

RIP3 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10228**Specification**

RIP3 Antibody - Product Information

Application	WB, IHC
Primary Accession	O9OZL0
Other Accession	NP_001157580
Reactivity	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	53322

RIP3 Antibody - Additional Information**Gene ID** 56532**Application & Usage**

Western blotting (0.5-4 µg/ml) and in Immunohistochemistry (10-20 µg/ml). Rat kidney tissue section can be used as a positive control. An approximately 57 kDa band should be detected.

Other Names

RIP like protein kinase 3, RIPK3, RIPK3

Target/Specificity

RIP3

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) immunoaffinity purified rabbit anti-RIP3 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

RIP3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RIP3 Antibody - Protein Information

Name Ripk3 {ECO:0000303|PubMed:27321907, ECO:0000312|MGI:MGI:2154952}

Function

Serine/threonine-protein kinase that activates necroptosis and apoptosis, two parallel forms of cell death (PubMed:27321907, PubMed:27746097, PubMed:27917412, PubMed:28607035, PubMed:32200799, PubMed:32296175). Necroptosis, a programmed cell death process in response to death-inducing TNF-alpha family members, is triggered by RIPK3 following activation by ZBP1 (PubMed:19590578, PubMed:22423968, PubMed:24012422, PubMed:24019532, PubMed:24557836, PubMed:27746097, PubMed:27819681, PubMed:27819682, PubMed:24095729, PubMed:32200799, PubMed:27321907, PubMed:32296175). 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:24813849, PubMed:24813850, PubMed:27321907). 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 (PubMed:32200799, PubMed:32296175). Also regulates apoptosis: apoptosis depends on RIPK1, FADD and CASP8, and is independent of MLKL and RIPK3 kinase activity (PubMed:27321907). Phosphorylates RIPK1: RIPK1 and RIPK3 undergo reciprocal auto- and trans-phosphorylation (By similarity). In some cell types, also able to restrict viral replication by promoting cell death-independent responses (PubMed:30635240). In response to flavivirus 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 (PubMed:30635240). Itaconate inhibits the activity of succinate dehydrogenase, generating a metabolic state in neurons that suppresses replication of viral genomes (PubMed:30635240). RIPK3 binds to and enhances the activity of three metabolic enzymes: GLUL, GLUD1, and PYGL (By similarity).

These metabolic enzymes may eventually stimulate the tricarboxylic acid cycle and oxidative phosphorylation, which could result in enhanced ROS production (By similarity).

Cellular Location

Cytoplasm, cytosol. Nucleus. Note=Mainly cytoplasmic (PubMed:32200799, PubMed:32296175). Present in the nucleus in response to influenza A virus (IAV) infection (PubMed:32200799).

Tissue Location

Expressed in embryo and in adult spleen, liver, testis, heart, brain and lung.

RIP3 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](#)

RIP3 Antibody - Images**RIP3 Antibody - Background**

Receptor interacting protein 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, and mediates TNF-R1 mediated apoptosis, and attenuates RIP and TNFR1 induced NFkB activation. Overexpression of RIP3 induces apoptosis and NFkB activation.