abcam

Product datasheet

Anti-PTEN antibody [Y184] - Low endotoxin, Azide free ab219361

敲除验证 重组 RabMAb

21 References 11 图像

概述

产品名称	Anti-PTEN抗体[Y184] - Low endotoxin, Azide free
描述	兔单克隆抗体[Y184] to PTEN - Low endotoxin, Azide free
宿主	Rabbit
特异性	A 42kDa band is seen for some samples in addition to 50-54kDa band- we do not know the specificity of this band. For example Rat kidney, heart, spleen have bands around 50kDa but rat PC-12 cells have single band at ~42kDa.
经测试应用	**适用于:** WB
种属反应性	**与反应:** Mouse, Human **预测可用于:** Rat
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. (Peptide available as **ab157804**)
阳性对照	WB: HAP1, MCF7 and HEK-293 cell lysates; Human brain lysate; Mouse primary bone marrow derived macrophage whole cell lysate.
常规说明	ab219361 is the carrier-free version of **ab32199**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. 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. 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. 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**.

Our **Low endotoxin, azide-free formats** have low endotoxin level (≤ 1 EU/ml, determined by the LAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C. Do Not Freeze.
存储溶液	pH: 7.20 Constituent: PBS
无载体	是
纯度	Protein A purified
克隆	单克隆
克隆编号	Y184
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab219361于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

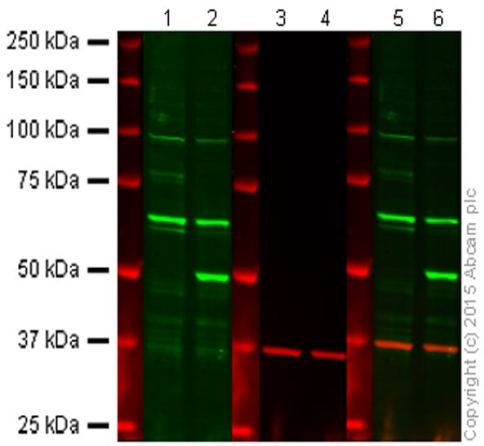
应用	Ab评论	说明
WB		Use at an assay dependent concentration. Predicted molecular weight: 47 kDa.

靶标

功能 Tumor suppressor. Acts as a dual-specificity protein phosphatase, dephosphorylating tyrosine-, serine- and threonine-phosphorylated proteins. Also acts as a lipid phosphatase, removing the phosphate in the D3 position of the inositol ring from phosphatidylinositol 3,4,5-trisphosphate, phosphatidylinositol 3,4-diphosphate, phosphatidylinositol 3-phosphate and inositol 1,3,4,5-tetrakisphosphate with order of substrate preference in vitro PtdIns(3,4,5)P3 > PtdIns(3,4)P2 > PtdIns3P > Ins(1,3,4,5)P4. The lipid phosphatase activity is critical for its tumor suppressor function. Antagonizes the PI3K-AKT/PKB signaling pathway by dephosphorylating phosphoinositides and thereby modulating cell cycle progression and cell survival. The unphosphorylated form cooperates with AIP1 to suppress AKT1 activation. Dephosphorylates tyrosine-phosphorylated focal adhesion kinase and inhibits cell migration and integrin-mediated cell spreading and focal adhesion formation. Plays a role as a key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including correct neuron positioning, dendritic development and synapse formation. May be a negative regulator of insulin signaling and glucose metabolism in adipose

