

RIP3 Blocking Peptide
Catalog # PBV10124b**Specification**

RIP3 Blocking Peptide - Product Information

Primary Accession	O9OZL0
Other Accession	NP_001157580
Gene ID	56532
Calculated MW	53322

RIP3 Blocking Peptide - Additional Information**Gene ID** 56532**Application & Usage**

The peptide is used for blocking the antibody activity of RIP3. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

Other Names

Receptor-interacting serine/threonine-protein kinase 3, 2.7.11.1, RIP-like protein kinase 3, Receptor-interacting protein 3, RIP-3, mRIP3, Ripk3, Rip3

Target/Specificity

RIP3

Formulation

50 µg (0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 0.1% BSA and 0.02% thimerosal.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

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

RIP3 Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/27321907"

target="_blank">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 Blocking Peptide - 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 Blocking Peptide - Images