

group IVF sPLA₂ (C-6): sc-398729

BACKGROUND

Phospholipase A₂s (PLA₂s) 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, PLA₂s release fatty acids. One such fatty acid, arachidonic acid, generates the substrates for the initiation of the arachidonic acid cascade that produces various eicosanoids, many of which are potent mediators of inflammation. Group IVF sPLA₂, also known as PLA2G4FZ (cytosolic phospholipase A₂ ζ or PLA2G4F (phospholipase A₂, group IVF)), is an 849 amino acid calcium-dependent phospholipase that contains one PLA2c domain and a C2 domain. Existing as three alternatively spliced isoforms, group IVF sPLA₂ has preferential enzyme activity for phosphatidylethanolamine over phosphatidylcholine.

REFERENCES

1. Mavoungou, E., et al. 1997. HIV and SIV envelope glycoproteins induce phospholipase A₂ activation in human and macaque lymphocytes. *J. Acquir. Immune Defic. Syndr. Hum. Retrovirol.* 16: 1-9.
2. Schröder, H.C., et al. 1998. Mechanisms of prionSc- and HIV-1 gp120 induced neuronal cell death. *Neurotoxicology* 19: 683-688.
3. Ishizaki, J., et al. 1999. Cloning and characterization of novel mouse and human secretory phospholipase A₂s. *J. Biol. Chem.* 274: 24973-24979.
4. Leslie, C.C. 2004. Regulation of the specific release of arachidonic acid by cytosolic phospholipase A₂. *Prostaglandins Leukot. Essent. Fatty Acids* 70: 373-376.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G4F (human) mapping to 15q15.1; Pla2g4f (mouse) mapping to 2 E5.

SOURCE

group IVF sPLA₂ (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 794-821 near the C-terminus of group IVF sPLA₂ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

group IVF sPLA₂ (C-6) is available conjugated to agarose (sc-398729 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398729 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398729 PE), fluorescein (sc-398729 FITC), Alexa Fluor® 488 (sc-398729 AF488), Alexa Fluor® 546 (sc-398729 AF546), Alexa Fluor® 594 (sc-398729 AF594) or Alexa Fluor® 647 (sc-398729 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398729 AF680) or Alexa Fluor® 790 (sc-398729 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398729 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

group IVF sPLA₂ (C-6) is recommended for detection of group IVF sPLA₂ 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 IVF sPLA₂ siRNA (h): sc-90284, group IVF sPLA₂ siRNA (m): sc-145778, group IVF sPLA₂ shRNA Plasmid (h): sc-90284-SH, group IVF sPLA₂ shRNA Plasmid (m): sc-145778-SH, group IVF sPLA₂ shRNA (h) Lentiviral Particles: sc-90284-V and group IVF sPLA₂ shRNA (m) Lentiviral Particles: sc-145778-V.

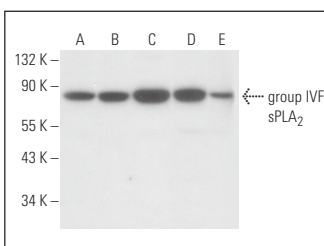
Molecular Weight of group IVF sPLA₂: 95 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Raji whole cell lysate: sc-364236 or AMJ2-C8 whole cell lysate: sc-364366.

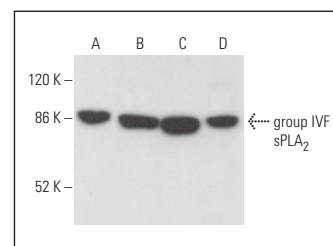
RECOMMENDED SUPPORT REAGENTS

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 IVF sPLA₂ (C-6): sc-398729. Western blot analysis of group IVF sPLA₂ expression in KNRK (A), WI-38 (B), Raji (C), AMJ2-C8 (D) and IB4 (E) whole cell lysates.



group IVF sPLA₂ (C-6): sc-398729. Western blot analysis of group IVF sPLA₂ expression in Raji (A), HL-60 (B), MM-142 (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.

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