

Anti-RIP2 Antibody

Catalog # ABO11169

Specification

Anti-RIP2 Antibody - Product Information

Application Primary Accession Host Reactivity Clonality Format **Description** Rabbit IoG polyclonal antibody for WB <u>O43353</u> Rabbit Human, Mouse, Rat Polyclonal Lyophilized

Rabbit IgG polyclonal antibody for Receptor-interacting serine/threonine-protein kinase 2(RIPK2) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-RIP2 Antibody - Additional Information

Gene ID 8767

Other Names Receptor-interacting serine/threonine-protein kinase 2, 2.7.11.1, CARD-containing interleukin-1 beta-converting enzyme-associated kinase, CARD-containing IL-1 beta ICE-kinase, RIP-like-interacting CLARP kinase, Receptor-interacting protein 2, RIP-2, Tyrosine-protein kinase RIPK2, 2.7.10.2, RIPK2, CARDIAK, RICK, RIP2

Calculated MW 61195 MW KDa

Application Details Western blot, 0.1-0.5 μg/ml, Human, Rat, Mouse

Subcellular Localization Cytoplasm .

Tissue Specificity Detected in heart, brain, placenta, lung, peripheral blood leukocytes, spleen, kidney, testis, prostate, pancreas and lymph node.

Protein Name Receptor-interacting serine/threonine-protein kinase 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human RIP2(495-514aa



DIQGEEFAKVIVQKLKDNKQ), different from the related rat and mouse sequences by one amino acid.

Purification Immunogen affinity purified.

Cross Reactivity No cross reactivity with other proteins

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family.

Anti-RIP2 Antibody - Protein Information

Name RIPK2 {ECO:0000303|PubMed:30026309, ECO:0000312|HGNC:HGNC:10020}

Function

Serine/threonine/tyrosine-protein kinase that plays an essential role in modulation of innate and adaptive immune responses (PubMed:14638696, PubMed:17054981, PubMed:21123652, PubMed:28656966, PubMed:9575181, PubMed:9642260). Acts as a key effector of NOD1 and NOD2 signaling pathways: upon activation by bacterial peptidoglycans, NOD1 and NOD2 oligomerize and recruit RIPK2 via CARD-CARD domains, leading to the formation of RIPK2 filaments (PubMed:17054981, PubMed:17562858, PubMed:21123652, PubMed:22607974, PubMed:28656966, PubMed:29452636, PubMed:30026309). Once recruited, RIPK2 autophosphorylates and undergoes 'Lys-63'-linked polyubiguitination by E3 ubiguitin ligases XIAP, BIRC2 and BIRC3, as well as 'Met-1'-linked (linear) polyubiguitination by the LUBAC complex, becoming a scaffolding protein for downstream effectors (PubMed:22607974, PubMed:28545134, PubMed:29452636, PubMed:30026309, PubMed:30279485, PubMed:30478312). 'Met-1'-linked polyubiquitin chains attached to RIPK2 recruit IKBKG/NEMO, which undergoes 'Lys-63'-linked polyubiguitination in a RIPK2-dependent process (PubMed:17562858, PubMed:22607974, PubMed:29452636, PubMed:30026309). 'Lys-63'-linked polyubiquitin chains attached to RIPK2 serve as docking sites for TAB2 and TAB3



and mediate the recruitment of MAP3K7/TAK1 to IKBKG/NEMO, inducing subsequent activation of IKBKB/IKKB (PubMed:<a href="http://www.uniprot.org/citations/18079694"

target="_blank">18079694). In turn, NF-kappa-B is released from NF-kappa-B inhibitors and translocates into the nucleus where it activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis (PubMed:18079694). The protein kinase activity is dispensable for the NOD1 and NOD2 signaling pathways (PubMed:29452636, PubMed:30026309). Contributes to the tyrosine phosphorylation of the guanine exchange factor ARHGEF2 through Src tyrosine kinase leading to NF-kappa-B activation by NOD2 (PubMed:21887730). Also involved in adaptive immunity: plays a role during engagement of the T-cell receptor (TCR) in promoting BCL10 phosphorylation and subsequent NF-kappa-B activation (PubMed:14638696). Plays a role in the inactivation of RHOA in response to NGFR signaling (PubMed:26646181).

Cellular Location

Cytoplasm. Cell membrane; Peripheral membrane protein. Endoplasmic reticulum. Note=Recruited to the cell membrane by NOD2 following stimulation by bacterial peptidoglycans

Tissue Location

Detected in heart, brain, placenta, lung, peripheral blood leukocytes, spleen, kidney, testis, prostate, pancreas and lymph node.

Anti-RIP2 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 Cytomety
- <u>Cell Culture</u>

Anti-RIP2 Antibody - Images



Anti-RIP2 antibody, ABO11169, Western blottingAll lanes: Anti RIP2 (ABO11169) at 0.5ug/mlLane 1: A549 Whole Cell Lysate at 40ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: PANC Whole Cell Lysate at 40ugLane 4: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 61KDObserved bind size: 61KD

Anti-RIP2 Antibody - Background

RIPK2(Receptor-interacting serine/threonine-protein kinase 2), also known as CARD3, CARDIAK, RICK, RIP2, is an enzyme that in humans is encoded by the RIPK2 gene. It has 540-amino acid protein in length. Northern blot analysis revealed that RICK is expressed in various human tissues as 2.5- and 1.8-kb mRNAs that differ due to alternative polyadenylation. RICK is a novel kinase that may regulate apoptosis induced by the FAS receptor pathway. This gene encodes a member of the receptor-interacting protein(RIP) family of serine/threonine protein kinases. The encoded protein contains a C-terminal caspase recruitment domain(CARD), and is a component of signaling complexes in both the innate and adaptive immune pathways. It is a potent activator of NF-kappa BÂ and inducer of apoptosis in response to various stimuli, CARDIAK(CARD-containing ICE-associated kinase) specifically interacted with the CARD of ICE/caspase-1, and this interaction correlated with the processing of pro-caspase-1 and the formation of the active caspase-1 p20 subunit.