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PLD4 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50835

Product Information

Application	WB
Primary Accession	Q96BZ4
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	55626

Additional Information

Gene ID	122618
Other Names	Phospholipase D4, PLD 4, Choline phosphatase 4, Phosphatidylcholine-hydrolyzing phospholipase D4, PLD4, C14orf175
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

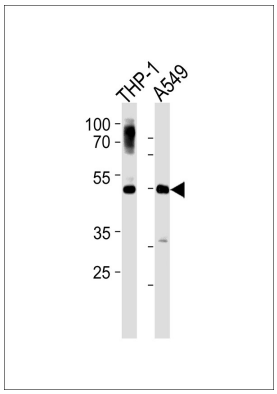
Name	PLD4 {ECO:0000303|PubMed:30111894, ECO:0000312|HGNC:HGNC:23792}
Function	Lysosomal 5'->3' exonuclease that functions in nucleic-acid sensing by immune cells. Hydrolyzes phosphodiester bond in single- stranded RNA and DNA molecules, with a higher efficiency for molecules with 5' uridine and guanosine residues. It can stall at certain sites and does not necessarily proceed to complete exonucleolytic degradation, thereby producing nucleoside 3'-monophosphates but also 5'-end 5'-hydroxy deoxyribonucleotide/ribonucleotide fragments (PubMed:30111894, PubMed:34620855, PubMed:38537643, PubMed:38697119, PubMed:40931063). Through the processing of self and exogenous RNA and DNA molecules, provides molecular signals to toll-like receptors (TLRs) in innate immunity. Partially redundant with PLD3, it cooperates with the RNase T2/RNASET2 to generate 2',3'-cGMP and cytidine-rich RNA fragments that occupy the two TLR7 ligand-binding pockets, to trigger receptor activation and signaling (PubMed:38697119). Can exert polynucleotide phosphatase activity toward 5'-phosphorylated single- stranded DNA substrates although at a slow rate (PubMed:38537643). Could play a role in phagocytosis of activated microglia (By similarity).

Cellular Location	Lysosome. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q8BG07}; Single- pass type II membrane protein {ECO:0000250|UniProtKB:Q8BG07}. Golgi apparatus, trans-Golgi network membrane {ECO:0000250|UniProtKB:Q8BG07}; Single-pass type II membrane protein {ECO:0000250|UniProtKB:Q8BG07} Nucleus {ECO:0000250|UniProtKB:Q8BG07}. Early endosome {ECO:0000250|UniProtKB:Q8BG07}. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:Q8BG07}. Note=Activation of microglia induces translocation of PLD4 from the nucleus to the phagosomes {ECO:0000250|UniProtKB:Q8BG07}
Tissue Location	Expressed in plasmacytoid dendritic cells and monocytes (at protein level).

References

Clark H.F.,et al.Genome Res. 13:2265-2270(2003).

Images



Western blot analysis of lysates from THP-1,A549 cell line (from left to right),using PLD4 Antibody, was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysates at 35ug per lane.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.