abcam

Product datasheet

Recombinant Human Werner's syndrome helicase WRN protein ab112372

1 Image

Description

Product name	Recombinant Human Werner's syndrome helicase WRN protein
Biological activity	useful for Antibody Production and Protein Array
Expression system	Wheat germ
Accession	Q14191
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	NPPVNSDMSKISLIRMLVPENIDTYLIHMAIEILKHGPDSGLQ PSCDVNK RRCFPGSEEICSSSKRSKEEVGINTETSSAERKRRLPVWF AKGSDTSKKL MDKTKRGGLFS
Predicted molecular weight	38 kDa including tags
Amino acids	1322 to 1432

Specifications

Our **Abpromise guarantee** covers the use of **ab112372** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Western blot ELISA SDS-PAGE
Form	Liquid
Additional notes	This product is useful for Antibody Production and Protein Array.

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles.

pH: 8.00
Constituents: 0.31% Glutathione, 0.79% Tris HCl

Glutathione is reduced

General Info

Function

Multifunctional enzyme that has both magnesium and ATP-dependent DNA-helicase activity and 3'->5' exonuclease activity towards double-stranded DNA with a 5'-overhang. Has no nuclease activity towards single-stranded DNA or blunt-ended double-stranded DNA. Binds preferentially to DNA substrates containing alternate secondary structures, such as replication forks and Holliday junctions. May play an important role in the dissociation of joint DNA molecules that can arise as products of homologous recombination, at stalled replication forks or during DNA repair. Alleviates stalling of DNA polymerases at the site of DNA lesions. Important for genomic integrity. Plays a role in the formation of DNA replication focal centers; stably associates with foci elements generating binding sites for RP-A.

Involvement in disease

Defects in WRN are a cause of Werner syndrome (WRN) [MIM:277700]. WRN is a rare autosomal recessive progeroid syndrome characterized by the premature onset of multiple age-related disorders, including atherosclerosis, cancer, non-insulin-dependent diabetes mellitus, ocular cataracts and osteoporosis. The major cause of death, at a median age of 47, is myocardial infarction. Currently all known WS mutations produces prematurely terminated proteins.
Defects in WRN may be a cause of colorectal cancer (CRC) [MIM:114500].

Sequence similarities

Belongs to the helicase family. RecQ subfamily.
Contains 1 3'-5' exonuclease domain.
Contains 1 helicase ATP-binding domain.
Contains 1 helicase C-terminal domain.
Contains 1 HRDC domain.

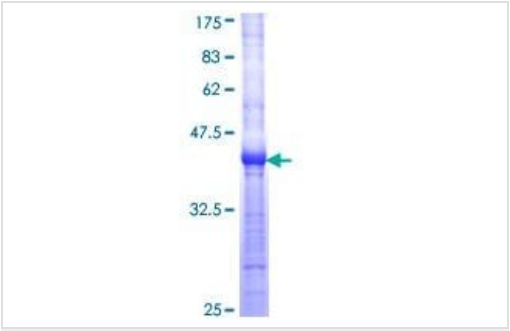
Post-translational modifications

Phosphorylated by PRKDC. Phosphorylated upon DNA damage, probably by ATM or ATR.

Cellular localization

Nucleus > nucleolus. Nucleus.

Images



SDS-PAGE - Recombinant Human Werner's syndrome helicase WRN protein (ab112372)

ab112372 analysed by 12.5% SDS-PAGE and stained with Coomassie Blue.

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