	tissue. The nuclear monoubiquitinated form possesses greater apoptotic potential, whereas the cytoplasmic nonubiquitinated form induces less tumor suppressive ability. In motile cells, suppresses the formation of lateral pseudopods and thereby promotes cell polarization and directed movement. Isoform alpha: Functional kinase, like isoform 1 it antagonizes the PI3K-AKT/PKB signaling pathway. Plays a role in mitochondrial energetic metabolism by promoting COX activity and ATP production, via collaboration with isoform 1 in increasing protein levels of PINK1.
组织特异性	Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.
疾病相关	Cowden syndrome 1 Lhermitte-Duclos disease Bannayan-Riley-Ruvalcaba syndrome Squamous cell carcinoma of the head and neck Endometrial cancer PTEN mutations are found in a subset of patients with Proteus syndrome, a genetically heterogeneous condition. The molecular diagnosis of PTEN mutation positive cases classifies Proteus syndrome patients as part of the PTEN hamartoma syndrome spectrum. As such, patients surviving the early years of Proteus syndrome are likely at a greater risk of developing malignancies. Glioma 2 VACTERL association with hydrocephalus Prostate cancer Macrocephaly/autism syndrome A microdeletion of chromosome 10q23 involving BMPR1A and PTEN is a cause of chromosome 10q23 deletion syndrome, which shows overlapping features of the following three disorders: Bannayan-Zonana syndrome, Cowden disease and juvenile polyposis syndrome.
序列相似性	Contains 1 C2 tensin-type domain. Contains 1 phosphatase tensin-type domain.
结构域	The C2 domain binds phospholipid membranes in vitro in a Ca(2+)-independent manner; this binding is important for its tumor suppressor function.
翻译后修饰	Constitutively phosphorylated by CK2 under normal conditions. Phosphorylated in vitro by MAST1, MAST2, MAST3 and STK11. Phosphorylation results in an inhibited activity towards PIP3. Phosphorylation can both inhibit or promote PDZ-binding. Phosphorylation at Tyr-336 by FRK/PTK5 protects this protein from ubiquitin-mediated degradation probably by inhibiting its binding to NEDD4. Phosphorylation by ROCK1 is essential for its stability and activity. Phosphorylation by PLK3 promotes its stability and prevents its degradation by the proteasome. Monoubiquitinated; monoubiquitination is increased in presence of retinoic acid. Deubiquitinated by USP7; leading to its nuclear exclusion. Monoubiquitination of one of either Lys-13 and Lys-289 amino acid is sufficient to modulate PTEN compartmentalization. Ubiquitinated by XIAP/BIRC4.
细胞定位	Secreted. May be secreted via a classical signal peptide and reenter into cells with the help of a poly-Arg motif and Cytoplasm. Nucleus. Nucleus, PML body. Monoubiquitinated form is nuclear. Nonubiquitinated form is cytoplasmic. Colocalized with PML and USP7 in PML nuclear bodies. XIAP/BIRC4 promotes its nuclear localization.

图片



Western blot - Anti-PTEN antibody [Y184] - Low endotoxin, Azide free (ab219361)

This data was developed using **ab32199**, the same antibody clone in a different buffer formulation.

Lanes 1 and 5: PTEN knockout HAP1 cell lysate (20 µg)

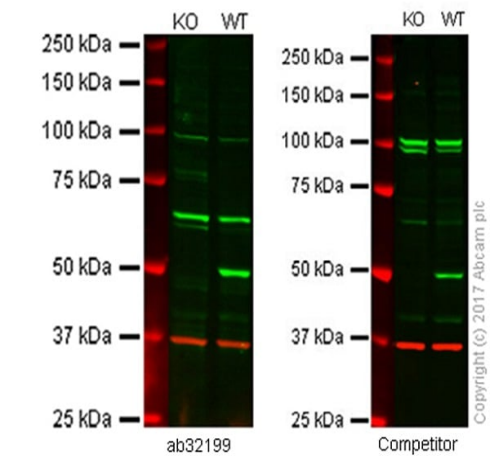
Lanes 2 and 6: Wild-type HAP1 cell lysate (20 µg)

Lane 2: Green signal from target - **ab32199** observed at 47 kDa

Lanes 3 and 4: Red signal from loading control - **ab8245** observed at 37 kDa

Lanes 5 and 6: Merged (red and green) signal.

ab32199 was shown to specifically recognize PTEN in wild-type HAP1 cells along with additional cross reactive bands. No band was observed when PTEN knockout samples were used. Wild-type and PTEN knockout samples were subjected to SDS-PAGE, **ab32199** and **ab8245** (loading control to GAPDH) were diluted to 1/500 and 1/2000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10,000 dilution for 1 h at room temperature before imaging.



