abcam

Product datasheet

Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] ab185633

Recombinant RabMAb

11 References 11 Images

Overview

Product name	Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671]
Description	Rabbit monoclonal [EPR17671] to AKT1 + AKT2 + AKT3
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), IP, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: AKT3 recombinant protein fragment (His-TagÂ®): aa351-479; AKT2 recombinant protein fragment (His-TagÂ®): aa282-481; AKT1 recombinant protein fragment (His-TagÂ®): aa281-480; A549 whole cell lysate; Human fetal brain and fetal kidney lysates; Mouse brain lysate; Rat brain and heart lysates. IHC-P: Human cerebral cortex, Human adenocarcinoma of colon, mouse cerebral cortex and rat kidney tissues. ICC/IF: HeLa cells. Flow Cyt (intra): A549 cells. IP: A549 whole cell extract.
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	EPR17671
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab185633 in the following tested applications.

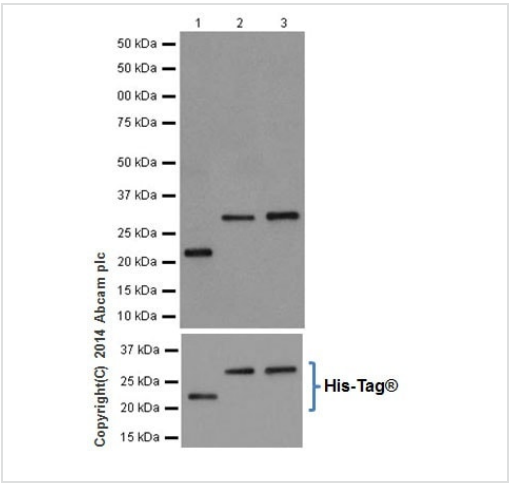
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/50. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IP		1/50.
WB		1/2000. Detects a band of approximately 56 kDa (predicted molecular weight: 56 kDa).
IHC-P		1/400. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	IGF-1 leads to the activation of AKT3, which may play a role in regulating cell survival. Capable of phosphorylating several known proteins. Truncated isoform 2/PKB gamma 1 without the second serine phosphorylation site could still be stimulated but to a lesser extent.
Tissue specificity	In adult tissues, it is highly expressed in brain, lung and kidney, but weakly in heart, testis and liver. In fetal tissues, it is highly expressed in heart, liver and brain and not at all in kidney.
Sequence similarities	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. RAC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 PH domain. Contains 1 protein kinase domain.
Domain	Binding of the PH domain to the phosphatidylinositol 3-kinase alpha (PI(3)K) results in its targeting to the plasma membrane.
Post-translational modifications	Phosphorylation on Thr-305 and Ser-472 is required for full activity (By similarity). Phosphorylated upon DNA damage, probably by ATM or ATR. Ubiquitinated. When fully phosphorylated and translocated into the nucleus, undergoes 'Lys-48'-polyubiquitination catalyzed by TTC3, leading to its degradation by the proteasome.
Cellular localization	Cytoplasm. Membrane. Membrane-associated after cell stimulation leading to its translocation.

Images



Western blot - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

All lanes : Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633) at 1/5000 dilution

Lane 1 : AKT3 recombinant protein fragment (His-Tag®): aa351-479
Lane 2 : AKT2 recombinant protein fragment (His-Tag®): aa282-481
Lane 3 : AKT1 recombinant protein fragment (His-Tag®): aa281-480

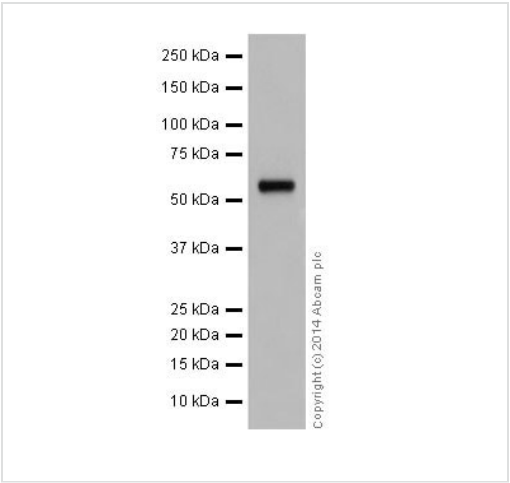
Lysates/proteins at 0.01 µg per lane.

