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#2814

RecQ4 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H R	Sensitivity: Endogenous	MW (kDa): 150	Source/Isotype: Rabbit	UniProt ID: #O94761	Entrez-Gene Id: 9401
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

RecQ4 Antibody detects endogenous levels of total RecQ4 protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids near the amino terminus of human RecQ4. Antibodies are purified by peptide affinity chromatography.

Background

RECQL4 is a member of the RecQ family of DNA helicases that plays an important role in global genomic stability. There are five members of this family in humans, and mutations in three of these, BLM, WRN and RECQL4, give rise to disorders that are characterized by premature aging and a predisposition to cancer (1). Despite the presence of a helicase domain, no helicase activity has been reported for RECQL4. Rather, RECQL4 has an ATPase function that is stimulated by ssDNA, and a ssDNA annealing activity that is inhibited by RPA (2). RECQL4 has been reported to interact with ubiquitin ligases UBR1 and UBR2 (3). The role of RECQL4 in tumor suppression and the maintenance of genomic integrity has been attributed to its activities associated with the regulation of DNA replication, and DNA recombination and repair (4-6).

Mutations in the RECQL4 gene have been identified in a subset of patients with Rothmund-Thomson syndrome (RTS) - a disorder characterized by growth deficiency, skin and skeletal abnormalities, and cancer predisposition. Two more autosomal recessive disorders have been associated with RECQL4 gene mutations: RAPADILINO, and Baller-Gerold syndromes (4).

Background References

1. Hanada, K. and Hickson, I.D. (2007) *Cell Mol Life Sci*.
2. Macris, M.A. et al. (2006) *DNA Repair (Amst)* 5, 172-80.
3. Yin, J. et al. (2004) *Hum Mol Genet* 13, 2421-30.
4. Dietschy, T. et al. (2007) *Cell Mol Life Sci* 64, 796-802.
5. LeRoy, G. et al. (2005) *Nucleic Acids Res* 33, 6251-7.
6. Sengupta, S. et al. (2005) *Oncogene* 24, 1738-48.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **R:** Rat

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