

group XIIA sPLA₂ (SP-34): sc-134352

BACKGROUND

Secreted phospholipases A₂ (sPLA₂s) form a large family of structurally related enzymes, which are widespread in nature. Snake venoms have been known for decades to contain a tremendous molecular diversity of sPLA₂s, which can exert a myriad of toxic and pharmacological effects. Secreted phospholipase A₂ enzymes liberate arachidonic acid from phospholipids for production of eicosanoids and exert a variety of physiologic and pathologic effects. Group XII sPLA₂s, such as group XIIA sPLA₂, have relatively low specific activity and are structurally and functionally distinct from other sPLA₂s. Group XIIA sPLA₂, also known as GXII, ROSSY, PLA2G12 or PLA2G12A, is a 189 amino acid secreted protein that localizes to the cytoplasm. Belonging to the phospholipase A₂ family, group XIIA sPLA₂ is abundantly expressed in heart, skeletal muscle, kidney, liver and pancreas.

REFERENCES

- Lambeau, G. and Lazdunski, M. 1999. Receptors for a growing family of secreted phospholipases A₂. *Trends Pharmacol. Sci.* 20: 162-170.
- Valentin, E. and Lambeau, G. 2000. Increasing molecular diversity of secreted phospholipases A₂ and their receptors and binding proteins. *Biochim. Biophys. Acta* 1488: 59-70.
- Hanasaki, K. and Arita, H. 2002. Phospholipase A₂ receptor: a regulator of biological functions of secretory phospholipase A₂. *Prostaglandins Other Lipid Mediat.* 68-69: 71-82.
- Hanasaki, K. 2004. Mammalian phospholipase A₂: phospholipase A₂ receptor. *Biol. Pharm. Bull.* 27: 1165-1167.
- Huhtinen, H.T., et al. 2006. Antibacterial effects of human group IIA and group XIIA phospholipase A₂ against *Helicobacter pylori* *in vitro*. *APMIS* 114: 127-130.
- Ni, Z., et al. 2006. Intracellular actions of group IIA secreted phospholipase A₂ and group IVA cytosolic phospholipase A₂ contribute to arachidonic acid release and prostaglandin production in rat gastric mucosal cells and transfected human embryonic kidney cells. *J. Biol. Chem.* 281: 16245-16255.
- Hallstrand, T.S., et al. 2007. Secreted phospholipase A₂ group X overexpression in asthma and bronchial hyperresponsiveness. *Am. J. Respir. Crit. Care Med.* 176: 1072-1078.
- Rouault, M., et al. 2007. Recombinant production and properties of binding of the full set of mouse secreted phospholipases A₂ to the mouse M-type receptor. *Biochemistry* 46: 1647-1662.
- Mounier, C.M., et al. 2008. Distinct expression pattern of the full set of secreted phospholipases A₂ in human colorectal adenocarcinomas: sPLA₂-III as a biomarker candidate. *Br. J. Cancer* 98: 587-595.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G12A (human) mapping to 4q25.

SOURCE

group XIIA sPLA₂ (SP-34) is a mouse monoclonal antibody raised against recombinant group XIIA sPLA₂ protein of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

group XIIA sPLA₂ (SP-34) is recommended for detection of group XIIA sPLA₂ of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for group XIIA sPLA₂ siRNA (h): sc-89136, group XIIA sPLA₂ shRNA Plasmid (h): sc-89136-SH and group XIIA sPLA₂ shRNA (h) Lentiviral Particles: sc-89136-V.

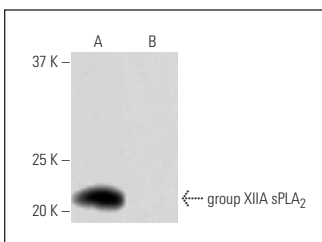
Molecular Weight of group XIIA sPLA₂: 21 kDa.

Positive Controls: human group XIIA sPLA₂ transfected 293T whole cell lysate.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



group XIIA sPLA₂ (SP-34): sc-134352. Western blot analysis of group XIIA sPLA₂ expression in human group XIIA sPLA₂ transfected (A) and non-transfected (B) 293T whole cell lysates.

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 for detailed protocols and support products.