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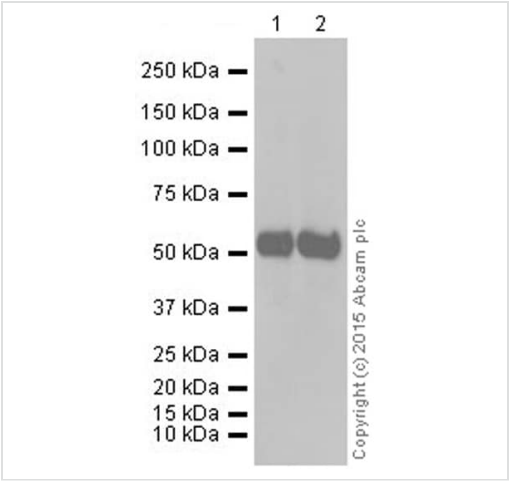


Western blot - Anti-PTEN antibody [Y184] - Low endotoxin, Azide free (ab219361)

All lanes : Anti-PTEN antibody [Y184] (**ab32199**) at 1/10000 dilution (purified)

All lanes : Brain lysate

Lysates/proteins at 10 µg per lane.

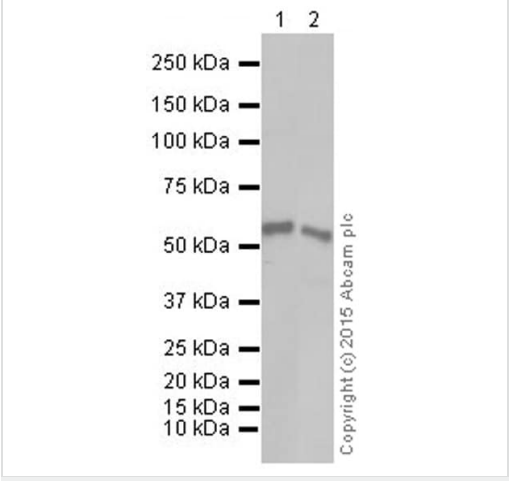
Secondary

All lanes : Anti-rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 47 kDa
Observed band size: 54 kDa

This data was developed using **ab32199**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST.



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All lanes : Anti-PTEN antibody [Y184] (**ab32199**) at 1/10000 dilution (purified)

Lane 1 : MCF7 whole cell lysate
Lane 2 : HEK293 whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Anti-rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

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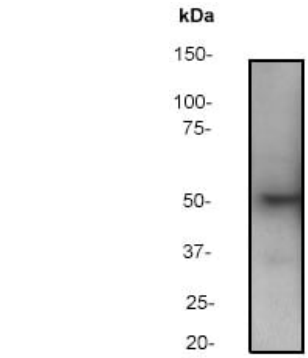

Western blot - Anti-PTEN antibody [Y184] - Low endotoxin, Azide free (ab219361)

Anti-PTEN antibody [Y184] (**ab32199**) at 1/500 dilution (Unpurified) + MCF7 cell lysate

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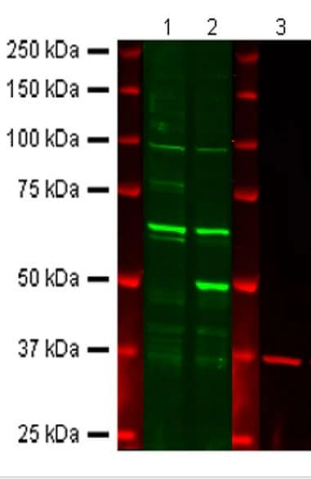

