

## Description

The AKT Substrate Expanded Antibody Kit provides a cost-effective tool for studying a broad range of proteins that are phosphorylated by AKT. Perfect for signal transduction researchers starting a new project, screening multiple prospective targets, or those who simply require less volume.

## Product Information

The AKT Substrate Expanded Kit contains 10 antibodies against downstream phosphorylation targets of AKT.

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
Phospho-GSK3B (Ser9)	<a href="#">67558-1-Ig</a>	Mouse monoclonal	H	WB, IHC, IF	20 uL
Phospho-mTOR (Ser2448)	<a href="#">80596-1-RR</a>	Rabbit monoclonal	H, R	WB, IF	20 uL
Phospho-TSC2 (Thr1462)	<a href="#">80698-1-RR</a>	Rabbit monoclonal	H	WB	20 uL
Phospho-TSC2 (Ser939)	<a href="#">81654-1-RR</a>	Rabbit monoclonal	H	WB	20 uL
Phospho-FOXO1 (Ser319)	<a href="#">28757-1-AP</a>	Rabbit polyclonal	H	WB	20 uL
Phospho-CREB1 (Ser133)	<a href="#">81871-1-RR</a>	Rabbit monoclonal	H	WB, IHC	20 uL
Phospho-Caspase 9 (Ser196)	<a href="#">80346-1-RR</a>	Rabbit monoclonal	H, M	WB	20 uL
Phospho-XIAP (Ser87)	<a href="#">28791-1-AP</a>	Rabbit polyclonal	H, M, R	WB	20 uL
Phospho-ASK1 (Ser83)	<a href="#">28847-1-AP</a>	Rabbit polyclonal	H	WB	20 uL
Phospho-AKT (Ser473)	<a href="#">80455-1-RR</a>	Rabbit monoclonal	H	WB	20 uL

Also see our 'AKT Substrate Essentials Antibody Kit' on the following page

<https://www.ptglab.com/products/AKT-Substrate-Essentials-Antibody-Kit-PK30021.htm>

## Package

10×20 uL

## Storage

Store at -20°C. Stable for one year from the date of receipt.

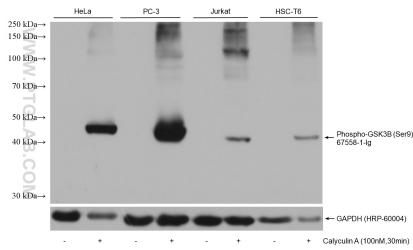
## Background Information

Upon its activation, AKT phosphorylates a number of different substrates, resulting in the activation or inactivation of downstream cellular functions. The phosphorylation of GSK3B at Ser9, inhibits its activity and subsequent glycogen synthesis. Meanwhile, AKT-mediated phosphorylation of mTOR at Ser2448 results in its activation and formation of the mTORC1 complex. TSC2, an inhibitor of mTORC1 activation, is blocked through phosphorylation at Thr1462 and Ser939 residues. FOXO1, a transcription factor involved in cell cycle arrest and apoptosis, is inhibited by AKT through phosphorylation at Ser319, which leads to its nuclear export. Pro-survival functions are also promoted through inhibiting ASK1 activity via Ser83 phosphorylation and XIAP through Ser87 phosphorylation. Finally, AKT can help to trigger the caspase cascade by phosphorylating Caspase 9 at Ser196.

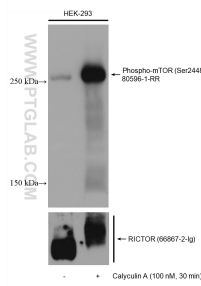
## Standard Protocols

Click [here](#) to view our standard protocols for various applications including WB, IP, IHC, IF, FC, and ELISA.

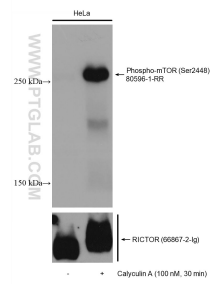
## Validation Data



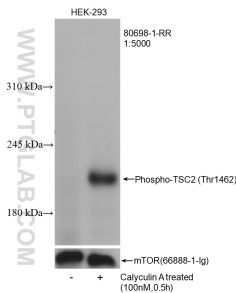
Non-treated and Calyculin A treated cell lysates were subjected to SDS PAGE followed by western blot with 67558-1-Ig (Phospho-GSK3B (Ser9) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated GAPDH Monoclonal antibody (HRP-60004) as loading... control.



