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# FEN1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2856C

## Product Information

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|---|---|
| **Application** | WB, IF, E |
| **Primary Accession** | P39748 |
| **Other Accession** | Q58DH8 |
| **Reactivity** | Mouse, Rat, Human |
| **Predicted** | Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB17639 |
| **Calculated MW** | 42593 |
| **Antigen Region** | 243-272 |

## Additional Information

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| **Gene ID** | 2237 |
| **Other Names** | Flap endonuclease 1 {ECO:0000255\|HAMAP-Rule:MF_03140}, FEN-1 {ECO:0000255\|HAMAP-Rule:MF_03140}, 31--{ECO:0000255\|HAMAP-Rule:MF_03140}, DNase IV, Flap structure-specific endonuclease 1 {ECO:0000255\|HAMAP-Rule:MF_03140}, Maturation factor 1, MF1, hFEN-1, FEN1 {ECO:0000255\|HAMAP-Rule:MF_03140}, RAD2 |
| **Target/Specificity** | This FEN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 243-272 amino acids from the Central region of human FEN1. |
| **Dilution** | WB~~1:1000 IF~~1:10~50 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| **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** | FEN1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | FEN1 {ECO:0000255\|HAMAP-Rule:MF_03140} |

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| **Synonyms** | RAD2 |
| **Function** | Structure-specific nuclease with 5'-flap endonuclease and 5'- 3' exonuclease activities involved in DNA replication and repair. During DNA replication, cleaves the 5'-overhanging flap structure that is generated by displacement synthesis when DNA polymerase encounters the 5'-end of a downstream Okazaki fragment. It enters the flap from the 5'-end and then tracks to cleave the flap base, leaving a nick for ligation. Also involved in the long patch base excision repair (LP-BER) pathway, by cleaving within the apurinic/apyrimidinic (AP) site- terminated flap. Acts as a genome stabilization factor that prevents flaps from equilibrating into structures that lead to duplications and deletions. Also possesses 5'-3' exonuclease activity on nicked or gapped double-stranded DNA, and exhibits RNase H activity. Also involved in replication and repair of rDNA and in repairing mitochondrial DNA. |
| **Cellular Location** | [Isoform 1]: Nucleus, nucleolus. Nucleus, nucleoplasm. Note=Resides mostly in the nucleoli and relocalizes to the nucleoplasm upon DNA damage |

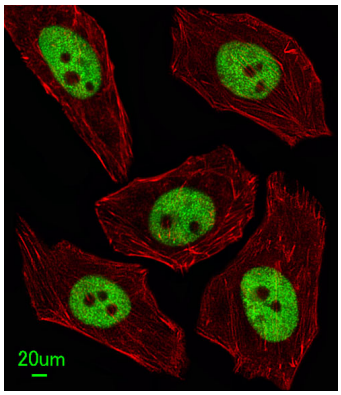
## Background

FEN1 removes 5' overhanging flaps in DNA repair and processes the 5' ends of Okazaki fragments in lagging strand DNA synthesis. Direct physical interaction between this protein and AP endonuclease 1 during long-patch base excision repair provides coordinated loading of the proteins onto the substrate, thus passing the substrate from one enzyme to another. This protein is a member of the XPG/RAD2 endonuclease family and is one of ten proteins essential for cell-free DNA replication. DNA secondary structure can inhibit flap processing at certain trinucleotide repeats in a length-dependent manner by concealing the 5' end of the flap that is necessary for both binding and cleavage by the protein encoded by this gene. Therefore, secondary structure can deter the protective function of this protein, leading to site-specific trinucleotide expansions.

## References

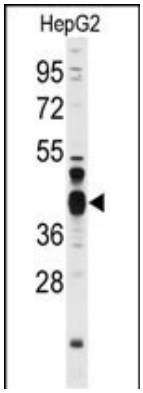
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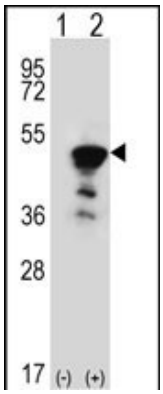
## Images




Immunofluorescent analysis of U251 cells, using FEN1 Antibody (Center) (Cat. #AP2856c). AP2856c was diluted at 1:100 dilution. Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue).

Western blot analysis of anti-FEN1 Antibody (Center) (Cat.#AP2856c) in HepG2 cell line lysates (35ug/lane). FEN1(arrow) was detected using the purified Pab.




Western blot analysis of FEN1 (arrow) using rabbit polyclonal FEN1 Antibody (Center) (Cat.#AP2856c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the FEN1 gene.

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