

**RIP2 Polyclonal Antibody**  
Catalog # AP72330**Specification****RIP2 Polyclonal Antibody - Product Information**

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

**RIP2 Polyclonal Antibody - Additional Information**

Gene ID 8767

**Other Names**

RIPK2; CARDIAK; RICK; RIP2; Receptor-interacting serine/threonine-protein kinase 2; CARD-containing interleukin-1 beta-converting enzyme-associated kinase; CARD-containing IL-1 beta ICE-kinase; RIP-like-interacting CLARP kinase; Receptor-in

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**RIP2 Polyclonal 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](http://www.uniprot.org/citations/14638696), PubMed: [17054981](http://www.uniprot.org/citations/17054981), PubMed: [21123652](http://www.uniprot.org/citations/21123652), PubMed: [28656966](http://www.uniprot.org/citations/28656966), PubMed: [9575181](http://www.uniprot.org/citations/9575181), PubMed: [9642260](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/17054981), PubMed: [17562858](http://www.uniprot.org/citations/17562858), PubMed: [21123652](http://www.uniprot.org/citations/21123652), PubMed: [14638696](http://www.uniprot.org/citations/14638696), PubMed: [17054981](http://www.uniprot.org/citations/17054981), PubMed: [21123652](http://www.uniprot.org/citations/21123652), PubMed: [28656966](http://www.uniprot.org/citations/28656966), PubMed: [9575181](http://www.uniprot.org/citations/9575181), PubMed: [9642260](http://www.uniprot.org/citations/9642260)).

<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.

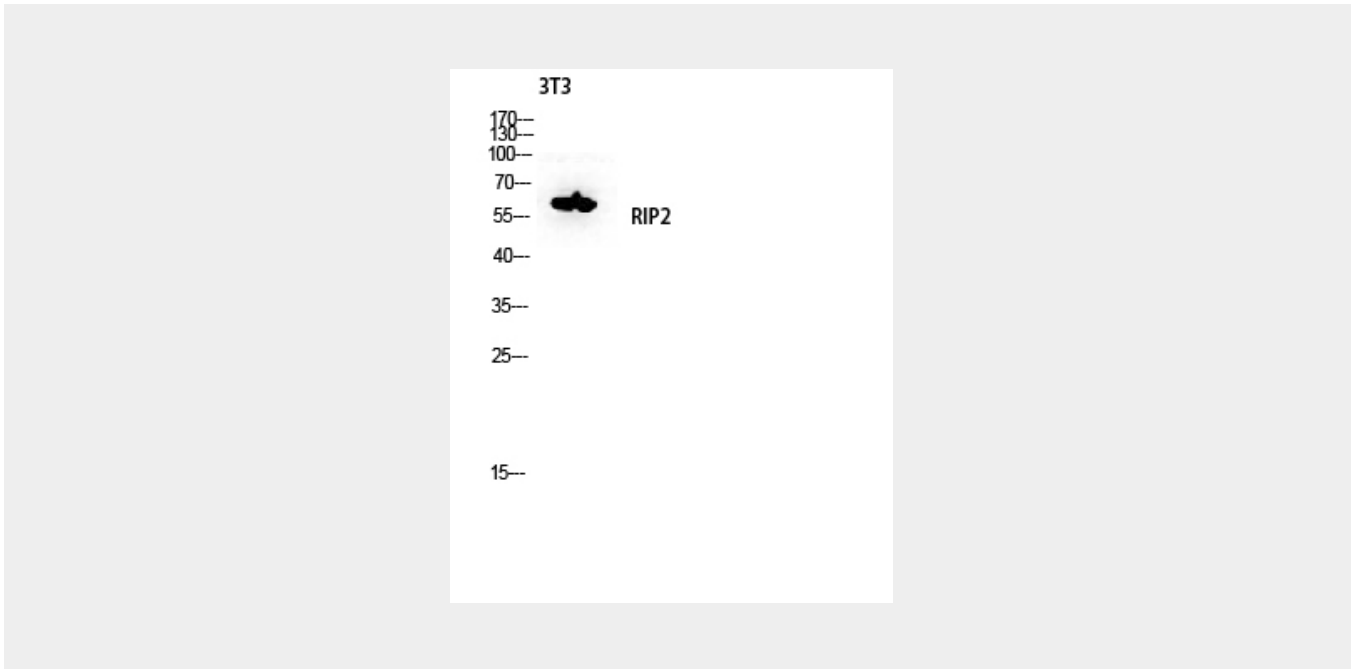
#### RIP2 Polyclonal Antibody - Protocols

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](#)

### RIP2 Polyclonal Antibody - Images



### RIP2 Polyclonal Antibody - Background

Serine/threonine/tyrosine kinase that plays an essential role in modulation of innate and adaptive immune responses. Upon stimulation by bacterial peptidoglycans, NOD1 and NOD2 are activated, oligomerize and recruit RIPK2 through CARD-CARD domains. Contributes to the tyrosine phosphorylation of the guanine exchange factor ARHGEF2 through Src tyrosine kinase leading to NF-kappaB activation by NOD2. Once recruited, RIPK2 autophosphorylates and undergoes 'Lys-63'-linked polyubiquitination by E3 ubiquitin ligases XIAP, BIRC2 and BIRC3. The polyubiquitinated protein mediates the recruitment of MAP3K7/TAK1 to IKBKG/NEMO and induces 'Lys-63'-linked polyubiquitination of IKBKG/NEMO and subsequent activation of IKBKB/IKKB. 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. Plays also a role during engagement of the T-cell receptor (TCR) in promoting BCL10 phosphorylation and subsequent NF-kappa-B activation.