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FEN1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50042

Product Information

Application	WB, IF, IHC
Primary Accession	P39748
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	42593

Additional Information

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
Dilution	WB~~ 1:1000 IF~~1:100 IHC~~1:50-1:100
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

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

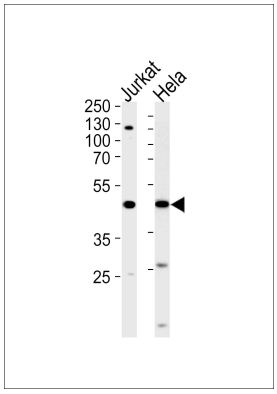
Background

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.

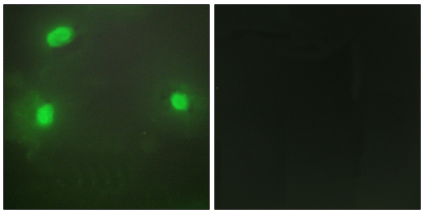
References

Murray J.M.,et al.Mol. Cell. Biol. 14:4878-4888(1994).
Hiraoka L.R.,et al.Genomics 25:220-225(1995).
Taylor T.D.,et al.Nature 440:497-500(2006).
Robins P.,et al.J. Biol. Chem. 269:28535-28538(1994).
Shen B.,et al.J. Biol. Chem. 271:9173-9176(1996).

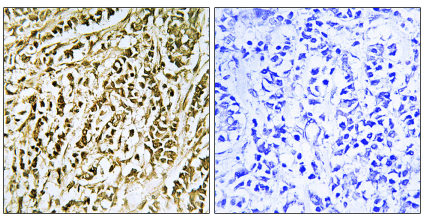
Images



Western blot analysis of lysates from Jurkat,Hela cell line (from left to right),using FEN1 Antibody(C10585). C10585 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysates at 35ug per lane.



Immunofluorescence analysis of HeLa cells, using FEN1 antibody.



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue using FEN1 antibody.