

sPLA2-IIID Human, Rabbit Polyclonal Antibody

Product Data Sheet

Source of Antigen: *E. coli*

Cat. No.:

Host: Rabbit

RD181067100

(0.1 mg)

Other names: EC=3.1.1.4, Phosphatidylcholine 2-acylhydrolase 1B, Group IB phospholipase A2, PLA2G1B, PLA2, PLA2A, PPLA2

Research topic

Secreted phospholipases A2

Preparation

The antibody was raised in rabbits by immunization with the recombinant Human sPLA2-IIID.

Amino Acid Sequence

The immunization antigen (16.4 kDa) is a protein containing 141 AA of recombinant Human sPLA2-IIID. N-Terminal His-tag, 16 extra AA (highlighted).

MRGSHHHHHH GMASHMGILN LNKMKVQVTG KMPILSYWPY GCHCGLGGRG QPKDATDWCC QTHDCCYDHL KTQGCGIYKD
YYRYNFSQGN IHCSDKGSWC EQQLCACDKE VAFCLKRNLD TYQKRLRFYW RPHCRGQTPG C

The amino acid sequence of the recombinant Human Secreted Phospholipase A2-IIID is 100% homologous to the amino acid sequence of the Human Secreted Phospholipase A2-IIID without signal sequence.

Species Reactivity

Human

Not yet tested in other species.

Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human sPLA2-IIID.

Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE.**

Reconstitution

Add 0.05 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

Shipping

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

Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

Expiration

See vial label.

Lot Number

See vial label.

Quality Control Test

Indirect ELISA - to determine titer of the antibody
SDS PAGE - to determine purity of the antibody

Applications

Western blotting

Introduction to the Molecule

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, Ca²⁺-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.

Note

This product is for research use only.

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