abcam

ab278709

FITC Anti-Phospholipase C gamma 1/PLC-gamma-1 (phospho Y783) antibody [PLCG1Y783-C4]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human PLCG1 pY783. The exact immunogen used to generate this antibody is proprietary information. Database link P19174
Clone number	PLCG1Y783-C4
Purification technique	Affinity purification Protein A/G
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	5 µL for 10^6 Cells
Notes	-

Target data

See full target information PLCG1 pY783

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Phospholipase C gamma 1 (PLC-gamma-1) also known as PLCG1 or PLC-gamma plays an important role in cellular signaling. This enzyme has a molecular mass of approximately 150 kDa. It is found in multiple cell types but is highly expressed in the brain and immune cells. PLC-gamma-1 is involved in the hydrolysis of phosphatidylinositol 45-bisphosphate (PIP2) to generate inositol 145-trisphosphate (IP3) and diacylglycerol (DAG) leading to downstream signaling events that control various cellular processes.
Biological function summary	PLC-gamma-1 is integral in signal transduction and is an important player in the immune response. The protein does not function as part of a large multi-protein complex but interacts transiently with other signaling molecules. It acts downstream of growth factor receptors and immunoreceptors by mediating calcium release and activation of protein kinase C influencing cell proliferation

	migration and differentiation. Its expression pattern suggests a critical role in the nervous and immune systems affecting learning memory and immune defense.
Pathways	PLC-gamma-1 is an important component in both the phospholipase C and PLC-gamma pathways. These pathways include important interactions with proteins such as the receptor tyrosine kinases and Src family kinases. In these pathways PLC-gamma-1 modulates signals that guide cellular responses to external stimuli affecting processes like growth signaling and T-cell receptor activation which is vital in adaptive immunity.
Associated diseases and disorders	PLC-gamma-1 has significant connections to cancer and immune deficiencies. Abnormal PLC-gamma-1 activity is observed in certain cancers such as breast cancer where it influences tumor growth and metastasis. Its dysregulation in immune cells leads to disorders like autoimmune diseases by impacting proteins such as LAT and SLP-76 which are important in T-cell signaling. Understanding PLC-gamma-1's regulatory mechanisms helps in developing targeted therapies for these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

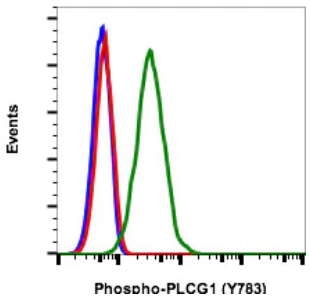
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - FITC Anti-Phospholipase C gamma 1/PLC-gamma-1 (phospho Y783) antibody [PLCG1Y783-C4] (ab278709)

Phospholipase C gamma 1/PLC-gamma-1 (phospho Y783) Flow Cytometry staining using rabbit Anti-Phospholipase C gamma 1/PLC-gamma-1 (phospho Y783) antibody

Flow cytometric analysis of Hela cells unstained imatinib treated cells (blue) or stained treated with imatinib (red) or with pervanadate (green) using ab278709.

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