

For Research Use Only

# Phospho-AKT (Ser473) Polyclonal antibody

Catalog Number: 28731-1-AP

161 Publications



## Basic Information

Catalog Number:

28731-1-AP

Size:

100ul, Concentration: 500 ug/ml by Nanodrop;

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

NM\_005163

GeneID (NCBI):

207

UNIPROT ID:

P31749

Full Name:

v-akt murine thymoma viral oncogene homolog 1

Observed MW:

58 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:1000-1:5000

## Applications

Tested Applications:

WB, ELISA

Cited Applications:

WB, IHC, IF

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat, pig, rabbit, sheep

Positive Controls:

WB: Calyculin A treated PC-3 cells, PDGF treated NIH/3T3 cells

## Background Information

Phosphorylation on Thr-308, Ser-473 and Tyr-474 is required for full activity. Activated TNK2 phosphorylates it on Tyr-176 resulting in its binding to the anionic plasma membrane phospholipid PA (PubMed:20333297). This phosphorylated form localizes to the cell membrane, where it is targeted by PDPK1 and PDPK2 for further phosphorylations on Thr-308 and Ser-473 leading to its activation (PubMed:9512493). Ser-473 phosphorylation by mTORC2 favors Thr-308 phosphorylation by PDPK1 (PubMed:21464307, PubMed:8978681). AKT1 Thr-308 and Ser-473 is Phosphorylated by IKK $\beta$  and TBK1 (PubMed:15718470, PubMed:18456494, PubMed:20481595, PubMed:8978681). Ser-473 phosphorylation is enhanced by interaction with AGAP2 isoform 2 (PIKE-A) (PubMed:14761976). Ser-473 phosphorylation is enhanced in focal cortical dysplasias with Taylor-type balloon cells (PubMed:17013611). Ser-473 phosphorylation is enhanced by signaling through activated FLT3 (By similarity). Ser-473 is dephosphorylated by PHLPP (PubMed:28147277) and Ser-473 by PP2A phosphatase (PubMed:21329884).

## Notable Publications

Author	Pubmed ID	Journal	Application
De-Wei Zhu	34658873	Front Pharmacol	WB
Dewei He	36139502	Cells	WB
Chunling Yuan	36095961	Biomed Pharmacother	WB

## Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

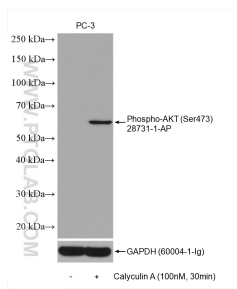
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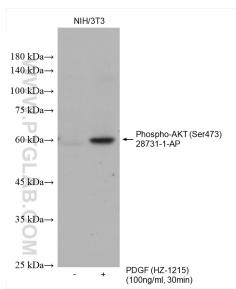
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## Selected Validation Data



Non-treated PC-3 and Calyculin A treated PC-3 cells were subjected to SDS PAGE followed by western blot with 28731-1-AP (Phospho-AKT (Ser473) antibody) at dilution of 1:3000 incubated at 4°C overnight. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Non-treated NIH/3T3 and PDGF (HZ-1215) treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 28731-1-AP (Phospho-AKT (Ser473) antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.