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

Predicted band size: 56 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

The bottom panel is probed with an anti-His tag antibody.



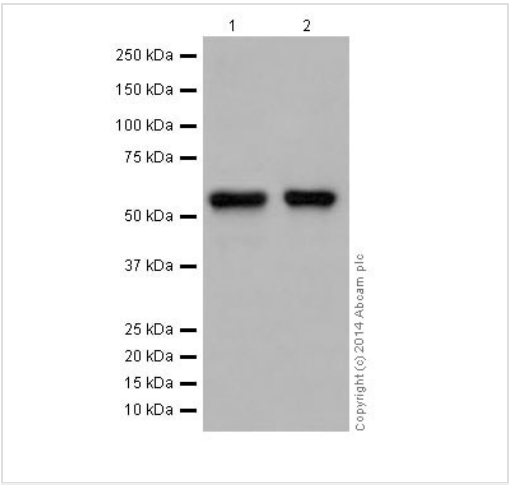
Western blot - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633) at 1/2000 dilution + A549 (Human lung carcinoma) whole cell lysates at 20 µg

Secondary
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 56 kDa
Observed band size: 56 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

All lanes : Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633) at 1/2000 dilution

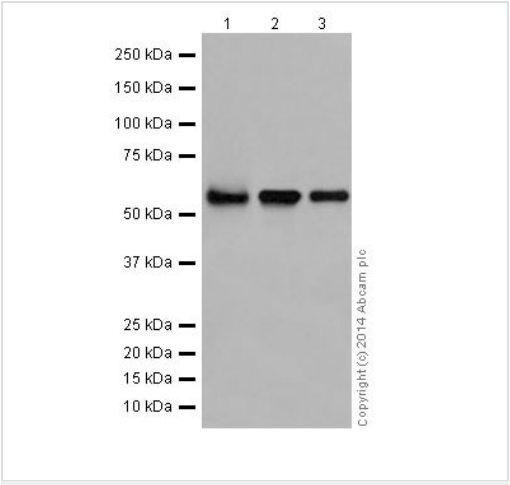
Lane 1 : Human fetal brain lysates
Lane 2 : Human fetal kidney lysates

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: 56 kDa
Observed band size: 56 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

All lanes : Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633) at 1/2000 dilution

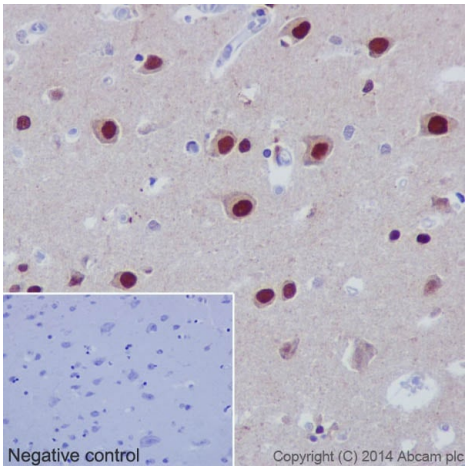
Lane 1 : Mouse brain lysates
Lane 2 : Rat brain lysates
Lane 3 : Rat heart lysates

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: 56 kDa
Observed band size: 56 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

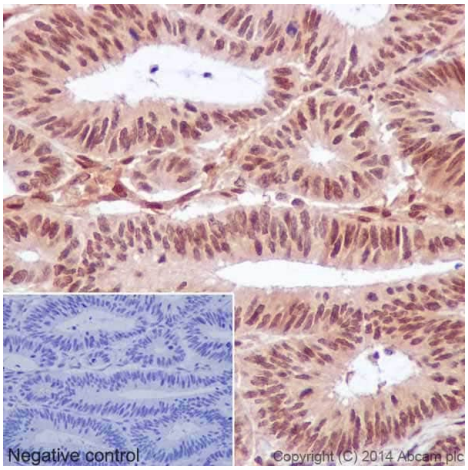


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

Immunohistochemical analysis of paraffin-embedded Human cerebral cortex tissue labeling AKT1 + AKT2 + AKT3 with ab185633 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) secondary antibody at 1/500 dilution. Nuclear and weak cytoplasmic staining on neurons of the Human cerebral cortex is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

