

## Product datasheet

# Recombinant Human ULK1 protein ab95322

[2 References](#) [1 Image](#)

### Description

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<b>Product name</b>	Recombinant Human ULK1 protein
<b>Purity</b>	> 40 % SDS-PAGE.
<b>Expression system</b>	HEK 293 cells
<b>Accession</b>	<b><u>O75385</u></b>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Predicted molecular weight</b>	113 kDa including tags
<b>Amino acids</b>	2 to 1050
<b>Tags</b>	DDDDK tag N-Terminus

### Specifications

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Our **Abpromise guarantee** covers the use of **ab95322** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE
<b>Form</b>	Liquid

### Preparation and Storage

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<b>Stability and Storage</b>	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 7.50 Constituents: 0.0462% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 0.395% Tris HCl, 0.05% Tween, 20% Glycerol (glycerin, glycerine), 0.58% Sodium chloride
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### General Info

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<b>Function</b>	Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of
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phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagosomes, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector and negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK and also acts as a regulator of AMPK by mediating phosphorylation of AMPK subunits PRKAA1, PRKAB2 and PRKAG1, leading to negatively regulate AMPK activity. May phosphorylate ATG13/KIAA0652 and RPTOR; however such data need additional evidences. Plays a role early in neuronal differentiation and is required for granule cell axon formation. May also phosphorylate SESN2 and SQSTM1 to regulate autophagy (PubMed:25040165).

#### Tissue specificity

Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung.

#### Sequence similarities

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. APG1/unc-51/ULK1 subfamily.

Contains 1 protein kinase domain.

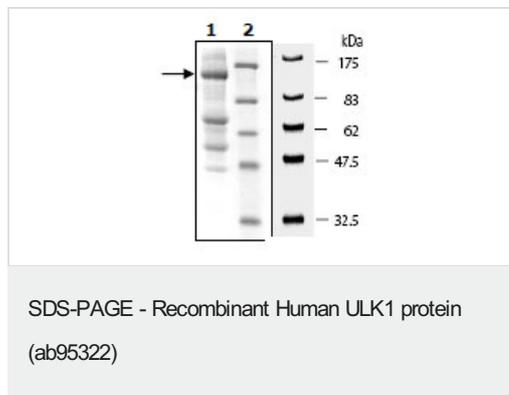
#### Post-translational modifications

Autophosphorylated. Phosphorylated under nutrient-rich conditions; dephosphorylated during starvation or following treatment with rapamycin. Under nutrient sufficiency, phosphorylated by MTOR/mTOR, disrupting the interaction with AMPK and preventing activation of ULK1 (By similarity). In response to nutrient limitation, phosphorylated and activated by AMPK, leading to activate autophagy.

#### Cellular localization

Cytoplasm, cytosol. Preautophagosomal structure. Under starvation conditions, is localized to punctate structures primarily representing the isolation membrane that sequesters a portion of the cytoplasm resulting in the formation of an autophagosome.

## Images



10% SDS-PAGE analysis

Lane 1: 3 µg ab95322

Lane 2: Molecular Weight Markers

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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