

RBCK1 (E-2): sc-365523

BACKGROUND

The RING finger motif is a specialized DNA-binding zinc finger domain found in many transcriptional regulatory proteins. RBCK protein interacting with PKC 1 (RBCK1), a member of the RING-IBR protein family, interacts with β -I-type (PRKCB1) and Z-type protein kinase C (PRKCZ) as well as UBE2L3, and has a new type of RING-B-box-coiled-coil (RBCC) region. RBCK1 can form homodimers *in vitro* and is a transcription factor with both transcriptional and DNA-binding activities that are unlike other RBCC family proteins. RBCK1 shuttles between the cytoplasm and nucleus and possesses nuclear export and localization signals within its amino acid sequence. It may function as an E3 ubiquitin-protein ligase, or as a part of the E3 complex, which accepts ubiquitin from E2 ubiquitin-conjugating enzymes, such as UBE2L3/UBCM4, and then transfers ubiquitin to substrates.

REFERENCE

1. Tokunaga, C., et al. 1998. Molecular cloning and characterization of a novel protein kinase C-interacting protein with structural motifs related to RBCC family proteins. *Biochem. Biophys. Res. Commun.* 244: 353-359.
2. Tokunaga, C., et al. 1998. Molecular cloning and characterization of RBCK2, a splicing variant of a RBCC family protein, RBCK1. *FEBS Lett.* 435: 11-15.

CHROMOSOMAL LOCATION

Genetic locus: RBCK1 (human) mapping to 20p13; Rbck1 (mouse) mapping to 2 G3.

SOURCE

RBCK1 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 203-237 within an internal region of RBCK1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-365523 X, 200 μ g/0.1 ml.

RBCK1 (E-2) is available conjugated to agarose (sc-365523 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365523 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365523 PE), fluorescein (sc-365523 FITC), Alexa Fluor® 488 (sc-365523 AF488), Alexa Fluor® 546 (sc-365523 AF546), Alexa Fluor® 594 (sc-365523 AF594) or Alexa Fluor® 647 (sc-365523 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365523 AF680) or Alexa Fluor® 790 (sc-365523 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365523 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

RBCK1 (E-2) is recommended for detection of RBCK1 (all isoforms) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

RBCK1 (E-2) is also recommended for detection of RBCK1 (all isoforms) in additional species, including bovine.

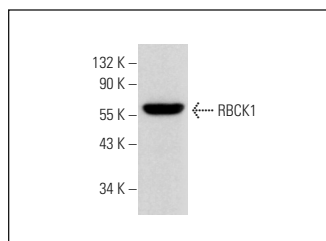
Suitable for use as control antibody for RBCK1 siRNA (h): sc-61446, RBCK1 siRNA (m): sc-61447, RBCK1 shRNA Plasmid (h): sc-61446-SH, RBCK1 shRNA Plasmid (m): sc-61447-SH, RBCK1 shRNA (h) Lentiviral Particles: sc-61446-V and RBCK1 shRNA (m) Lentiviral Particles: sc-61447-V.

RBCK1 (E-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

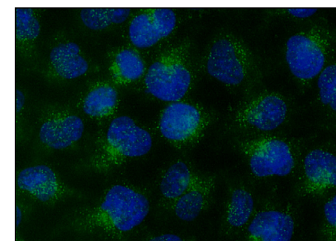
Molecular Weight of RBCK1: 56 kDa.

Positive Controls: rat liver extract: sc-2395 or A-431 whole cell lysate: sc-2201.

DATA



RBCK1 (E-2): sc-365523. Western blot analysis of RBCK1 expression in rat liver tissue extract.



RBCK1 (E-2): sc-365523. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization. Note DAPI nuclear counterstain from UltraCruz® Hard-set Mounting Medium (sc-359850).

SELECT PRODUCT CITATIONS

1. Verhelst, K., et al. 2012. A20 inhibits LUBAC-mediated NF κ B activation by binding linear polyubiquitin chains via its zinc finger 7. *EMBO J.* 31: 3845-3855.
2. van Well, E.M., et al. 2019. A protein quality control pathway regulated by linear ubiquitination. *EMBO J.* 38: e100730.
3. Li, X., et al. 2020. Ubiquitination of RIPK1 regulates its activation mediated by TNFR1 and TLRs signaling in distinct manners. *Nat. Commun.* 11: 6364.
4. Tao, P., et al. 2021. Deubiquitination of proteasome subunits by OTULIN regulates type I IFN production. *Sci. Adv.* 7: eabi6794.
5. Li, Z., et al. 2022. RBCK1 is an endogenous inhibitor for triple negative breast cancer via hippo/YAP axis. *Cell. Commun. Signal.* 20: 164.

STORAGE

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