SANTA CRUZ BIOTECHNOLOGY, INC.

group VI iPLA$_2$ (h): 293T Lysate: sc-116309

BACKGROUND

Phospholipases catalyze the release of fatty acids from phospholipids. 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 cytoplasmically localized. The human gene encoding iPLA$_2$ maps to chromosome 22q13.1. Another phopholipase, iPLA$_2$, belongs to a family of secretory phospholipases A$_2$, which represent an expanding family of related enzymes. iPLA$_2$ has both membrane bound and secreted forms that are encoded by a single gene. iPLA$_2$ 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 phospholipase 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: PLA2G6 (human) mapping to 22q13.1.

PRODUCT

group VI iPLA$_2$ (h): 293T Lysate represents a lysate of human group VI iPLA$_2$ transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

group VI iPLA$_2$ (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive group VI iPLA$_2$ antibodies. Recommended use: 10-20 µl per lane.

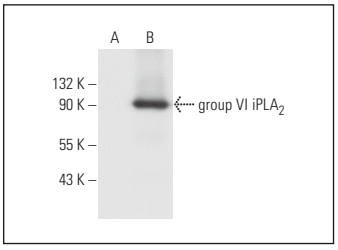
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

group VI iPLA$_2$ (A-10): sc-137189 is recommended as a positive control antibody for Western Blot analysis of enhanced human group VI iPLA$_2$ expression in group VI iPLA$_2$ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

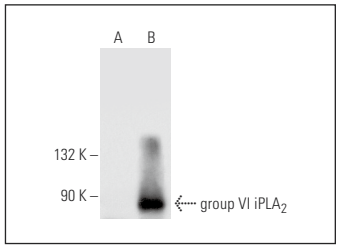
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



group VI iPLA$_2$ (A-10): sc-137189. Western blot analysis of group VI iPLA$_2$ expression in non-transfected: sc-117752 (**A**) and human group VI iPLA$_2$ transfected: sc-116309 (**B**) 293T whole cell lysates.



group VI iPLA$_2$ (E-8): sc-166616. Western blot analysis of group VI iPLA$_2$ expression in non-transfected: sc-117752 (**A**) and human group VI iPLA$_2$ transfected: sc-116309 (**B**) 293T whole cell lysates.

RESEARCH USE

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