

For Research Use Only

AKT1-Specific Recombinant antibody

Catalog Number: 80457-1-RR

6 Publications



Basic Information

Catalog Number:

80457-1-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:

56-62 kDa

Purification Method:

Protein A purification

CloneNo.:

4I5

Recommended Dilutions:

WB: 1:5000-1:50000

IHC: 1:50-1:500

IF/ICC: 1:200-1:800

Applications

Tested Applications:

WB, IHC, IF/ICC, ELISA

Cited Applications:

WB

Species Specificity:

human, mouse

Cited Species:

human, mouse

**Note-IHC: suggested antigen retrieval with
TE buffer pH 9.0; (*) Alternatively, antigen
retrieval may be performed with citrate
buffer pH 6.0**

Positive Controls:

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

IHC: human breast cancer tissue,

IF/ICC: 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). 80457-1-RR specifically recognizes AKT1.

Notable Publications

Author	Pubmed ID	Journal	Application
Ming Zhou	40117752	Bioorg Chem	WB
Yihan Huang	40054174	Phytomedicine	WB
Nannan Sha	39865175	Oncogene	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

For technical support and original validation data for this product please contact:

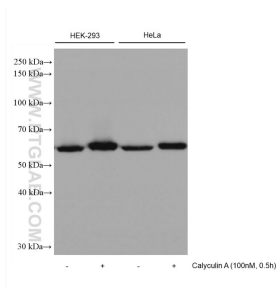
T: 4006900926

E: Proteintech-CN@ptglab.com

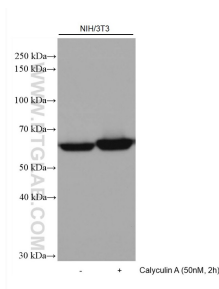
W: ptgcn.com

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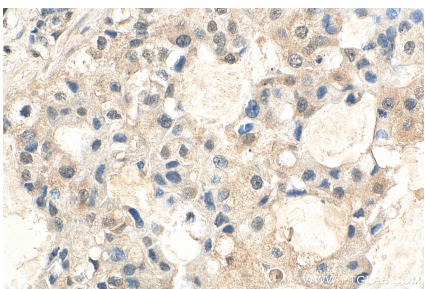
Selected Validation Data



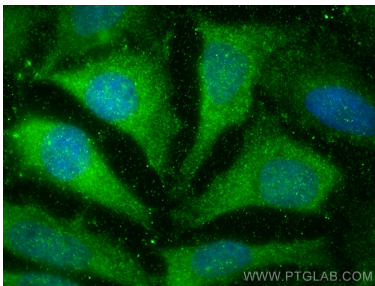
Non-treated and Calyculin A treated cells were subjected to SDS PAGE followed by western blot with 80457-1-RR (AKT1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



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: 415) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).