sPLA2-IIA Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: EC=3.1.1.4, Phosphatidylcholine 2-acylhydrolase 1B, Group IB phospholipase A2, PLA2G1B, PLA2, PLA2A, PPLA2

Cat. No.:
RD172054100 (0.1 mg)

Description

Total 140 AA. MW: 15.8 kDa (calculated). N-Terminal His-tag, 16 extra AA (highlighted).

Introduction to the Molecule

Phospholipase A2 (PLA2) catalyzes the hydrolysis of the sn-2 position of membrane glycerophospho-lipids to liberate arachidonic acid (AA. The same reaction also produces lysophosholipids, which represent another class of lipid mediators. 10 isozymes have been identified in the secretory PLA2 (sPLA2) family. It consists of low-molecular weight amd Ca2+, which-requires 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. Thus, facilitating the accumulation of bioactive lipids and modified lipoproteins in atherosclerotic fo-ci. sPLA2 expression significantly influences HDL particle size and composition in mice. it also demonstrates that an induction of sPLA2 is necessary 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.

Research topic

Secreted phospholipases A2

Amino Acid Sequence

MRGSHHHHHH GMASHMNLVN FHRMIKLTTG KEAALSYGFY GCHCGVGGRG SPKDATDRCC VTHDCCYKRL EKRGCGTKFL SYKFSNSGSR ITCAKQDSCR SQLCECDKAA ATCFARNKTT YNKKYQYYSN KHCRGSTPRC

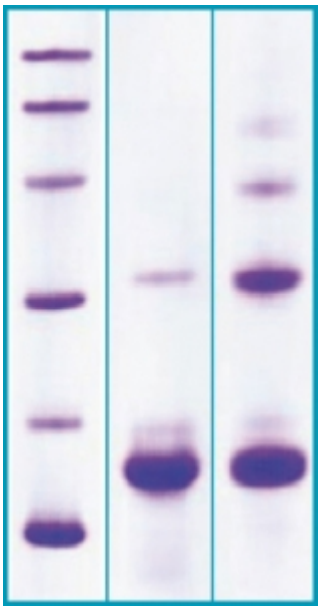
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >95%

SDS-PAGE gel



12% SDS-PAGE separation of Human sPLA2-IIA
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 10µg/lane
3. non-reduced and non-heated sample, 10µg/lane

Endotoxin

< 1.0 EU/ug

Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 0.05M Acetate buffer pH4

Reconstitution

Add 0.1M Acetate buffer pH4 to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10µg/mL. In higher concentrations the solubility of this antigen is limited. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. 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.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.
LAL to determine quantity of endotoxin.

Applications

Western blotting

Note

This product is intended for research use only.

References to this Product

- Ronkko S, Rekonen P, Kaarniranta K, Puustjarvi T, Terasvirta M, Uusitalo H . *Phospholipase A2 in chamber angle of normal eyes and patients with primary open angle glaucoma and exfoliation glaucoma.* Mol Vis . Mar 26;13:408-17 (2007)

Gentaur Molecular Products
Voortstraat 49
1910 Kampenhout, Belgium
http://www.gentaur-worldwide.com