

For Research Use Only

# Phospho-ULK1 (Ser467) Polyclonal antibody



Catalog Number: 30005-1-AP

## Basic Information

<b>Catalog Number:</b> 30005-1-AP	<b>GenBank Accession Number:</b> NM_003565	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 500 µg/ml	<b>GeneID (NCBI):</b> 8408	<b>Recommended Dilutions:</b> WB 1:500-1:1000
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> O75385	
<b>Isotype:</b> IgG	<b>Full Name:</b> unc-51-like kinase 1 (C. elegans)	
	<b>Observed MW:</b> 113-130 kDa	

## Applications

<b>Tested Applications:</b> WB, ELISA	<b>Positive Controls:</b> WB: λ phosphatase treated NIH/3T3 cells,
<b>Species Specificity:</b> Human, Mouse	

## Background Information

Unc-51-like-kinase 1 (ULK1) is a target of both the mechanistic target of rapamycin (mTOR) and AMP activated protein kinase (AMPK), whose role is to facilitate the initiation of autophagy in response to starvation. ULK1 is phosphorylated on serine 638 and 758 sites by mTOR in nutrient-rich conditions, inhibiting ULK1 activation by disrupting its binding to AMPK. Upon glucose starvation, dissociation of mTOR from ULK1 and phosphorylation by AMPK leads to the activation of ULK1 activity. AMPK increases ULK1 activity by directly phosphorylating Ser467, Ser555, Thr574, and Ser637 at least four sites, which increases the recruitment of autophagy-relevant proteins (ATG proteins) to the membrane domains which affects autophagy at the initiation stage. S467, S556, and T574 are sites responsible for regulating mitochondrial homeostasis during starvation. (PMID: 30517873, PMID: 21258367)

## 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

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

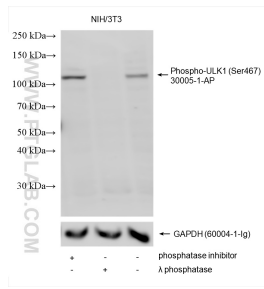
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## Selected Validation Data



Non-treated NIH/3T3, phosphatase inhibitor treated and  $\lambda$  phosphatase treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 30005-1-AP (Phospho-ULK1 (Ser467) antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.