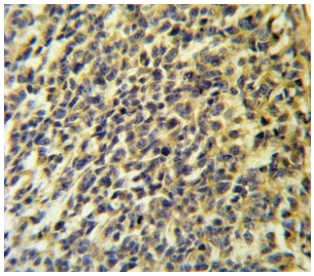
CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody (F55050)

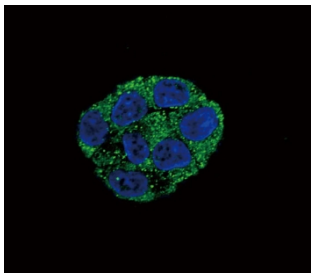
Catalog No.	Formulation	Size
F55050-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F55050-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

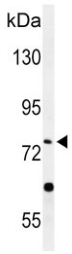
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	O60733
RRID	AB_3754636
Localization	Cell membrane, cytoplasm
Applications	Flow cytometry: 1:10-1:50 (1x10e6 cells) Immunofluorescence: 1:10-1:50 Immunohistochemistry (FFPE): 1:10-1:50 Western blot: 1:500-1:1000
Limitations	This CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody is available for research use only.



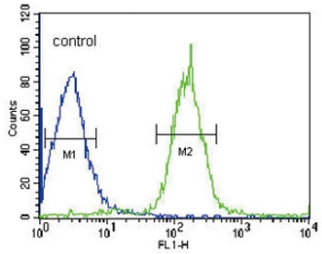
CaI-PLA2 Antibody in Human Testis Carcinoma IHC. Immunohistochemistry testing of CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody in FFPE human testis carcinoma tissue. HIER was performed by steaming tissue sections in pH 6 citrate buffer for 20 min followed by cooling prior to staining. Distinct PLA2G6 immunoreactivity is observed in the tumor tissue with a predominantly cytoplasmic staining pattern.



CaI-PLA2 Antibody in Human HepG2 Liver Cancer Cells IF. Immunofluorescence testing of CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody in human HepG2 liver cancer cells shows green PLA2G6 immunoreactivity with a predominantly cytoplasmic distribution. Nuclei are counterstained with DAPI (blue).



CaI-PLA2 Antibody in Human HepG2 Liver Cancer Cells WB. Western blot testing of CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody in human HepG2 cell lysate. A distinct immunoreactive band is observed between the 72 and 95 kDa molecular weight markers, consistent with the expected PLA2G6 molecular weight of approximately 85-90 kDa.



CaI-PLA2 Antibody in Human HepG2 Liver Cancer Cells FACS. Flow cytometry testing of CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody in human HepG2 cells. The CaI-PLA2 antibody-stained population (green) shows a strong fluorescence shift relative to the isotype control (blue), demonstrating detection of PLA2G6 in HepG2 cells under the tested conditions.

Description

CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody recognizes the protein encoded by the PLA2G6 gene, a member of the group VI calcium-independent phospholipase A2 family. Also known as iPLA2 beta and PNPLA9, this intracellular enzyme hydrolyzes the sn-2 acyl bond of glycerophospholipids, generating free fatty acids and lysophospholipids. Unlike calcium-dependent phospholipase A2 enzymes, PLA2G6 does not require calcium for its catalytic activity. The protein contains ankyrin repeats and a patatin-like catalytic domain with a conserved lipase motif.

CaI-PLA2 participates in membrane phospholipid remodeling and helps maintain membrane lipid homeostasis. Its enzymatic activity can contribute to the release of arachidonic acid and the generation of lipid mediators involved in cellular signaling. PLA2G6 has also been associated with processes including mitochondrial integrity, cell proliferation, apoptosis and inflammatory signaling. These diverse functions make calcium-independent phospholipase A2 relevant to studies of lipid metabolism as well as the cellular consequences of altered membrane composition.

PLA2G6 is particularly important in neuroscience because pathogenic variants in the gene cause a spectrum of disorders collectively known as PLA2G6-associated neurodegeneration (PLAN). These include infantile neuroaxonal dystrophy and forms of neurodegeneration with brain iron accumulation, and PLA2G6 has also been designated PARK14 because of its association with dystonia-parkinsonism and Parkinsonian phenotypes. Disruption of PLA2G6 activity is thought to impair phospholipid homeostasis and membrane integrity, providing an important connection between lipid metabolism and neuronal maintenance.

This rabbit polyclonal antibody was generated against a portion of amino acids 551-580 of human PLA2G6 and recognizes the human protein. The antibody has been evaluated using Western blot, immunohistochemistry, immunofluorescence and flow cytometry. NSJ Bioreagents provides this CaI-PLA2 Antibody for research into phospholipid metabolism, membrane biology, lipid signaling and PLA2G6-associated cellular processes. A Calcium-Independent Phospholipase A2 Antibody can support investigation of this lipid-metabolizing enzyme and its roles in cellular homeostasis and neurological research.

Explore our Signal Transduction Antibodies page for additional reagents targeting proteins involved in lipid signaling, intracellular signaling pathways and regulation of cellular responses.

Application Notes

The stated application concentrations are suggested starting points. Titration of the CaI-PLA2 Antibody / Calcium-Independent Phospholipase A2 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 551-580 from the human protein was used as the immunogen for the CaI-PLA2 antibody.

Storage

Aliquot the PLA2G6 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CaI-PLA2 antibody, Calcium-Independent Phospholipase A2 antibody, iPLA2 beta antibody, iPLA2B antibody, PNPLA9 antibody, PARK14 antibody

Copyright © NSJ Bioreagents. All rights reserved.