abcam

Product datasheet

Anti-PTEN antibody [EPR22636-122] - BSA and Azide free ab267791

KO 評価済 リコンビナント RabMAb

1 Abreviews 画像数 11

製品の概要

製品名	Anti-PTEN antibody [EPR22636-122] - BSA and Azide free
製品の詳細	Rabbit monoclonal [EPR22636-122] to PTEN - BSA and Azide free
由来種	Rabbit
アプリケーション	**適用あり:** WB, IHC-P, IP, Flow Cyt (Intra) **適用なし:** ICC/IF
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: Wild type HAP1, MCF7, MDA-MB-468, HeLa, C6, RAW264.7, PC-12 and NIH/3T3 whole cell lysates; Mouse kidney, Mouse spleen and Rat lung lysates. IHC-P: Human endometrial cancer, Human ovarian cancer, Human pancreas, Mouse pancreas and Rat pancreas tissues. Flow Cyt (intra): HeLa and NIH/3T3 cells. IP: MCF7 and HeLa cells.
特記事項	ab267791 is the carrier-free version of **ab267787**. 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**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C. Do Not Freeze.
バッファー	pH: 7.2 Constituent: PBS
キャリア・フリー	はい
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR22636-122
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab267791の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB		Use at an assay dependent concentration. Detects a band of approximately 54 kDa (predicted molecular weight: 47 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		Use at an assay dependent concentration.
Flow Cyt (Intra)		Use at an assay dependent concentration.

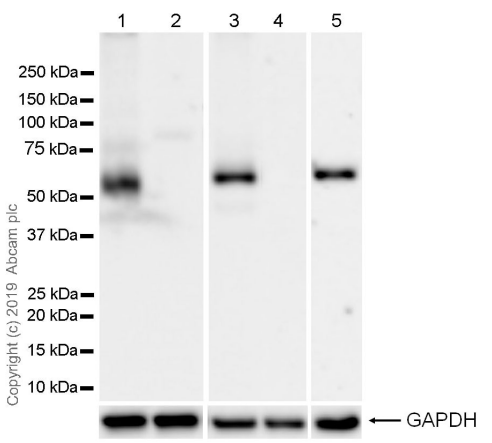
追加情報 Is unsuitable for ICC/IF.

ターゲット情報

機能 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.
組織特異性	Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.
関連疾患	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.
配列類似性	Contains 1 C2 tensin-type domain. Contains 1 phosphatase tensin-type domain.
ドメイン	The C2 domain binds phospholipid membranes in vitro in a Ca(2+)-independent manner; this binding is important for its tumor suppressor function.
翻訳後修飾	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.
細胞内局在	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.

画像



Western blot - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

All lanes : Anti-PTEN antibody [EPR22636-122] (**ab267787**) at 1/1000 dilution

Lane 1 : Wild-type HAP1 (Human near-haploid cell line) whole cell lysate
Lane 2 : PTEN knockout HAP1 whole cell lysate
Lane 3 : MCF7 (human breast adenocarcinoma epithelial cell), whole cell lysate
Lane 4 : MDA-MB-468 (human breast adenocarcinoma epithelial cell), whole cell lysate
Lane 5 : HeLa (human cervix adenocarcinoma epithelial cell), whole cell 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: 47 kDa
Observed band size: 54 kDa

Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times:

Lanes 1-4: 3 seconds;
Lane 5: 114 seconds.

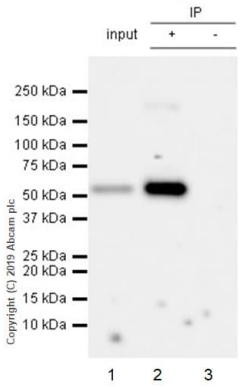
ab267787 was shown to specifically react with PTEN in wild-type HAP1 cells as signal was lost in PTEN knockout cells. Wild-type and PTEN knockout samples were subjected to SDS-PAGE. Ab267787 and **ab181602** (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/20,000 dilution for 1 hour at room temperature before imaging.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID:10514407).

