

RIPK3 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8682b

Specification

RIPK3 Antibody - Product Information

Application	WB,E
Primary Accession	O9Y572
Reactivity	Human
Predicted	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG1, κ
Calculated MW	56887

RIPK3 Antibody - 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

This RIPK3 antibody is generated from a mouse immunized with a recombinant protein from the human region of human RIPK3.

Dilution

WB~1:1000

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

RIPK3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RIPK3 Antibody - Protein Information

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

Function Serine/threonine-protein kinase that activates necroptosis and apoptosis, two parallel forms of cell death (PubMed:[19524512](#), PubMed:[19524513](#), PubMed:[22265413](#), PubMed:[22265414](#), PubMed:[22421439](#), PubMed:[29883609](#), PubMed:[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](#), PubMed:[19524513](#), PubMed:[22265413](#), PubMed:[22265414](#), PubMed:[22421439](#), PubMed:[29883609](#), PubMed:[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](#), PubMed:[19524513](#), PubMed:[22265413](#), PubMed:[22265414](#), PubMed:[22421439](#), PubMed:[25316792](#), PubMed:[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](#)). 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](#)). These metabolic enzymes may eventually stimulate the tricarboxylic acid cycle and oxidative phosphorylation, which could result in enhanced ROS production (PubMed:[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

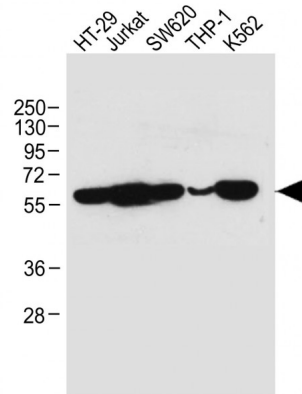
RIPK3 Antibody - Protocols

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 - Images





All lanes : Anti-RIPK3 Antibody at 1:1000 dilution Lane 1: HT-29 whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: SW620 whole cell lysate Lane 4: THP-1 whole cell lysate Lane 5: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDN/TBST.

RIPK3 Antibody - 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 Antibody - 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).