10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-PLC beta 3 (Phospho-S537) Antibody

Catalog # AP51634

Product Information

Application	WB, IHC
Primary Accession	Q01970
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	138799

Additional Information

Gene ID	5331
Other Names	1-phosphatidylinositol 4, 5-bisphosphate phosphodiesterase beta-3; Phosphoinositide phospholipase C-beta-3; Phospholipase C-beta-3; PLC-beta-3
Target/Specificity	KLH-conjugated synthetic phosphopeptide corresponding to residues surrounding S537 of human PLC beta 3 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

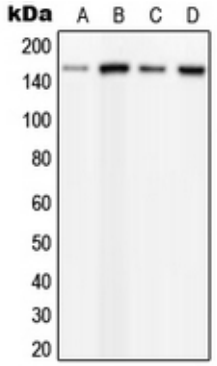
Name	PLCB3 {ECO:0000303|PubMed:20966218, ECO:0000312|EMBL:AAA77683.1}
Function	Catalyzes the production of the second messenger molecules diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) (PubMed:20966218, PubMed:29122926, PubMed:37172014, PubMed:37991948, PubMed:9188725). Key transducer of G protein-coupled receptor signaling: activated by G(q)/G(11) G alpha proteins downstream of G protein-coupled receptors activation (PubMed:20966218, PubMed:37991948). In neutrophils, participates in a phospholipase C- activating N-formyl peptide-activated GPCR (G protein-coupled receptor) signaling pathway by promoting RASGRP4 activation by DAG, to promote neutrophil functional responses (By similarity). In conjunction with OSBPL2, it may contribute to the control of keratinocyte proliferation and differentiation, probably through the regulation of the ERK pathway and the cell cycle (PubMed:38701954).

Cellular Location	Cytoplasm. Membrane; Peripheral membrane protein; Cytoplasmic side. Nucleus {ECO:0000250|UniProtKB:P51432} Note=An heterotetramer composed of GNG2 and GNB1 increases the concentration of PLCB3 on the membrane surface, where its substrate PIP2 resides, by orienting its catalytic site

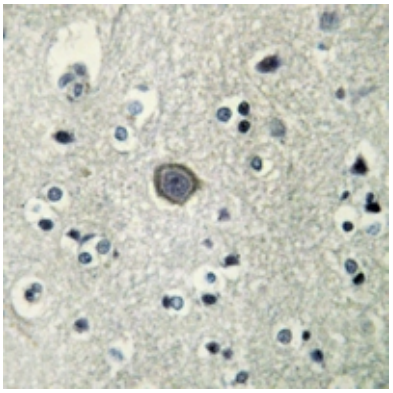
References

Mazuruk K.,et al.Biochem. Biophys. Res. Commun. 212:190-195(1995).
Lagercrantz J.,et al.Genomics 26:467-472(1995).
Taylor T.D.,et al.Nature 440:497-500(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Carozzi A.J.,et al.Eur. J. Biochem. 210:521-529(1992).

Images



Western blot analysis of PLC beta 3 (Phospho-S537) expression in HeLa PMA-treated (A), MCF7 UV-treated (B), mouse brain (C), rat brain (D) whole cell lysates. (Predicted band size: 138 kD; Observed band size: 150 kD)



Immunohistochemical analysis of PLC beta 3 (Phospho-S537) staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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