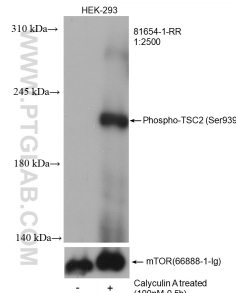
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80596-1-RR (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with RICTOR antibody (66867-2-Ig) subsequently.



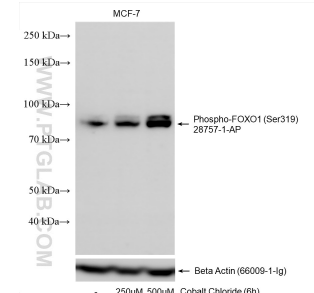
Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 80596-1-RR (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with RICTOR antibody (66867-2-Ig) subsequently.



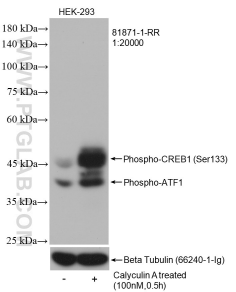
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80698-1-RR (Phospho-TSC2 (Thr1462) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with mTOR antibody (66888-1-Ig) as the loading control.



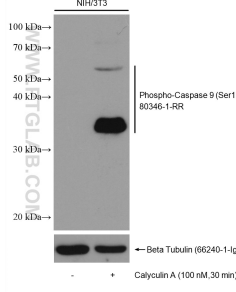
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 81654-1-RR (Phospho-TSC2 (Ser939) antibody) at dilution of 1:2500 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with mTOR antibody (66888-1-Ig) as the loading control.



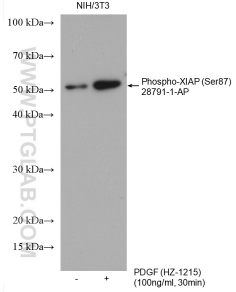
Non-treated MCF-7 cells and Cobalt Chloride treated MCF-7 cells were subjected to SDS PAGE followed by western blot with 28757-1-AP (Phospho-FOXO1 (Ser319) antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Actin antibody as loading control.



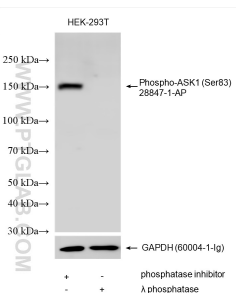
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 81871-1-RR (Phospho-CREB1 (Ser133) antibody) at dilution of 1:20000 incubated at room temperature for 1 hours. The membrane was stripped and re-blotted with Beta-tubulin antibody as loading control.



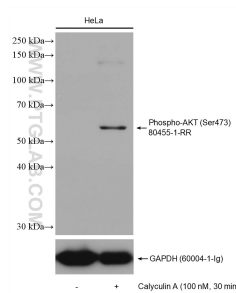
Non-treated NIH/3T3 and Calyculin A treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 80346-1-RR (Phospho-Caspase 9 (Ser196) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Tubulin antibody as loading control.



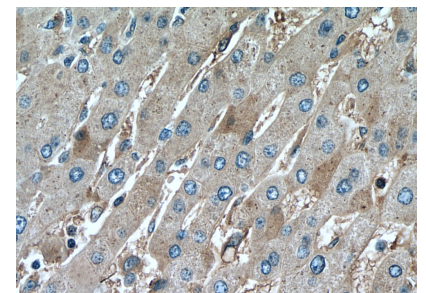
Non-treated NIH/3T3 and PDGF (HZ-1215) treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 28791-1-AP (Phospho-XIAP (Ser87) antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



Phosphatase inhibitor treated and λ phosphatase treated HEK-293T cells were subjected to SDS PAGE followed by western blot with 28847-1-AP (Phospho-ASK1 (Ser83) antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as



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



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 67558-1-Ig (GSK3B-phospho-S9 antibody) at dilution of 1:300 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

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

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W: ptglab.com

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