SANTA CRUZ BIOTECHNOLOGY, INC.

group IVF $sPLA_2$ (Q-13): sc-160404

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, many of which are potent mediators of inflammation. Group IVF $sPLA_2$, also known as PLA2G4FZ (cytosolic phospholipase A_2 ζ) or PLA2G4F (phospholipase A_2, group IVF), is an 849 amino acid calcium-dependent phospholipase that contains one PLA_2c domain and a C2 domain. Existing as three alternatively spliced isoforms, group IVF $sPLA_2$ has preferential enzyme activity for phosphatidylethanolamine over phosphatidylcholine.

REFERENCES

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5. Ohto, T., Uozumi, N., Hirabayashi and T., Shimizu, T. 2005. Identification of novel cytosolic phospholipase A_2s, murine cPLA$_2$ δ, ε and ζ, which form a gene cluster with cPLA$_2$ β. J. Biol. Chem. 280: 24576-24583.
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CHROMOSOMAL LOCATION

Genetic locus: Pla2g4f (mouse) mapping to 2 E5.

SOURCE

group IVF $sPLA_2$ (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of group IVF $sPLA_2$ of mouse origin.

STORAGE

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

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-160404 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

group IVF $sPLA_2$ (Q-13) is recommended for detection of group IVF $sPLA_2$ of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 A_2 family members.

group IVF $sPLA_2$ (Q-13) is also recommended for detection of group IVF $sPLA_2$ in additional species, including equine and porcine.

Suitable for use as control antibody for group IVF $sPLA_2$ siRNA (m): sc-145778, group IVF $sPLA_2$ shRNA Plasmid (m): sc-145778-SH and group IVF $sPLA_2$ shRNA (m) Lentiviral Particles: sc-145778-V.

Molecular Weight of group IVF $sPLA_2$: 95 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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