

Anti-RIPK3 Antibody

Rabbit polyclonal antibody to RIPK3

Catalog # AP60384

Product Information

Application	WB
Primary Accession	Q9Y572
Other Accession	Q9QZL0
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56887

Additional Information

Gene ID	11035
Other Names	RIP3; Receptor-interacting serine/threonine-protein kinase 3; RIP-like protein kinase 3; Receptor-interacting protein 3; RIP-3
Target/Specificity	Recognizes endogenous levels of RIPK3 protein.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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

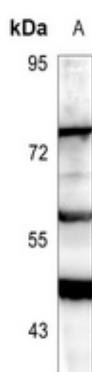
also take place in the nucleus in response to orthomyxoviruses infection: following ZBP1 activation, which senses double-stranded Z-RNA structures, nuclear RIPK3 catalyzes phosphorylation and activation of MLKL, promoting disruption of the nuclear envelope and leakage of cellular DNA into the cytosol (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

Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human RIPK3. The exact sequence is proprietary.

Images



Western blot analysis of RIPK3 expression in THP1 (A) whole cell lysates.

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