SANTA CRUZ BIOTECHNOLOGY, INC.

group XIIA $sPLA_2$ (E-9): sc-514423

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Secreted phospholipases A_2 ($sPLA_2$s) form a large family of structurally related enzymes, which are widespread in nature. Snake venoms have been known for decades to contain a tremendous molecular diversity of $sPLA_2$s, which can exert a myriad of toxic and pharmacological effects. Secreted phospholipase A_2 enzymes liberate arachidonic acid from phospholipids for production of eicosanoids and exert a variety of physiologic and pathologic effects. Group XII $sPLA_2$s, such as group XIIA $sPLA_2$, have relatively low specific activity and are structurally and functionally distinct from other $sPLA_2$s. Group XIIA $sPLA_2$, also known as GXII, ROSSY, PLA2G12 or PLA2G12A, is a 189 amino acid secreted protein that localizes to the cytoplasm. Belonging to the phospholipase A_2 family, group XIIA $sPLA_2$ is abundantly expressed in heart, skeletal muscle, kidney, liver and pancreas.

REFERENCES

1. Lambeau, G. and Lazdunski, M. 1999. Receptors for a growing family of secreted phospholipases A_2. Trends Pharmacol. Sci. 20: 162-170.
2. Valentin, E. and Lambeau, G. 2000. Increasing molecular diversity of secreted phospholipases A_2 and their receptors and binding proteins. Biochim. Biophys. Acta 1488: 59-70.
3. Hanasaki, K. and Arita, H. 2002. Phospholipase A_2 receptor: a regulator of biological functions of secretory phospholipase A_2. Prostaglandins Other Lipid Mediat. 68-69: 71-82.
4. Hanasaki, K. 2004. Mammalian phospholipase A_2: phospholipase A_2 receptor. Biol. Pharm. Bull. 27: 1165-1167.
5. Huhtinen, H.T., et al. 2006. Antibacterial effects of human group IIA and group XIIA phospholipase A_2 against Helicobacter pylori *in vitro.* APMIS 114: 127-130.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G12A (human) mapping to 4q25; Pla2g12a (mouse) mapping to 3 G3.

SOURCE

group XIIA $sPLA_2$ (E-9) is a mouse monoclonal antibody raised against amino acids 111-170 mapping near the C-terminus of group XIIA $sPLA_2$ of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

group XIIA sPLA2 (E-9) is available conjugated to agarose (sc-514423 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514423 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514423 PE), fluorescein (sc-514423 FITC), Alexa Fluor® 488 (sc-514423 AF488), Alexa Fluor® 546 (sc-514423 AF546), Alexa Fluor® 594 (sc-514423 AF594) or Alexa Fluor® 647 (sc-514423 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514423 AF680) or Alexa Fluor® 790 (sc-514423 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

group XIIA $sPLA_2$ (E-9) is recommended for detection of group XIIA $sPLA_2$ 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 XIIA $sPLA_2$ siRNA (h): sc-89136, group XIIA $sPLA_2$ siRNA (m): sc-105419, group XIIA $sPLA_2$ shRNA Plasmid (h): sc-89136-SH, group XIIA $sPLA_2$ shRNA Plasmid (m): sc-105419-SH, group XIIA $sPLA_2$ shRNA (h) Lentiviral Particles: sc-89136-V and group XIIA $sPLA_2$ shRNA (m) Lentiviral Particles: sc-105419-V.

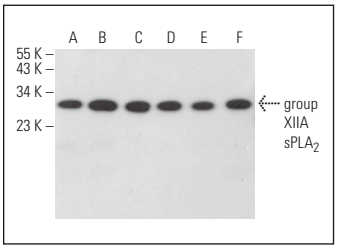
Molecular Weight of group XIIA $sPLA_2$: 21 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, A-673 cell lysate: sc-2414 or C2C12 whole cell lysate: sc-364188.

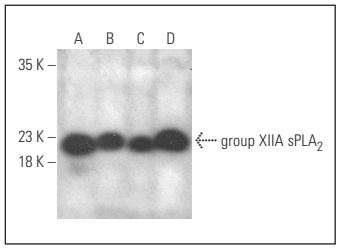
RECOMMENDED SUPPORT REAGENTS

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 XIIA $sPLA_2$ (E-9): sc-514423. Western blot analysis of group XIIA $sPLA_2$ expression in BC_3H1 (**A**), SJRH30 (**B**), A-673 (**C**), C2C12 (**D**), MIA PaCa-2 (**E**) and KNRK (**F**) whole cell lysates.



group XIIA $sPLA_2$ (E-9) HRP: sc-514423 HRP. Direct western blot analysis of group XIIA $sPLA_2$ expression in A-673 (**A**), C2C12 (**B**), MIA PaCa-2 (**C**) and KNRK (**D**) whole cell lysates.

STORAGE

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

RESEARCH USE

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