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PC-PLD4 Polyclonal Antibody

Catalog # AP71805

Product Information

Application	WB, IHC-P
Primary Accession	Q96BZ4
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55626

Additional Information

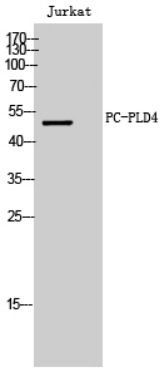
Gene ID	122618
Other Names	PLD4; C14orf175; Phospholipase D4; PLD 4; Choline phosphatase 4; Phosphatidylcholine-hydrolyzing phospholipase D4
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
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).

Images



Western Blot analysis of Jurkat cells using PC-PLD4 Polyclonal Antibody

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