Negative control: MDA-MB-468 (PMID:21358673,15674339).

This data was developed using the same antibody clone in a

different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



Immunoprecipitation - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

PTEN was immunoprecipitated from 0.35 mg HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate with **ab267787** at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using **ab267787** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/5000 dilution.

Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10ug

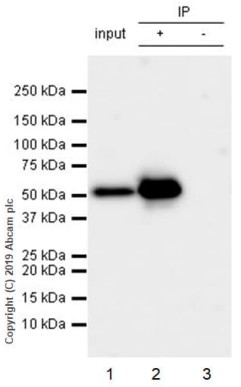
Lane 2: **ab267787** IP in HeLa whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab267787** in HeLa whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 15 seconds

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



Immunoprecipitation - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

PTEN was immunoprecipitated from 0.35 mg MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate with **ab267787** at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using **ab267787** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/5000 dilution.

Lane 1: MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate 10ug

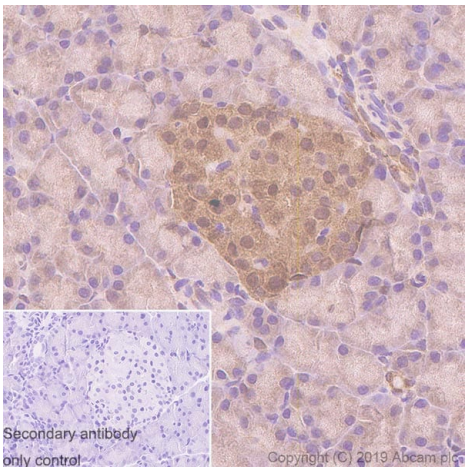
Lane 2: **ab267787** IP in MCF7 whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab267787** in MCF7 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 15 seconds

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



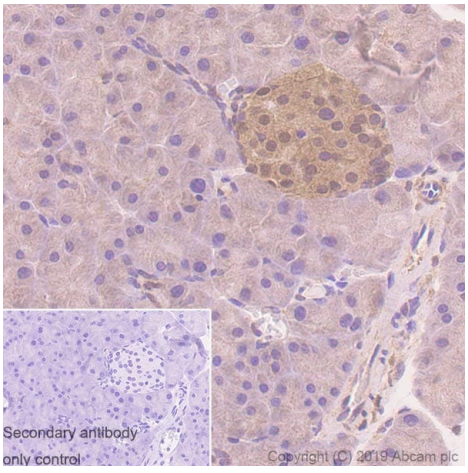
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Immunohistochemical analysis of paraffin-embedded Rat pancreas tissue labeling PTEN with **ab267787** at 1/2000 dilution (2.18 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on rat pancreas (PMID:11021813). The section was incubated with **ab267787** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



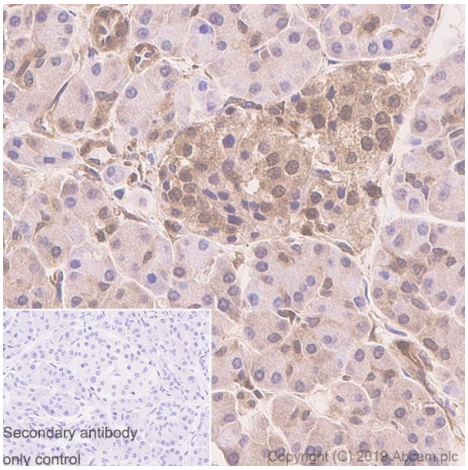
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Immunohistochemical analysis of paraffin-embedded Mouse pancreas tissue labeling PTEN with **ab267787** at 1/2000 dilution (2.18 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on mouse pancreas (PMID:11021813). The section was incubated with **ab267787** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



