Akt1(Phospho-Ser473) Rabbit mAb

Catalog No: #13357

Package Size: #13357-1 50ul #13357-2 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

Description

Product Name	Akt1(Phospho-Ser473) Rabbit mAb
Host Species	Rabbit
Clonality	Monoclonal
Clone No.	SY28-05
Purification	ProA affinity purified
Applications	WB;ICC/IF;IHC
Species Reactivity	Human;Mouse
Immunogen Description	Synthetic phospho-peptide corresponding to residues surrounding Ser473 of human Akt1.
Conjugates	Unconjugated
Other Names	AKT 1 antibody AKT antibody AKT1 antibody AKT1_HUMAN antibody MGC99656 antibody PKB antibody PKB-ALPHA antibody PRKBA antibody Protein Kinase B Alpha antibody Protein kinase B antibody Proto-oncogene c-Akt antibody RAC Alpha antibody RAC antibody RAC-alpha serine/threonine-protein kinase antibody RAC-PK-alpha antibody
Accession No.	Swiss-Prot#:P31749
Calculated MW	56 kDa
SDS-PAGE MW	56 kDa
Formulation	1*TBS (pH7.4), 1%BSA, 40%Glycerol. Preservative: 0.05% Sodium Azide.
Storage	Store at -20°C

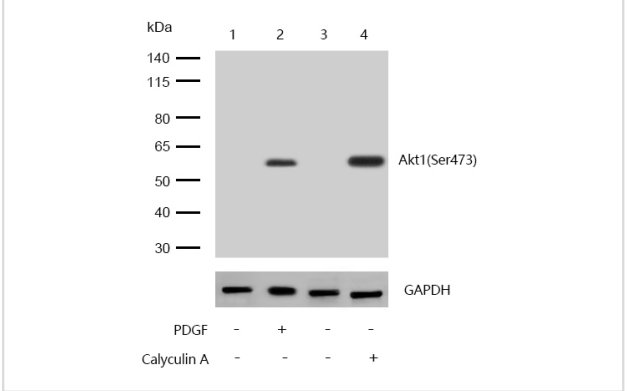
Application Details

WB: 1:500-1:2000

ICC/IF: 1:50-1:200

IHC: 1:50-1:200

Images



All lanes : Akt1(Phospho-Ser473) Rabbit mAb at 1/1k dilution

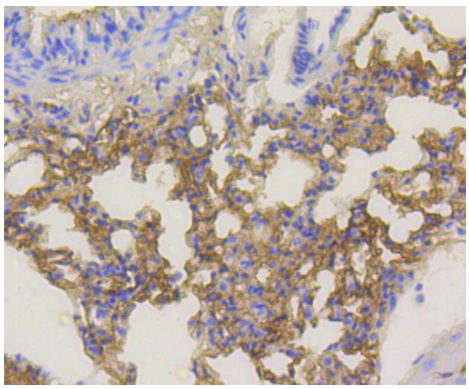
Lane 1 : NIH/3T3 whole cell lysates
Lane 2 : NIH/3T3 treated with 100ng/mL PDGF for 1 hour whole cell lysates
Lane 3 : MCF7 whole cell lysates
Lane 4 : MCF7 treated with 100nM Calyculin A for 30 minutes whole cell lysates

Lysates/proteins at 20 µg per lane.

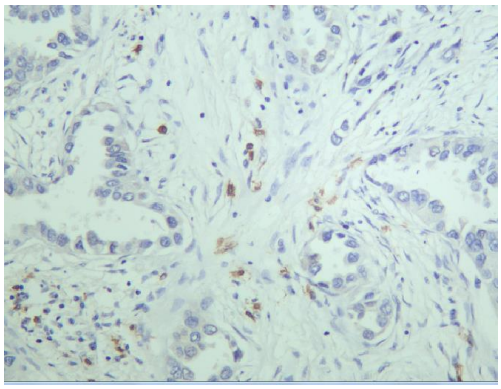
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) at 1/20000 dilution

