abcam

ab278545

Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11]

Anti-PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545) is a rabbit monoclonal antibody detecting PI 3 Kinase p85 alpha in **Western Blot, Flow Cytometry**. Suitable for **Human, Mouse**.

- Recombinant format for unrivalled batch-batch consistency
- Over 50 publications

Recombinant | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human PIK3R1 pY467. The exact immunogen used to generate this antibody is proprietary information. Database link P27986
Clone number	PI3KY458-1A11
Purification technique	Affinity purification Protein A/G
Specificity	Recent data suggests this antibody can recognize PI 3 Kinase p85 and p55.
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	0.1 µg/mL
Notes	-

Species	Human
Dilution info	0.1 µg/mL
Notes	-

WB

Tested

Species	Mouse
Dilution info	0.5 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information PIK3R1 pY467

Function Binds to activated (phosphorylated) protein-Tyr kinases, through its SH2 domain, and acts as an adapter, mediating the association of the p110 catalytic unit to the plasma membrane. Necessary for the insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues. Plays an important role in signaling in response to FGFR1, FGFR2, FGFR3, FGFR4, KITLG/SCF, KIT, PDGFRA

and PDGFRB. Likewise, plays a role in ITGB2 signaling (PubMed:17626883, PubMed:19805105, PubMed:7518429). Modulates the cellular response to ER stress by promoting nuclear translocation of XBP1 isoform 2 in a ER stress- and/or insulin-dependent manner during metabolic overloading in the liver and hence plays a role in glucose tolerance improvement (PubMed:20348923).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt) in Human, Mouse samples.

What is the molecular weight of PI 3 Kinase p85 alpha?
Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) [PI3KY458-1A11] (ab278545) specifically detects a band for PI 3 Kinase p85 alpha (UniProt: Q92569) at a molecular weight of 84kDa.

Trusted by the scientific community
Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) [PI3KY458-1A11] (ab278545) was first used in a scientific publication in 2021 and has been cited over 50 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [PI3KY458-1A11] also available for your convenience: ab278545, PE - ab278691, FITC - ab278692, APC - ab278733

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply

- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

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

Activity summary	The PI 3 Kinase p85 alpha also known as PI3K p85 or PI3-kinase p85 is a regulatory subunit part of the phosphoinositide 3-kinases (PI3Ks) complex which is integral to cellular functions. The p85 alpha form partners with the catalytic subunit to form PI3K p55 known for its significant role in signaling. This subunit exhibits a molecular weight of approximately 85 kDa. It shows expression in various tissues including liver muscle and brain where it aids in cellular communication responding to extracellular signals.
Biological function summary	PI 3 Kinase p85 alpha plays an essential role in intracellular signaling where it functions as part of the PI3K complex. It functions to regulate metabolic processes by interacting with phosphatidylinositol lipids in the cell membrane. PI3K p55 form contributes to cell growth survival and proliferation often collaborating with the catalytic subunit p110 to execute these functions. The phospho PI3K form becomes active upon receiving external growth factors facilitating downstream signaling.
Pathways	The involvement of PI 3 Kinase p85 alpha extends to critical cellular pathways like the PI3K/AKT pathway and the insulin signaling pathway. It engages with proteins such as AKT (protein kinase B) and IRS-1 linking to various cellular functions including metabolism protein synthesis and cellular proliferation. The activity of PI3K p55 form regulates these pathways by influencing enzyme activity and pathways associated with cell survival and apoptosis.
Associated diseases and disorders	Dysregulation of PI 3 Kinase p85 alpha associates closely with cancers and metabolic disorders like type 2 diabetes. Aberrations in the p55 form link to tumorigenesis due to its role in uncontrolled cell proliferation. PI3K pathway disorders also relate to insulin resistance where the malfunction of PI3K components disrupts normal glucose uptake and insulin signaling. This target when interacting with proteins like PTEN further influences the development of cancer highlighting its critical role in both oncogenic and metabolic pathologies.

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.

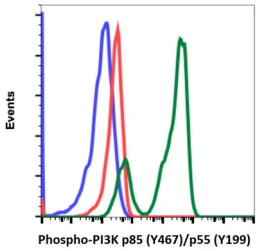
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

Full details and terms and conditions can be found here:
Terms & Conditions.

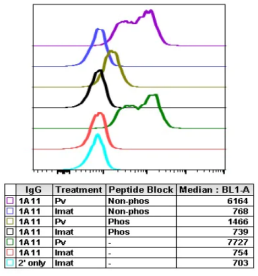
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4 product images



Flow Cytometry - Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545)

Flow cytometric analysis of Ramos (human Burkitt's lymphoma cell line) cells secondary antibody only negative control (blue) or untreated (red) or treated with pervanadate (green) using ab278545 at 0.1 µg/ml.

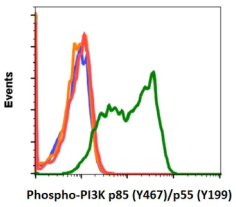


IgG	Treatment	Peptide Block	Median : BL1-A
1A11	Pv	Non-phos	6164
1A11	Imat	Non-phos	768
1A11	Pv	Phos	1466
1A11	Imat	Phos	739
1A11	Pv	-	7727
1A11	Imat	-	754
2° only	Imat	-	703

Flow Cytometry - Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545)

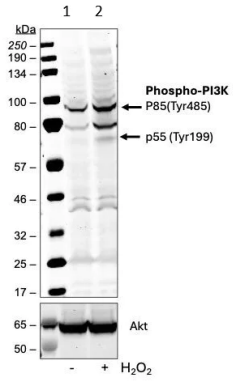
PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) Flow Cytometry staining using rabbit Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody

Peptide blocking flow cytometric analysis of NIH/3T3 (mouse embryo fibroblast cell line) cells secondary antibody only negative control (light blue) or treated with imatinib (red) or with pervanadate (green) or imatinib and blocked with phospho-peptide (black) or pervanadate and blocked with phospho peptide (gold) or imatinib and blocked with non-phospho peptide (dark blue) or pervanadate and blocked with non-phospho peptide (purple) using ab278545 at 0.1 µg/ml.



Flow Cytometry - Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545)

Flow cytometric analysis of NIH/3T3 (mouse embryo fibroblast cell line) cells secondary antibody only negative control (blue) or 0.1 µg/mL of isotype control (orange) or treated with imatinib (red) or with pervanadate (green) using ab278545 at 0.1 µg/ml.



Western blot - Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545)

PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) Western blot staining using rabbit Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody

Western blot analysis of NIH3T3 cell extract, untreated or treated with H2O2 with anti-Phospho-PI3Kinase p85 (Tyr458)/p55 (Tyr199) antibody ab278545. Loading control: AKT (Protein kinase B (PKB)).
All lanes:
Western blot - Anti- PI 3 Kinase p85 alpha (phospho Y467) + PI3 Kinase p55 (phospho Y199) antibody [PI3KY458-1A11] (ab278545) at 0.5 µg/mL

Lane 1:
Untreated NIH/3T3 (mouse embryo fibroblast cell line) cell extract

Lane 2:
H2O2-treated NIH/3T3 (mouse embryo fibroblast cell line) cell extract

Observed band size: 85 kDa, 70 kDa

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