

group VI iPLA₂ (P-19): sc-14462

BACKGROUND

Phospholipases catalyze the release of fatty acids from phospholipids. 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 cytoplasmically 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.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G6 (human) mapping to 22q13.1; Pla2g6 (mouse) mapping to 15 E1.

SOURCE

group VI iPLA₂ (P-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of group VI iPLA₂ 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-14462 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

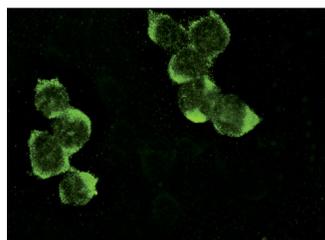
group VI iPLA₂ (P-19) is recommended for detection of calcium-independent PLA₂ of mouse, human and, to a lesser extent, rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

group VI iPLA₂ (P-19) is also recommended for detection of calcium-independent PLA₂ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for group VI iPLA₂ siRNA (h): sc-43819, group VI iPLA₂ siRNA (m): sc-43820, group VI iPLA₂ siRNA (r): sc-270117, group VI iPLA₂ shRNA Plasmid (h): sc-43819-SH, group VI iPLA₂ shRNA Plasmid (m): sc-43820-SH, group VI iPLA₂ shRNA Plasmid (r): sc-270117-SH, group VI iPLA₂ shRNA (h) Lentiviral Particles: sc-43819-V, group VI iPLA₂ shRNA (m) Lentiviral Particles: sc-43820-V and group VI iPLA₂ shRNA (r) Lentiviral Particles: sc-270117-V.

Molecular Weight of group VI iPLA₂: 88 kDa.

DATA



group VI iPLA₂ (P-19): sc-14462. Immunofluorescence staining of methanol-fixed SK-N-MC cells showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Mangikian, A.D., et al. 2004. Cell cycle dependence of group VIA calcium-independent phospholipase A₂ activity. *J. Biol. Chem.* 279: 52881-52892.
2. Kolko, M., et al. 2009. Calcium-independent phospholipase A₂ regulates retinal pigment epithelium proliferation and may be important in the pathogenesis of retinal diseases. *Exp. Eye Res.* 89: 383-391.
3. Ben-Tekaya, H., et al. 2010. ADP ribosylation factors 1 and 4 and group VIA phospholipase A₂ regulate morphology and intraorganellar traffic in the endoplasmic reticulum-Golgi intermediate compartment. *Mol. Biol. Cell* 21: 4130-4140.

RESEARCH USE

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


 MONOS
Satisfaction
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Try **group VI iPLA₂ (D-4): sc-376563** or **group VI iPLA₂ (E-8): sc-166616**, our highly recommended monoclonal alternatives to group VI iPLA₂ (P-19).