SANTA CRUZ BIOTECHNOLOGY, INC.

WRN (F-33): sc-101110

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's syndrome region on human chromosome 8p. Genomics 16: 685-690.
2. Yu, C.E., et al. 1994. Linkage disequilibrium and haplotype studies of chromosome 8p11.1-21.1 markers and Werner's syndrome. Am. J. Hum. Genet. 55: 356-364.
3. Nakura, J., et al. 1994. Homozygosity mapping of the Werner's syndrome locus (WRN). Genomics 23: 600-608.
4. Ye, L., et al. 1995. Genetic association between chromosome 8 microsatellite (MS8-134) and Werner's syndrome (WRN): chromosome microdissection and homozygosity mapping. Genomics 28: 566-599.
5. Goto, M., et al. 1996. Excess of rare cancers in Werner's syndrome (adult progeria). Cancer Epidemiol. Biomarkers Prev. 5: 239-246.
6. Goddard, K.A., et al. 1996. Toward localization of the Werner's syndrome gene by linkage disequilibrium and ancestral haplotyping: lessons learned from analysis of 35 chromosome 8p11.1-21.1 markers. Am. J. Hum. Genet. 58: 1286-1302.
7. 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 (F-33) is a mouse monoclonal antibody raised against recombinant WRN of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

WRN (F-33) 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)], 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 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.

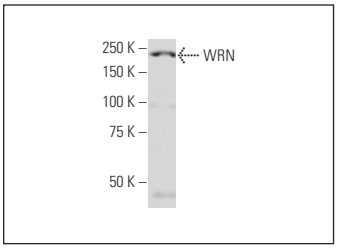
Molecular Weight of WRN: 170 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, NAMALWA cell lysate: sc-2234 or KNRK nuclear extract: sc-2141.

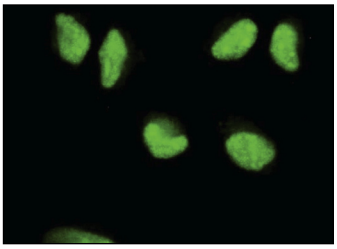
RECOMMENDED SUPPORT REAGENTS

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



WRN (F-33): sc-101110. Western blot analysis of WRN expression in HeLa nuclear extract.



WRN (F-33): sc-101110. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

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.