

Anti-ULK1 Antibody
Rabbit polyclonal antibody to ULK1
Catalog # AP61223

Specification

Anti-ULK1 Antibody - Product Information

| | |
|-------------------|--------------------------|
| Application | WB |
| Primary Accession | O75385 |
| Other Accession | O70405 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 112631 |

Anti-ULK1 Antibody - Additional Information

Gene ID 8408

Other Names

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

Target/Specificity

Recognizes endogenous levels of ULK1 protein.

Dilution

WB~~WB (1/500 - 1/1000), IH (1/50 - 1/200)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-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: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). 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

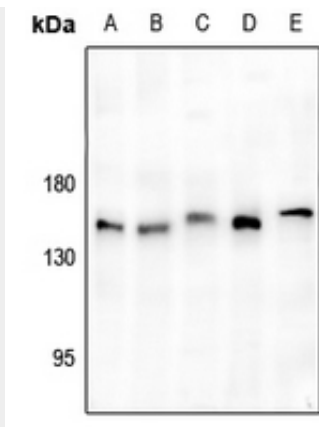
Anti-ULK1 Antibody - Protocols

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

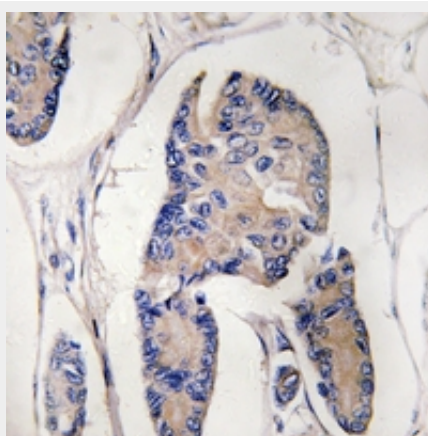
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ULK1 Antibody - Images





Western blot analysis of ULK1 expression in A549 (A), HEK293T (B), AML12 (C), C6 (D), Panc1 (E) whole cell lysates.



Immunohistochemical analysis of ULK1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Anti-ULK1 Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human ULK1. The exact sequence is proprietary.