

# RIPK2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7818B

## Product Information

---

Application	WB, IHC-P, E
Primary Accession	<a href="#">O43353</a>
Other Accession	<a href="#">NP_003812</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB03318
Calculated MW	61195
Antigen Region	458-488

## Additional Information

---

Gene ID	8767
Other Names	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-interacting protein 2, RIP-2, Tyrosine-protein kinase RIPK2, RIPK2, CARDIAK, RICK, RIP2
Target/Specificity	This RIPK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 458-488 amino acids from the C-terminal region of human RIPK2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	RIPK2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## 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 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:[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 polyubiquitination 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 IKK $\beta$ /IKK $\gamma$  (PubMed:[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.

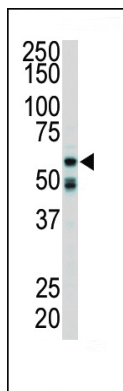
## Background

RIPK2 is a member of the receptor-interacting protein (RIP) family of serine/threonine protein kinases. The encoded protein contains a C-terminal 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.

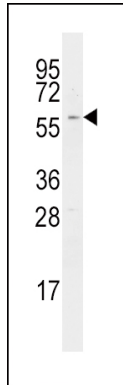
## References

- Clark, H.F., et al., *Genome Res.* 13(10):2265-2270 (2003).  
 Stehlik, C., et al., *J. Biol. Chem.* 278(34):31941-31949 (2003).  
 Chen, Y.R., et al., *Biochemistry* 42(20):6310-6320 (2003).  
 Munz, B., et al., *Mol. Cell. Biol.* 22(16):5879-5886 (2002).  
 Chin, A.I., et al., *Nature* 416(6877):190-194 (2002).

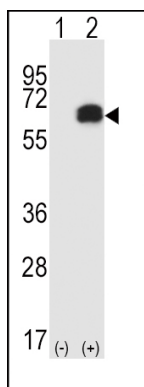
## Images



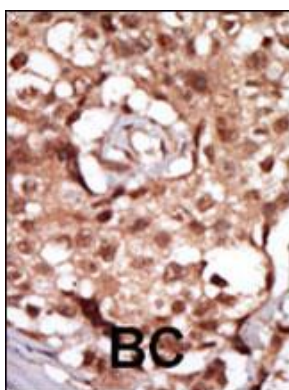
Western blot analysis of anti-RIPK2 Pab (Cat. #AP7818b) in mouse cerebellum tissue lysate. RIPK2 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Western blot analysis of anti-RIPK2 Pab (Cat. #AP7818b) in Ramos cell line lysates (35ug/lane). RIPK2 (arrow) was detected using the purified Pab.

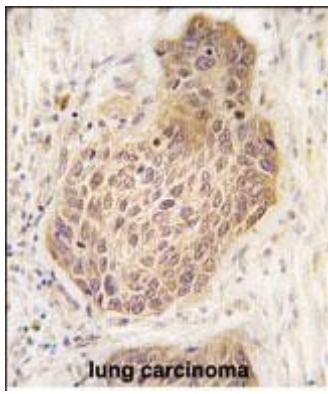


Western blot analysis of RIPK2 (arrow) using rabbit polyclonal RIPK2 Antibody (D474) (Cat.#AP7818b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the RIPK2 gene.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with RIPK2 Antibody (C-term) (Cat.#AP7818b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.