

Product datasheet

Anti-ULK1 (phospho S757) antibody [EPR22265-9] ab229909

Recombinant RabMAb

★★★★☆ 1 Abreviews 1 References 5 Images

Overview

Product name	Anti-ULK1 (phospho S757) antibody [EPR22265-9]
Description	Rabbit monoclonal [EPR22265-9] to ULK1 (phospho S757)
Host species	Rabbit
Tested applications	Suitable for: WB, Dot blot, IP Unsuitable for: Flow Cyt, ICC/IF or IHC-P
Species reactivity	Reacts with: Mouse
Immunogen	Synthetic peptide within Mouse ULK1 aa 750-850. The exact sequence is proprietary. Database link: O70405
Positive control	WB: MEF whole cell lysate. IP: MEF whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p>

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as 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: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR22265-9
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab229909** 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
WB		1/1000.
Dot blot		1/1000.
IP		1/30.

Application notes Is unsuitable for Flow Cyt, ICC/IF or IHC-P.

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.

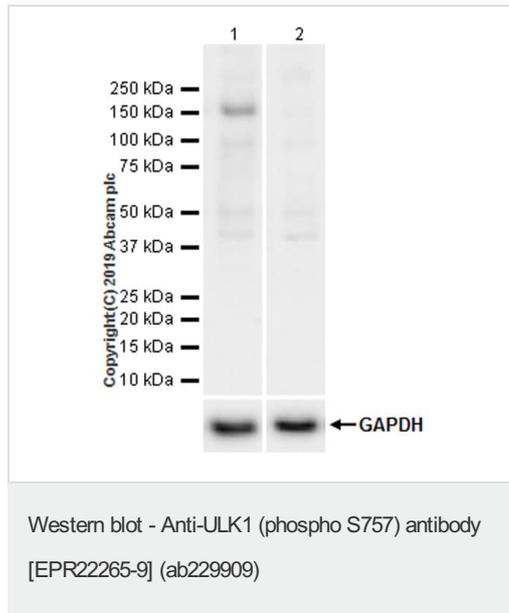
Post-translational modifications

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 punctate structures primarily representing the isolation membrane that sequesters a portion of the cytoplasm resulting in the formation of an autophagosome.

Images



All lanes : Anti-ULK1 (phospho S757) antibody [EPR22265-9] (ab229909) at 1/1000 dilution

Lane 1 : MEF (mouse embryonic fibroblast (immortalized)), whole cell lysate

Lane 2 : MEF whole cell lysate (Phosphatase treated membrane)

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

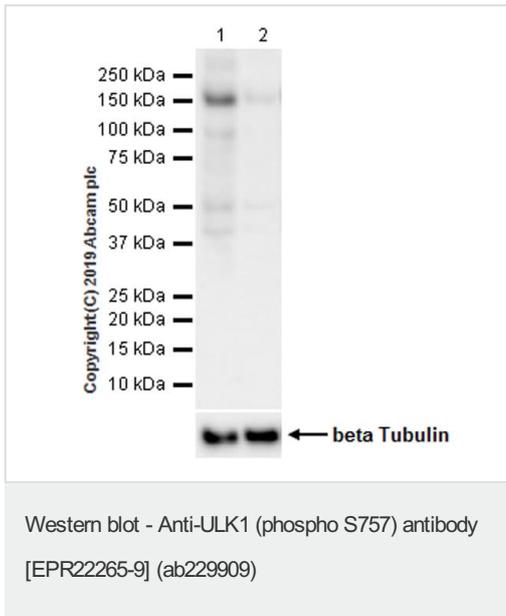
Observed band size: 150 kDa

[why is the actual band size different from the predicted?](#)

WB membrane in lane 2 was treated with alkaline phosphatase for 1h at 37°C. This blot was developed using a higher sensitivity ECL substrate.

Blocking/Dilution buffer and concentration: 5% NFD/MBST.

Exposure time: 59 seconds.



All lanes : Anti-ULK1 (phospho S757) antibody [EPR22265-9] (ab229909) at 1/1000 dilution

Lane 1 : Untreated MEF (mouse embryonic fibroblast (immortalized)), whole cell lysate

Lane 2 : MEF cells were cultured in amino acid and serum-free, glucose-containing starvation buffer (EBSS) for 16 hours, whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

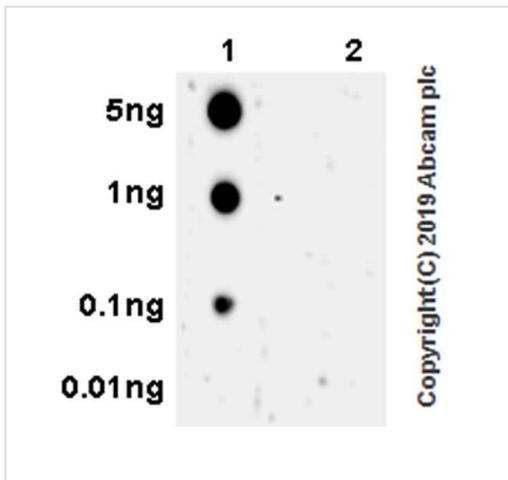
Observed band size: 150 kDa [why is the actual band size different from the predicted?](#)

Exposure time: 59 seconds

Phosphorylation level of S757 is reduced during starvation (PMID: 28835610, 21258367). This blot was developed using a higher sensitivity ECL substrate.

Blocking/Diluting buffer and concentration: 5% NFD/MTBST.

Exposure time: 59 seconds.



Dot Blot - Anti-ULK1 (phospho S757) antibody
[EPR22265-9] (ab229909)

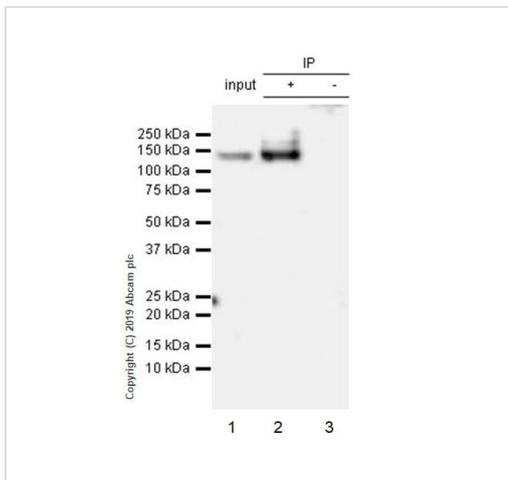
Dot blot analysis using ab229909 at 1/1000 dilution, followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100,000 dilution.

Lane 1: ULK1 (phospho S757) peptide.

Lane 2: ULK1 non-phospho peptide.

Blocking/diluting buffer and concentration: 5% NFDm/TBST.

Exposure time: 3 minutes.



Immunoprecipitation - Anti-ULK1 (phospho S757)
antibody [EPR22265-9] (ab229909)

ULK1 (phospho S757) was immunoprecipitated from 0.35 mg MEF (mouse embryonic fibroblast (immortalized)) whole cell lysate with ab229909 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab229909 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution. Lysate were made freshly and used in IP test immediately to minimize protein degradation. Incubation time was 2h.

Lane 1: MEF (mouse embryonic fibroblast (immortalized)) whole cell lysate, 10µg.

Lane 2: ab229909 IP in MEF whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab229909 in MEF whole cell lysate.

Blocking/dilution buffer: 5% NFDm/TBST.

Exposure time: 3 mins.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-ULK1 (phospho S757) antibody [EPR22265-9]
(ab229909)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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