

**Product Name: PLCE1 Rabbit Polyclonal Antibody**  
**Catalog #: APRab16256**



## Summary

<b>Production Name</b>	PLCE1 Rabbit Polyclonal Antibody
<b>Description</b>	Rabbit Polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,ELISA
<b>Reactivity</b>	Human,Rat,Mouse

## Performance

<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Immunogen

<b>Gene Name</b>	PLCE1 KIAA1516 PLCE PPLC
<b>Alternative Names</b>	
<b>Gene ID</b>	51196.0
<b>SwissProt ID</b>	Q9P212.Synthesized peptide derived from part region of human protein

## Application

<b>Dilution Ratio</b>	IHC 1:50-300
<b>Molecular Weight</b>	253kD

## Background

This gene encodes a phospholipase enzyme that catalyzes the hydrolysis of phosphatidylinositol-4,5-bisphosphate to generate two second messengers: inositol 1,4,5-triphosphate (IP3) and diacylglycerol (DAG). These second messengers

**Product Name: PLCE1 Rabbit Polyclonal Antibody**  
**Catalog #: APRab16256**



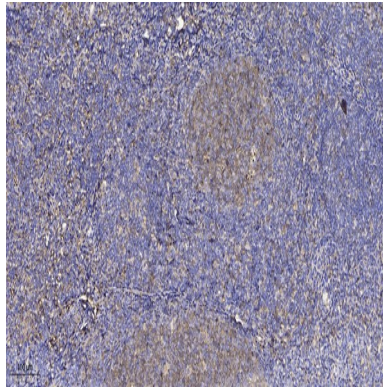
subsequently regulate various processes affecting cell growth, differentiation, and gene expression. This enzyme is regulated by small monomeric GTPases of the Ras and Rho families and by heterotrimeric G proteins. In addition to its phospholipase C catalytic activity, this enzyme has an N-terminal domain with guanine nucleotide exchange (GEF) activity. Mutations in this gene cause early-onset nephrotic syndrome; characterized by proteinuria, edema, and diffuse mesangial sclerosis or focal and segmental glomerulosclerosis. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Sep 2009],catalytic activity:1-phosphatidyl-1D-myo-inositol 4,5-bisphosphate + H(2)O = 1D-myo-inositol 1,4,5-trisphosphate + diacylglycerol.,cofactor:Calcium.,disease:Defects in PLCE1 are the cause of nephrotic syndrome type 3 (NPHS3) [MIM:610725]; also called early-onset nephrotic syndrome type 3. Nephrotic syndrome, a malfunction of the kidney glomerular filter, leads to proteinuria, hypoalbuminemia, edema. End-stage kidney disease is observed in steroid-resistant nephrotic syndrome.,domain:The Ras-associating domain 1 is degenerated and may not bind HRAS. The Ras-associating domain 2 mediates interaction with GTP-bound HRAS, RAP1A, RAP2A and RAP2B and recruitment of HRAS to the cell membrane.,domain:The Ras-GEF domain has a GEF activity towards HRAS and RAP1A. Mediates activation of the mitogen-activated protein kinase pathway.,enzyme regulation:Activated by the heterotrimeric G-protein subunits GNA12, GNA13 and GNB1-GNG2. Activated by HRAS, RAP1A, RHOA, RHOB, RHOC, RRAS and RRAS2. Activated by the G(s)-coupled GPCRs ADRB2, PTGER1 and CHRM3 through cyclic-AMP formation and RAP2B activation. Inhibited by G(i)-coupled GPCRs.,function:The production of the second messenger molecules diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) is mediated by activated phosphatidylinositol-specific phospholipase C enzymes. PLCE1 is a bifunctional enzyme which also regulates small GTPases of the Ras superfamily through its Ras guanine-exchange factor (RasGEF) activity. As an effector of heterotrimeric and small G-protein, it may play a role in cell survival, cell growth, actin organization and T-cell activation.,induction:Overexpressed during heart failure.,similarity:Contains 1 C2 domain.,similarity:Contains 1 PI-PLC X-box domain.,similarity:Contains 1 PI-PLC Y-box domain.,similarity:Contains 1 Ras-GEF domain.,similarity:Contains 2 Ras-associating domains.,subcellular location:Recruited to plasma membrane by activated HRAS and RAP2. Recruited to perinuclear membrane by activated RAP1A. Isoform 1 and isoform 2 associates with Golgi membranes.,subunit:Interacts with RHOA (By similarity). Interacts with IQGAP1, HRAS, RAP1A, RAP2A, RAP2B and RRAS.,tissue specificity:Widely expressed. Isoform 1 is broadly expressed and only absent in peripheral blood leukocytes. Isoform 2 is specifically expressed in placenta, lung and spleen.,

## Research Area

Inositol phosphate metabolism;Calcium;Phosphatidylinositol signaling system;

## Image Data

**Product Name: PLCE1 Rabbit Polyclonal Antibody**  
**Catalog #: APRab16256**



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200 (4° overnight) . 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200 (room temperature, 30min) .

**Note**

For research use only.