

## ULK1 polyclonal antibody

Catalog: BS66000

Host: Rabbit

Reactivity: Human

### BackGround:

Two related serine/threonine kinases, UNC-51-like kinase 1 and 2 (ULK1, ULK2), were discovered as mammalian homologs of the *C. elegans* gene UNC-51 in which mutants exhibited abnormal axonal extension and growth. Both proteins are widely expressed and contain an amino-terminal kinase domain followed by a central proline/serine rich domain and a highly conserved carboxy-terminal domain. The roles of ULK1 and ULK2 in axon growth have been linked to studies showing that the kinases are localized to neuronal growth cones and are involved in endocytosis of critical growth factors, such as NGF. Yeast two-hybrid studies found ULK1/2 associated with modulators of the endocytic pathway, SynGAP and syntenin. Structural similarity of ULK1/2 has also been recognized with the yeast autophagy protein Atg1/Apg1. Knockdown experiments using siRNA demonstrated that ULK1 is essential for autophagy, a catabolic process for the degradation of bulk cytoplasmic contents. It appears that Atg1/ULK1 can act as a convergence point for multiple signals that control autophagy, and can bind to several autophagy-related (Atg) proteins, regulating phosphorylation states and protein trafficking. AMPK, activated during low nutrient conditions, directly phosphorylates ULK1 at multiple sites including Ser317, Ser555, and Ser777. Conversely, mTOR, which is a regulator of cell growth and an inhibitor of autophagy, phosphorylates ULK1 at Ser757 and disrupts the interaction between ULK1 and AMPK.

### Product:

Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2

### Molecular Weight:

~ 140 kDa

### Swiss-Prot:

O75385

### Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

### Applications:

WB: 1:500~1:1000

IHC: 1:50~1:200

IF: 1:100~1:500

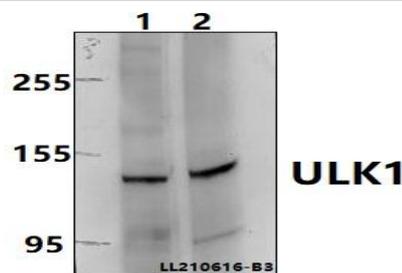
### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

### Specificity:

ULK1 polyclonal antibody detects endogenous levels of ULK1 protein.

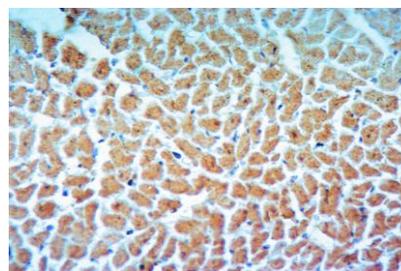
### DATA:



Western blot (WB) analysis of ULK1 polyclonal antibody at 1:500 dilution

Lane1:K562 whole cell lysate(40ug)

Lane2:H1792 whole cell lysate(40ug)



Immunohistochemistry of paraffin-embedded Rat Heart using ULK1 antibody at dilution of 1:50.

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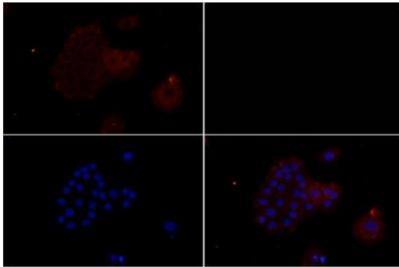
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## PRODUCT DATA SHEET

Bioworld Technology, Inc.



**Note:**

For research use only, not for use in diagnostic procedure.

Immunofluorescence analysis of HeLa cells using ULK1 pAb at dilution of 1:200 (40x lenses).

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