

## PLA2G2A Human

**Description:** Secreted Phospholipase A2-IIA Human Recombinant is manufactured with N-terminal fusion of HisTag. PLA2G2A His-Tagged Fusion Protein is 15.8 kDa containing 124 amino acid residues of the human secreted phospholipase A2-IIA and 16 additional amino acid residues HisTag.

**Synonyms:** MOM1, PLA2, PLA2B, PLA2L, PLA2S, PLAS1, sPLA2, Phospholipase A2 membrane associated, EC 3.1.1.4, Phosphatidylcholine 2-acylhydrolase, Group IIA phospholipase A2, GIIC sPLA2, Non-pancreatic secretory phospholipase A2, NPS-PLA2, sPLA2-IIA, PLA2G2A.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** MRGSHHHHHH GMASHMNLVN FHRMIKLTTG KEAALSYGFY  
GCHCGVGGRG SPKDATDRCC VTHDCCYKRL EKRGCGTKFL SYKFSNSGSR ITCAKQDSCR  
SQLCECDKAA ATCFARNKTT YNKKYQYYSN KHCRCSTPRC.

**Purity:** Greater than 95% as determined by SDS-PAGE.

**Formulation:**

Lyophilized from 0.5 mg/ml in 0.05M Acetate buffer pH-4.

**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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Applications:**

Western blotting.

**Solubility:**

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 g/ml. In higher concentrations the solubility of this antigen is limited.

**Introduction:**

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 lowmolecular weight, Ca<sup>2+</sup>-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. Instillation of bacteria into the bronchi was associated with surfactant degradation and a decrease in large:small ratio of surfactant aggregates in rats. sPLA2-IIA can exert beneficial action in the context of infectious diseases since recent studies have shown that this enzyme exhibits potent bactericidal effects. Induction of the synthesis of sPLA2-IIA is generally initiated by endotoxin and a limited number of cytokines via paracrine and/or autocrine processes.

Catalog #:ENPS-297

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