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

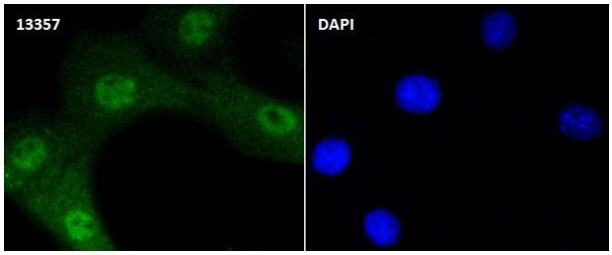
Exposure time: 7 seconds



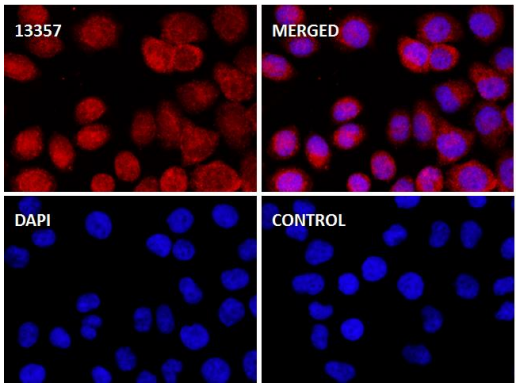
Formalin-fixed;paraffin-embedded mouse lung tissue stained for Akt1(Phospho-Ser473) using 13357 at 1/100 dilution in immunohistochemical analysis.



Formalin-fixed;paraffin-embedded huamn lung tissue stained for Akt1(Phospho-Ser473) using 13357 at 1/100 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence
Akt1(Phospho-Ser473) antibody (13357)
ICC/IF staining of Akt1(Phospho-Ser473) in NIH/3T3 cells. Cells were fixed with 4% Paraformaldehyde permeabilized with 0.1% Triton X-100.
Samples were incubated with 13357 at a working dilution of 1/100. The secondary antibody was Alexa FluorB 488 goat anti rabbit;used at a dilution of 1/500.
Nuclei were counterstained with DAPI.



Immunocytochemistry/Immunofluorescence
Akt1(Phospho-Ser473) antibody (13357)
ICC/IF staining of Akt1(Phospho-Ser473) in Hela cells. Cells were fixed with 4% Paraformaldehyde permeabilized with 0.1% Triton X-100.
Samples were incubated with 13357 at a working dilution of 1/100. The secondary antibody was Alexa FluorB 647 goat anti rabbit;used at a dilution of 1/500.
The negative control is shown in bottom right hand panel - for the negative control. Nuclei were counterstained with DAPI.

Background

The serine/threonine kinase Akt family contains several members, including Akt1 (also designated PKB or RacPK), Akt2 (also designated PKBβ or RacPK-β) and Akt 3 (also designated PKBγ or thyoma viral proto-oncogene 3), which exhibit sequence homology with the protein kinase A and C families and are encoded by the c-Akt proto-oncogene. All members of the Akt family have a pleckstrin homology domain. Akt1 and Akt2 are activated by PDGF stimulation. This activation is dependent on PDGFR-β tyrosine residues 740 and 751, which bind the subunit of the phosphatidylinositol 3-kinase (PI 3-kinase) complex. Activation of Akt1 by insulin or insulin-growth factor-1(IGF-1) results in phosphorylation of both Thr 308 and Ser 473. Phosphorylation of both residues is important to generate a high level of Akt1 activity, and the phosphorylation of Thr 308 is not dependent on phosphorylation of Ser 473 in vivo. Thus, Akt proteins become phosphorylated and activated in insulin/IGF-1-stimulated cells by an

upstream kinase(s). The activation of Akt1 and Akt2 is inhibited by the PI kinase inhibitor wortmannin, suggesting that the protein signals downstream of the PI kinases.

References

1. Chen J et al. Low expression of phosphatase and tensin homolog in clear-cell renal cell carcinoma contributes to chemoresistance through activating the Akt/HDM2 signaling pathway. Mol Med Rep 12:2622-8 (2015).
2. Burdine LJ et al. Proteomic Identification of DNA-PK Involvement within the RET Signaling Pathway. PLoS One 10:e0127943 (2015).

Published Papers

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Oncol on 2021 Apr 22 by Xin Tian, Lina Wu,et al..PMID:33968740, , (2021)

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Dan Pei;Hongpeng Li el at., The Role of the PDGFR/PI3K/Akt Signaling Pathway in Promoting the Proliferation of Mouse Brain Astrocytes in vitro by PDGF-BB, , (2019)

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el at., NVD-BM-mediated genetic biosensor triggers accumulation of 7-dehydrocholesterol and inhibits melanoma via Akt1/NF-?B signaling. In Aging (Albany NY) on 2020 Jul 25 by Jia Liu, Lei Cao, et al..PMID: 32712598, , (2020)

PMID:32712598

Note: This product is for in vitro research use only and is not intended for use in humans or animals.