gram-positive bacteria in this fluid. It may play a role in cell proliferation through binding a receptor on membrane surface or extracellular matrix components |

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| | such as heparan sulfate proteoglycan and integrins. It has been shown to have pro-atherogenic properties both in the circulation and within the arterial wall. Circulating levels of PLA2G2A are higher in coronary artery disease (CAD) patients and are associated with increased risk of future CAD. |
| **Predicted N Terminal** | Asn21 |
| **Form** | Supplied as a 0.2 μm filtered solution in Sodium Acetate and NaCl. |
| **Bio-activity** | Measured by its ability to hydrolyze 1-Hexadecanoyl-2-(1-pyrene-decanoyl)-sn-glycero-3-phosphoglycerol. The specific activity is >3,750 pmol/min/μg, as measured under the described conditions. |
| **Molecular Mass** | Predicted Molecular Mass: 15 kDa;<br>SDS-PAGE: 17 kDa, reducing conditions. |
| **Endotoxin** | <1.0 EU per 1 μg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE under reducing conditions and visualized by silver stain |
| **Storage** | Use a manual defrost freezer and avoid repeated freeze-thaw cycles.<br>6 months from date of receipt, -20 to -70 centigrade as supplied.<br>3 months, -20 to -70 centigrade under sterile conditions after opening. |
| **Shipping** | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |

## GENE INFORMATION

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| **Gene Name** | PLA2G2A phospholipase A2, group IIA (platelets, synovial fluid) [ Homo sapiens ] |

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| **Official Symbol** | PLA2G2A |
| **Synonyms** | PLA2G2A; phospholipase A2, group IIA (platelets, synovial fluid); PLA2B, PLA2L; phospholipase A2, membrane associated; NPS-PLA2; GIIC sPLA2; group IIA phospholipase A2; phosphatidylcholine 2-acylhydrolase 2A; non-pancreatic secretory phospholipase A2; MOM1; PLA2; PLA2B; PLA2L; PLA2S; PLAS1; sPLA2; |
| **Gene ID** | 5320 |
| **mRNA Refseq** | NM_000300 |
| **Protein Refseq** | NP_000291 |
| **MIM** | 172411 |
| **UniProt ID** | P14555 |
| **Chromosome Location** | 1p35 |
| **Pathway** | Arachidonic acid metabolism, organism-specific biosystem; Arachidonic acid metabolism, conserved biosystem; Eicosanoid Synthesis, organism-specific biosystem; Ether lipid metabolism, organism-specific biosystem; Ether lipid metabolism, conserved biosystem; Fat digestion and absorption, organism-specific biosystem; Fat digestion and absorption, conserved biosystem; |
| **Function** | calcium ion binding; calcium-dependent phospholipase A2 activity; hydrolase activity; phospholipase A2 activity; phospholipid binding; |

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