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Phospho-ULK1(S317) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3803a

Specification

Phospho-ULK1(S317) Antibody - Product Information

Application	**DB,E**
Primary Accession	O75385
Other Accession	NP_003556.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

Phospho-ULK1(S317) Antibody - Additional Information

Gene ID 8408

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

Target/Specificity
This ULK1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S317 of human ULK1.

Dilution
DB~~1:500
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
Phospho-ULK1(S317) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-ULK1(S317) 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 puncate structures primarily representing the isolation membrane that sequesters a portion of the cytoplasm resulting in the formation of an autophagosome.

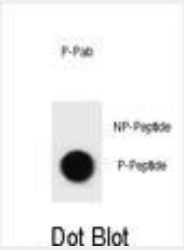
Tissue Location
Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung

Phospho-ULK1(S317) 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 Cytomety
- Cell Culture

Phospho-ULK1(S317) Antibody - Images



Dot blot analysis of ULK1 Antibody (Phospho S317) Phospho-specific Pab (Cat. #AP3803a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

Phospho-ULK1(S317) Antibody - Background

Involved in autophagy. Required for autophagosome formation (By similarity). Target of the TOR kinase signaling pathway that regulates autophagy through the control of phosphorylation status of ATG13/KIAA0652 and ULK1, and the regulation of the ATG13-ULK1-RB1CC1 complex (By similarity). Phosphorylates ATG13/KIAA0652. Involved in axon growth (By similarity). Plays an essential role in neurite extension of cerebellar granule cells (By similarity).

Phospho-ULK1(S317) Antibody - References

Mercer, C.A., et al. Autophagy 5(5):649-662(2009) Ganley, I.G., et al. J. Biol. Chem. 284(18):12297-12305(2009) Jung, C.H., et al. Mol. Biol. Cell 20(7):1992-2003(2009) Hosokawa, N., et al. Mol. Biol. Cell 20(7):1981-1991(2009) Chan, E.Y. Sci Signal 2 (84), PE51 (2009) :

Phospho-ULK1(S317) Antibody - Citations

- GZ17-6.02 Interacts With [MEK1/2 and B-RAF Inhibitors] to Kill Melanoma Cells
- GZ17-6.02 and Doxorubicin Interact to Kill Sarcoma Cells via Autophagy and Death Receptor Signaling
- Neratinib decreases pro-survival responses of [sorafenib + vorinostat] in pancreatic cancer
- The multi-kinase inhibitor lenvatinib interacts with the HDAC inhibitor entinostat to kill liver cancer cells
- Enhanced signaling via ERBB3/PI3K plays a compensatory survival role in pancreatic tumor cells exposed to [neratinib + valproate]
- Fingolimod Augments Monomethylfumarate Killing of GBM Cells
- (Curcumin+sildenafil) enhances the efficacy of 5FU and anti-PD1 therapies in vivo
- GZ17-6.02 initiates DNA damage causing autophagosome-dependent HDAC degradation resulting in enhanced anti-PD1 checkpoint inhibitory antibody efficacy