10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RIPK2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13758a

Product Information

Application	WB, IHC-P, E
Primary Accession	O43353
Other Accession	NP_003812.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	61195
Antigen Region	39-68

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 39-68 amino acids from the N-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 purified through a protein A column, followed by peptide affinity purification.
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 (N-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 IKBKB/IKKB (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.

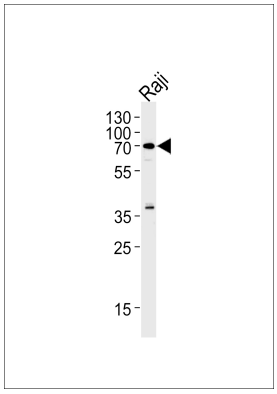
Background

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 activation and 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-kappaB and inducer of apoptosis in response to various stimuli.

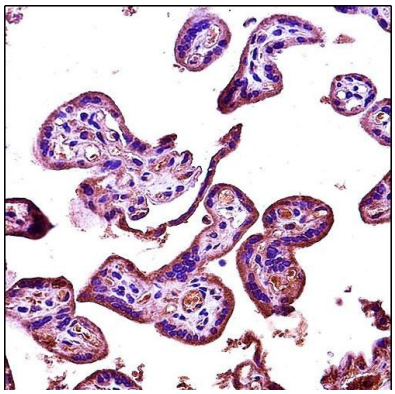
References

Cirulli, E.T., et al. Eur. J. Hum. Genet. 18(7):815-820(2010)
Du, X., et al. Mol. Cell. Biochem. 337 (1-2), 277-285 (2010) :
Adams, S., et al. Exp. Cell Res. 316(5):728-736(2010)
Zhang, F.R., et al. N. Engl. J. Med. 361(27):2609-2618(2009)
Hosgood, H.D. III, et al. Occup Environ Med 66(12):848-853(2009)

Images



RIPK2 Antibody (N-term) (Cat. #AP13758a) western blot analysis in Raji cell line lysates (35ug/lane).This demonstrates the RIPK2 antibody detected the RIPK2 protein (arrow).



RIPK2 Antibody (N-term) (Cat. #AP13758a)immunohistochemistry analysis in formalin fixed and paraffin embedded human placenta tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of RIPK2 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.