

RCK (E-12): sc-376433

BACKGROUND

RCK, also known as DDX6 and P54, is a member of the DEAD-box RNA helicase family of proteins, all of which share common protein motifs. Found in most tissues, RCK is an unwindase that exhibits ATP-dependent RNA un-winding activity, as well as the ability to decay RNA in the 5'-3' direction. In non-malignant cells, RCK is associated with all processes of normal RNA metabolism including splicing, export and translation initiation. Mutations in the gene encoding RCK can cause the protein to be overexpressed, changing its function to that of an oncogene that positively regulates the expression of genes involved in cell growth and proliferation. It is believed that, through its unwindase activity, the main function of RCK is to downregulate mRNA expression and maintain normal transcriptional levels within the cell.

CHROMOSOMAL LOCATION

Genetic locus: DDX6 (human) mapping to 11q23.3; Ddx6 (mouse) mapping to 9 A5.2.

SOURCE

RCK (E-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-31 at the N-terminus of RCK of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RCK (E-12) is available conjugated to agarose (sc-376433 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376433 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376433 PE), fluorescein (sc-376433 FITC), Alexa Fluor[®] 488 (sc-376433 AF488), Alexa Fluor[®] 546 (sc-376433 AF546), Alexa Fluor[®] 594 (sc-376433 AF594) or Alexa Fluor[®] 647 (sc-376433 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376433 AF680) or Alexa Fluor[®] 790 (sc-376433 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376433 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RCK (E-12) is recommended for detection of RCK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RCK siRNA (h): sc-72246, RCK siRNA (m): sc-72247, RCK shRNA Plasmid (h): sc-72246-SH, RCK shRNA Plasmid (m): sc-72247-SH, RCK shRNA (h) Lentiviral Particles: sc-72246-V and RCK shRNA (m) Lentiviral Particles: sc-72247-V.

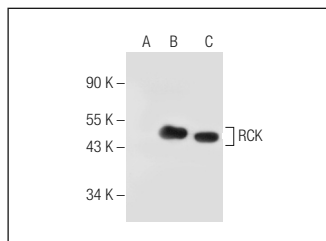
Molecular Weight of RCK: 54 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, K-562 whole cell lysate: sc-2203 or RCK (h): 293T Lysate: sc-117056.

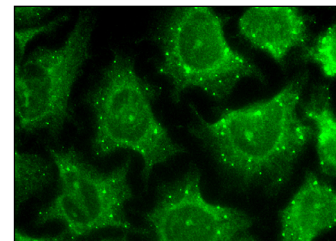
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



RCK (E-12): sc-376433. Western blot analysis of RCK expression in non-transfected 293T: sc-117752 (A), human RCK transfected 293T: sc-117056 (B) and K-562 (C) whole cell lysates.



RCK (E-12): sc-376433. Immunofluorescence staining of methanol-fixed HeLa cells showing P-bodies and cytoplasmic localization.

SELECT PRODUCT CITATIONS

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- Cho, J.H., et al. 2017. The p90 ribosomal S6 kinase-UBR5 pathway controls Toll-like receptor signaling via miRNA-induced translational inhibition of tumor necrosis factor receptor-associated factor 3. *J. Biol. Chem.* 292: 11804-11814.
- Tajirika, T., et al. 2018. DEAD-box protein RNA-helicase DDX6 regulates the expression of HER2 and FGFR2 at the post-transcriptional step in gastric cancer cells. *Int. J. Mol. Sci.* 19: 2005.
- Estañ, M.C., et al. 2019. Recessive mutations in muscle-specific isoforms of FXR1 cause congenital multi-minicore myopathy. *Nat. Commun.* 10: 797.
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- Bearss, J.J., et al. 2021. EDC3 phosphorylation regulates growth and invasion through controlling P-body formation and dynamics. *EMBO Rep.* 22: e50835.
- Fan, S., et al. 2021. Enterovirus 71 2A protease inhibits P-body formation to promote viral RNA synthesis. *J. Virol.* 95: e0092221.
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RESEARCH USE

For research use only, not for use in diagnostic procedures.

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