

**Anti-RIP2 Antibody**  
Catalog # ABO11169**Specification****Anti-RIP2 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">O43353</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**Description**

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<br>

**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 Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

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

DIQGEEFAKIVVQKLKDNKQ), 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 reconstitution, 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: <a href="http://www.uniprot.org/citations/14638696" target="\_blank">14638696</a>, PubMed: <a href="http://www.uniprot.org/citations/17054981" target="\_blank">17054981</a>, PubMed: <a href="http://www.uniprot.org/citations/21123652" target="\_blank">21123652</a>, PubMed: <a href="http://www.uniprot.org/citations/28656966" target="\_blank">28656966</a>, PubMed: <a href="http://www.uniprot.org/citations/9575181" target="\_blank">9575181</a>, PubMed: <a href="http://www.uniprot.org/citations/9642260" target="\_blank">9642260</a>). 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: <a href="http://www.uniprot.org/citations/17054981" target="\_blank">17054981</a>, PubMed: <a href="http://www.uniprot.org/citations/17562858" target="\_blank">17562858</a>, PubMed: <a href="http://www.uniprot.org/citations/21123652" target="\_blank">21123652</a>, PubMed: <a href="http://www.uniprot.org/citations/22607974" target="\_blank">22607974</a>, PubMed: <a href="http://www.uniprot.org/citations/28656966" target="\_blank">28656966</a>, PubMed: <a href="http://www.uniprot.org/citations/29452636" target="\_blank">29452636</a>, PubMed: <a href="http://www.uniprot.org/citations/30026309" target="\_blank">30026309</a>). Once recruited, RIPK2 autophosphorylates and undergoes 'Lys-63'-linked polyubiquitination by E3 ubiquitin ligases XIAP, BIRC2 and BIRC3, as well as 'Met-1'-linked (linear) polyubiquitination by the LUBAC complex, becoming a scaffolding protein for downstream effectors (PubMed: <a href="http://www.uniprot.org/citations/22607974" target="\_blank">22607974</a>, PubMed: <a href="http://www.uniprot.org/citations/28545134" target="\_blank">28545134</a>, PubMed: <a href="http://www.uniprot.org/citations/29452636" target="\_blank">29452636</a>, PubMed: <a href="http://www.uniprot.org/citations/30026309" target="\_blank">30026309</a>, PubMed: <a href="http://www.uniprot.org/citations/30279485" target="\_blank">30279485</a>, PubMed: <a href="http://www.uniprot.org/citations/30478312" target="\_blank">30478312</a>). 'Met-1'-linked polyubiquitin chains attached to RIPK2 recruit IKBKG/NEMO, which undergoes 'Lys-63'-linked polyubiquitination in a RIPK2-dependent process (PubMed: <a href="http://www.uniprot.org/citations/17562858" target="\_blank">17562858</a>, PubMed: <a href="http://www.uniprot.org/citations/22607974" target="\_blank">22607974</a>, PubMed: <a href="http://www.uniprot.org/citations/29452636" target="\_blank">29452636</a>, PubMed: <a href="http://www.uniprot.org/citations/30026309" target="\_blank">30026309</a>). '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</a>). 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:<a href="http://www.uniprot.org/citations/18079694" target="\_blank">18079694</a>). The protein kinase activity is dispensable for the NOD1 and NOD2 signaling pathways (PubMed:<a href="http://www.uniprot.org/citations/29452636" target="\_blank">29452636</a>, PubMed:<a href="http://www.uniprot.org/citations/30026309" target="\_blank">30026309</a>). Contributes to the tyrosine phosphorylation of the guanine exchange factor ARHGEF2 through Src tyrosine kinase leading to NF-kappa-B activation by NOD2 (PubMed:<a href="http://www.uniprot.org/citations/21887730" target="\_blank">21887730</a>). 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:<a href="http://www.uniprot.org/citations/14638696" target="\_blank">14638696</a>). Plays a role in the inactivation of RHOA in response to NGFR signaling (PubMed:<a href="http://www.uniprot.org/citations/26646181" target="\_blank">26646181</a>).

#### 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.

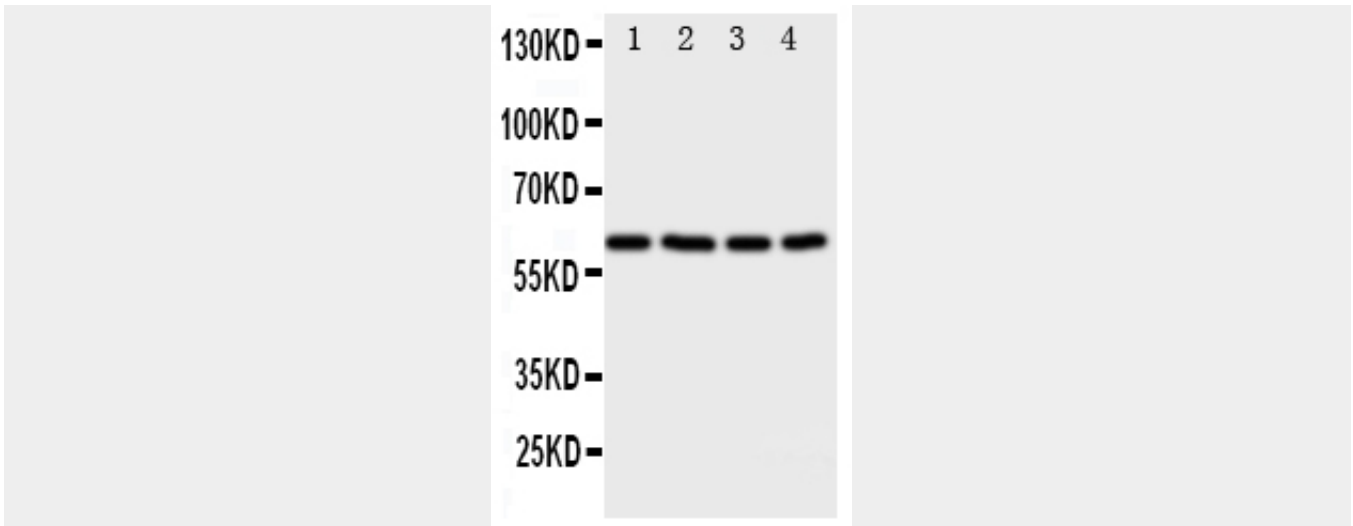
#### Anti-RIP2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-RIP2 Antibody - Images





Anti-RIP2 antibody, ABO11169, Western blotting  
All lanes: Anti RIP2 (ABO11169) at 0.5ug/ml  
Lane 1: A549 Whole Cell Lysate at 40ug  
Lane 2: HELA Whole Cell Lysate at 40ug  
Lane 3: PANC Whole Cell Lysate at 40ug  
Lane 4: COLO320 Whole Cell Lysate at 40ug  
Predicted bind size: 61KD  
Observed 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 B 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.