

ULK2 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8105a

Specification

ULK2 Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	Q8IYT8
Other Accession	Q9OY01
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	112694
Antigen Region	235-264

ULK2 Antibody (N-term) - Additional Information

Gene ID 9706

Other Names

Serine/threonine-protein kinase ULK2, Unc-51-like kinase 2, ULK2, KIAA0623

Target/Specificity

This ULK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 235-264 amino acids from the N-terminal region of human ULK2.

Dilution

WB~~1:1000
IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

ULK2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

ULK2 Antibody (N-term) - Protein Information

Name ULK2

Synonyms KIAA0623

Function 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 a negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK, also acts as a negative regulator of AMPK through phosphorylation of the AMPK subunits PRKAA1, PRKAB2 and PRKAG1. May phosphorylate ATG13/KIAA0652, FRS2, FRS3 and RPTOR; however such data need additional evidences. Not involved in ammonia-induced autophagy or in autophagic response of cerebellar granule neurons (CGN) to low potassium concentration. Plays a role early in neuronal differentiation and is required for granule cell axon formation: may govern axon formation via Ras-like GTPase signaling and through regulation of the Rab5-mediated endocytic pathways within developing axons.

Cellular Location

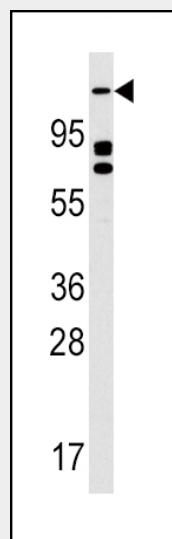
Cytoplasmic vesicle membrane; Peripheral membrane protein. Note=Localizes to pre-autophagosomal membrane

ULK2 Antibody (N-term) - Protocols

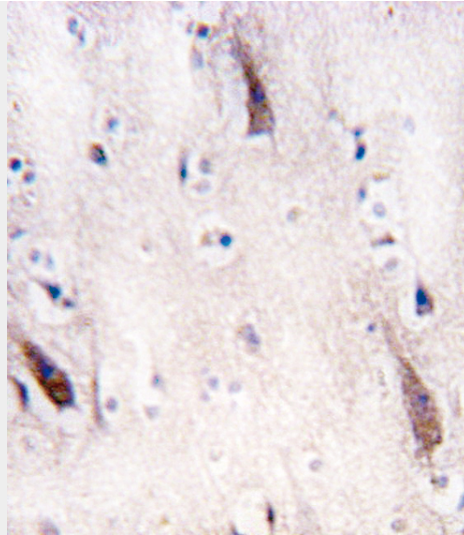
Provided below are standard protocols that you may find useful for product applications.

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

ULK2 Antibody (N-term) - Images



Western blot analysis of anti-ULK2 Antibody (N-term) (Cat.#AP8105a) in K562 cell line lysates (35ug/lane). ULK2(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human brain tissue reacted with ULK2 antibody (N-term) (Cat.#AP8105a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ULK2 Antibody (N-term) - Background

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). Two human homologs of the yeast autophagy-specific kinase exist: ULK1(APG1) and ULK2. APG1 plays a critical role in regulating key elements of the autophagy pathway. APG1 stimulates autophagy, leading to autophagy-dependent restriction of cell growth and ultimately cell apoptosis at high levels of activity, and is a negative regulator of mTOR signaling.

ULK2 Antibody (N-term) - References

Yan, J., et al., *Oncogene* 18(43):5850-5859 (1999).