

**hRIP3 Antibody**  
**Catalog # ASC12188****Specification****hRIP3 Antibody - Product Information**

Application	WB, IHC-P, IF, E
Primary Accession	<a href="#">Q9Y572</a>
Other Accession	<a href="#">Q9Y572</a>
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 57kD
	Observed: 57 kD KDa

**hRIP3 Antibody - Additional Information**

Gene ID	11035
Alias Symbol	Ripk3
Other Names	
hRIP3 Antibody: Rip3, AW107945, 2610528K09Rik, RIP-like protein kinase 3, RIP-3	

**Target/Specificity**

Several isoforms of hRIP3 are known to exist.

**Reconstitution & Storage**

hRIP3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

hRIP3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**hRIP3 Antibody - Protein Information**

**Name** RIPK3 ([HGNC:10021](#))

**Function**

Serine/threonine-protein kinase that activates necroptosis and apoptosis, two parallel forms of cell death (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/29883609" target="\_blank">29883609</a>, PubMed:<a href="http://www.uniprot.org/citations/32657447" target="\_blank">32657447</a>). Necroptosis, a programmed cell death process in response to death-inducing TNF-alpha family members, is triggered by RIPK3 following activation by ZBP1

(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/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 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:<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

## hRIP3 Antibody - 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](#)

#### **hRIP3 Antibody - Images**

#### **hRIP3 Antibody - Background**

hRIP3 Antibody: Certain serine/threonine protein kinases, such as ASK1, RIP, DAP, and ZIP kinases, are mediators of apoptosis. Receptor interacting proteins including RIP and RIP2/RICK mediate apoptosis induced by TNFR1 and Fas, two prototype members in the death receptor family. A novel member in the RIP kinase family was recently identified and designated RIP3. RIP3 contains N-terminal kinase domain but, unlike RIP or RIP2, lacks the C-terminal death or CARD domain. RIP3 binds to RIP and TNFR1, mediates TNFR1 induced apoptosis, and attenuates RIP and TNFR1 induced NF- $\kappa$ B activation. Overexpression of RIP3 induces apoptosis and NF- $\kappa$ B activation. The messenger RNA of RIP3 is expressed in a subset of adult tissues.

#### **hRIP3 Antibody - References**

Yu et al. Curr Biol. 1999;9(10):539-42. Sun et al. J Biol Chem. 1999;274(24):16871-5. Pazdernik et al. Mol Cell Bio. 1999; 19(10):6500-8 (WD0102)