abcam

Product datasheet

Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] ab183957

KO VALIDATED Recombinant RabMAb

1 References 5 Images

Overview

Product name	Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693]
Description	Rabbit monoclonal [EPR19693] to PI 3 Kinase catalytic subunit alpha/PIK3CA
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: F9 and M1 whole cell lysates; Mouse hypothalamus and fetal brain lysates; P0 Rat brain lysate. IP: Mouse hypothalamus lysate.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19693

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab183957 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 110 kDa (predicted molecular weight: 124 kDa).
IP		1/30.

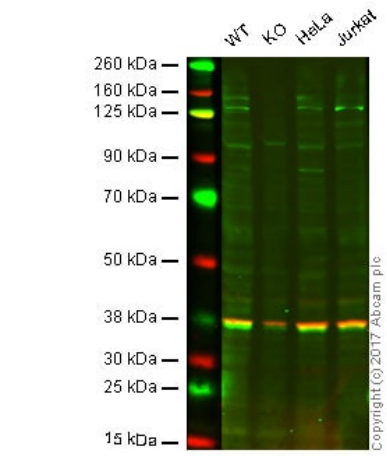
Target

Function Phosphorylates PtdIns, PtdIns4P and PtdIns(4,5)P2 with a preference for PtdIns(4,5)P2.

Involvement in disease Defects in PIK3CA are associated with colorectal cancer (CRC) [MIM:114500].
Defects in PIK3CA are a cause of susceptibility to breast cancer (BC) [MIM:114480]. A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case.
Defects in PIK3CA are a cause of susceptibility to ovarian cancer (OC) [MIM:167000]. Ovarian cancer common malignancy originating from ovarian tissue. Although many histologic types of ovarian neoplasms have been described, epithelial ovarian carcinoma is the most common form. Ovarian cancers are often asymptomatic and the recognized signs and symptoms, even of late-stage disease, are vague. Consequently, most patients are diagnosed with advanced disease.
Defects in PIK3CA may underlie hepatocellular carcinoma (HCC) [MIM:114550].
Defects in PIK3CA are a cause of keratosis seborrheic (KERSEB) [MIM:182000]. A common benign skin tumor. Seborrheic keratoses usually begin with the appearance of one or more sharply defined, light brown, flat macules. The lesions may be sparse or numerous. As they initially grow, they develop a velvety to finely verrucous surface, followed by an uneven warty surface with multiple plugged follicles and a dull or lackluster appearance.

Sequence similarities Belongs to the PI3/PI4-kinase family.
Contains 1 C2 domain.
Contains 1 PI3K/PI4K domain.

Images

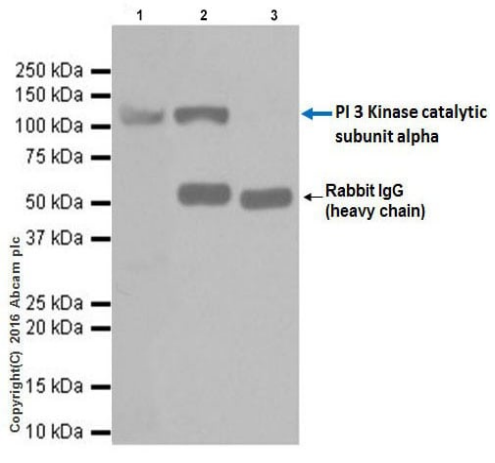


Western blot - Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] (ab183957)

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: PI 3 Kinase catalytic subunit alpha/PIK3CA knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: Jurkat whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab183957 observed at 125 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

ab183957 was shown to recognize PI 3 Kinase catalytic subunit alpha/PIK3CA in wild type cells as signal was lost at the expected MW in PI 3 Kinase catalytic subunit alpha/PIK3CA knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and PI 3 Kinase catalytic subunit alpha/PIK3CA knockout samples were subjected to SDS-PAGE. ab183957 and **ab9484** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

