SANTA CRUZ BIOTECHNOLOGY, INC.

RecQL1 (A-9): sc-166388

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: RECQL (human) mapping to 12p12.1; Recql (mouse) mapping to 6 G2.

SOURCE

RecQL1 (A-9) is a mouse monoclonal antibody raised against amino acids 1-110 of RecQL1 of human origin.

PRODUCT

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

RecQL1 (A-9) is available conjugated to agarose (sc-166388 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166388 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166388 PE), fluorescein (sc-166388 FITC), Alexa Fluor® 488 (sc-166388 AF488), Alexa Fluor® 546 (sc-166388 AF546), Alexa Fluor® 594 (sc-166388 AF594) or Alexa Fluor® 647 (sc-166388 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166388 AF680) or Alexa Fluor® 790 (sc-166388 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

RecQL1 (A-9) is recommended for detection of RecQL1 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), immunohistochemistry (including paraffin-embedded sections) (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 RecQL1 siRNA (h): sc-38217, RecQL1 siRNA (m): sc-38218, RecQL1 shRNA Plasmid (h): sc-38217-SH, RecQL1 shRNA Plasmid (m): sc-38218-SH, RecQL1 shRNA (h) Lentiviral Particles: sc-38217-V and RecQL1 shRNA (m) Lentiviral Particles: sc-38218-V.

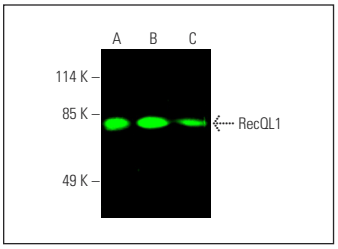
Molecular Weight of RecQL1: 75 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or IB4 whole cell lysate: sc-364780.

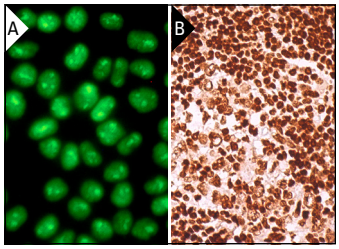
STORAGE

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

DATA



RecQL1 (A-9): sc-166388. Near-infrared western blot analysis of RecQL1 expression in A549 (**A**), HeLa (**B**) and IB4 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



RecQL1 (A-9): sc-166388. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (**B**).

SELECT PRODUCT CITATIONS

1. Duchatelet, S., et al. 2019. Mutations in PERP cause dominant and recessive keratoderma. J. Invest. Dermatol. 139: 380-390.
2. Pillay, N., et al. 2019. DNA replication vulnerabilities render ovarian cancer cells sensitive to poly(ADP-ribose) glycohydrolase inhibitors. Cancer Cell 35: 519-533.
3. Nieminuszczy, J., et al. 2019. EXD2 protects stressed replication forks and is required for cell viability in the absence of BRCA1/2. Mol. Cell 75: 605-619.
4. 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.
5. Thakar, T., et al. 2020. Ubiquitinated-PCNA protects replication forks from DNA2-mediated degradation by regulating Okazaki fragment maturation and chromatin assembly. Nat. Commun. 11: 2147.
6. Raso, M.C., et al. 2020. Interferon-stimulated gene 15 accelerates replication fork progression inducing chromosomal breakage. J. Cell Biol. 219: e202002175.
7. Randolph, M.E., et al. 2024. RNA helicase DDX3 regulates RAD51 localization and DNA damage repair in Ewing sarcoma. iScience 27: 108925.

RESEARCH USE

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

PROTOCOLS

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