

PLCE1 Rabbit pAb

CatalogNo: YN1789

Key Features

Host Species

- Rabbit

Reactivity

- Human,Rat,Mouse,

Applications

- IHC,IF

MW

- 253kD (Observed)

Isotype

- IgG

Recommended Dilution Ratios

IHC 1:50-300

IF 1:50-200

Storage

Storage* -15°C to -25°C/1 year(Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, and 0.02% sodium azide.

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized peptide derived from part region of human protein

Specificity PLCE1 Polyclonal Antibody detects endogenous levels of protein.

Target Information

Gene name PLCE1 KIAA1516 PLCE PPLC

Protein Name 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase epsilon-1 (Pancreas-enriched phospholipase C) (Phosphoinositide phospholipase C-epsilon-1) (Phospholipase C-epsilon-1) (PLC-epsilon-1)

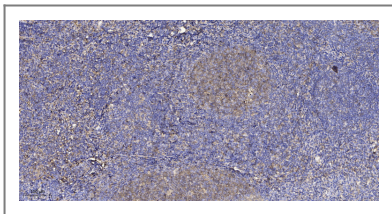
Organism	Gene ID	UniProt ID
Human	51196 ;	Q9P212 ;
Mouse		Q8K4S1 ;
Rat		Q99P84 ;

Cellular Localization Cytoplasm, cytosol. Cell membrane. Golgi apparatus membrane. Cell projection, lamellipodium . 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.

Tissue specificity Widely expressed. Expressed in podocytes (PubMed:29058690). ; [Isoform 1]: Broadly expressed and only absent in peripheral blood leukocytes. ; [Isoform 2]: Specifically expressed in placenta, lung and spleen.

Function 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.,

Validation Data



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).

| Contact information

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PLCE1 Rabbit pAb

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