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WRN Antibody (Center T802)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12078C

Product Information

Application	WB, FC, IHC-P, E
Primary Accession	Q14191
Other Accession	NP_000544.2
Reactivity	Human
Predicted	Mouse, Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17383
Calculated MW	162461
Antigen Region	787-816

Additional Information

Gene ID	7486
Other Names	Werner syndrome ATP-dependent helicase, DNA helicase, RecQ-like type 3, RecQ3, Exonuclease WRN, 31--, RecQ protein-like 2, WRN, RECQ3, RECQL2
Target/Specificity	This WRN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 787-816 amino acids from the Central region of human WRN.
Dilution	WB~~1:1000 FC~~1:10~50 IHC-P~~1:100 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	WRN Antibody (Center T802) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	WRN
Synonyms	RECQ3, RECQL2

Function	Multifunctional enzyme that has magnesium and ATP-dependent 3'-5' DNA-helicase activity on partially duplex substrates (PubMed:9224595, PubMed:9288107, PubMed:9611231). Also has 3'->5' exonuclease activity towards double-stranded (ds)DNA with a 5'-overhang (PubMed:11863428). Has no nuclease activity towards single-stranded (ss)DNA or blunt-ended dsDNA (PubMed:11863428). Helicase activity is most efficient with (d)ATP, but (d)CTP will substitute with reduced efficiency; strand displacement is enhanced by single-strand binding- protein (heterotrimeric replication protein A complex, RPA1, RPA2, RPA3) (PubMed:9611231). 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. Plays a role in the formation of DNA replication focal centers; stably associates with foci elements generating binding sites for RP-A (By similarity). Plays a role in double-strand break repair after gamma- irradiation (PubMed:9224595, PubMed:9288107, PubMed:9611231). Unwinds some G-quadruplex DNA (d(CGG)n tracts); unwinding seems to occur in both 5'-3' and 3'-5' direction and requires a short single-stranded tail (PubMed:10212265). d(CGG)n tracts have a propensity to assemble into tetraplex structures; other G-rich substrates from a telomeric or IgG switch sequence are not unwound (PubMed:10212265). Depletion leads to chromosomal breaks and genome instability (PubMed:33199508).
Cellular Location	Nucleus, nucleolus. Nucleus. Nucleus, nucleoplasm. Chromosome. Note=Gamma-irradiation leads to its translocation from nucleoli to nucleoplasm and PML regulates the irradiation-induced WRN relocation (PubMed:21639834). Localizes to DNA damage sites (PubMed:27063109).

Background

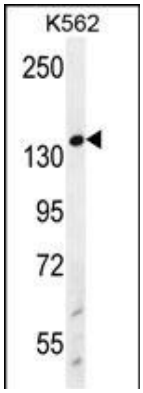
This gene encodes a member of the RecQ subfamily and the DEAH (Asp-Glu-Ala-His) subfamily of DNA and RNA helicases. DNA helicases are involved in many aspects of DNA metabolism, including transcription, replication, recombination, and repair. This protein contains a nuclear localization signal in the C-terminus and shows a predominant nucleolar localization. It possesses an intrinsic 3' to 5' DNA helicase activity, and is also a 3' to 5' exonuclease. Based on interactions between this protein and Ku70/80 heterodimer in DNA end processing, this protein may be involved in the repair of double strand DNA breaks. Defects in this gene are the cause of Werner syndrome, an autosomal recessive disorder characterized by premature aging.

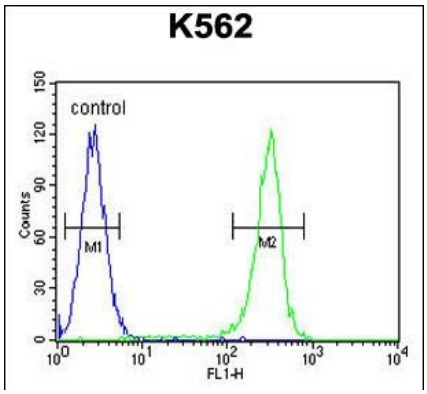
References

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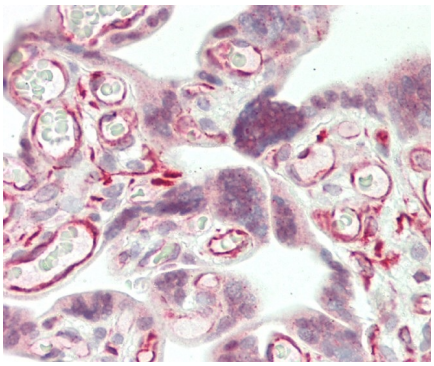
Images

WRN Antibody (Center T802) (Cat. #AP12078c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the WRN antibody detected the WRN protein (arrow).





WRN Antibody (Center T802) (Cat. #AP12078c) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Formalin-fixed and paraffin-embedded H.placenta tissue reacted with WRN Antibody (Center T802) (Cat#AP12078c).

Citations

- miR-200c-3p spreads invasive capacity in human oral squamous cell carcinoma microenvironment.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.