SANTA CRUZ BIOTECHNOLOGY, INC.

WHIP (C-10): sc-514740

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Werner's syndrome is an inherited, autosomal recessive disorder that is characterized by premature aging and commonly results in cancer. WHIP, also known as WRNIP1 (werner helicase-interacting protein 1) is a ubiquitously expressed member of the AAA ATPase family that is involved in the regulation of DNA synthesis. Localized to the nucleus, WHIP acts as a modulator for initiation events during DNA polymerase-mediated DNA synthesis and, through its ATPase activity, can detect DNA damage or arrested replication forks. WHIP is found in granular structures within the nucleus, where it interacts with the N-terminal domain of WRN, the protein product of the gene responsible for Werner's syndrome. Due to its close association with WRN, WHIP is thought to be involved in the aging process and thus may play a role in the development of Werner's syndrome. Four isoforms of WHIP are produced due to alternative splicing events.

REFERENCES

1. Branzei, D., et al. 2001. A novel protein interacts with the Werner's syndrome gene product physically and functionally. J. Biol. Chem. 276: 20364-20369.
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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608196. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Comai, L. and Li, B. 2004. The Werner syndrome protein at the crossroads of DNA repair and apoptosis. Mech. Ageing Dev. 125: 521-528.
5. Tsurimoto, T., et al. 2005. Human Werner helicase interacting protein 1 (WRNIP1) functions as a novel modulator for DNA polymerase δ. Genes Cells 10: 13-22.
6. Kawabe, Y., et al. 2006. Analyses of the interaction of WRNIP1 with Werner syndrome protein (WRN) *in vitro* and in the cell. DNA Repair 5: 816-828.
7. Yoshimura, A., et al. 2006. Functional relationships between Rad18 and WRNIP1 in vertebrate cells. Biol. Pharm. Bull. 29: 2192-2196.
8. Bish, R.A. and Myers, M.P. 2007. Werner helicase-interacting protein 1 binds polyubiquitin via its zinc finger domain. J. Biol. Chem. 282: 23184-23193.

CHROMOSOMAL LOCATION

Genetic locus: WRNIP1 (human) mapping to 6p25.2.

SOURCE

WHIP (C-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 633-658 at the C-terminus of WHIP of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514740 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-514740 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

WHIP (C-10) is recommended for detection of WHIP of 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 WHIP siRNA (h): sc-63222, WHIP shRNA Plasmid (h): sc-63222-SH and WHIP shRNA (h) Lentiviral Particles: sc-63222-V.

WHIP (C-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

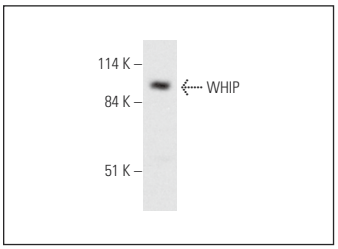
Molecular Weight of WHIP: 72 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

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 L-Agarose: sc-2336 (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



WHIP (C-10): sc-514740. Western blot analysis of WHIP expression in Jurkat nuclear extract.

RESEARCH USE

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