

## Recombinant Human Secreted Phospholipase A2-X (sPLA2-X)

Source: E.Coli

Catalog No.: ENZ-329

### Background:

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.

### Description:

Recombinant Human Secreted Phospholipase A2-X is manufactured with N-terminal fusion HisTag, is 15.5 kDa polypeptide containing 123 amino acid residues of the human secreted phospholipase A2-X and 16 additional amino acid residues - HisTag.

### amino acid sequence:

MRGSHHHHHHGMASHMGILELAGTVGCVGPRTPIAYMKYGCFCGLGGHGQPRDAIDWCCHGHDCCYTRA  
EEAGCSPKTERYSWQCVNQSVLGPAENKQCQELLCKCDQEIANCLAQTEYNLKYLFYPQFLCEPDSPKCD

### Physical Appearance:

Sterile Filtered lyophilized (freeze-dried) powder.

### Formulation:

Sterile filtered and lyophilized from 0.5 mg/ml in 0.01 M Tris buffer pH 7.2. Reconstitution: 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.

### Purification Method:

Single-step procedure using affinity Ni-NTA chromatography.

### Purity:

>95% (SDS PAGE analyzed).

### Reconstitution:

Sterile filtered and lyophilized from 0.5 mg/ml in 0.01 M Tris buffer pH 7.2. Reconstitution: Add 0.2 ml of distilled water and let the lyophilized pellet dissolve completely.

### 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.

**Stability/Shelf Life:**

The lyophilized protein remains stable until the expiry date when stored at -20°C.

**Applications:**

Western blotting

**Usage:**

Product is furnished 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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