

Phospho-ULK1 (Ser467) Polyclonal antibody

Catalog Number: 30005-1-AP

Basic Information

Catalog Number:

30005-1-AP

Size:

500 µg/ml

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

NM_003565

GeneID (NCBI):

8408

UNIPROT ID:

O75385

Full Name:

unc-51-like kinase 1 (C. elegans)

Observed MW:

113-130 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:500-1:1000

Applications

Tested Applications:

WB, ELISA

Species Specificity:

Human, Mouse

Positive Controls:

WB: λ phosphatase treated NIH/3T3 cells,

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

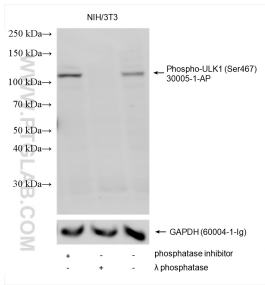
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Selected Validation Data



Non-treated NIH/3T3, phosphatase inhibitor treated and λ 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.