abcam

ab236440

Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SP62
Purification technique	Affinity purification Protein A/G
Concentration	1.032 - 1.073 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	Primary incubation for 30 minutes at room temperature.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Cow
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Cow
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	Primary incubation for 30 minutes at 4Â°C.

Species	Rat
Dilution info	-
Notes	Primary incubation for 30 minutes at 4Â°C.

Species	Human
Dilution info	-
Notes	Primary incubation for 30 minutes at 4Â°C.

Predicted

Species	Cow
Dilution info	-
Notes	-

Target data

See full target information PIK3R1

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab236440 is the carrier-free version of ab225720.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	PI 3 Kinase p85 alpha also known as PI3KR1 or phospho PI3K is a regulatory subunit of phosphoinositide 3-kinase (PI3K) that plays a fundamental role in various signaling pathways. The p85 protein has a molecular weight of approximately 85 kDa. This protein is widely expressed in many cell types facilitating essential cellular functions by forming a heterodimer with the class I PI3K catalytic subunit often implicated in regulating lipid signaling pathways.

Biological function summary	P85 alpha modulates intracellular signaling by interacting with other proteins in a complex formation with catalytic subunit p110. This interaction enables the initiation of downstream signaling cascades controlling cell growth proliferation and survival. PI 3 kinase activity mediated by p85 alpha is integral to cellular homeostasis and metabolism helping to execute cellular responses to a variety of growth factors and hormones.
Pathways	PI 3 Kinase p85 alpha integrates into two principal signaling networks: the PI3K-Akt and mTOR pathways. These pathways are instrumental for regulating anabolic processes and cell survival. The p85 form of PI3K interacts with additional proteins such as Akt and mTOR coordinating cellular energy balance promoting protein synthesis and inhibiting apoptosis. Through these interactions the protein ensures that cells respond accurately to nutritional and stress signals.
Associated diseases and disorders	Alterations in PI 3 Kinase p85 alpha function have been linked to cancer and type 2 diabetes. Aberrant signaling involving PI3K-Akt-mTOR pathways due to mutations in PI3KR1 can contribute to tumor progression and chemoresistance. Moreover dysfunction of this pathway affects insulin signaling connecting p85 alpha to diabetic pathologies. Proteins such as IRS-1 (insulin receptor substrate 1) act alongside p85 alpha in mediating these disease-associated processes emphasizing its importance in maintaining physiological balance.

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

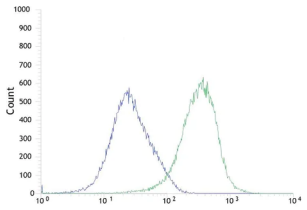
We do not recommend this combination. It is not covered by our product promise.

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.

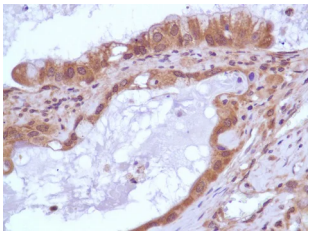
16 product images



Flow Cytometry (Intracellular) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Flow Cytometry (Intracellular) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

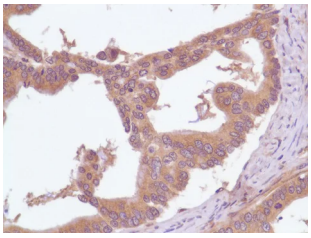
Intracellular flow cytometric analysis of MCF7 (human breast adenocarcinoma cell line) cell line labeling PI 3 Kinase p85 alpha with ab225720 at 1/100 dilution (green) compared with a negative control of rabbit IgG (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

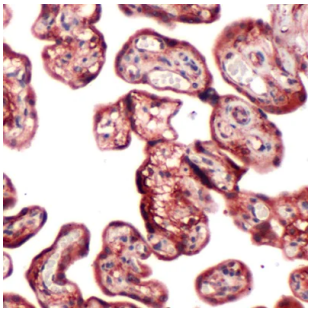
Formalin-fixed, paraffin-embedded human pancreatic adenocarcinoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

Formalin-fixed, paraffin-embedded human stomach adenocarcinoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).

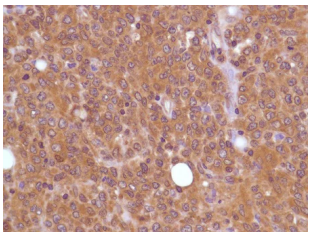


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

Formalin-fixed, paraffin-embedded human placenta tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.

