Datasheet for ABIN967698

anti-Phospholipase C gamma 1 antibody (N-Term)

2 Images | 3 Publications

Go to Product page

Overview

Quantity:	50 µg
Target:	Phospholipase C gamma 1 (PLCG1)
Binding Specificity:	N-Term
Reactivity:	Human, Mouse, Rat, Dog, Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Phospholipase C gamma 1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), BioImaging (BI)

Product Details

Immunogen:	Cow PLCgamma1 N-terminal region Peptide
Clone:	10-PLCgamma
Isotype:	IgG1
Cross-Reactivity:	Human, Mouse (Murine), Rat (Rattus), Dog (Canine), Chicken
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the

Product Details

	reagent for optimal performance. 5. Please refer to us for technical protocols.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	Phospholipase C gamma 1 (PLCG1)
Alternative Name:	Phospholipase C gamma 1 (PLCG1 Products)
Background:	The Phospholipase C (PLC) isozymes hydrolyze phosphatidyl inositol biphosphate to inositol triphosphate and diacylglycerol. The former causes release of calcium from the endoplasmic reticulum, while the latter is an activator of Protein Kinase C. Within the PLC family, PLCg is the only member that contains SH2 and SH3 domains. These domains enable it to interact with receptor tyrosine kinases and become enzymatically activated via phosphorylation. It exists as two isoforms: 1) PLCg1, which is ubiquitously expressed, and 2) PLCg2, found primarily in the lymphoid system. PLCg is essential for growth factor-induced cell motility and mitogenesis. PLCg1 null mice exhibit retarded embryonic growth and lethality in midgestation. Overexpression of PLCg is evident in several forms of cancer, and it has been identified as a key mediator of PDGF-dependent cellular transformation. Thus regulation of PLCg activity by growth factors is involved in cell growth and transformation. The 10/PLCgamma monoclonal antibody recognizes PLCg1, regardless of phosphorylation status. It does not cross-react with PLCg2.
Molecular Weight:	148 kDa
Pathways:	RTK Signaling, WNT Signaling, TCR Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Thyroid Hormone Synthesis, Inositol Metabolic Process, Myometrial Relaxation and Contraction, Regulation of Muscle Cell Differentiation, Regulation of G-Protein Coupled Receptor Protein Signaling, Skeletal Muscle Fiber Development, G-protein mediated Events, Signaling Events mediated by VEGFR1 and VEGFR2, Interaction of EGFR with phospholipase C-gamma, VEGFR1 Specific Signals, VEGF Signaling

Application Details

Application Notes:	Recommended Protocol for Bioimaging: 1. Seed the cells in appropriate culture medium at an appropriate cell density in an 96-well

	Imaging Plate , and culture overnight to 48 hours. 2. Remove the culture medium from the wells, and wash (one to two times) with 100 µl of 1× PBS. 3. Fix the cells by adding 100 µl of fresh 3.7% Formaldehyde in PBS or fixation buffer to each well and incubating for 10 minutes at room temperature (RT). 4. Remove the fixative from the wells, and wash the wells (one to two times) with 100 µl of 1× PBS. 5. Permeabilize the cells using either cold methanol (a), Triton™ X-100 (b), or Saponin (c): a. Add 100 µl of -20°C 90% methanol to each well and incubate for 5 minutes at RT. b. Add 100 µl of 0.1% Triton™ X-100 to each well and incubate for 5 minutes at RT. c. Add 100 µl of 1× Perm/Wash buffer to each well and incubate for 15 to 30 minutes at RT. Continue to use 1× Perm/Wash buffer for all subsequent wash and dilutions steps. 6. Remove the permeabilization buffer from the wells, and wash one to two times with 100 µl of appropriate buffer (either 1× PBS or 1× Perm/Wash buffer, see step 5.c.). 7. Optional blocking step: Remove the wash buffers, and block the cells by adding 100 µl of blocking buffer or 3% FBS in appropriate dilution buffer to each well and incubating for 15 to 30 minutes at RT. 8. Dilute the antibody to its optimal working concentration in appropriate dilution buffer. Titrate purified (unconjugated) antibodies and second-step reagents to determine the optimal concentration. If using a Bioimaging Certified antibody conjugate, dilute it 1:10. 9. Add 50 µl of diluted antibody per well and incubate for 120 minutes at RT. Incubate in the dark if using fluorescently labeled antibodies. 10. Remove the antibody, and wash the wells three times with 100 µl of wash buffer. An optional detergent wash (100 µl of 0.05% Tween in 1× PBS) can be included prior to the regular wash steps. 11. If the antibody being used is fluorescently labeled, then move to step 12. Otherwise, if using a purified unlabeled antibody, repeat steps 8 to 10 with a fluorescently labeled second-step reagent to detect the purified antibody. 12. After the final wash, counter-stain the nuclei by adding 100 µl of a 2 µg/ml solution of Hoechst 33342 in 1× PBS to each well at least 15 minutes before imaging. 13. View and analyze the cells on an appropriate imaging instrument.
Comment:	Related Products: ABIN968533, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:

