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

Anti-RIOK3 Antibody

Catalog # AP51853

Product Information

Application	WB, IHC
Primary Accession	O14730
Reactivity	Human, Mouse, Rat, Bovine, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	59093

Additional Information

Gene ID	8780
Other Names	SUDD; Serine/threonine-protein kinase RIO3; RIO kinase 3; sudD homolog
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human RIOK3. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	RIOK3
Function	Serine/threonine-protein kinase involved in a ribosome quality control that takes place when ribosomes have stalled, leading to 18S non-functional rRNA decay and degradation of the 40S ribosomal subunit (PubMed:39947182, PubMed:39947183, PubMed:40022732). Acts downstream of RNF10: specifically recognizes and binds RPS2/us5 and RPS3/us3 monoubiquitinated by RNF10, promoting degradation of the 40S ribosomal subunit in a kinase-dependent manner (PubMed:39947182, PubMed:39947183, PubMed:40022732). The RNF10-RIOK3 ribosome quality control takes place in response to ribosome subunit imbalance or downstream the EIF2AK4/GCN2-mediated integrated stress response (ISR) (PubMed:39947182, PubMed:39947183, PubMed:40022732). Also involved in regulation of type I interferon (IFN)-dependent immune response, possibly by acting 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-kappa-B signaling pathway (PubMed:19557502).

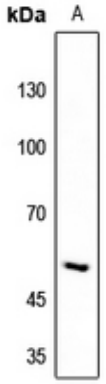
Cellular Location Cytoplasm, cytosol

Tissue Location Widely expressed..

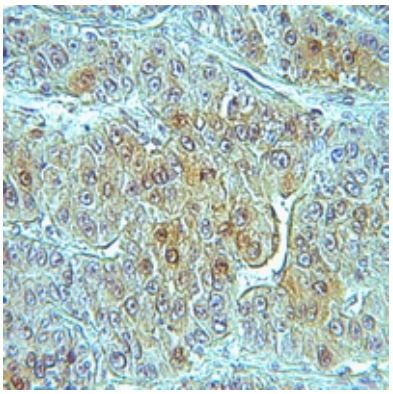
References

Anaya P.,et al.Gene 211:323-329(1998).
Nusbaum C.,et al.Nature 437:551-555(2005).
Dephoure N.,et al.Proc. Natl. Acad. Sci. U.S.A. 105:10762-10767(2008).
Burkard T.R.,et al.BMC Syst. Biol. 5:17-17(2011).
Greenman C.,et al.Nature 446:153-158(2007).

Images



Western blot analysis of RIOK3 expression in Hela (A) whole cell lysates. (Predicted band size: 59 kD; Observed band size: 59 kD)



Immunohistochemical analysis of RIOK3 staining in human liver cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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