abcam

Product datasheet

Anti-ULK1 (phospho S556) antibody ab203207

★★★★★ 2 Abreviews 13 References 2 Images

Overview

Product name	Anti-ULK1 (phospho S556) antibody
Description	Rabbit polyclonal to ULK1 (phospho S556)
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human ULK1 aa 500-600 (phospho S556) conjugated to keyhole limpet haemocyanin. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please **contact** our Scientific Support team to discuss your requirements. Database link: **O75385** Run BLAST with Run BLAST with
Positive control	Rat brain tissue; Mouse brain and heart tissue lysates
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 1% BSA, 48.98% TBS, 1X
Purity	Protein A purified
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab203207 in the following tested applications.

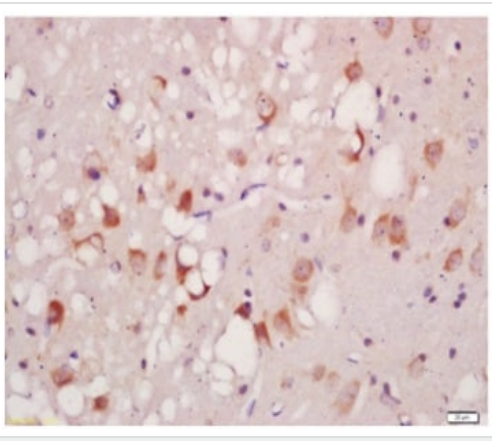
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Use at 1/50 - 1/200 with fluorescent detection methods.
WB	★★★★★ (1)	1/100 - 1/1000. Predicted molecular weight: 112 kDa.

Target

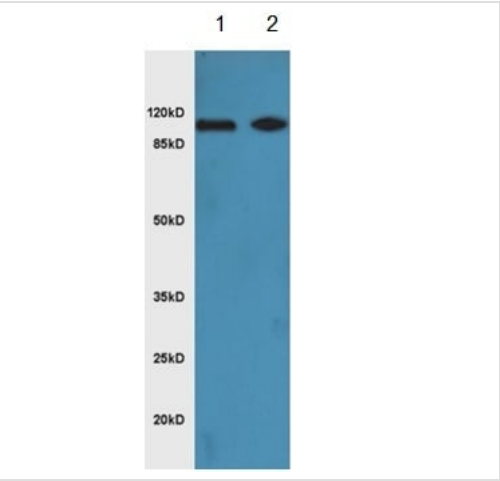
Function	Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector 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).
Tissue specificity	Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung.
Sequence similarities	Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. APG1/unc-51/ULK1 subfamily. Contains 1 protein kinase domain.
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.
Cellular localization	Cytoplasm, cytosol. Preautophagosomal structure. 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.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ULK1 (phospho S556) antibody (ab203207)

Immunohistochemical analysis of formalin-fixed and paraffin embedded Rat brain tissue labeling ULK1 (phospho S556) using ab203207 at 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Western blot - Anti-ULK1 (phospho S556) antibody (ab203207)

All lanes : Anti-ULK1 (phospho S556) antibody (ab203207) at 1/200 dilution

Lane 1 : Mouse brain tissue lysate
Lane 2 : Mouse heart tissue lysate

Secondary
All lanes : Goat Anti-Rabbit IgG Antibody (H+L), HRP Conjugated at 1/3000 dilution

Predicted band size: 112 kDa

12% Gel.

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