

**Phospho-ULK1 (S556) Antibody**  
Rabbit mAb  
Catalog # AP93134

**Specification**

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**Phospho-ULK1 (S556) Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O75385</a>
Clonality	Monoclonal
<b>Other Names</b>	
ATG1; ATG1A; hATG1; ULK1; UNC51;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	112631 Da

**Phospho-ULK1 (S556) Antibody - Additional Information**

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Phospho-ULK1 (S556)
Description	Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Phospho-ULK1 (S556) Antibody - Protein Information**

**Name** ULK1 {ECO:0000303|PubMed:9693035, ECO:0000312|HGNC:HGNC:12558}

**Function**

Serine/threonine-protein kinase involved in autophagy in response to starvation (PubMed:<a href="http://www.uniprot.org/citations/18936157" target="\_blank">18936157</a>, PubMed:<a href="http://www.uniprot.org/citations/21460634" target="\_blank">21460634</a>, PubMed:<a href="http://www.uniprot.org/citations/21795849" target="\_blank">21795849</a>, PubMed:<a href="http://www.uniprot.org/citations/23524951" target="\_blank">23524951</a>, PubMed:<a href="http://www.uniprot.org/citations/25040165" target="\_blank">25040165</a>, PubMed:<a href="http://www.uniprot.org/citations/29487085" target="\_blank">29487085</a>, PubMed:<a href="http://www.uniprot.org/citations/31123703" target="\_blank">31123703</a>). Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes (PubMed:<a href="http://www.uniprot.org/citations/18936157" target="\_blank">18936157</a>, PubMed:<a href="http://www.uniprot.org/citations/21460634" target="\_blank">21460634</a>).

target="\_blank">21460634</a>, PubMed:<a href="http://www.uniprot.org/citations/21795849" target="\_blank">21795849</a>, PubMed:<a href="http://www.uniprot.org/citations/25040165" target="\_blank">25040165</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/21795849" target="\_blank">21795849</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/21460634" target="\_blank">21460634</a>). May phosphorylate ATG13/KIAA0652 and RPTOR; however such data need additional evidences (PubMed:<a href="http://www.uniprot.org/citations/18936157" target="\_blank">18936157</a>). Plays a role early in neuronal differentiation and is required for granule cell axon formation (PubMed:<a href="http://www.uniprot.org/citations/11146101" target="\_blank">11146101</a>). Also phosphorylates SESN2 and SQSTM1 to regulate autophagy (PubMed:<a href="http://www.uniprot.org/citations/25040165" target="\_blank">25040165</a>, PubMed:<a href="http://www.uniprot.org/citations/37306101" target="\_blank">37306101</a>). Phosphorylates FLCN, promoting autophagy (PubMed:<a href="http://www.uniprot.org/citations/25126726" target="\_blank">25126726</a>). Phosphorylates AMBRA1 in response to autophagy induction, releasing AMBRA1 from the cytoskeletal docking site to induce autophagosome nucleation (PubMed:<a href="http://www.uniprot.org/citations/20921139" target="\_blank">20921139</a>). Phosphorylates ATG4B, leading to inhibit autophagy by decreasing both proteolytic activation and delipidation activities of ATG4B (PubMed:<a href="http://www.uniprot.org/citations/28821708" target="\_blank">28821708</a>).

#### Cellular Location

Cytoplasm, cytosol. Preautophagosomal structure. Note=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.

#### Tissue Location

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

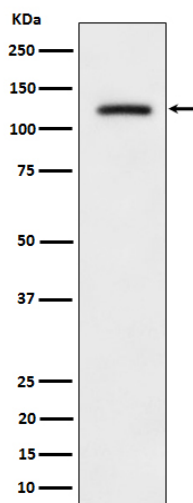
### Phospho-ULK1 (S556) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Phospho-ULK1 (S556) Antibody - Images





Western blot analysis of Phospho-ULK1 (S556) expression in 293T transfected with ULK1 cell lysate.