

**Mouse Monoclonal Antibody to PLCG1**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO2451a****Specification**

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**Mouse Monoclonal Antibody to PLCG1 - Product Information**

Application	<b>E, WB, FC</b>
Primary Accession	<a href="#">P19174</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>Mouse IgG2a</b>
Calculated MW	<b>148.5kDa KDa</b>

**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

**Mouse Monoclonal Antibody to PLCG1 - Additional Information**

**Gene ID** 5335

**Other Names**

PLC1; NCKAP3; PLC-II; PLC148; PLCgamma1

**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.

**Mouse Monoclonal Antibody to PLCG1 - 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:<a href="http://www.uniprot.org/citations/17229814" target="\_blank">17229814</a>). Guanine nucleotide exchange factor that binds the GTPase DNMI and catalyzes the dissociation of GDP, allowing a GTP molecule to bind in its place, therefore enhancing DNMI-dependent endocytosis (By similarity).

### Cellular Location

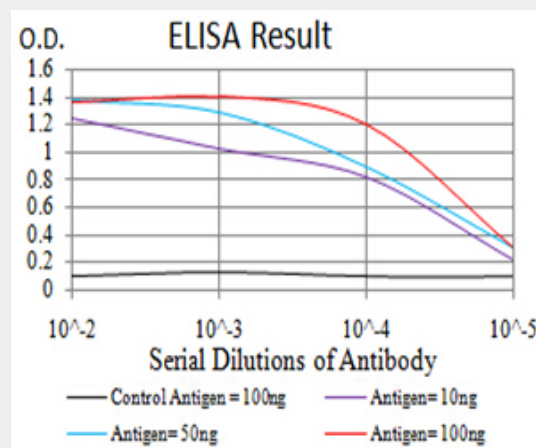
Cell projection, lamellipodium. Cell projection, ruffle. Note=Rapidly redistributed to ruffles and lamellipodia structures in response to epidermal growth factor (EGF) treatment.

### Mouse Monoclonal Antibody to PLCG1 - Protocols

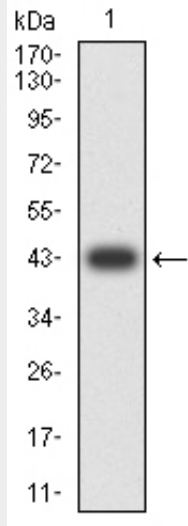
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

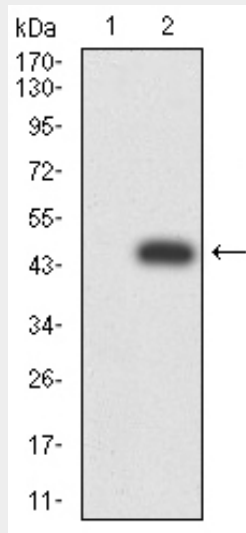
### Mouse Monoclonal Antibody to PLCG1 - Images



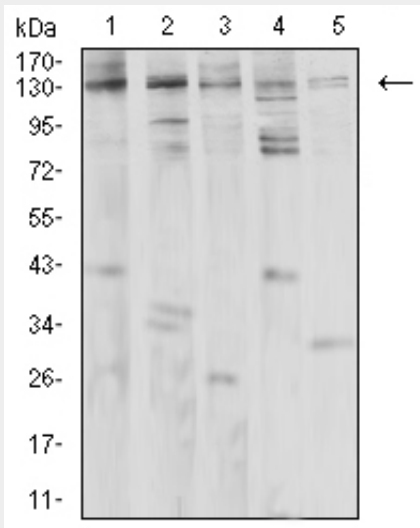
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



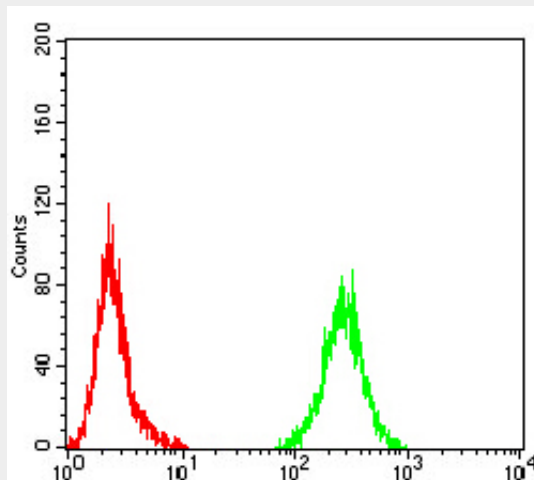
Western blot analysis using PLCG1 mAb against human PLCG1 (AA: 39-181) recombinant protein. (Expected MW is 43 kDa)



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).

#### **Mouse Monoclonal Antibody to PLCG1 - References**

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