

For Research Use Only

AKT1-Specific Recombinant antibody

Catalog Number: 80457-1-RR **4 Publications**



Basic Information

Catalog Number: 80457-1-RR	GenBank Accession Number: NM_005163	Purification Method: Protein A purification
Size: 100ul , Concentration: 1000 ug/ml by Nanodrop;	GeneID (NCBI): 207	CloneNo.: 4I5
Source: Rabbit	UNIPROT ID: P31749	Recommended Dilutions: WB 1:5000-1:50000 IHC 1:50-1:500 IF/ICC 1:200-1:800
Isotype: IgG	Full Name: v-akt murine thymoma viral oncogene homolog 1	
	Observed MW: 56-62 kDa	

Applications

Tested Applications: WB, IHC, IF/ICC, ELISA	Positive Controls:
Cited Applications: WB	WB : HEK-293 cells, HEK-293T cells, NIH/3T3 cells, Calyculin A treated HepG2 cells, Calyculin A treated HEK-293 cells, HeLa cells, Calyculin A treated HeLa cells, Calyculin A treated NIH/3T3 cells
Species Specificity: human, mouse	IHC : human breast cancer tissue,
Cited Species: human, mouse	IF/ICC : HeLa cells,
Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0	

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). 80457-1-RR specifically recognizes AKT1.

Notable Publications

Author	Pubmed ID	Journal	Application
Nannan Sha	39865175	Oncogene	WB
Liyan Sui	39616195	Nat Commun	WB
Yihan Huang	38092386	Biol Pharm Bull	WB

Storage

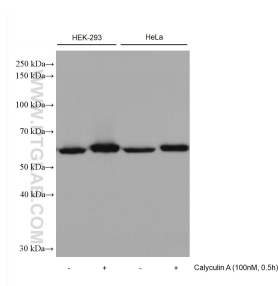
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

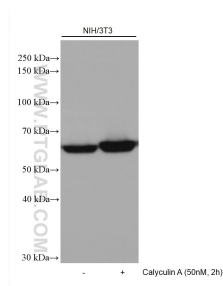
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
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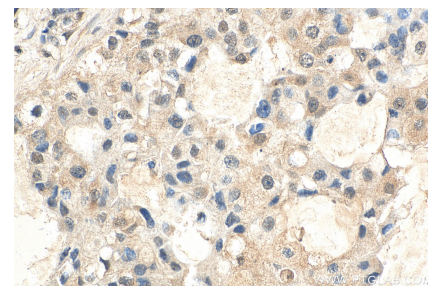
Selected Validation Data



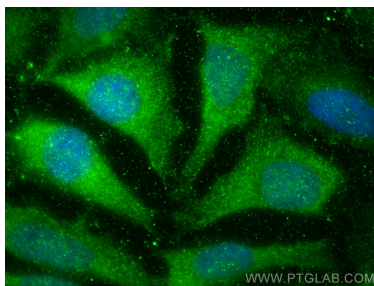
Non-treated and Calyculin A treated cells were subjected to SDS PAGE followed by western blot with 80457-1-RR (AKT1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Non-treated and Calyculin A treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 80457-1-RR (AKT1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 80457-1-RR (AKT1 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Ethanol) fixed HeLa cells using AKT1 (C-terminal) antibody (80457-1-RR, Clone: 4I5) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).