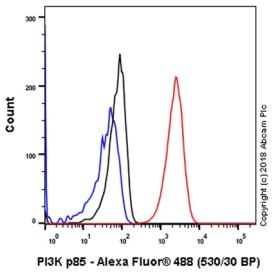
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

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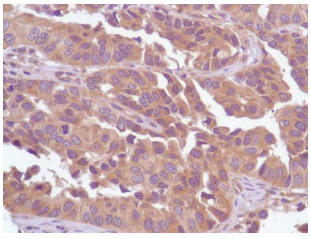
Formalin-fixed, paraffin-embedded human lung adenocarcinoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Flow Cytometry (Intracellular) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Flow Cytometry (Intracellular) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

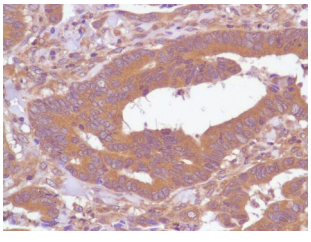
Intracellular Flow Cytometry analysis of MCF-7 (human breast carcinoma) labeling PI 3 Kinase p85 alpha with purified ab225720 at 1/250 dilution (10.32µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlableled control - Unlabelled cells (blue).
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

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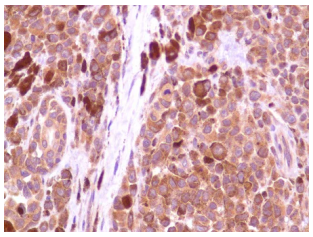
Formalin-fixed, paraffin-embedded human bladder transitional cell carcinoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

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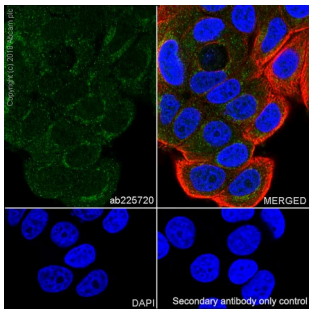
Formalin-fixed, paraffin-embedded human colon adenocarcinoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

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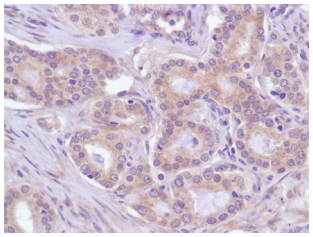
Formalin-fixed, paraffin-embedded human melanoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunocytochemistry/ Immunofluorescence - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

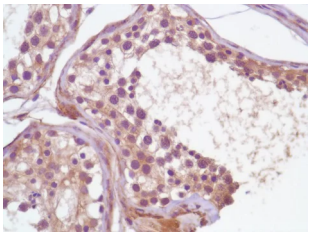
Immunocytochemistry/ Immunofluorescence analysis of MCF7 (human breast adenocarcinoma epithelial cell) cells labeling PI 3 Kinase p85 alpha with purified ab225720 at 1/250 (10 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

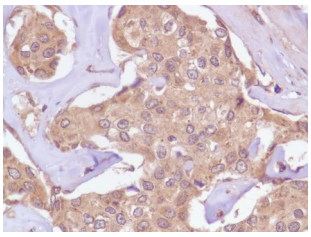
Formalin-fixed, paraffin-embedded human prostate adenocarcinoma tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

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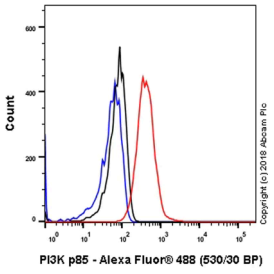
Formalin-fixed, paraffin-embedded human testis tissue stained for PI 3 Kinase p85 alpha using ab225720 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab225720).



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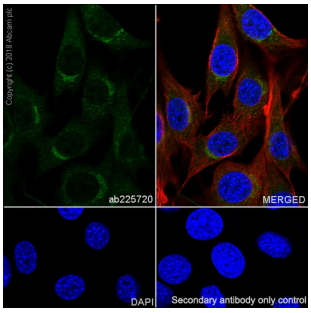
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Flow Cytometry (Intracellular) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Flow Cytometry (Intracellular) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

Intracellular Flow Cytometry analysis of NIH/3T3 (mouse embryo) labeling PI 3 Kinase p85 alpha with purified ab225720 at 1/250 dilution (10.32µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlableled control - Unlabelled cells (blue).
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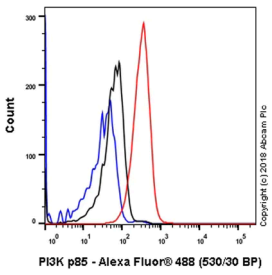


Immunocytochemistry/ Immunofluorescence - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

Immunocytochemistry/ Immunofluorescence analysis of NIH/3T3 (mouse embryonic fibroblast) cells labeling PI 3 Kinase p85 alpha with purified ab225720 at 1/250 (10 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

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Flow Cytometry (Intracellular) - Anti-PI 3 Kinase p85 alpha antibody [SP62] - BSA and Azide free (ab236440)

PI 3 Kinase p85 alpha Flow Cytometry (Intracellular) staining using rabbit Anti-PI 3 Kinase p85 alpha antibody

Intracellular Flow Cytometry analysis of PC-12 (rat adrenal gland pheochromocytoma) labeling PI 3 Kinase p85 alpha with purified ab225720 at 1/2500 dilution (1.03µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlableled control - Unlabelled cells (blue).
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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.