

WHIP (G-2): sc-377402

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.
2. Shen, J. and Loeb, L.A. 2001. Unwinding the molecular basis of the Werner syndrome. *Mech. Ageing Dev.* 122: 921-944.
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/>

CHROMOSOMAL LOCATION

Genetic locus: WRNIP1 (human) mapping to 6p25.2; Wrnip1 (mouse) mapping to 13 A3.2.

SOURCE

WHIP (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 91-129 near the N-terminus of WHIP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-377402 X, 200 µg/0.1 ml.

WHIP (G-2) is available conjugated to agarose (sc-377402 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377402 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377402 PE), fluorescein (sc-377402 FITC), Alexa Fluor® 488 (sc-377402 AF488), Alexa Fluor® 546 (sc-377402 AF546), Alexa Fluor® 594 (sc-377402 AF594) or Alexa Fluor® 647 (sc-377402 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377402 AF680) or Alexa Fluor® 790 (sc-377402 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377402 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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

APPLICATIONS

WHIP (G-2) is recommended for detection of WHIP 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).

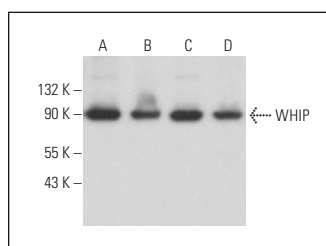
Suitable for use as control antibody for WHIP siRNA (h): sc-63222, WHIP siRNA (m): sc-63223, WHIP shRNA Plasmid (h): sc-63222-SH, WHIP shRNA Plasmid (m): sc-63223-SH, WHIP shRNA (h) Lentiviral Particles: sc-63222-V and WHIP shRNA (m) Lentiviral Particles: sc-63223-V.

WHIP (G-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

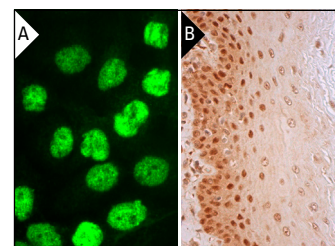
Molecular Weight of WHIP: 72 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, NTERA-2 cl.D1 whole cell lysate: sc-364181 or F9 cell lysate: sc-2245.

DATA



WHIP (G-2): sc-377402. Western blot analysis of WHIP expression in A-431 (A), NTERA-2 cl.D1 (B) and F9 (C) whole cell lysates and NIH/3T3 nuclear extract (D).



WHIP (G-2): sc-377402. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

1. Porebski, B., et al. 2019. WRNIP1 protects reversed DNA replication forks from SLX4-dependent nucleolytic cleavage. *iScience* 21: 31-41.

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 for detailed protocols and support products.