

**ULK1 Antibody (Center S556)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP19265c****Specification**

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

|                   |                             |
|-------------------|-----------------------------|
| Application       | WB,E                        |
| Primary Accession | <a href="#">O75385</a>      |
| Other Accession   | <a href="#">NP_003556.1</a> |
| Reactivity        | Human                       |
| Host              | Rabbit                      |
| Clonality         | Polyclonal                  |
| Isotype           | Rabbit IgG                  |
| Calculated MW     | 112631                      |
| Antigen Region    | 538-564                     |

**ULK1 Antibody (Center S556) - Additional Information****Gene ID** 8408**Other Names**

Serine/threonine-protein kinase ULK1, Autophagy-related protein 1 homolog, ATG1, hATG1, Unc-51-like kinase 1, ULK1, KIAA0722

**Target/Specificity**

This ULK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 538-564 amino acids from the Central region of human ULK1.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

ULK1 Antibody (Center S556) is for research use only and not for use in diagnostic or therapeutic procedures.

**ULK1 Antibody (Center S556) - 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:[18936157](#), PubMed:[21460634](#), PubMed:[21795849](#), PubMed:[23524951](#), PubMed:[25040165](#), PubMed:[29487085](#), PubMed:[31123703](#)). Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes (PubMed:[18936157](#), PubMed:[21460634](#), PubMed:[21795849](#), PubMed:[25040165](#), PubMed:[39384743](#)). 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:[21795849](#)). 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:[21460634](#)). May phosphorylate ATG13/KIAA0652 and RPTOR; however such data need additional evidences (PubMed:[18936157](#)). Plays a role early in neuronal differentiation and is required for granule cell axon formation (PubMed:[11146101](#)). Also phosphorylates SESN2 and SQSTM1 to regulate autophagy (PubMed:[25040165](#), PubMed:[37306101](#)). Phosphorylates FLCN, promoting autophagy (PubMed:[25126726](#)). Phosphorylates AMBRA1 in response to autophagy induction, releasing AMBRA1 from the cytoskeletal docking site to induce autophagosome nucleation (PubMed:[20921139](#)). Phosphorylates ATG4B, leading to inhibit autophagy by decreasing both proteolytic activation and delipidation activities of ATG4B (PubMed:[28821708](#)).

#### 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

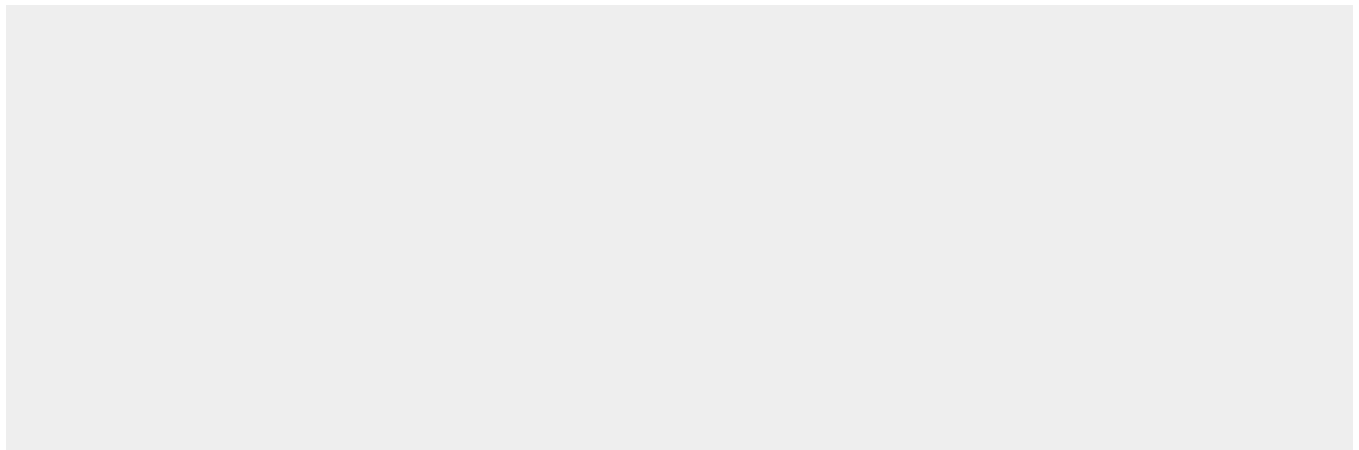
Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung

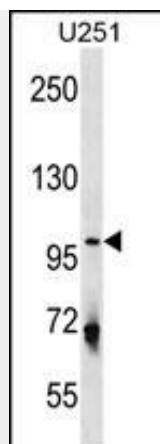
### ULK1 Antibody (Center S556) - Protocols

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](#)

### ULK1 Antibody (Center S556) - Images





ULK1 Antibody (Center S556)(Cat. #AP19265c) western blot analysis in U251 cell line lysates (35ug/lane). This demonstrates the ULK1 antibody detected the ULK1 protein (arrow).

#### **ULK1 Antibody (Center S556) - Background**

ULK1 is involved in autophagy. Required for autophagosome formation (By similarity). Target of the TOR kinase signaling pathway that regulates autophagy through the control of phosphorylation status of ATG13/KIAA0652 and ULK1, and the regulation of the ATG13-ULK1-RB1CC1 complex (By similarity). Phosphorylates ATG13/KIAA0652. Involved in axon growth (By similarity). Plays an essential role in neurite extension of cerebellar granule cells (By similarity).

#### **ULK1 Antibody (Center S556) - References**

Mercer, C.A., et al. Autophagy 5(5):649-662(2009)  
Ganley, I.G., et al. J. Biol. Chem. 284(18):12297-12305(2009)  
Jung, C.H., et al. Mol. Biol. Cell 20(7):1992-2003(2009)  
Hosokawa, N., et al. Mol. Biol. Cell 20(7):1981-1991(2009)  
Chan, E.Y. Sci Signal 2 (84), PE51 (2009) :