

Recombinant Human FEN1

Cat. No. FEN1-28168TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human FEN1; amino acids 1-380, MWt 42.5kDa.
Species	Human
Source	E.coli
ProteinLength	1-380 a.a.
Description	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.
Form	Liquid
Purity	>90% by SDS-PAGE
Storage buffer	Preservative: None Constituents: 10% Glycerol, 20mM Tris HCl, 1mM DTT, pH 8.0

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Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	MGIQGLAKLI ADVAPSAIRE NDIKSYFGRK VAIDASMSIY QFLIAVRQGG DVLQNEEGET TSHLMGMFYR TIRMMENGIK PVYVFDGKPP QLKSGELAKR SERRAEAEKQ LQQAQAAGAE QEVEKFTKRL VKVTKQHNDK CKHLLSLMGI PYLDAPSEAE ASCAALVKAG KVYAAATEDM DCLTFGSPVL MRHLTASEAK KLPIQEFHLS RILQELGLNQ EQFVDLCILL GSDYCESIRG IGPKRAVDLI QKHKSIEEIV RRLDPNKYPV PENWLHKEAH QLFLEPEVLD PESVELKWSE PNEEELIKFM CGEKQFSEER IRSGVKRLSK SRQGSTQGRL DDFFKVTGSL SSAKRKEPEPKGSTKKKAKT GAAGKFKRGK
Sequence Similarities	Belongs to the XPG/RAD2 endonuclease family. FEN1 subfamily.
Full Length	Full L.
GENE INFORMATION	
Gene Name	FEN1 flap structure-specific endonuclease 1 [Homo sapiens]
Official Symbol	FEN1
Synonyms	FEN1; flap structure-specific endonuclease 1; RAD2; flap endonuclease 1; DNase IV; FEN 1; maturation factor 1; MF1;
Gene ID	2237
mRNA Refseq	NM_004111
Protein Refseq	NP_004102

MIM	600393
Uniprot ID	P39748
Chromosome Location	11q12
Pathway	Base Excision Repair, organism-specific biosystem; Base excision repair, organism-specific biosystem; Base excision repair, conserved biosystem; Cell Cycle, Mitotic, organism-specific biosystem; Chromosome Maintenance, organism-specific biosystem;
Function	5-3 exonuclease activity; 5-flap endonuclease activity; 5-flap endonuclease activity; DNA binding; damaged DNA binding;

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