For Research Use Only

Phospho-AKT (Ser473) Recombinant antibody

Catalog Number:80455-1-RR 118 Publications

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Basic Information

Catalog Number:
80455-1-RR

Concentration:
1000 ug/ml

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:
Protein A purification

CloneNo.:
2E17

Recommended Dilutions:
WB 1:500-1:5000

Applications

Tested Applications:
WB, FC (Intra), ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human

Cited Species:
human, mouse, rat, pig, rabbit, bovine

Positive Controls:

WB : HEK-293 cells, HEK-293T cells, HeLa cells, mouse brain tissue, IGF-1 treated HEK-293T cells, Calyculin A treated HEK-293 cells, Calyculin A treated HeLa cells

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)

Notable Publications

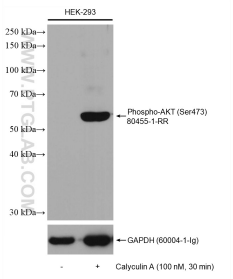
Author	Pubmed ID	Journal	Application
Li Wu	36184060	Vascul Pharmacol	WB
Feixue Liu	36113268	Ecotoxicol Environ Saf	WB
Huangrong Zhu	36120586	Front Cell Dev Biol	IF

Storage

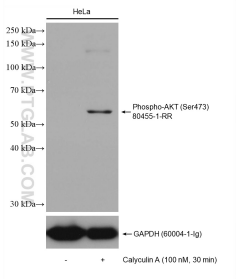
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

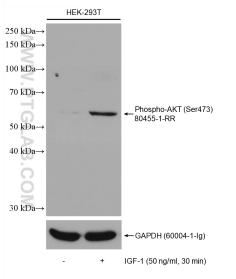
Selected Validation Data



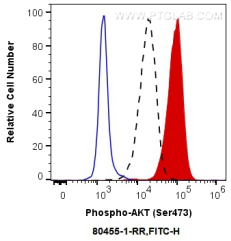
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80455-1-RR (Phospho-AKT (Ser473) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 80455-1-RR (Phospho-AKT (Ser473) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Non-treated and IGF-1 treated HEK-293T cells were subjected to SDS PAGE followed by western blot with 80455-1-RR (Phospho-AKT (Ser473) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



1X10^6 Calyculin A treated HEK-293 cells were intracellularly stained with 0.25 ug Anti-Human Phospho-AKT (Ser473) (80455-1-RR, Clone:2E17) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.25 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with 80% MeOH.