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Mouse Monoclonal Antibody to PLCG1

Purified Mouse Monoclonal Antibody
Catalog # AO2451a

Product Information

Application	WB, FC, E
Primary Accession	P19174
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	2F3D11
Isotype	Mouse IgG2a
Calculated MW	148532
Description	The protein encoded by this gene catalyzes the formation of inositol 1,4,5-trisphosphate and diacylglycerol from phosphatidylinositol 4,5-bisphosphate. This reaction uses calcium as a cofactor and plays an important role in the intracellular transduction of receptor-mediated tyrosine kinase activators. For example, when activated by SRC, the encoded protein causes the Ras guanine nucleotide exchange factor RasGRP1 to translocate to the Golgi, where it activates Ras. Also, this protein has been shown to be a major substrate for heparin-binding growth factor 1 (acidic fibroblast growth factor)-activated tyrosine kinase. Two transcript variants encoding different isoforms have been found for this gene.;
Immunogen	Purified recombinant fragment of human PLCG1 (AA: 39-181) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; FCM: 1/200 - 1/400

Additional Information

Gene ID	5335
Other Names	PLC1; NCKAP3; PLC-II; PLC148; PLCgamma1
Dilution	WB~~1:1000 FC~~1:10~50 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to PLCG1 is for research use only and not for use in diagnostic or therapeutic procedures.

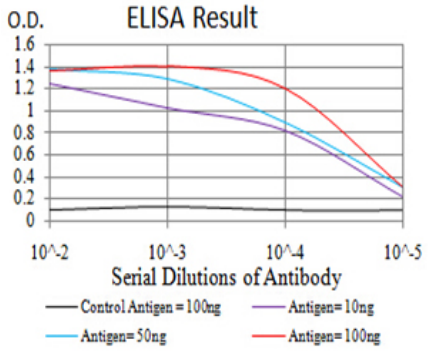
Protein Information

Name	PLCG1 (HGNC:9065)
Synonyms	PLC1
Function	Mediates the production of the second messenger molecules diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3). Plays an important role in the regulation of intracellular signaling cascades. Becomes activated in response to ligand-mediated activation of receptor-type tyrosine kinases, such as PDGFRA, PDGFRB, EGFR, FGFR1, FGFR2, FGFR3 and FGFR4 (By similarity). Plays a role in actin reorganization and cell migration (PubMed:17229814). Guanine nucleotide exchange factor that binds the GTPase DNM1 and catalyzes the dissociation of GDP, allowing a GTP molecule to bind in its place, therefore enhancing DNM1-dependent endocytosis (By similarity).
Cellular Location	Cell projection, lamellipodium. Cell projection, ruffle. Note=Rapidly redistributed to ruffles and lamellipodia structures in response to epidermal growth factor (EGF) treatment.

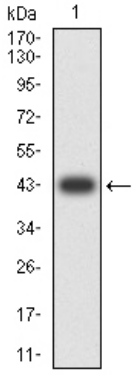
References

1.Cancer Discov. 2014 Apr;4(4):OF13. ; 2.Adv Biol Regul. 2013 Jan;53(1):51-62.;

Images

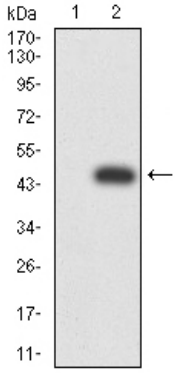


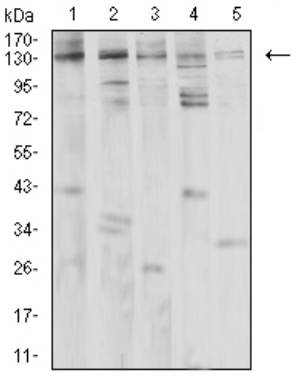
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



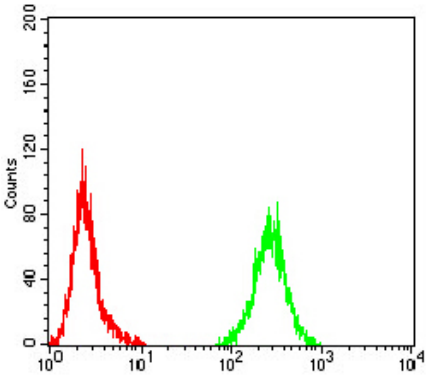
Western blot analysis using PLCG1 mAb against human PLCG1 (AA: 39-181) recombinant protein. (Expected MW is 43 kDa)

Western blot analysis using PLCG1 mAb against HEK293 (1) and PLCG1 (AA: 39-181)-hIgGFc transfected HEK293 (2) cell lysate.





Western blot analysis using PLCG1 mouse mAb against Jurkat (1), K562 (2), A431 (3), Hela (4), and PC-12 (5) cell lysate.



Flow cytometric analysis of Hela cells using PLCG1 mouse mAb (green) and negative control (red).