

**RIPK3 / RIP3 Antibody (aa480-530)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS11903****Specification**

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**RIPK3 / RIP3 Antibody (aa480-530) - Product Information**

Application	IHC
Primary Accession	<a href="#">O9Y572</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57kDa KDa

**RIPK3 / RIP3 Antibody (aa480-530) - Additional Information****Gene ID** 11035**Other Names**

Receptor-interacting serine/threonine-protein kinase 3, 2.7.11.1, RIP-like protein kinase 3, Receptor-interacting protein 3, RIP-3, RIPK3, RIP3

**Target/Specificity**

A portion of amino acids 480-518 of human RIP3

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

**Precautions**

RIPK3 / RIP3 Antibody (aa480-530) is for research use only and not for use in diagnostic or therapeutic procedures.

**RIPK3 / RIP3 Antibody (aa480-530) - Protein Information****Name** RIPK3 ([HGNC:10021](#))**Function**

Serine/threonine-protein kinase that activates necroptosis and apoptosis, two parallel forms of cell death (PubMed: [19524512](http://www.uniprot.org/citations/19524512)), PubMed: [19524513](http://www.uniprot.org/citations/19524513)), PubMed: [22265413](http://www.uniprot.org/citations/22265413)), PubMed: [22265414](http://www.uniprot.org/citations/22265414)), PubMed: [22421439](http://www.uniprot.org/citations/22421439)), PubMed: [29883609](http://www.uniprot.org/citations/29883609)), PubMed: [32657447](http://www.uniprot.org/citations/32657447)). Necroptosis, a programmed cell death process in response to death-inducing TNF-alpha family members, is triggered by RIPK3 following activation by ZBP1 (PubMed: [19524512](http://www.uniprot.org/citations/19524512)), PubMed: [19524513](http://www.uniprot.org/citations/19524513)),

PubMed: <a href="http://www.uniprot.org/citations/22265413" target="\_blank">22265413</a>, PubMed: <a href="http://www.uniprot.org/citations/22265414" target="\_blank">22265414</a>, PubMed: <a href="http://www.uniprot.org/citations/22421439" target="\_blank">22421439</a>, PubMed: <a href="http://www.uniprot.org/citations/29883609" target="\_blank">29883609</a>, PubMed: <a href="http://www.uniprot.org/citations/32298652" target="\_blank">32298652</a>). Activated RIPK3 forms a necrosis- inducing complex and mediates phosphorylation of MLKL, promoting MLKL localization to the plasma membrane and execution of programmed necrosis characterized by calcium influx and plasma membrane damage (PubMed: <a href="http://www.uniprot.org/citations/19524512" target="\_blank">19524512</a>, PubMed: <a href="http://www.uniprot.org/citations/19524513" target="\_blank">19524513</a>, PubMed: <a href="http://www.uniprot.org/citations/22265413" target="\_blank">22265413</a>, PubMed: <a href="http://www.uniprot.org/citations/22265414" target="\_blank">22265414</a>, PubMed: <a href="http://www.uniprot.org/citations/22421439" target="\_blank">22421439</a>, PubMed: <a href="http://www.uniprot.org/citations/25316792" target="\_blank">25316792</a>, PubMed: <a href="http://www.uniprot.org/citations/29883609" target="\_blank">29883609</a>). In addition to TNF- induced necroptosis, necroptosis can also take place in the nucleus in response to orthomyxovirus infection: following ZBP1 activation, which senses double-stranded Z-RNA structures, nuclear RIPK3 catalyzes phosphorylation and activation of MLKL, promoting disruption of the nuclear envelope and leakage of cellular DNA into the cytosol (By similarity). Also regulates apoptosis: apoptosis depends on RIPK1, FADD and CASP8, and is independent of MLKL and RIPK3 kinase activity (By similarity). Phosphorylates RIPK1: RIPK1 and RIPK3 undergo reciprocal auto- and trans-phosphorylation (PubMed: <a href="http://www.uniprot.org/citations/19524513" target="\_blank">19524513</a>). In some cell types, also able to restrict viral replication by promoting cell death- independent responses (By similarity). In response to Zika virus infection in neurons, promotes a cell death-independent pathway that restricts viral replication: together with ZBP1, promotes a death- independent transcriptional program that modifies the cellular metabolism via up-regulation expression of the enzyme ACOD1/IRG1 and production of the metabolite itaconate (By similarity). Itaconate inhibits the activity of succinate dehydrogenase, generating a metabolic state in neurons that suppresses replication of viral genomes (By similarity). RIPK3 binds to and enhances the activity of three metabolic enzymes: GLUL, GLUD1, and PYGL (PubMed: <a href="http://www.uniprot.org/citations/19498109" target="\_blank">19498109</a>). These metabolic enzymes may eventually stimulate the tricarboxylic acid cycle and oxidative phosphorylation, which could result in enhanced ROS production (PubMed: <a href="http://www.uniprot.org/citations/19498109" target="\_blank">19498109</a>).

#### Cellular Location

Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:Q9QZL0}. Note=Mainly cytoplasmic Present in the nucleus in response to influenza A virus (IAV) infection. {ECO:0000250|UniProtKB:Q9QZL0}

#### Tissue Location

Highly expressed in the pancreas. Detected at lower levels in heart, placenta, lung and kidney

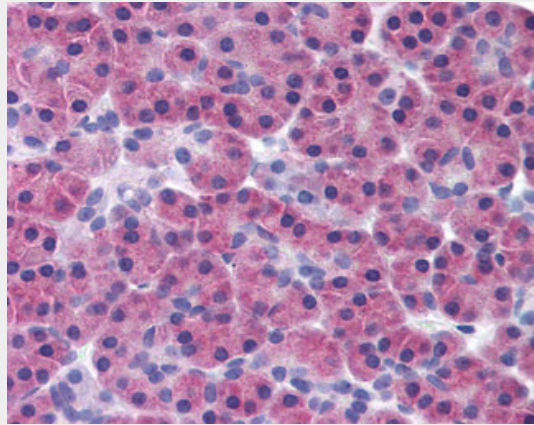
### RIPK3 / RIP3 Antibody (aa480-530) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

### **RIPK3 / RIP3 Antibody (aa480-530) - Images**



Anti-RIPK3 / RIP3 antibody IHC of human pancreas.

### **RIPK3 / RIP3 Antibody (aa480-530) - Background**

Essential for necroptosis, a programmed cell death process in response to death-inducing TNF-alpha family members. Upon induction of necrosis, RIPK3 interacts with, and phosphorylates RIPK1 and MLKL to form a necrosis-inducing complex. RIPK3 binds to and enhances the activity of three metabolic enzymes: GLUL, GLUD1, and PYGL. These metabolic enzymes may eventually stimulate the tricarboxylic acid cycle and oxidative phosphorylation, which could result in enhanced ROS production.

### **RIPK3 / RIP3 Antibody (aa480-530) - References**

- Yu P.W.,et al.Curr. Biol. 9:539-542(1999).  
Sun X.,et al.J. Biol. Chem. 274:16871-16875(1999).  
Yang Y.,et al.Biochem. Biophys. Res. Commun. 332:181-187(2005).  
Heilig R.,et al.Nature 421:601-607(2003).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).