FEN1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	FEN1, Polyclonal Antibody
Full Product Name	FEN1 (Center) Rabbit pAb
Product Gene Name	anti-FEN1 antibody
Product Synonym 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
Clonality	Polyclonal
Isotype	Ig
Clone Number	RB17639
Host	Rabbit
Species Reactivity	Human
Form/Format	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.
Purity/Purification	Affinity Purified
OMIM	600393
3D Structure	ModBase 3D Structure for P39748
Immunogen	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.
Cellular Localization	Mitochondrion, Nucleus
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-FEN1 antibody	Western Blot (WB), Immunocytochemistry (ICC)
Application Notes for anti-FEN1 antibody	WB: 1:1000 ICC: 1:100
Related Product Information for anti-FEN1 antibody	MBS8553907 is an antibody targeting FEN1. Also known as FEN1 (Center) Rabbit pAb. Reactive in Human. Host: Rabbit.
Other Notes	Small volumes of anti-FEN1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FEN1. It may not necessarily be applicable to this product.

NCBI GI #	4758356
NCBI GeneID	2237
NCBI Accession #	NP_004102.1

UniProt Primary Accession #	P39748
UniProt Related Accession #	P39748
GenBank Nucleotide #	NP_004102.1
NCBI Official Full Name	flap endonuclease 1
NCBI Official Synonym Full Names	flap structure-specific endonuclease 1
NCBI Official Symbol	FEN1
NCBI Official Synonym Symbols	MF1; RAD2; FEN-1
UniProt Protein Name	Flap endonuclease 1
UniProt Synonym Protein Names	DNase IV; Flap structure-specific endonuclease 1; Maturation factor 1
UniProt Gene Name	FEN1
UniProt Synonym Gene Names	RAD2; FEN-1; MF1; hFEN-1
UniProt Entry Name	FEN1_HUMAN
NCBI Protein Information	flap endonuclease 1
NCBI Summary for FEN1	The protein encoded by this gene 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. The 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. [provided by RefSeq, Jul 2008]
UniProt Comments for FEN1	FEN1: 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 structurs 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. Interacts with PCNA. Three molecules of FEN1 bind to one PCNA trimer with each molecule binding to one PCNA monomer. PCNA stimulates the nuclease activity without altering cleavage specificity. The C-terminal domain binds EP300. Can bind simultaneously to both PCNA and EP300. Interacts with DDX11. Belongs to the XPG/RAD2 endonuclease family. FEN1 subfamily. Protein type: Ribonuclease; DNA repair, damage; Nucleolus; EC 3.1.-.-; Nuclear receptor co-regulator; DNA-binding; Deoxyribonuclease Chromosomal Location of Human Ortholog: 11q12 Cellular Component: nucleoplasm; membrane; mitochondrion; plasma membrane; nucleolus; nucleus Molecular Function: 5'-3' exonuclease activity; protein binding; DNA binding; 5'-flap endonuclease activity; manganese ion binding; endonuclease activity; exonuclease activity; double-stranded DNA binding; damaged DNA binding; magnesium ion binding; ribonuclease H activity; double-stranded DNA specific exodeoxyribonuclease activity Biological Process: telomere maintenance via semi-conservative replication; DNA replication, removal of RNA primer; UV protection; base-excision repair; double-strand break repair; telomere maintenance via recombination; mitotic cell cycle; DNA strand elongation during DNA replication; DNA replication; DNA catabolic process, exonucleolytic; DNA repair; telomere maintenance; DNA catabolic process, endonucleolytic; memory
Research Articles on FEN1	**1.** Data indicate that flap endonuclease 1 (FEN1) induces the substrate 3'-flap conformer through the Leu53 wedge.

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