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RAD51AP1 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS13647

Specification

RAD51AP1 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q96B01
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**38kDa KDa**

RAD51AP1 Antibody - Additional Information

Gene ID 10635

Other Names
RAD51-associated protein 1, RAD51-interacting protein, R51A1

Target/Specificity
Human RAD51AP1.

Reconstitution & Storage
Aliquot and store at -20°C. Minimize freezing and thawing.

Precautions
RAD51AP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RAD51AP1 Antibody - Protein Information

Name RAD51AP1 {ECO:0000303|PubMed:16990250, ECO:0000312|HGNC:HGNC:16956}

Function
Structure-specific DNA-binding protein involved in DNA repair by promoting RAD51-mediated homologous recombination (PubMed:17996710, PubMed:17996711, PubMed:20871616, PubMed:25288561, PubMed:26323318). Acts by stimulating D-Loop formation by RAD51: specifically enhances joint molecule formation through its structure-specific DNA interaction and its interaction with RAD51 (PubMed:17996710, PubMed:17996711). Binds single-stranded DNA (ssDNA), double-stranded DNA (dsDNA) and secondary DNA structures, such as D-loop structures: has a strong preference for branched-DNA structures that are obligatory intermediates during joint molecule formation

(PubMed:9396801, PubMed:17996711, PubMed:22375013, PubMed:17996710). Cooperates with WDR48/UAF1 to stimulate RAD51-mediated homologous recombination: both WDR48/UAF1 and RAD51AP1 have coordinated role in DNA-binding during homologous recombination and DNA repair (PubMed:27463890, PubMed:27239033, PubMed:32350107). WDR48/UAF1 and RAD51AP1 also have a coordinated role in DNA-binding to promote USP1-mediated deubiquitination of FANCD2 (PubMed:31253762). Also involved in meiosis by promoting DMC1-mediated homologous meiotic recombination (PubMed:21307306). Key mediator of alternative lengthening of telomeres (ALT) pathway, a homology-directed repair mechanism of telomere elongation that controls proliferation in aggressive cancers, by stimulating homologous recombination (PubMed:31400850). May also bind RNA; additional evidences are however required to confirm RNA-binding in vivo (PubMed:9396801).

Cellular Location
Chromosome. Nucleus Chromosome, telomere. Note=Colocalizes with RAD51 to multiple nuclear foci (By similarity). Colocalizes with DMC1 on meiotic chromatin (By similarity) {ECO:0000250|UniProtKB:Q8C551}

Tissue Location
Highly expressed in testis and thymus (PubMed:9396801). Lower levels in colon and small intestine (PubMed:9396801). Little or no expression in spleen, prostate, ovary and peripheral blood leukocytes (PubMed:9396801)

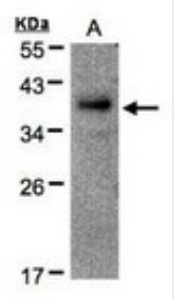
Volume
50 µl

RAD51AP1 Antibody - Protocols

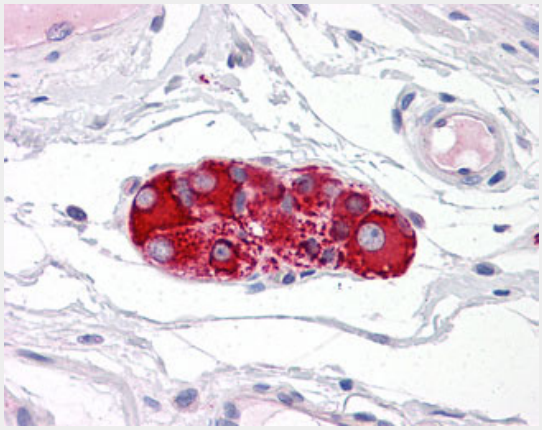
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RAD51AP1 Antibody - Images



Sample(30 g of whole cell lysate). A: Raji. 12% SDS PAGE. RAD51AP1 antibody diluted at 1:500.



Anti-RAD51AP1 antibody IHC of human small intestine, submucosal plexus.

RAD51AP1 Antibody - Background

May participate in a common DNA damage response pathway associated with the activation of homologous recombination and double-strand break repair. Functionally cooperates with PALB2 in promoting of D-loop formation by RAD51. Binds to single and double stranded DNA, and is capable of aggregating DNA. Also binds RNA.

RAD51AP1 Antibody - References

Kovalenko O.V.,et al.Nucleic Acids Res. 25:4946-4953(1997).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Kovalenko O.V.,et al.Nucleic Acids Res. 34:5081-5092(2006).
Dephoure N.,et al.Proc. Natl. Acad. Sci. U.S.A. 105:10762-10767(2008).