



## group III sPLA<sub>2</sub> (K-16): sc-86473

### BACKGROUND

Phospholipase A<sub>2</sub>s (PLA<sub>2</sub>s) constitute a family of esterases that hydrolyze the sn-2-acyl ester bond in glycerophospholipid molecules. These enzymes are generally calcium-dependent and have been found both intra- and extracellularly. By hydrolyzing the sn-2 bond in glycerophospholipids, PLA<sub>2</sub>s release fatty acids. One such fatty acid, arachidonic acid, generates the substrates for the initiation of the arachidonic acid cascade that produces various eicosanoids, many of which are potent mediators of inflammation. As a member of the PLA<sub>2</sub> family, group IIE sPLA<sub>2</sub> (Group IIE secretory phospholipase A<sub>2</sub>), also known as PLA2G2E (Phosphatidylcholine 2-acylhydrolase GIIIE) and sPLA<sub>2</sub>-IIE, is a 142 amino acid secreted enzyme that promotes stimulus-induced arachidonic acid release and prostaglandin production, therefore playing a major role in the inflammatory process. Expression of group IIE sPLA<sub>2</sub> is restricted to heart, brain, lung and placenta.

### REFERENCES

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- Sato, H., et al. 2008. Analyses of group III secreted phospholipase A<sub>2</sub> transgenic mice reveal potential participation of this enzyme in plasma lipoprotein modification, macrophage foam cell formation, and atherosclerosis. *J. Biol. Chem.* 283: 33483-33497.
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### CHROMOSOMAL LOCATION

Genetic locus: PLA2G3 (human) mapping to 22q12.2.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### SOURCE

group III sPLA<sub>2</sub> (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of group III sPLA<sub>2</sub> of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86473 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

group III sPLA<sub>2</sub> (K-16) is recommended for detection of group III sPLA<sub>2</sub> of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for group III sPLA<sub>2</sub> siRNA (h): sc-75201, group III sPLA<sub>2</sub> shRNA Plasmid (h): sc-75201-SH and group III sPLA<sub>2</sub> shRNA (h) Lentiviral Particles: sc-75201-V.

Molecular Weight of group III sPLA<sub>2</sub>: 56 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.