

PLBD2 Antibody / Phospholipase B domain-containing protein 2 (FY12967)

Catalog No.	Formulation	Size
FY12967	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

[Bulk quote request](#)

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	Q8NHP8
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 5ug/ml Immunohistochemistry : 2-5ug/ml Immunocytochemistry : 5ug/ml Western Blot : 0.25-0.5ug/ml
Limitations	This PLBD2 antibody is available for research use only.

Description

PLBD2 antibody detects Phospholipase B domain-containing protein 2, a lysosomal enzyme implicated in lipid metabolism and cellular membrane remodeling. The UniProt recommended name is Phospholipase B domain-containing protein 2 (PLBD2). This protein belongs to the phospholipase B-like superfamily, which hydrolyzes both acyl chains of phospholipids to generate free fatty acids and glycerophosphates. Although the enzymatic activity of PLBD2 is still under characterization, evidence suggests roles in lipid turnover, immune defense, and autophagy.

Functionally, PLBD2 antibody recognizes a 516-amino-acid protein localized primarily in lysosomes and the endoplasmic reticulum. PLBD2 contains a conserved phospholipase B-like catalytic domain, which may mediate hydrolysis of membrane phospholipids and lysophospholipids. By modulating lipid composition, PLBD2 contributes to vesicle formation, endosomal trafficking, and lipid droplet metabolism. Its expression is induced by inflammatory cytokines and lipid stress, indicating a regulatory role in lipid homeostasis and immune signaling.

The PLBD2 gene is located on chromosome 12q13.13 and encodes a protein that shares structural features with classical phospholipases but displays distinct substrate specificity. While its catalytic mechanism remains partially defined, studies suggest that PLBD2 may participate in lipid recycling and detoxification under stress conditions. Proteomic analyses have identified PLBD2 as part of the lysosomal proteome, implicating it in membrane degradation and recycling of lipid components.

In immunology, PLBD2 has been linked to macrophage activation and inflammatory signaling. It may function as a lipid-modifying enzyme that influences phagosome maturation and pathogen clearance. Dysregulation of PLBD2 expression has been observed in metabolic disorders and cancers, suggesting that it plays a broader role in cellular metabolism and immune modulation. Elevated PLBD2 levels correlate with altered phospholipid profiles and increased autophagic activity in response to nutrient deprivation.

PLBD2 antibody is employed in lipidomics, immunology, and cell biology studies to investigate lysosomal function and lipid signaling pathways. It is useful for immunoblotting, immunofluorescence, and proteomic profiling of organelle-specific proteins. The enzyme's localization in the lysosomal compartment makes it an important marker for studies of membrane dynamics and lipid degradation. NSJ Bioreagents provides PLBD2 antibody reagents validated for use in research on lipid metabolism, autophagy, and membrane trafficking.

Structurally, PLBD2 contains the conserved GXGXXG motif characteristic of lipid-hydrolyzing enzymes and a putative signal peptide for targeting to intracellular membranes. Its domain organization suggests roles in lipid recognition and hydrolysis. Post-translational regulation may involve glycosylation and proteolytic processing that modulate catalytic efficiency. Ongoing research continues to clarify its enzymatic specificity and physiological relevance in lipid remodeling.

Application Notes

Optimal dilution of the PLBD2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PLBD2 recombinant protein (Position: Q108-Q525) was used as the immunogen for the PLBD2 antibody.

Storage

After reconstitution, the PLBD2 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.