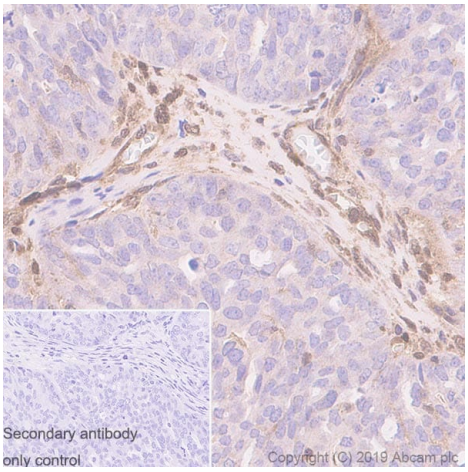
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling PTEN with **ab267787** at 1/2000 dilution (2.18 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human pancreas (PMID:11021813). The section was incubated with **ab267787** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



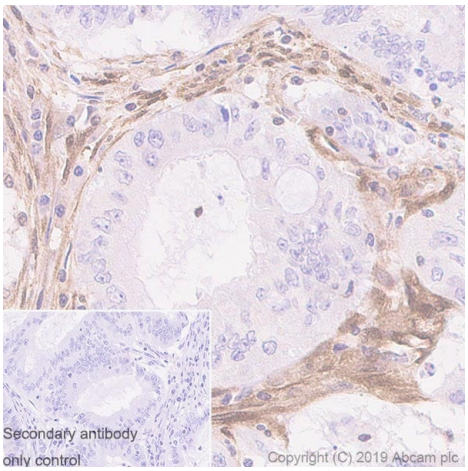
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Immunohistochemical analysis of paraffin-embedded Human ovarian cancer tissue labeling PTEN with **ab267787** at 1/2000 dilution (2.18 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on stroma of human ovarian cancer (PMID:25608477). The section was incubated with **ab267787** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



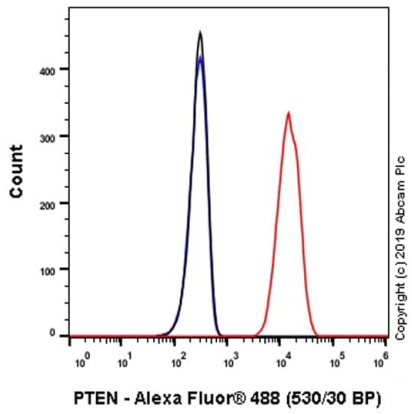
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Immunohistochemical analysis of paraffin-embedded Human endometrial cancer tissue labeling PTEN with **ab267787** at 1/2000 dilution (2.18 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on stroma of human endometrial cancer (PMID:2230170). The section was incubated with **ab267787** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

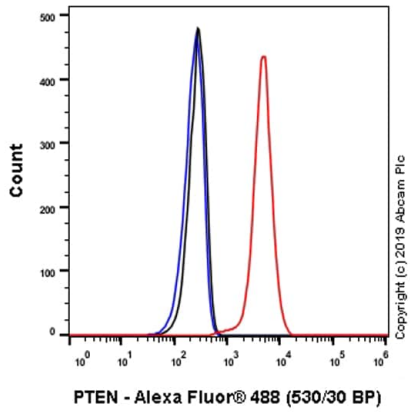
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



Flow Cytometry (Intracellular) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast) cells labelling PTEN with **ab267787** at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor®488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.

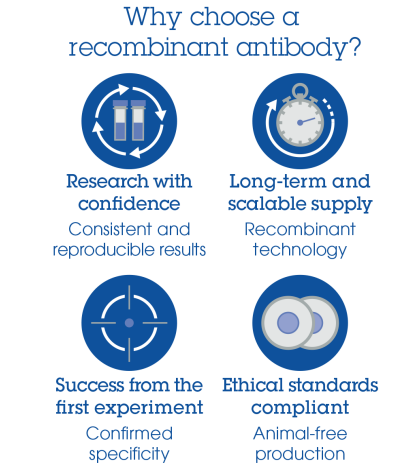
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



Flow Cytometry (Intracellular) - Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling PTEN with **ab267787** at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor®488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab267787**).



Anti-PTEN antibody [EPR22636-122] - BSA and Azide free (ab267791)

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