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RICK Antibody
Catalog # ASC10079

Specification

RICK Antibody - Product Information

Application	**WB, ICC, IF**
Primary Accession	O43353
Other Accession	O43353, 20455217
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**60 kDa KDa**
Application Notes	**RICK antibody can be used for detection of RICK by Western blot at 1 - 2 µg/mL. An approximately 60 kDa band can be detected. Antibody can also be used for immunocytochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

RICK Antibody - Additional Information

Gene ID **8767**

Other Names
RICK Antibody: CCK, RICK, RIP2, CARD3, GIG30, CARDIAK, UNQ277/PRO314/PRO34092, CARD-containing interleukin-1 beta-converting enzyme-associated kinase, CARD-containing IL-1 beta ICE-kinase, receptor-interacting serine-threonine kinase 2

Target/Specificity
RIPK2;

Reconstitution & Storage
RICK antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
RICK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RICK 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:<a href="http://www.uniprot.org/citations/21123652"

target="_blank">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.

RICK Antibody - Protocols

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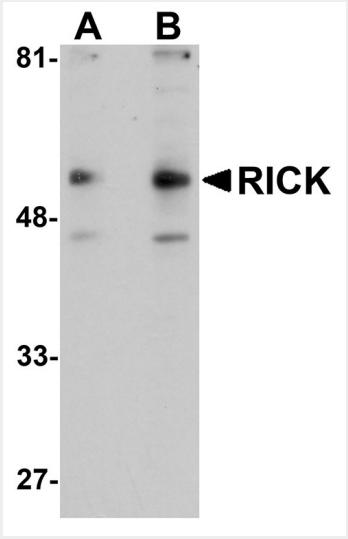
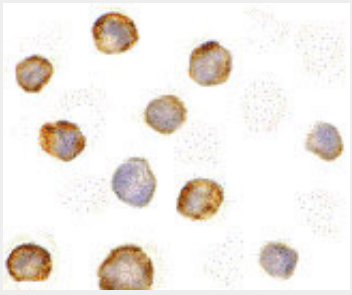
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

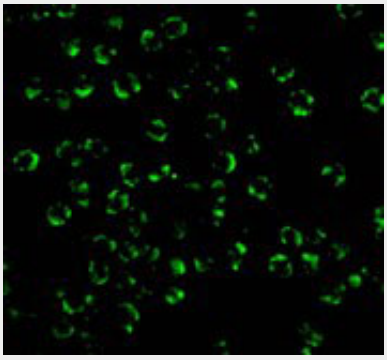
RICK Antibody - Images



Western blot analysis of RICK in A431 cell lysate with RICK antibody at (A) 1 and (B) 2 µg/mL.



Immunocytochemistry of RICK in K562 cells with RICK antibody at 5 µg/mL.



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Immunofluorescence of RICK in K562 cells with RICK antibody at 20 µg/mL.

RICK Antibody - Background

RICK Antibody: Apoptosis is mediated by death domain (DD) and/or caspase recruitment domain (CARD) containing molecules and a caspase family of proteases. DD-containing serine/threonine kinase RIP regulates Fas-induced apoptosis. A novel CARD-containing serine/threonine kinase was recently identified and designated RICK/RIP2/CARDIAK for RIP-like interacting CLARP kinase, receptor interacting protein-2, and CARD-containing ICE associated kinase, respectively. RICK contains an N-terminal kinase catalytic domain and a C-terminal CARD domain. Overexpression of RICK induced apoptosis and activation of NF-κB and JNK. RICK interacts with members of the TRAF family, CLARP and caspase-1. Thus, RICK represents a novel kinase that regulates TNF and Fas induced-apoptosis and that is involved in the generation of proinflammatory cytokine IL-1β. The messenger RNA of RICK is expressed in multiple human tissues.

RICK Antibody - References

Inohara N, del Peso L, Koseki T, Chen S, Nunez G. RICK, a novel protein kinase containing a caspase recruitment domain, interacts with CLARP and regulates CD95-mediated apoptosis. J Biol Chem 1998;273:12296-300
McCarthy JV, Ni J, Dixit VM. RIP2 is a novel NF-κB-activating and cell death-inducing kinase. J Biol Chem 1998;273:16968-75
Thome M, Hofmann K, Burns K, Martinon F, Bodmer JL, Mattmann C, Tschopp J. Identification of CARDIAK, a RIP-like kinase that associates with caspase-1. Curr Biol 1998;8:885-8 (WD0300)