SANTA CRUZ BIOTECHNOLOGY, INC.

group II sPLA$_2$ (H-74): sc-20105

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phospholipases catalyze the release of fatty acids from phospho-lipids. One member of the phospholipase family, iPLA$_2$, is detected as a membrane-bound protein with multiple smaller isoforms, which result from alternative splicing. Two isoforms, ankyrin- iPLA$_2$-1 and 2, lack the catalytic domain and are thought to be involved in the negative regulation of iPLA$_2$ activity. The SH-iPLA$_2$ isoform is cytoplasmic-ally localized. The human gene encoding iPLA$_2$ maps to chromosome 22q13.1. Another phopholipase, sPLA$_2$, belongs to a family of secretory phospholipases A$_2$, which represent an expanding family of related enzymes. sPLA$_2$ has both membrane bound and secreted forms that are encoded by a single gene. sPLA$_2$ 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 A$_2$ 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 A$_2$. J. Biol. Chem. 272: 15745-15752.
4. Kitadokoro, K., et al. 1998. Crystal structure of human secretory phospholipase A$_2$-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 phospho-lipase A$_2$ (iPLA$_2$) that arise from an exon-skipping mechanism of alternative splicing of the transcript from the iPLA$_2$ gene on chromosome 22q13.1. J. Biol. Chem. 274: 9607-9616.
6. Larsson-Forsell, P.K., et al. 1999. The human calcium-independent phospholipase A$_2$ 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 sPLA$_2$ (H-74) is a rabbit polyclonal antibody raised against amino acids 71-144 mapping at the C-terminus of group II sPLA$_2$ 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.

STORAGE

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

APPLICATIONS

group II sPLA$_2$ (H-74) is recommended for detection of group II secretory PLA$_2$ of human and, to a lesser extent, mouse and rat 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, immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

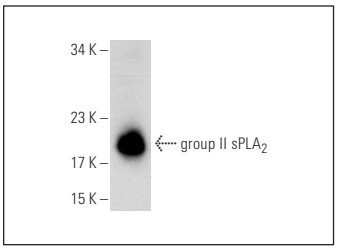
Suitable for use as control antibody for group II sPLA$_2$ siRNA (h): sc-43817, group II sPLA$_2$ shRNA Plasmid (h): sc-43817-SH and group II sPLA$_2$ shRNA (h) Lentiviral Particles: sc-43817-V.

Molecular Weight of group II sPLA$_2$: 14 kDa.

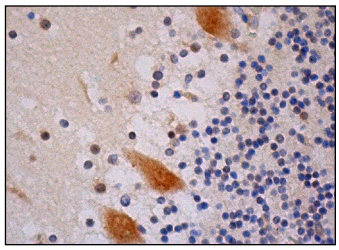
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



group II sPLA$_2$ (H-74): sc-20105. Western blot analysis of group II sPLA$_2$ expression in mouse lung tissue extract.



group II sPLA$_2$ (H-74): sc-20105. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic and nuclear-Purkinje cells and nuclear-subset of cells in molecular and granular layers.

RESEARCH USE

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