

# group IIC sPLA<sub>2</sub> (C-15): sc-247082

## 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 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 IIC sPLA<sub>2</sub>, also known as PLA2G2C, is a 149 amino acid secreted protein that is suggested to be an inactive phospholipase. In mice, mutation of the group IIC sPLA<sub>2</sub> gene leads to an increase number of intestinal polyps in the multiple intestinal neoplasia (Min), which is the murine model for adenomatous polyposis coli in humans. However, group IIC sPLA<sub>2</sub> gene mutation is suggested not to play a role in the development of adenomatous polyps in humans.

## REFERENCES

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2. Johnson, L.K., et al. 1990. Localization and evolution of two human phospholipase A<sub>2</sub> genes and two related genetic elements. *Adv. Exp. Med. Biol.* 275: 17-34.
3. Spirio, L.N., et al. 1996. Three secretory phospholipase A(2) genes that map to human chromosome 1P35-36 are not mutated in individuals with attenuated adenomatous polyposis coli. *Cancer Res.* 56: 955-958.
4. Tischfield, J.A., et al. 1996. Low-molecular-weight, calcium-dependent phospholipase A<sub>2</sub> genes are linked and map to homologous chromosome regions in mouse and human. *Genomics* 32: 328-333.
5. Chen, J., et al. 1997. Localization of group IIC low molecular weight phospholipase A<sub>2</sub> mRNA to meiotic cells in the mouse. *J. Cell. Biochem.* 64: 369-375.
6. Ishizaki, J., et al. 1999. Cloning and characterization of novel mouse and human secretory phospholipase A(2)s. *J. Biol. Chem.* 274: 24973-24979.
7. Lambeau, G. and Lazdunski, M. 1999. Receptors for a growing family of secreted phospholipases A<sub>2</sub>. *Trends Pharmacol. Sci.* 20: 162-170.
8. Shakhov, A.N., et al. 2000. SPLASH (PLA2IID), a novel member of phospholipase A<sub>2</sub> family, is associated with lymphotoxin deficiency. *Genes Immun.* 1: 191-199.
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## CHROMOSOMAL LOCATION

Genetic locus: PLA2G2C (human) mapping to 1p36.12.

## STORAGE

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

## SOURCE

group IIC sPLA<sub>2</sub> (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of group IIC 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-247082 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

group IIC sPLA<sub>2</sub> (C-15) is recommended for detection of group IIC 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).

group IIC sPLA<sub>2</sub> (C-15) is also recommended for detection of group IIC sPLA<sub>2</sub> in additional species, including equine and bovine.

Molecular Weight of group IIC sPLA<sub>2</sub>: 17 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.

## RESEARCH USE

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

## PROTOCOLS

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