

group II sPLA₂ (N-16): sc-14467

BACKGROUND

Phospholipases catalyze the release of fatty acids from phospho-lipids. One member of the phospholipase family, iPLA₂, is detected as a membrane-bound protein with multiple smaller isoforms, which result from alternative splicing. Two isoforms, ankyrin- iPLA₂-1 and 2, lack the catalytic domain and are thought to be involved in the negative regulation of iPLA₂ activity. The SH-iPLA₂ isoform is cytoplasmic-ally localized. The human gene encoding iPLA₂ maps to chromosome 22q13.1. Another phospholipase, sPLA₂, belongs to a family of secretory phospholipases A₂, which represent an expanding family of related enzymes. sPLA₂ has both membrane bound and secreted forms that are encoded by a single gene. sPLA₂ is involved in the regulation of phospholipid metabolism in biomembranes and in eicosanoid biosynthesis.

REFERENCES

1. Scott, D.L., et al. 1991. Structures of free and inhibited human secretory phospholipase A₂ from inflammatory exudate. *Science* 254: 1007-1010.
2. Lehninger, A., et al. 1993. Principles of Biochemistry Second Edition. New York: Worth Publishers.
3. Cupillard, L., et al. 1997. Cloning, chromosomal mapping, and expression of a novel human secretory phospholipase A₂. *J. Biol. Chem.* 272: 15745-15752.
4. Kitadokoro, K., et al. 1998. Crystal structure of human secretory phospholipase A₂-IIA complex with the potent indolizine inhibitor 120-1032. *J. Biochem.* 123: 619-623.
5. Ma, Z., et al. 1999. Human pancreatic islets express mRNA species encoding two distinct catalytically active isoforms of group VI phospholipase A₂ (iPLA₂) that arise from an exon-skipping mechanism of alternative splicing of the transcript from the iPLA₂ gene on chromosome 22q13.1. *J. Biol. Chem.* 274: 9607-9616.
6. Larsson-Forsell, P.K., et al. 1999. The human calcium-independent phospholipase A₂ gene multiple enzymes with distinct properties from a single gene. *Eur. J. Biochem.* 262: 575-585.

CHROMOSOMAL LOCATION

Genetic locus: PLA₂G2A (human) mapping to 1p36.13; Pla₂g2a (mouse) mapping to 4 D3.

SOURCE

group II sPLA₂ (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of group II 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-14467 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

group II sPLA₂ (N-16) is recommended for detection of group II secretory PLA₂ and, to a lesser extent, cytosolic PLA₂ of human and, to a lesser extent, mouse and rat 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).

group II sPLA₂ (N-16) is also recommended for detection of group II secretory PLA₂ and, to a lesser extent, cytosolic PLA₂ in additional species, including bovine.

Suitable for use as control antibody for group II sPLA₂ siRNA (h): sc-43817, group II sPLA₂ siRNA (m): sc-43818, group II sPLA₂ shRNA Plasmid (h): sc-43817-SH, group II sPLA₂ shRNA Plasmid (m): sc-43818-SH, group II sPLA₂ shRNA (h) Lentiviral Particles: sc-43817-V and group II sPLA₂ shRNA (m) Lentiviral Particles: sc-43818-V.

Molecular Weight of group II sPLA₂: 14 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.

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.

PROTOCOLS

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


 MONOS
 Satisfaction
 Guaranteed

Try **group II sPLA₂ (SCACC353): sc-58363**, our highly recommended monoclonal alternative to group II sPLA₂ (N-16).