

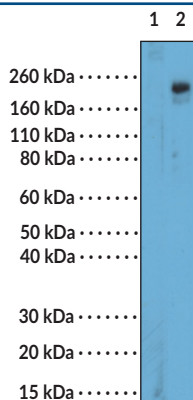
# PRODUCT INFORMATION

**ULK1 (Phospho-Ser<sup>757</sup>) Rabbit Monoclonal Antibody (Clone RM488)**  
Item No. 42818

## Overview and Properties

|                            |                                                                                                                                                                                         |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contents:</b>           | This vial contains 100 µl of protein A-affinity purified monoclonal antibody.                                                                                                           |
| <b>Synonyms:</b>           | ATG1, Autophagy-related 1 Homolog, Unc-51-like Autophagy Activating Kinase 1                                                                                                            |
| <b>Immunogen:</b>          | A phospho-peptide corresponding to ULK1 (phospho-Ser <sup>757</sup> )                                                                                                                   |
| <b>Cross Reactivity:</b>   | (+) ULK1 (phospho-Ser <sup>757</sup> ); (-) Unmodified ULK1                                                                                                                             |
| <b>Species Reactivity:</b> | (+) Human, mouse, rat                                                                                                                                                                   |
| <b>Form:</b>               | Liquid                                                                                                                                                                                  |
| <b>Storage:</b>            | -20°C (as supplied)                                                                                                                                                                     |
| <b>Stability:</b>          | ≥1 year                                                                                                                                                                                 |
| <b>Storage Buffer:</b>     | PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide                                                                                                                                  |
| <b>Clone:</b>              | RM488                                                                                                                                                                                   |
| <b>Host:</b>               | Rabbit                                                                                                                                                                                  |
| <b>Isotype:</b>            | IgG                                                                                                                                                                                     |
| <b>Applications:</b>       | Western blot (WB); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

## Image



**Lane 1:** A431 cell lysates (untreated)  
**Lane 2:** A431 cell lysates (treated)

WB of A431 cell lysates untreated or treated with calyculin A and okadaic acid using ULK1 (Phospho-Ser<sup>757</sup>) Rabbit Monoclonal Antibody (Clone RM488) at a 1:1,000 dilution.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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# PRODUCT INFORMATION



## Description

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Unc-51-like autophagy activating kinase 1 (ULK1), also known as autophagy-related 1 homolog (ATG1), is a kinase involved in initiating autophagy.<sup>1,2</sup> It is composed of an N-terminal kinase domain, a proline serine-rich domain, and two C-terminal microtubule-interacting and transporter (MIT) domains.<sup>1</sup> ULK1 forms a complex with ATG12, ATG5, and ATG15L1 to sequester cargo in autophagosomes prior to transport to and fusion with lysosomes.<sup>2,3</sup> It is activated when AMP-activated protein kinase (AMPK) phosphorylates Ser317 and Ser777 in response to low nutrient availability and deactivated when mTORC1 phosphorylates Ser757.<sup>4,5</sup> ULK1 phosphorylates and deactivates STING in response to STING-induced increases in levels of cyclic dinucleotides.<sup>6</sup> Cayman's ULK1 (Phospho-Ser<sup>757</sup>) Rabbit Monoclonal Antibody (Clone RM488) can be used for Western blot (WB).

## References

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1. Lin, M.G. and Hurley, J.H. Structure and function of the ULK1 complex in autophagy. *Curr. Opin. Cell Biol.* **39**, 61-68 (2016).
2. Parzych, K.R. and Klionsky, D.J. An overview of autophagy: Morphology, mechanism, and regulation. *Antioxid. Redox Signal.* **20(3)**, 460-473 (2014).
3. Chang, Y.Y., Juhász, G., Goraksha-Hicks, P., et al. Nutrient-dependent regulation of autophagy through the target of rapamycin pathway. *Biochem. Soc. Trans.* **37**, 232-236 (2009).
4. Kim, J., Kundu, M., Viollet, B., et al. AMPK and mTOR regulate autophagy through direct phosphorylation of Ulk1. *Nat. Cell Biol.* **13(2)**, 132-141 (2011).
5. He, S., Li, Q., Jiang, X., et al. Design of small molecule autophagy modulators: A promising druggable strategy. *J. Med. Chem.* **61(11)**, 4656-4687 (2017).
6. Konno, H., Konno, K., and Barber, G.N. Cyclic dinucleotides trigger ULK1 (ATG1) phosphorylation of STING to prevent sustained innate immune signaling. *Cell* **155(3)**, 688-698 (2013).