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RAD51AP1 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI11778

Product Information

Application	WB
Primary Accession	Q96B01
Other Accession	NM_006479, NP_006470
Reactivity	Human, Rat, Rabbit, Pig, Dog, Horse, Yeast
Predicted	Human, Rabbit, Pig, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38457

Additional Information

Gene ID	10635
Alias Symbol	PIR51
Other Names	RAD51-associated protein 1, RAD51-interacting protein, R51A1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-RAD51AP1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	RAD51AP1 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

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:17996710,

PubMed:17996711, PubMed:22375013, PubMed:9396801). 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:27239033, PubMed:27463890, 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 evidence is 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}

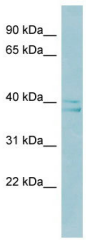
Tissue Location

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)

References

Obama,K., (2008) Clin. Cancer Res. 14 (5), 1333-1339 Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

Images



WB Suggested Anti-RAD51AP1 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:62500
Positive Control: HT1080 cell lysate

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