

ULK1 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS11941**Specification**

ULK1 Antibody - Product Information

Application	WB
Primary Accession	O75385
Reactivity	Human, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	113kDa KDa

ULK1 Antibody - Additional Information**Gene ID** 8408**Other Names**

Serine/threonine-protein kinase ULK1, 2.7.11.1, Autophagy-related protein 1 homolog, ATG1, hATG1, Unc-51-like kinase 1, ULK1, KIAA0722

Target/Specificity

A portion of amino acid 320-370 of human ULK1

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

ULK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ULK1 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:18936157, PubMed:21460634, PubMed:21795849, PubMed:23524951, PubMed:25040165, PubMed:31123703, PubMed:29487085). 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).

target="_blank">25040165). 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

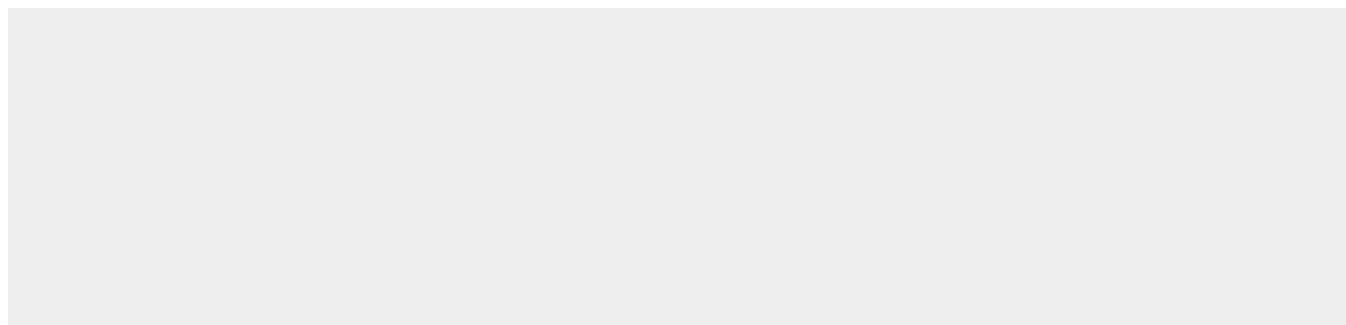
Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung

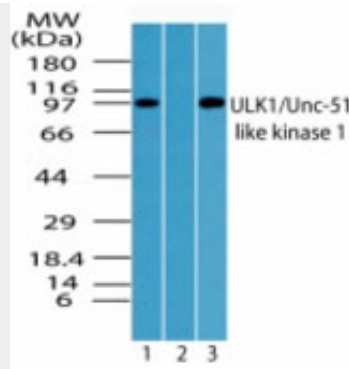
ULK1 Antibody - Protocols

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 - Images





Western blot of ULK1 in Raji cell lysate in the 1) absence, 2) presence of immunizing peptide...

ULK1 Antibody - Background

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. 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.

ULK1 Antibody - References

- Kuroyanagi H.,et al.Genomics 51:76-85(1998).
- Nagase T.,et al.DNA Res. 5:277-286(1998).
- Nakajima D.,et al.DNA Res. 9:99-106(2002).
- Scherer S.E.,et al.Nature 440:346-351(2006).
- Okazaki N.,et al.Brain Res. Mol. Brain Res. 85:1-12(2000).