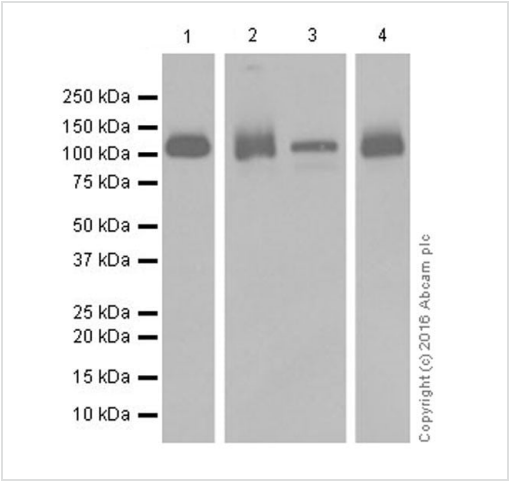


Immunoprecipitation - Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] (ab183957)

PI 3 Kinase catalytic subunit alpha/PIK3CA was immunoprecipitated from 0.35 mg of mouse hypothalamus lysate with ab183957 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab183957 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/1000 dilution.

Lane 1: Mouse hypothalamus lysate, 10µg (Input).
Lane 2: ab183957 IP in mouse hypothalamus lysate.
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab183957 in mouse hypothalamus lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 3 minutes.



Western blot - Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] (ab183957)

All lanes : Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] (ab183957) at 1/1000 dilution

Lane 1 : F9 (Mouse embryonic testicular cancer cell line) whole cell lysate
Lane 2 : M1 (Mouse myeloblast myeloid leukemia cell line) whole cell lysate
Lane 3 : Mouse hypothalamus lysate
Lane 4 : Mouse fetal brain lysate

Lysates/proteins at 20 µg per lane.

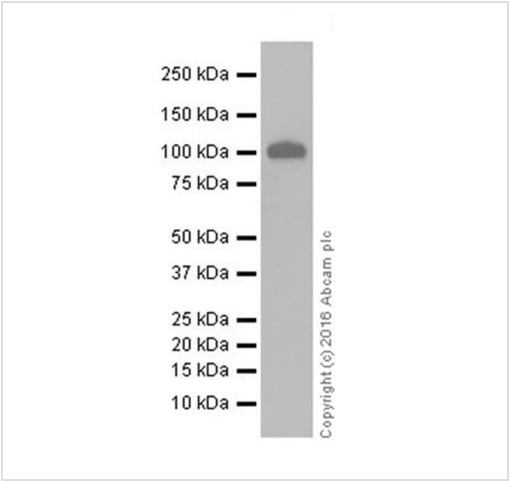
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 124 kDa
Observed band size: 110 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1: 3 minutes; Lane 2 and 3: 5 seconds; Lane 4: 3 seconds.

The observed molecular weight is consistent with what has been described in the literature (PMID: 19701705).



Western blot - Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] (ab183957)

Anti-PI 3 Kinase catalytic subunit alpha/PIK3CA antibody [EPR19693] (ab183957) at 1/1000 dilution + P0 Rat brain lysate at 20 µg

Secondary
Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

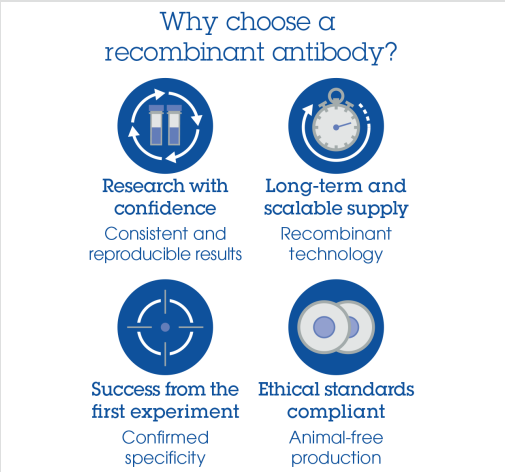
Predicted band size: 124 kDa
Observed band size: 110 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.

The observed molecular weight is consistent with what has been

described in the literature (PMID: 19701705).



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