

Rabbit ULK1 Polyclonal Antibody | anti-ULK1 antibody

Phospho-ULK1(Ser556) Antibody

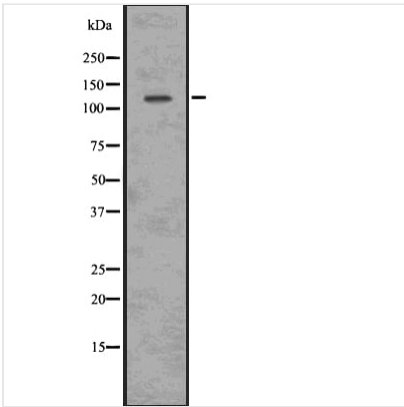
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA327243	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

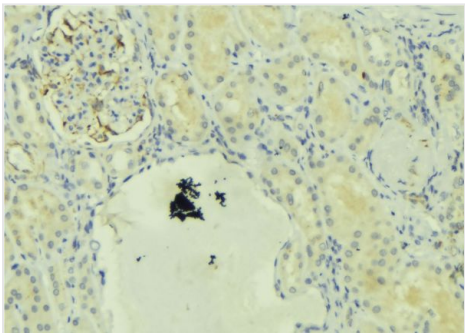
ULK1; Polyclonal Antibody; Phospho-ULK1(Ser556) Antibody; ATG 1; ATG1; ATG1 autophagy related 1 homolog; ATG1A; Autophagy related protein 1 homolog; Autophagy-related protein 1 homolog; FLJ38455; FLJ46475; hATG1; KIAA0722; Serine/threonine protein kinase ULK1; Serine/threonine protein kinase Unc51.1; Serine/threonine-protein kinase ULK1; ULK 1; ULK1_HUMAN; Unc 51 (C. elegans) like kinase 1; UNC 51; Unc 51 like kinase 1; Unc-51 like kinase 1 (C. elegans); Unc-51-like kinase 1; UNC51; C. elegans; homolog of; Unc51.1; anti-ULK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-ULK1(S556) antibody detects endogenous levels of ULK1 only when phosphorylated at S556
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1050
Applicable Applications for anti-ULK1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Phospho-ULK1(S556)
Subcellular Location	Cytoplasm, Cytosol. Preautophagosomal Structure. 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 Specificity	Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (90%), Horse (100%), Sheep (100%), Rabbit (90%), Dog (90%), Chicken (90%), Xenopus (80%)
Conjugation	Unconjugated
Epitope	Phospho Ser556
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)
Western blot analysis of Phospho-ULK1(S556) using HUVEC whole cell lysates



IHC (Immunohistochemistry)
AAA327243 at 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-ULK1 antibody	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. May also phosphorylate SESN2 and SQSTM1 to regulate autophagy (PubMed:25040165). Subunit Structure: Interacts with GABARAP and GABARAPL2 (PubMed:11146101). Interacts (via C-terminus) with ATG13 (PubMed:18936157). Part of a complex consisting of ATG13, ATG101, ULK1 and RB1CC1 (PubMed:19287211). Associates with the mammalian target of rapamycin complex 1 (mTORC1) through an interaction with RPTOR; the association depends on nutrient conditions and is reduced during starvation (PubMed:19211835, PubMed:21795849). Interacts with FEZ1; SCOC interferes with FEZ1-binding (PubMed:22354037). Interacts with TBC1D14 (PubMed:22613832). Interacts (phosphorylated form) with TRIM5 (PubMed:25127057). When phosphorylated at Ser-317, interacts with MEFV and BECN1 simultaneously (PubMed:26347139). Interacts with TRIM21 and IRF3, in the presence of TRIM21 (PubMed:26347139). Interacts with SESN2 (PubMed:25040165). Interacts with SQSTM1 (PubMed:25040165). Interacts with C9orf72 (PubMed:27334615). Post-translational Modifications: 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. Similarity: Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. APG1/unc-51/ULK1 subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4507831
NCBI GeneID	8408
NCBI Accession #	NP_003556.1
NCBI GenBank Nucleotide #	NM_003565.2
UniProt Accession #	O75385; Q9UQ28
Molecular Weight	Observed: 120 kDa Predicted: 113 kDa
NCBI Official Full Name	serine/threonine-protein kinase ULK1
NCBI Official Synonym Full Names	unc-51 like autophagy activating kinase 1

NCBI Official Symbol	ULK1
NCBI Official Synonym Symbols	ATG1; ATG1A; UNC51; hATG1; Unc51.1
NCBI Protein Information	serine/threonine-protein kinase ULK1
UniProt Protein Name	Serine/threonine-protein kinase ULK1
UniProt Gene Name	ULK1
UniProt Synonym Gene Names	KIAA0722; ATG1; hATG1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ulk1-antibody-immunohistochemistry-western-blot-elisa/327243>