

group II sPLA₂ (G-15): sc-14468

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.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G2A (human) mapping to 1p36.13, PLA2G4A (human) mapping to 1q31.1; Pla2g2a (mouse) mapping to 4 D3, Pla2g4a (mouse) mapping to 1 G1.

SOURCE

group II sPLA₂ (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-14468 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

group II sPLA₂ (G-15) is recommended for detection of group II sPLA₂ and, to a lesser extent, cPLA₂ of mouse, rat and human 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).

group II sPLA₂ (G-15) is also recommended for detection of group II sPLA₂ and, to a lesser extent, cPLA₂ in additional species, including bovine and avian.

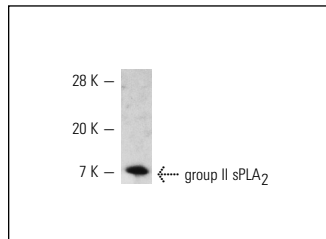
Molecular Weight of group II sPLA₂: 14 kDa.

Positive Controls: mouse lung extract: sc-2390.

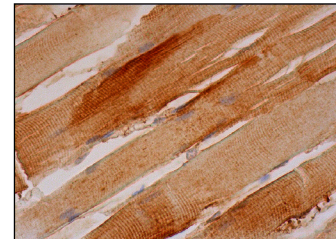
STORAGE

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

DATA



group II sPLA₂ (G-15): sc-14468. Western blot analysis of human recombinant PLA₂ Type IIa.



group II sPLA₂ (G-15): sc-14468. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Farnbacher, M.J., et al. 2005. Composition of clogging material in pancreatic endoprostheses. *Gastrointest. Endosc.* 61: 862-866.
2. Okamoto, R., et al. 2009. Requirement of Notch activation during regeneration of the intestinal epithelia. *Am. J. Physiol. Gastrointest. Liver Physiol.* 296: G23-G35.
3. Murayama, M., et al. 2009. Musashi-1 suppresses expression of Paneth cell-specific genes in human intestinal epithelial cells. *J. Gastroenterol.* 44: 173-182.
4. Hickey, O.T., et al. 2010. Determinants of outcome for patients undergoing lumbar discectomy: a pilot study. *Eur. J. Anaesthesiol.* 27: 696-701.
5. Omata, J., et al. 2013. Parenteral nutrition suppresses the bactericidal response of the small intestine. *Surgery* 153: 17-24.

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
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Try **group II sPLA₂ (SCACC353): sc-58363**, our highly recommended monoclonal alternative to group II sPLA₂ (G-15).