SANTA CRUZ BIOTECHNOLOGY, INC.

HRASLS3 (G-12): sc-168105



BACKGROUND

Phospholipase A2s (PLA2s) constitute a family of esterases that hydrolyze the sn-2-acyl ester bond in glycerophospholipid molecules. These enzymes are generally calcium-dependent and have been found both intra- and extracellularly. By hydrolyzing the sn-2 bond in glycerophospholipids, PLA2s release fatty acids. One such fatty acid, arachidonic acid, generates substrates for the initiation of the arachidonic acid cascade that produces various eicosanoids, many of which are potent mediators of inflammation. HRASLS3 (Ha-RAS like suppressor 3), also known as PLA2G16 (phospholipase A2, group XVI), AdPLA, HRSL3 or HREV107, is a 162 amino acid single-pass membrane protein that belongs to the H-rev107 family. Widely expressed, HRASLS3 exhibits PLA1/2 activity by catalyzing the calcium-independent hydrolysis of acyl groups in various phosphotidylcholines (PCs) and phosphatidylethanolamine (PE). HRASLS3 is induced by IFN-γ and IRF-1.

REFERENCES

- Johnson, L.K., et al. 1990. Localization and evolution of two human phospholipase A2 genes and two related genetic elements. Adv. Exp. Med. Biol. 275: 17-34.
- Tischfield, J.A., et al. 1996. Low-molecular-weight, calcium-dependent phospholipase A2 genes are linked and map to homologous chromosome regions in mouse and human. Genomics 32: 328-333.
- Husmann, K., et al. 1998. Transcriptional and translational downregulation of H-REV107, a class II tumour suppressor gene located on human chromosome 11q11-12. Oncogene 17: 1305-1312.
- Lambeau, G. and Lazdunski, M. 1999. Receptors for a growing family of secreted phospholipases A2. Trends Pharmacol. Sci. 20: 162-170.
- Siegrist, S., et al. 2001. hH-Rev107, a class II tumor suppressor gene, is expressed by post-meiotic testicular germ cells and CIS cells but not by human testicular germ cell tumors. Oncogene 20: 5155-5163.
- Sers, C., et al. 2002. The class II tumour suppressor gene H-REV107-1 is a target of interferon-regulatory factor-1 and is involved in IFNγ-induced cell death in human ovarian carcinoma cells. Oncogene 21: 2829-2839.
- 7. Nazarenko, I., et al. 2007. Mechanisms of the HRSL3 tumor suppressor function in ovarian carcinoma cells. J. Cell Sci. 120: 1393-1404.
- Uyama, T., et al. 2009. Characterization of the human tumor suppressors TIG3 and HRASLS2 as phospholipid-metabolizing enzymes. Biochim. Biophys. Acta 1791: 1114-1124.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G16 (human) mapping to 11q12.3; Pla2g16 (mouse) mapping to 19 A.

SOURCE

HRASLS3 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HRASLS3 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168105 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HRASLS3 (G-12) is recommended for detection of HRASLS3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other HRASLS family members.

HRASLS3 (G-12) is also recommended for detection of HRASLS3 in additional species, including bovine and porcine.

Suitable for use as control antibody for HRASLS3 siRNA (h): sc-96963, HRASLS3 siRNA (m): sc-146077, HRASLS3 shRNA Plasmid (h): sc-96963-SH, HRASLS3 shRNA Plasmid (m): sc-146077-SH, HRASLS3 shRNA (h) Lentiviral Particles: sc-96963-V and HRASLS3 shRNA (m) Lentiviral Particles: sc-146077-V.

Molecular Weight of HRASLS3: 18 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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