

# group IVD sPLA<sub>2</sub> (S-19): sc-160398

## 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. Group IVD sPLA<sub>2</sub>, also known as PLA2G4D (phospholipase A<sub>2</sub> group IVD) or cPLA<sub>2</sub>- $\delta$  (cytosolic phospholipase A<sub>2</sub>  $\delta$ ), is a 818 amino acid calcium-dependent phospholipase that contains one PLA<sub>2</sub>c domain, a C2 domain and exists as two alternatively spliced isoforms. A peripheral membrane protein, group IVD sPLA<sub>2</sub> is suggested to play a role in the inflammation of psoriatic lesions, and catalyzes the reaction of phosphatidylcholine and water into 1-acylglycerophosphocholine and carboxylate.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Pla2g4d (mouse) mapping to 2 E5.

## RESEARCH USE

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

## SOURCE

group IVD sPLA<sub>2</sub> (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of group IVD sPLA<sub>2</sub> of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160398 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

group IVD sPLA<sub>2</sub> (S-19) is recommended for detection of group IVD sPLA<sub>2</sub> of mouse 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); non cross-reactive with other Phospholipase A<sub>2</sub> family members.

Suitable for use as control antibody for group IVD sPLA<sub>2</sub> siRNA (m): sc-145776, group IVD sPLA<sub>2</sub> shRNA Plasmid (m): sc-145776-SH and group IVD sPLA<sub>2</sub> shRNA (m) Lentiviral Particles: sc-145776-V.

Molecular Weight of group IVD sPLA<sub>2</sub>: 92 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.