ARG40776
anti-ULK1 / ATG1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ULK1 / ATG1
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ULK1 / ATG1
Species	Human
Immunogen	Synthetic peptide derived from Human ULK1.
Conjugation	Un-conjugated
Alternate Names	ATG1A; Unc51.1; Autophagy-related protein 1 homolog; ATG1; Unc-51-like kinase 1; EC 2.7.11.1; hATG1; UNC51; Serine/threonine-protein kinase ULK1

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50 - 1:200
IHC-P	1:50 - 1:200
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Observed Size	120 - 150 kDa

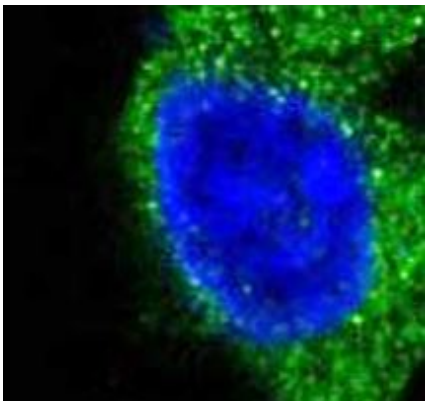
Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.4), 150 mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

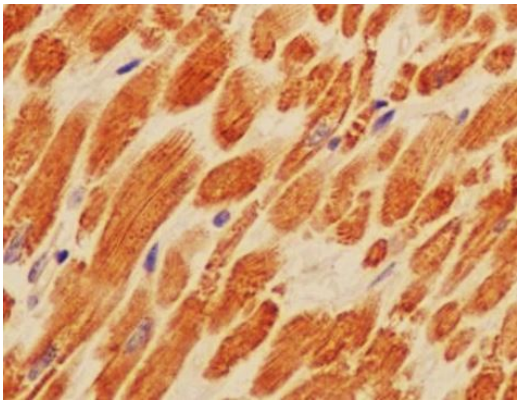
Gene Symbol	ULK1
Gene Full Name	unc-51 like autophagy activating kinase 1
Function	Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector and 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. [UniProt]
Calculated Mw	113 kDa
PTM	Autophosphorylated. Phosphorylated under nutrient-rich conditions; dephosphorylated during starvation or following treatment with rapamycin. Under nutrient sufficiency, phosphorylated by MTOR/mTOR, disrupting the interaction with AMPK and preventing activation of ULK1 (By similarity). In response to nutrient limitation, phosphorylated and activated by AMPK, leading to activate autophagy. [UniProt]
Cellular Localization	Cytoplasm, cytosol. Preautophagosomal structure. Note=Under starvation conditions, is localized to puncate structures primarily representing the isolation membrane that sequesters a portion of the cytoplasm resulting in the formation of an autophagosome. [UniProt]

Images



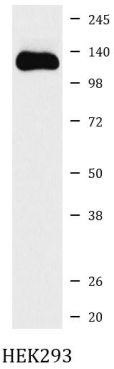
ARG40776 anti-ULK1 / ATG1 antibody ICC/IF image

Immunofluorescence: 293 cells stained with ARG40776 anti-ULK1 / ATG1 antibody.



ARG40776 anti-ULK1 / ATG1 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human heart tissue stained with ARG40776 anti-ULK1 / ATG1 antibody.



ARG40776 anti-ULK1 / ATG1 antibody WB image

Western blot: HEK293 cell lysate stained with ARG40776 anti-ULK1 / ATG1 antibody.