**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 (i.e., prostaglandins, leukotrienes and thromboxanes), many of which are potent mediators of inflammation. PLA<sub>2</sub>S include both the relatively low molecular weight type I and type II enzymes and the form known as cytosolic PLA<sub>2</sub> (cPLA<sub>2</sub>). cPLA<sub>2</sub> is present in the cytosol of various cells and tissues including platelets, macrophages and monoblasts; and preferentially hydrolyzes the sn-2 position of phospholipid molecules, releasing free arachidonate.

**CHROMOSOMAL LOCATION**

Genetic locus: PLA2G4A (human) mapping to 1q31.1; Pla2g4a (mouse)

**SOURCE**

cPLA<sub>2</sub> (4-4B-3C) is a mouse monoclonal antibody raised against amino acids 1-216 of cPLA<sub>2</sub> of human origin.

**PRODUCT**

Each vial contains 200 µg IgG<sub>k</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cPLA<sub>2</sub> (4-4B-3C) is available conjugated to agarose (sc-454 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-454 HRP), 200 µg/ml, for WB, IF, ILISA; to either phycocerythrin (sc-454 PE), fluorescein (sc-454 FITC), Alexa Fluor® 488 (sc-454 AF488), Alexa Fluor® 546 (sc-454 AF546), Alexa Fluor® 594 (sc-454 AF594) or Alexa Fluor® 647 (sc-454 AF647), 200 µg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 680 (sc-454 AF680) or Alexa Fluor® 790 (sc-454 AF790), 200 µg/ml, for Near-Infrared (NIR) IF, WB and FCM.

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**APPLICATIONS**

cPLA<sub>2</sub> (4-4B-3C) is recommended for detection of cytosolic PLA<sub>2</sub> of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for cPLA<sub>2</sub> siRNA (h): sc-29280, cPLA<sub>2</sub> siRNA (m): sc-35098, cPLA<sub>2</sub> shRNA Plasmid (h): sc-29280-SH, cPLA<sub>2</sub> shRNA Plasmid (m): sc-35098-SH, cPLA<sub>2</sub> shRNA (h) Lentiviral Particles: sc-29280-V and cPLA<sub>2</sub> shRNA (m) Lentiviral Particles: sc-35098-V.

Molecular Weight of cPLA<sub>2</sub>: 85-114 kDa.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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