SANTA CRUZ BIOTECHNOLOGY, INC.

RecQL5 (C-9): sc-515050

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In humans, the RecQ helicase family includes WRN, BLM, RecQL1, RecQL4 and RecQL5 proteins, all of which contain a conserved helicase domain. WRN and BLM have been demonstrated to be the responsible genes in Werner and Bloom syndromes, respectively. RecQL1 and RecQL5 also belong to the human RecQ helicase family, but their correlation with genetic disorders, if any, is unknown. The levels of RecQ helicase family members are differentially upregulated to guarantee genomic stability in cells that are transformed or actively proliferating. The gene encoding human RecQL4, which maps to chromosome 8q24.3, is believed to be the gene responsible for the development of Rothmund-Thomson syndrome (RTS). The genes encoding RecQL1 and RecQL5 map to chromosome 12p12.1 and 17q25.1, respectively.

CHROMOSOMAL LOCATION

Genetic locus: RECQL5 (human) mapping to 17q25.1; Recql5 (mouse) mapping to 11 E2.

SOURCE

RecQL5 (C-9) is a mouse monoclonal antibody raised against amino acids 194-291 mapping within an internal region of RecQL5 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.

RecQL5 (C-9) is available conjugated to agarose (sc-515050 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515050 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515050 PE), fluorescein (sc-515050 FITC), Alexa Fluor® 488 (sc-515050 AF488), Alexa Fluor® 546 (sc-515050 AF546), Alexa Fluor® 594 (sc-515050 AF594) or Alexa Fluor® 647 (sc-515050 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515050 AF680) or Alexa Fluor® 790 (sc-515050 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

RecQL5 (C-9) is recommended for detection of RecQL5 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).

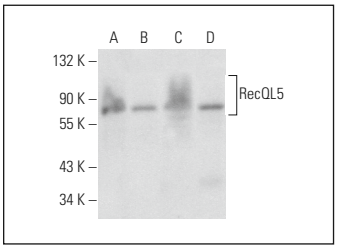
Suitable for use as control antibody for RecQL5 siRNA (h): sc-38221, RecQL5 siRNA (m): sc-38222, RecQL5 shRNA Plasmid (h): sc-38221-SH, RecQL5 shRNA Plasmid (m): sc-38222-SH, RecQL5 shRNA (h) Lentiviral Particles: sc-38221-V and RecQL5 shRNA (m) Lentiviral Particles: sc-38222-V.

Positive Controls: RecQL5 (h2): 293T Lysate: sc-116851, JAR cell lysate: sc-2276 or K-562 whole cell lysate: sc-2203.

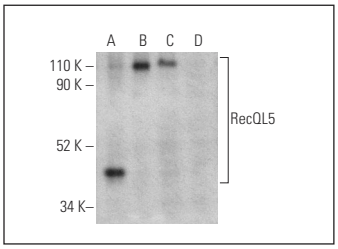
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RecQL5 (C-9): sc-515050. Western blot analysis of RecQL5 expression in K-562 (**A**), JAR (**B**), SK-BR-3 (**C**) and SP2/0 (**D**) whole cell lysates.



RecQL5 (C-9): sc-515050. Western blot analysis of RecQL5 expression in non-transfected 293T: sc-117752 (**A**), human RecQL5a transfected 293T: sc-113401 (**B**), human RecQL5 transfected 293T: sc-116851 (**C**) and K-562 (**D**) whole cell lysates. Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.

SELECT PRODUCT CITATIONS

1. Chen, T.I., et al. 2019. Hepatitis C virus NS3 protein plays a dual role in WRN-mediated repair of non-homologous end joining. J. Virol. 93: e01273-19.
2. Li, M., et al. 2020. TRIM28 functions as the SUMO E3 ligase for PCNA in prevention of transcription induced DNA breaks. Proc. Natl. Acad. Sci. USA 117: 23588-23596.
3. Ovejero, S., et al. 2022. The BLM helicase is a new therapeutic target in multiple myeloma involved in replication stress survival and drug resistance. Front. Immunol. 13: 983181.
4. Iwata, S., et al. 2024. A Recql5 mutant facilitates complex CRISPR/ Cas9-mediated chromosomal engineering in mouse zygotes. Genetics 227: iyae054.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.