

group IVF sPLA₂ (G-16): sc-160401

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 IVD sPLA₂, also known as PLA₂G4D (phospholipase A₂ group IVD) or cPLA₂-δ (cytosolic phospholipase A₂ δ), is a 818 amino acid calcium-dependent phospholipase that contains one PLA₂c domain, a C2 domain and exists as two alternatively spliced isoforms. A peripheral membrane protein, group IVD sPLA₂ is suggested to play a role in the inflammation of psoriatic lesions, and catalyzes the reaction of phosphatidylcholine and water into 1-acylglycerophosphocholine and carboxylate.

REFERENCES

- Mavoungou, E., Georges-Courbot, M.C., Poaty-Mavoungou, V., Nguyen, H.T., Yaba, P., Delicat, A., Georges, A.J. and Russo-Marie, F. 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.
- Schröder, H.C., Perovic, S., Kavsan, V., Ushijima, H. and Müller, W.E. 1998. Mechanisms of prionSc- and HIV-1 gp120 induced neuronal cell death. *Neurotoxicology* 19: 683-688.
- Ishizaki, J., Suzuki, N., Higashino, K., Yokota, Y., Ono, T., Kawamoto, K., Fujii, N., Arita, H. and Hanasaki, K. 1999. Cloning and characterization of novel mouse and human secretory phospholipase A₂s. *J. Biol. Chem.* 274: 24973-24979.
- Chiba, H., Michibata, H., Wakimoto, K., Seishima, M., Kawasaki, S., Okubo, K., Mitsui, H., Torii, H. and Imai, Y. 2004. Cloning of a gene for a novel epithelium-specific cytosolic phospholipase A₂, cPLA₂δ, induced in psoriatic skin. *J. Biol. Chem.* 279: 12890-12897.
- Tao, R., Yu, Y., Zhang, X., Shi, J., Guo, Y., Wang, C., Han, B., Xu, Q., Shang, H., Zhang, X., Xie, L., Liu, S., Ju, G., Shen, Y. and Wei, J. 2005. A family based study of the genetic association between the PLA₂G4D gene and schizophrenia. *Prostaglandins Leukot. Essent. Fatty Acids* 73: 419-422.
- Yu, Q., Shi, J.P., Kou, C.G., Meng, X.F. and Yu, Y.Q. 2008. Study on the genetic association between the polymorphism of cytosolic phospholipase A₂ family genes and schizophrenia. *Zhonghua Liu Xing Bing Xue Za Zhi* 29: 173-176.

CHROMOSOMAL LOCATION

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

SOURCE

group IVF sPLA₂ (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of group IVF sPLA₂ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160401 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

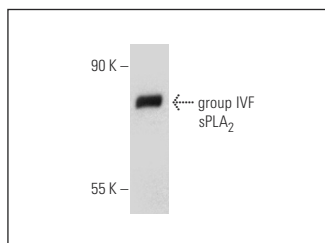
group IVF sPLA₂ (G-16) is recommended for detection of group IVF sPLA₂ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Phospholipase A₂ family members.

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 or WI-38 whole cell lysate: sc-364260.

DATA



group IVF sPLA₂ (G-16): sc-160401. Western blot analysis of group IVF sPLA₂ expression in WI 38 whole cell lysate.

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.

MONOS
Satisfaction
Guaranteed

Try **group IVF sPLA₂ (C-6): sc-398729**, our highly recommended monoclonal alternative to group IVF sPLA₂ (G-16).