SANTA CRUZ BIOTECHNOLOGY, INC.

group X $sPLA_2$ (E-4): sc-514324

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phospholipases catalyze the release of fatty acids from phospho-lipids. One member of the phospholipase family, $iPLA_2$, is detected as a membrane-bound protein with multiple smaller isoforms, which result from alternative splicing. Another phopholipase, $sPLA_2$, belongs to a family of secretory phospholipases A2, which represent an expanding family of related enzymes. $sPLA_2$ has both membrane bound and secreted forms that are encoded by a single gene which maps to human chromosome 1p35. $sPLA_2$ is involved in the regulation of phospholipid metabolism in biomembranes and in eicosanoid biosynthesis. Group X $sPLA_2$ mRNA is found in various tissues including the lung, thymus, and spleen, and immunohistochemical analysis reveals its expression in splenic macrophages. Group X $sPLA_2$ is an actively secreted enzyme that maps to human chromosome 16p13.12.

REFERENCES

1. Scott, D.L., et al. 1991. Structures of free and inhibited human secretory phospholipase A_2 from inflammatory exudate. Science 254: 1007-1010.
2. Lehninger, A., et al. 1993. Principles of Biochemistry. New York: Worth Publishers: Second Edition.
3. Cupillard, L., et al. 1997. Cloning, chromosomal mapping, and expression of a novel human secretory phospholipase A_2. J. Biol. Chem. 272: 15745-15752.
4. Kitadokoro, K., et al. 1998. Crystal structure of human secretory phospholipase A_2-IIA complex with the potent indolizine inhibitor 120-1032. J. Biochem. 123: 619-623.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G10 (human) mapping to 16p13.12; Pla2g10 (mouse) mapping to 16 A1.

SOURCE

group X $sPLA_2$ (E-4) is a mouse monoclonal antibody raised against amino acids 81-155 mapping at the C-terminus of group X $sPLA_2$ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

group X $sPLA_2$ (E-4) is available conjugated to agarose (sc-514324 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514324 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514324 PE), fluorescein (sc-514324 FITC), Alexa Fluor® 488 (sc-514324 AF488), Alexa Fluor® 546 (sc-514324 AF546), Alexa Fluor® 594 (sc-514324 AF594) or Alexa Fluor® 647 (sc-514324 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514324 AF680) or Alexa Fluor® 790 (sc-514324 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

group X $sPLA_2$ (E-4) is recommended for detection of group X $sPLA_2$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for group X $sPLA_2$ siRNA (h): sc-43821, group X $sPLA_2$ siRNA (m): sc-60031, group X $sPLA_2$ shRNA Plasmid (h): sc-43821-SH, group X $sPLA_2$ shRNA Plasmid (m): sc-60031-SH, group X $sPLA_2$ shRNA (h) Lentiviral Particles: sc-43821-V and group X $sPLA_2$ shRNA (m) Lentiviral Particles: sc-60031-V.

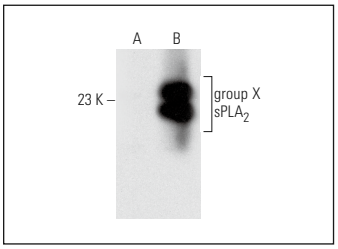
Molecular Weight of group X $sPLA_2$: 14 kDa.

Positive Controls: human group X $sPLA_2$ transfected HEK293T whole cell lysate or AMJ2-C8 whole cell lysate: sc-364366.

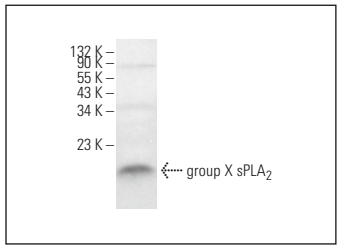
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



group X $sPLA_2$ (E-4): sc-514324. Western blot analysis of group X $sPLA_2$ expression in non-transfected (**A**) and human group X $sPLA_2$ transfected (**B**) HEK293T whole cell lysates.



group X $sPLA_2$ (E-4): sc-514324. Western blot analysis of group X $sPLA_2$ expression in AMJ2-C8 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chen, Y., et al. 2022. PLA2G10 incorporated in exosomes could be diagnostic and prognostic biomarker for non-small cell lung cancer. Clin. Chim. Acta 530: 55-65.

RESEARCH USE

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