

## Anti-ULK1 antibody

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| <b>Description</b>        | Rabbit polyclonal to ULK1.                                                                                                                   |
| <b>Model</b>              | STJ96184                                                                                                                                     |
| <b>Host</b>               | Rabbit                                                                                                                                       |
| <b>Reactivity</b>         | Human, Mouse                                                                                                                                 |
| <b>Applications</b>       | ELISA, IHC                                                                                                                                   |
| <b>Immunogen</b>          | Synthesized peptide derived from human ULK1.                                                                                                 |
| <b>Immunogen Region</b>   | C-terminal                                                                                                                                   |
| <b>Gene ID</b>            | <a href="#">8408</a>                                                                                                                         |
| <b>Gene Symbol</b>        | <a href="#">ULK1</a>                                                                                                                         |
| <b>Dilution range</b>     | IHC 1:100-1:300ELISA 1:40000                                                                                                                 |
| <b>Specificity</b>        | ULK1 Polyclonal Antibody detects endogenous levels of ULK1 protein.                                                                          |
| <b>Tissue Specificity</b> | Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung. |
| <b>Purification</b>       | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                        |
| <b>Note</b>               | For Research Use Only (RUO).                                                                                                                 |
| <b>Protein Name</b>       | Serine/threonine-protein kinase ULK1 Autophagy-related protein 1 homolog<br>ATG1 hATG1 Unc-51-like kinase 1                                  |
| <b>Molecular Weight</b>   | 112.601 kDa                                                                                                                                  |
| <b>Clonality</b>          | Polyclonal                                                                                                                                   |

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| <b>Conjugation</b>                      | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Isotype</b>                          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Formulation</b>                      | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Concentration</b>                    | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Storage Instruction</b>              | Store at -20°C, and avoid repeat freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Database Links</b>                   | <a href="#">HGNC:12558</a> <a href="#">OMIM:603168</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Alternative Names</b>                | Serine/threonine-protein kinase ULK1 Autophagy-related protein 1 homolog<br>ATG1 hATG1 Unc-51-like kinase 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Function</b>                         | 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 . |
| <b>Cellular Localization</b>            | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Post-translational Modifications</b> | 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 . In response to nutrient limitation, phosphorylated and activated by AMPK, leading to activate autophagy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |