



Product Data Sheet

□ Cat # RP-409

Recombinant Human Secreted Phospholipase A2-IIIE

Size: □ 10 ug

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, 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. The amino acid sequence of the recombinant human Secreted Phospholipase A2-IIIE is 100% homologous to the amino acid sequence of the human Secreted Phospholipase A2-IIIE without signal sequence.

**Source:** *Escherichia Coli*. Secreted Phospholipase A2-IIIE Human Recombinant manufactured with N-terminal His-Tag. sPLA2-IIIE His-Tagged Fusion Protein is 15.8 kDa protein containing 123 amino acid residues of the human secreted phospholipase A2-IIIE and 16 additional amino acid residues. Sterile filtered and lyophilized from 0.5 mg/ml in 0.05M Acetate buffer pH-4.

**Applications and Suggested Dilutions:** 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. Greater than 95% as determined by SDS PAGE. Western blotting Users must optimize the appropriate concentration and conditions for each assay.

**Storage and Stability:** If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4oC for ~1 week or aliquots in suitable size and store at -20oC for long term storage.

**Usage:** This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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