

**RIPK3 antibody - N-terminal region**  
**Rabbit Polyclonal Antibody**  
**Catalog # AI10021****Specification**

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**RIPK3 antibody - N-terminal region - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">O9Y572</a>
Other Accession	<a href="#">O9Y572</a> , <a href="#">NP_006862</a> , <a href="#">NM_006871</a>
Reactivity	Human, Mouse, Rat, Pig, Dog, Horse, Bovine
Predicted Host	Human, Mouse, Pig, Dog, Horse, Bovine
Clonality	Rabbit
Calculated MW	Polyclonal 57 kDa KDa

**RIPK3 antibody - N-terminal region - Additional Information****Gene ID** 11035**Alias Symbol** RIP3, RIP3 beta, RIP3 gamma**Other Names**Receptor-interacting serine/threonine-protein kinase 3, RIP-like protein kinase 3,  
Receptor-interacting protein 3, RIP-3, RIPK3, RIP3**Target/Specificity**

RIPK3 is a member of the receptor-interacting protein (RIP) family of serine/threonine protein kinases, and contains a C-terminal domain unique from other RIP family members. The protein is predominantly localized to the cytoplasm, and can undergo nucleocytoplasmic shuttling dependent on novel nuclear localization and export signals. It is a component of the tumor necrosis factor (TNF) receptor-I signaling complex, and can induce apoptosis and weakly activate the NF-kappaB transcription factor. The product of this gene is a member of the receptor-interacting protein (RIP) family of serine/threonine protein kinases, and contains a C-terminal domain unique from other RIP family members. The encoded protein is predominantly localized to the cytoplasm, and can undergo nucleocytoplasmic shuttling dependent on novel nuclear localization and export signals. It is a component of the tumor necrosis factor (TNF) receptor-I signaling complex, and can induce apoptosis and weakly activate the NF-kappaB transcription factor.

**Format**

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

**Reconstitution & Storage**

Add 100 ul of distilled water. Final anti-RIPK3 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.

**Precautions**

RIPK3 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

## RIPK3 antibody - N-terminal region - 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: [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: [32298652](http://www.uniprot.org/citations/32298652)). 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: [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: [25316792](http://www.uniprot.org/citations/25316792)), PubMed: [29883609](http://www.uniprot.org/citations/29883609)). In addition to TNF-induced necroptosis, necroptosis can also take place in the nucleus in response to orthomyxoviruses 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: [19524513](http://www.uniprot.org/citations/19524513)). 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: [19498109](http://www.uniprot.org/citations/19498109)). These metabolic enzymes may eventually stimulate the tricarboxylic acid cycle and oxidative phosphorylation, which could result in enhanced ROS production (PubMed: [19498109](http://www.uniprot.org/citations/19498109)).

### 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 antibody - N-terminal region - Protocols**

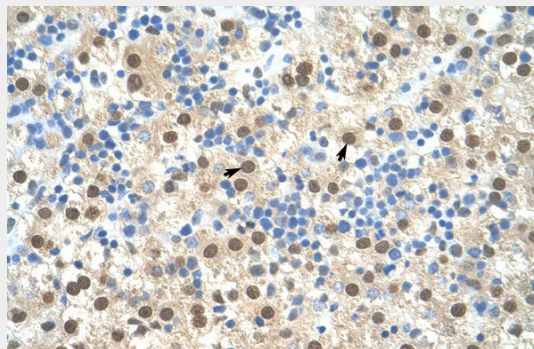
Provided below are standard protocols that you may find useful for product applications.

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

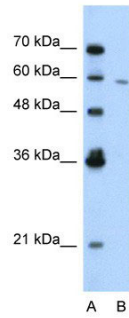
#### **RIPK3 antibody - N-terminal region - Images**



RIPK3 antibody - N-terminal region (AI10021) in Human Heart cells using Immunohistochemistry  
Human Heart



RIPK3 antibody - N-terminal region (AI10021) in Human Liver cells using Immunohistochemistry  
Human Liver



RIPK3 antibody - N-terminal region (AI10021) in Human Jurkat cells using Western Blot  
WB Suggested Anti-RIPK3 Antibody Titration: 1.25 $\mu$ g/ml  
ELISA Titer: 1:62500  
Positive Control: Jurkat cell lysate

### **RIPK3 antibody - N-terminal region - Background**

This is a rabbit polyclonal antibody against RIPK3. It was validated on Western Blot and immunohistochemistry by Abgent. At Abgent we manufacture rabbit polyclonal antibodies on a large scale (200-1000 products/month) of high throughput manner. Our antibodies are peptide based and protein family oriented. We usually provide antibodies covering each member of a whole protein family of your interest. We also use our best efforts to provide you antibodies recognize various epitopes of a target protein. For availability of antibody needed for your experiment, please inquire ([sales@abgent.com](mailto:sales@abgent.com)).