SANTA CRUZ BIOTECHNOLOGY, INC.

WRN (M-18): sc-9918

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, 8p11.2-p12, and the subsequent cloning of the gene has revealed a predicted protein of 1432 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 percent 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. Yu, C.E., et al. 1994. Linkage disequilibrium and haplotype studies of chromosome 8p 11.1-21.1 markers and Werner Syndrome. Amer. J. Human Gen. 55: 356-364.
3. Nakura, J., et al. 1994. Homozygosity mapping of the Werner syndrome locus (WRN). Genomics 23: 600-608.
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. Goddard, K.A., et al. 1996. Toward localization of the Werner Syndrome gene by linkage disequilibrium and ancestral haplotyping: lessons learned from analysis of 35 chromosome 8p11.1-21.1 markers. Amer. J. Human Gen. 58: 1286-1302.
6. Goto, M., et al. 1996. Excess of rare cancers in Werner Syndrome. Cancer Epidem. 5: 239-246.
7. Yu, C.E., et al. 1996. Positional cloning of the Werner's Syndrome gene. Science 272: 258-262.

CHROMOSOMAL LOCATION

Genetic locus: Wrn (mouse) mapping to 8 A4.

SOURCE

WRN (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of WRN of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9918 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WRN (M-18) is recommended for detection of WRN of mouse and rat 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 (m): sc-36844, WRN shRNA Plasmid (m): sc-36844-SH and WRN shRNA (m) Lentiviral Particles: sc-36844-V.

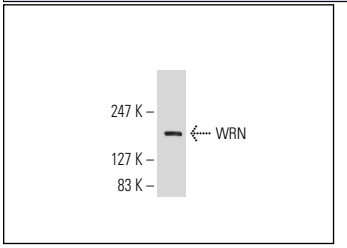
Molecular Weight of WRN: 170 kDa.

Positive Controls: KNRK nuclear extract: sc-2141.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



WRN (M-18): sc-9918. Western blot analysis of WRN expression in KNRK nuclear extract.

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.

PROTOCOLS

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