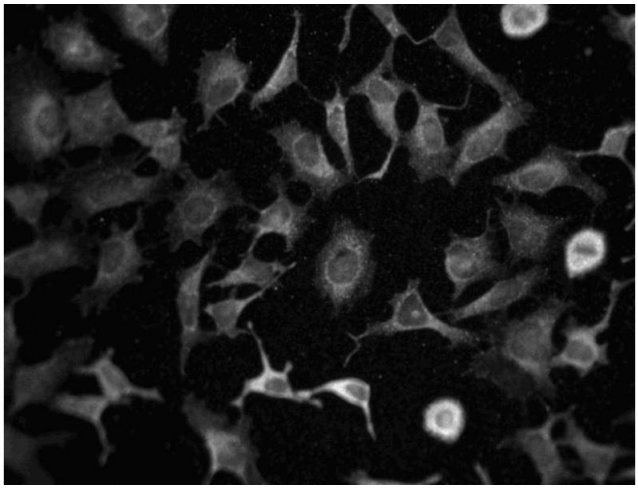
Vossmeyer, Hofmann, Löster, Reutter, Danker: "Phospholipase Cgamma binds alpha1beta1 integrin and modulates alpha1beta1 integrin-specific adhesion." in: **The Journal of biological chemistry**, Vol. 277, Issue 7, pp. 4636-43, (2002) (PubMed).

Dayanir, Meyer, Lashkari, Rahimi: "Identification of tyrosine residues in vascular endothelial growth factor receptor-2/FLK-1 involved in activation of phosphatidylinositol 3-kinase and cell proliferation." in: **The Journal of biological chemistry**, Vol. 276, Issue 21, pp. 17686-92, (2001) (PubMed).

Obermeier, Tinhofer, Grunicke, Ullrich: "Transforming potentials of epidermal growth factor and nerve growth factor receptors inversely correlate with their phospholipase C gamma affinity and signal activation." in: **The EMBO journal**, Vol. 15, Issue 1, pp. 73-82, (1996) (PubMed).

Western Blotting

Image 1. Western blot analysis of Phospholipase Cgamma1 on a A431 cell lysate (Human epithelial carcinoma, ATCC CRL-1555). Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-Phospholipase Cgamma1 antibody.



Immunofluorescence

Image 2. Immunofluorescence staining of HeLa cells. Cells were seeded in a 96 well imaging plate at ~ 10,000 cells per well. After overnight incubation, cells were stained using the methanol fix/perm protocol and the purified mouse anti-Phospholipase Cgamma1 antibody. The second step reagent was FITC goat anti-mouse Ig. The image was taken on a BD Pathway™ 850 imager using a 20x objective. This antibody also stained A549 and U2OS cells and can be used with either fix/perm protocol.