SANTA CRUZ BIOTECHNOLOGY, INC.

$cPLA_2$ (m): 293T Lysate: sc-119430

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phospholipase A_2s (PLA_2s) 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_2s 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_2s include both the relatively low molecular weight type I and type II enzymes and the form known as cytoplasmic PLA_2 ($cPLA_2$). $cPLA_2$ is present in the cytosol of various cells and tissues, including platelets, macrophages and monoblasts; preferentially hydrolyzing the sn-2 position of phospholipid molecules, releasing free arachidonate.

REFERENCES

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6. Heinrikson, R.L. and Kezdy, F. 1990. A novel bifunctional mechanism of surface recognition by phospholipase A_2. In Mukherjee, A.B., ed., Biochemistry, Molecular Biology and Physiology of Phospholipase A_2 and its Regulatory Factors. New York: Plenum, 37-47.
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8. Mukherjee, A.B., Cordella-Miele, E. and Miele, L. 1992. Regulation of extracellular phospholipase A_2 activity: implications for inflammatory diseases. DNA Cell Biol. 11: 233-243.

CHROMOSOMAL LOCATION

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

RESEARCH USE

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

PRODUCT

$cPLA_2$ (m): 293T Lysate represents a lysate of mouse $cPLA_2$ transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

$cPLA_2$ (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive $cPLA_2$ antibodies. Recommended use: 10-20 µl per lane.

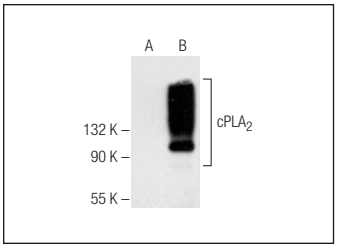
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

$cPLA_2$ (H-12): sc-376636 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse $cPLA_2$ expression in $cPLA_2$ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



$cPLA_2$ (H-12): sc-376636. Western blot analysis of $cPLA_2$ expression in non-transfected: sc-117752 (**A**) and mouse $cPLA_2$ transfected: sc-119430 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.