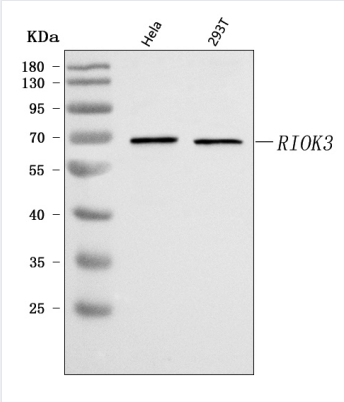
RIOK3 Antibody – Rabbit Polyclonal

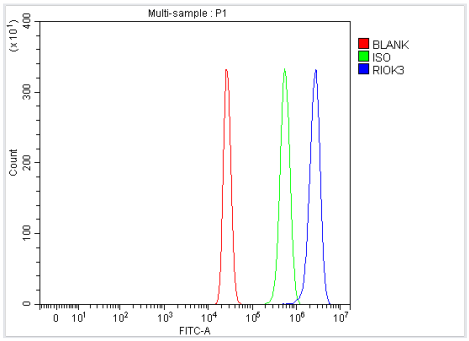
PRODUCT OVERVIEW

Product Name	RIOK3, Polyclonal Antibody
Full Product Name	Anti-RIOK3 Antibody Picoband
Product Gene Name	anti-RIOK3 antibody
Product Synonym Names	Nck-associated protein 1; Nck-associated protein 1; NAP 1; Membrane-associated protein HEM-2; p125Nap1; NCKAP1; HEM2, KIAA0587, NAP1
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Expressed in all tissues examined except peripheral blood leukocytes, with highest expression in brain, heart, and skeletal muscle.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	58,671 Da
3D Structure	ModBase 3D Structure for O14730
Immunogen	E coli-derived human RIOK3 recombinant protein (Position: Q48-E519).
Subcellular Localization	Cell membrane, Single-pass membrane protein, Cytoplasmic side, Cell projection, lamellipodium membrane, Single-pass membrane protein, Cytoplasmic side, At the interface between the lamellipodial actin meshwork and the membrane.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Part of the WAVE complex that regulates lamellipodia formation. The WAVE complex regulates actin filament reorganization via its interaction with the Arp2/3 complex. Actin remodeling activity is regulated by RAC1.
Product Categories/Family for anti-RIOK3 antibody	Primary Antibodies; Neurogenesis; Neurology Process; Neuroscience; NFKB Pathway; Nuclear Signaling; Signal Transduction; Signaling Pathway
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-RIOK3 antibody	Western Blot (WB), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-RIOK3 antibody	WB: 0.25-0.5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-RIOK3 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.

Product References and Citations for anti-RIOK3 antibody	1. Anaya, P., Evans, S. C., Dai, C., Lozano, G., May, G. S. Isolation of the Aspergillus nidulans sudD gene and its human homologue. Gene 211: 323-329, 1998.
Other Notes	Small volumes of anti-RIOK3 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for RIOK3 purchase	MBS1759003 is an antibody targeting RIOK3. Also known as Anti-RIOK3 Antibody Picoband. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-RIOK3 antibody
Figure 1. Western blot analysis of RIOK3 using anti-RIOK3 antibody (MBS1759003).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human Hela whole cell lysates,Lane 2: human 293T whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-RIOK3 antigen affinity purified polyclonal antibody (#MBS1759003) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for RIOK3 at approximately 65 kDa. The expected band size for RIOK3 is at 59 kDa.



Flow Cytometry (FC/FACS) of anti-RIOK3 antibody
Figure 2. Flow Cytometry analysis of HepG2 cells using anti-RIOK3 antibody (MBS1759003).Overlay histogram showing HepG2 cells stained with MBS1759003 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-RIOK3 Antibody (MBS1759003, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RIOK3. It may not necessarily be applicable to this product.

NCBI GI #	112180703
NCBI GeneID	8780
NCBI Accession #	AAH28360.1
UniProt Primary Accession #	O14730
UniProt Secondary Accession #	Q8IXN9
UniProt Related Accession #	O14730
NCBI Official Full Name	RIOK3 protein
NCBI Official Synonym Full Names	RIO kinase 3
NCBI Official Symbol	RIOK3
NCBI Official Synonym Symbols	SUDD
UniProt Protein Name	Serine/threonine-protein kinase RIO3
UniProt Synonym Protein Names	RIO kinase 3; sudD homolog
UniProt Gene Name	RIOK3

UniProt Synonym Gene Names	SUDD
NCBI Protein Information	serine/threonine-protein kinase RIO3
NCBI Summary for RIOK3	This gene was first identified by the similarity of its product to the Aspergillus nidulans SUDD protein. This gene is now recognized as a member of the right open reading frame (RIO) kinase gene family. This gene encodes a serine/threonine kinase that localizes to the cytoplasm and plays a role in the processing of the pre-40 S ribosomal subunit. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2017]
UniProt Comments for RIOK3	Involved in regulation of type I interferon (IFN)-dependent immune response which plays a critical role in the innate immune response against DNA and RNA viruses. May act as an adapter protein essential for the recruitment of TBK1 to IRF3 (PubMed:24807708). Phosphorylates IFIH1 on 'Ser-828' interfering with IFIH1 filament assembly on long dsRNA and resulting in attenuated IFIH1-signaling (PubMed:25865883). Can inhibit CASP10 isoform 7-mediated activation of the NF-kappaB signaling pathway (PubMed:19557502). May play a role in the biogenesis of the 40S ribosomal subunit. Involved in the processing of 21S pre-rRNA to the mature 18S rRNA (PubMed:22418843).
Research Articles on RIOK3	**1.** the ectopic expression of RIOK3 or a phosphomimetic MDA5-S828D mutation attenuated MDA5-mediated signaling.
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