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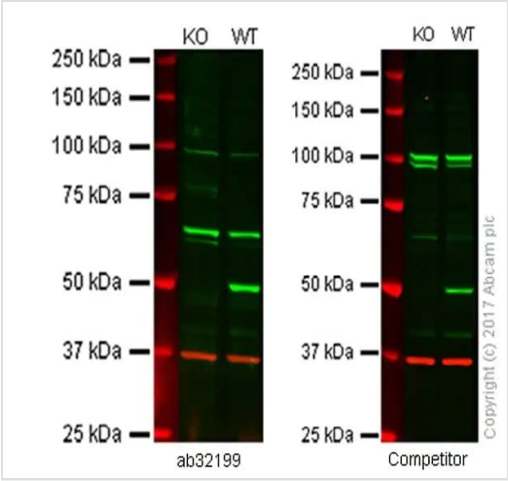

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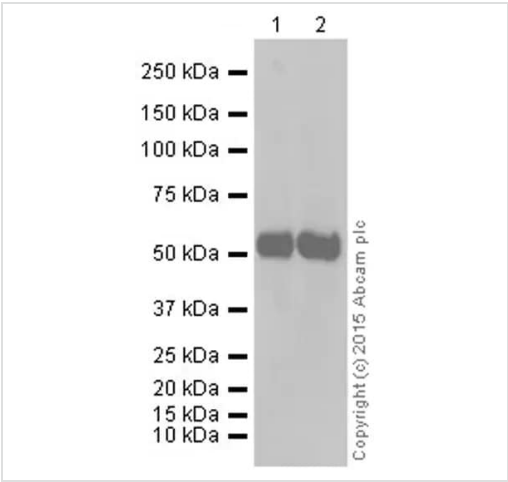

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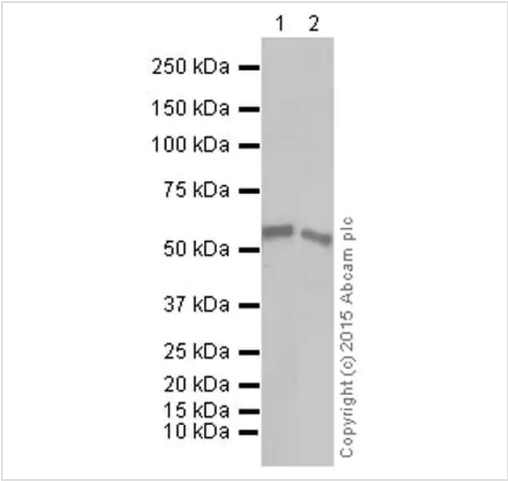

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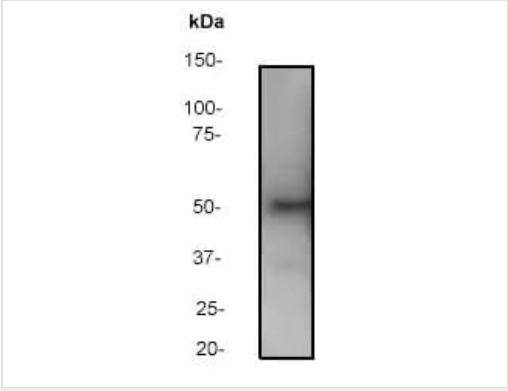

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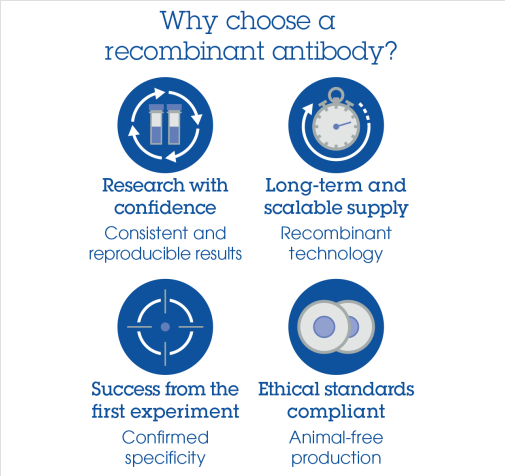

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Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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