

For Research Use Only

Phospho-AKT1 (Ser473) Recombinant antibody



Catalog Number: 80462-1-RR **2 Publications**

Basic Information

Catalog Number: 80462-1-RR	GenBank Accession Number: NM_005163	Purification Method: Protein A purification
Size: 100ul , Concentration: 1090 µg/ml by Nanodrop;	GeneID (NCBI): 207	CloneNo.: 2M10
Source: Rabbit	UNIPROT ID: P31749	Recommended Dilutions: WB 1:2000-1:10000
Isotype: IgG	Full Name: v-akt murine thymoma viral oncogene homolog 1	
	Observed MW: 56-62 kDa	

Applications

Tested Applications: FC, WB, ELISA	Positive Controls: WB : HeLa cells, HEK-293T cells, HEK-293 cells, NIH/3T3 cells, IGF-1 treated HEK-293T cells, Calyculin A treated HEK-293 cells, Calyculin A treated HeLa cells, Calyculin A treated NIH/3T3 cells
Cited Applications: WB	
Species Specificity: Human, mouse	
Cited Species: human, mouse	

Background Information

AKT is a serine/threonine kinase and it participates in the key role of the PI3K signaling pathway. Phosphatidylinositol-3 kinase (PI3K) is the key regulator of AKT activation. The recruitment of inactive AKT protein to PIP3-rich areas of the plasma membrane results in a conformational change that exposes the activation loop of AKT. AKT's activating kinase, phosphoinositide-dependent protein kinase (PDK1), is also recruited to PIP3 microdomains. PDK1 phosphorylates AKT on threonine 308 (Thr308) of the exposed activation loop, activating AKT and leading to a second phosphorylation of AKT at serine 473 (Ser473) by a kinase presumed to be mTORC2 that further potentiates kinase activity. Active AKT will phosphorylate various downstream protein targets that control cell growth and translational control and act to suppress apoptosis. (PMID: 31594388, PMID: 30808672). 80462-1-RR specifically recognizes AKT1 phosphorylated at Ser473.

Notable Publications

Author	Pubmed ID	Journal	Application
Kun Wang	35415320	ACS Omega	WB
Yihan Huang	38092386	Biol Pharm Bull	WB

Storage

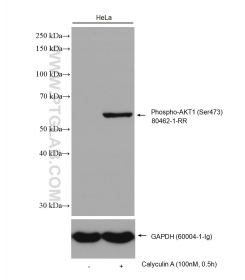
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

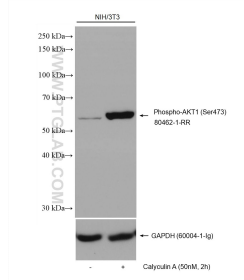
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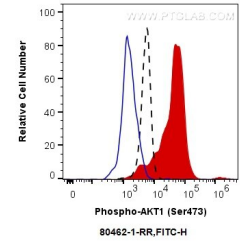
Selected Validation Data



Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 80462-1-RR (Phospho-AKT1 (Ser473) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Non-treated and Calyculin A treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 80462-1-RR (Phospho-AKT1 (Ser473) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



1X10⁶ NIH/3T3 cells untreated (dashed line) or treated with Calyculin A (red) were intracellularly stained with 0.5 ug Anti-Human Phospho-AKT1 (Ser473) (80462-1-RR, Clone:2M10) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000, or 0.5 ug Control Antibody (blue). Cells were fixed with 4% PFA and permeabilized with 90% MeOH.