ARG57833
anti-FEN1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes FEN1
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, IHC-P, IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	FEN1
Species	Human
Immunogen	Recombinant protein of Human FEN1.
Conjugation	Un-conjugated
Alternate Names	hFEN-1; Maturation factor 1; Flap endonuclease 1; DNase IV; EC 3.1.-.-; FEN-1; MF1; Flap structure-specific endonuclease 1; RAD2

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50 - 1:200
IHC-P	1:50 - 1:200
IP	1:50 - 1:200
WB	1:1000 - 1:2000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

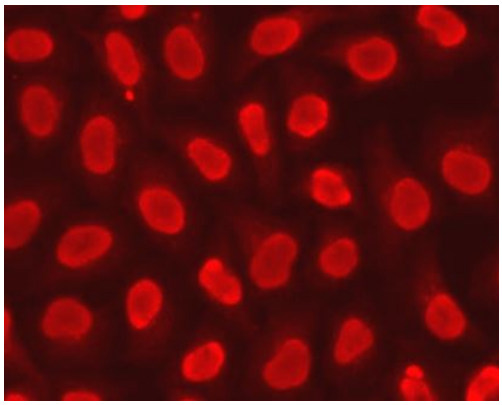
Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

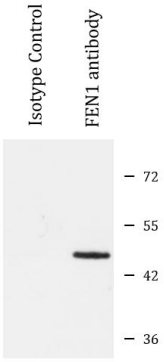
Gene Symbol	FEN1
Gene Full Name	flap structure-specific endonuclease 1
Background	The protein encoded by this gene removes 5' overhanging flaps in DNA repair and processes the 5' ends of Okazaki fragments in lagging strand DNA synthesis. Direct physical interaction between this protein and AP endonuclease 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]
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 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. [UniProt]
Calculated Mw	43 kDa
PTM	Acetylated by EP300. Acetylation inhibits both endonuclease and exonuclease activity. Acetylation also reduces DNA-binding activity but does not affect interaction with PCNA or EP300. Phosphorylation upon DNA damage induces relocalization to the nuclear plasma. Phosphorylation at Ser-187 by CDK2 occurs during late S-phase and results in dissociation from PCNA. Methylation at Arg-192 by PRMT5 impedes Ser-187 phosphorylation and increases interaction with PCNA. [UniProt]
Cellular Localization	Mitochondrion, Nucleus, nucleolus, nucleoplasm. [UniProt]

Images



ARG57833 anti-FEN1 antibody ICC/IF image

Immunofluorescence: HeLa cells stained with ARG57833 anti-FEN1 antibody.



ARG57833 anti-FEN1 antibody IP image

Immunoprecipitation: 200 µg extracts of HeLa cells were immunoprecipitated and stained with ARG57833 anti-FEN1 antibody at 1:1000 dilution.