SANTA CRUZ BIOTECHNOLOGY, INC.

WRN (1.27): sc-135807

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Werner's syndrome (WS), also called adult progeria, is an inherited, autosomal recessive disorder that is most common in families from regions of Japan where consanguineous marriages occur frequently. WS is characterized by premature aging and the early onset of age-related diseases and commonly results in cancer. The gene responsible for Werner's syndrome, WRN, has been mapped to the short arm of chromosome 8, and the subsequent cloning of the gene has reveled a predicted protein of 1,432 amino acids in length that bears significant sequence homology with DNA helicases. Four mutations in WRN have been identified in patients afflicted with WS. Two of the mutations involve mRNA splice-junctions. Of these two mutations, one was found in 60% of the individuals examined. This mutation is predicted to cause a frameshift which results in a truncated WRN protein.

REFERENCES

1. Thomas, W., et al. 1993. A genetic analysis of the Werner syndrome region on human chromosome 8p. Genomics 16: 685-690.
2. Nakura, J., et al. 1994. Homozygosity mapping of the Werner syndrome locus (WRN). Genomics 23: 600-608.
3. Yu, C.E., et al. 1994. Linkage disequilibrium and haplotype studies of chromosome 8p 11.1-21.1 markers and Werner syndrome. Am. J. Hum. Genet. 55: 356-364.
4. Ye, L., et al. 1995. Genetic association between chromosome 8 microsatellite (MS8-134) and Werner syndrome (WRN): chromosome microdissection and homozygosity mapping. Genomics 28: 566-599.
5. Goto, M., et al. 1996. Excess of rare cancers in Werner syndrome (adult progeria). Cancer Epidemiol. Biomarkers Prev. 5: 239-246.
6. Yu, C.E., et al. 1996. Positional cloning of the Werner's syndrome gene. Science 272: 258-262.

CHROMOSOMAL LOCATION

Genetic locus: WRN (human) mapping to 8p12; Wrn (mouse) mapping to 8 A3.

SOURCE

WRN (1.27) is a mouse monoclonal antibody raised against recombinant WRN 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.

WRN (1.27) is available conjugated to agarose (sc-135807 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-135807 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-135807 PE), fluorescein (sc-135807 FITC), Alexa Fluor® 488 (sc-135807 AF488), Alexa Fluor® 546 (sc-135807 AF546), Alexa Fluor® 594 (sc-135807 AF594) or Alexa Fluor® 647 (sc-135807 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-135807 AF680) or Alexa Fluor® 790 (sc-135807 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

WRN (1.27) is recommended for detection of WRN of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for WRN siRNA (h): sc-36843, WRN siRNA (m): sc-36844, WRN shRNA Plasmid (h): sc-36843-SH, WRN shRNA Plasmid (m): sc-36844-SH, WRN shRNA (h) Lentiviral Particles: sc-36843-V and WRN shRNA (m) Lentiviral Particles: sc-36844-V.

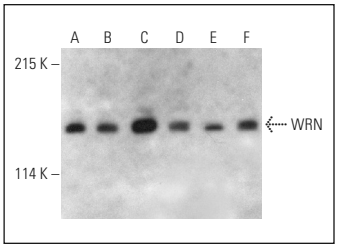
Molecular Weight of WRN: 170 kDa.

Positive Controls: IB4 whole cell lysate: sc-364780, HeLa whole cell lysate: sc-2200 or MOLT-4 cell lysate: sc-2233.

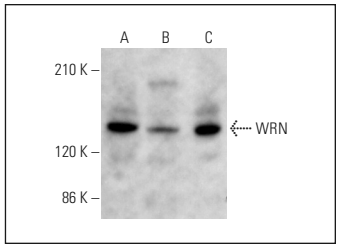
RECOMMENDED SUPPORT REAGENTS

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).

DATA



WRN (1.27) HRP: sc-135807 HRP. Direct western blot analysis of WRN expression in SUP-T1 (**A**), HEL 92.1.7 (**B**), U-698-M (**C**), MOLT-4 (**D**), HeLa (**E**) and IB4 (**F**) whole cell lysates.



WRN (1.27): sc-135807. Western blot analysis of WRN expression in SUP-T1 (**A**), HEL 92.1.7 (**B**) and U-698-M (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Xu, S., et al. 2019. Inhibition of protein disulfide isomerase in glioblastoma causes marked downregulation of DNA repair and DNA damage response genes. Theranostics 9: 2282-2298.

STORAGE

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

RESEARCH USE

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