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RECQL5 Rabbit pAb

Catalog # AP99735

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	O94762
Other Accession	O94762
Predicted	Rat, Pig, Human, Mouse, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	108858
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RECQL5
Epitope Specificity	1-100/991
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the helicase family. RecQ subfamily. Contains 1 helicase ATP-binding domain. Contains 1 helicase C-terminal domain.
SUBUNIT	Interacts with TOP3A and TOP3B.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	RecQ helicases are implicated in DNA recombination and repair helicases and are critical in genome maintenance. RecQL5 is one of five known RecQ homologues in humans, and defects in three of these (BLM, WRN and RecQ4)are associated with autosomal recessive disorders that involve genomic instability and a predisposition to cancer. The exact role of ReqL5 is unclear. It has been shown in mouse embryonic stem (ES) cells that mutations in the Recql5 genes result in a significant increase in the frequency of sister chromatid exchange (SCE), whereas deleting Recql5 lead to an even higher frequency of SCE. There are three different RecQL5 isoforms - alpha, beta and gamma, produced by alternative splicing.

Additional Information

Gene ID	9400
Other Names	RECQ5; RECQ5_HUMAN; RECQL5; DNA 3'-5' helicase RecQ5; DNA helicase, RecQ-like type 5 (RecQ5); RecQ protein-like 5; 5.6.2.4; RecQ like helicase 5; RecQ protein 5
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	RECQL5
Synonyms	RECQ5 {ECO:0000303|PubMed:9878247}
Function	DNA helicase that plays an important role in DNA replication, transcription and repair (PubMed:20643585, PubMed:22973052, PubMed:28100692). Probably unwinds DNA in a 3'-5' direction (Probable) (PubMed:28100692). Binds to the RNA polymerase II subunit POLR2A during transcription elongation and suppresses transcription-associated genomic instability (PubMed:20231364). Also associates with POLR1A and enforces the stability of ribosomal DNA arrays (PubMed:27502483). Plays an important role in mitotic chromosome separation after cross-over events and cell cycle progress (PubMed:22013166). Mechanistically, removes RAD51 filaments protecting stalled replication forks at common fragile sites and stimulates MUS81-EME1 endonuclease leading to mitotic DNA synthesis (PubMed:28575661). Required for efficient DNA repair, including repair of inter-strand cross-links (PubMed:23715498). Stimulates DNA decatenation mediated by TOP2A. Prevents sister chromatid exchange and homologous recombination. A core helicase fragment (residues 11-609) binds preferentially to splayed duplex, looped and ssDNA (PubMed:28100692).
Cellular Location	[Isoform Beta]: Nucleus, nucleoplasm. Nucleus Note=Recruited to sites of DNA damage, such as single-strand breaks and inter-strand cross-links, and at stalled replication forks. Re- localizes from the nucleolus into the nucleus after replicative stress and significantly associates with WRN during S-phase (PubMed:23180761) [Isoform Gamma]: Cytoplasm
Tissue Location	Ubiquitous..

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