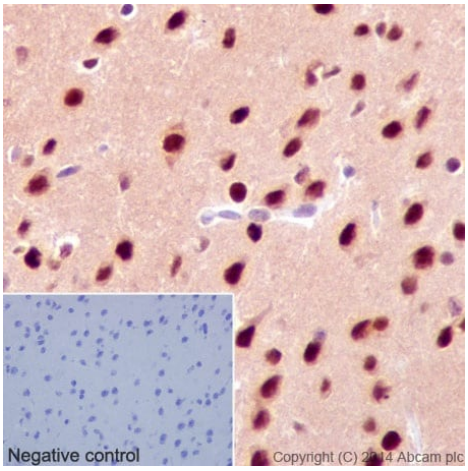


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

Immunohistochemical analysis of paraffin-embedded Human adenocarcinoma of colon tissue labeling AKT1 + AKT2 + AKT3 with ab185633 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) secondary antibody at 1/500 dilution. Nuclear and weak cytoplasmic staining on Human adenocarcinoma of colon is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

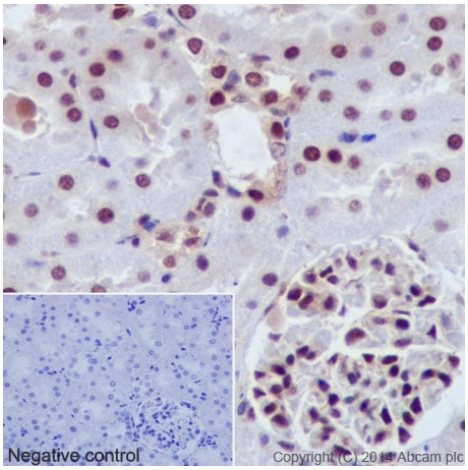


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

Immunohistochemical analysis of paraffin-embedded Mouse cerebral cortex tissue labeling AKT1 + AKT2 + AKT3 with ab185633 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) secondary antibody at 1/500 dilution. Nuclear and weak cytoplasmic staining on neurons of the mouse cerebral cortex is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

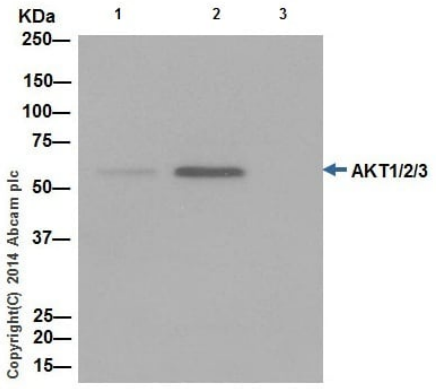


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling AKT1 + AKT2 + AKT3 with ab185633 at 1/400 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) secondary antibody at 1/500 dilution. Nuclear and weak cytoplasmic staining on rat kidney is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

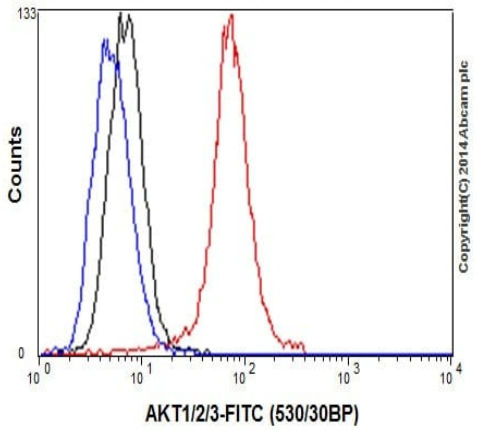
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

AKT1 + AKT2 + AKT3 was immunoprecipitated from 1mg of A549 (Human lung carcinoma) whole cell extract with ab185633 at 1/50 dilution. Western blot was performed from the immunoprecipitate using ab185633 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: A549 whole cell extract 10 µg (Input). Lane 2: ab185633 IP in A549 whole cell extract. Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab185633 in A549 whole cell extract. Blocking and dilution buffer and concentration: 5% NFDM/TBST.



Flow Cytometry (Intracellular) - Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixedA549 (Human lung carcinoma) cells labeling AKT1 + AKT2 + AKT3 with ab185633 at 1/50 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.

Anti-AKT1 + AKT2 + AKT3 antibody [EPR17671] (ab185633)

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