Recombinant Human Flap Structure-Specific Endonuclease 1

Cat. No. FEN1-488H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human FEN-1 protein was expressed in*E.coli*and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	FEN-1, also known as Flap structure-specific endonuclease 1, removes 5" overhanging flaps in DNA repair and processes the 5" ends of Okazaki fragments in lagging strand DNA synthesis. The protein is a member of the XPG/RAD2 endonuclease family and is one of ten proteins essential for cell-free DNA replication. FEN-1 is highly homologous to yeast Rad2. The C-terminal region of FEN-1 may bind to PCNA, thus allowing FEN-1 to function as an exonuclease in DNA replication.
Sequences of amino acids	MGIQGLAKLI ADVAPSAIRE NDIKSYFGRK VAIDASMSIY QFLIAVRQGG DVLQNEEGET TSHLMGMFYR TIRMMENGIK PVYVFDGKPP QLKSGELAKR SERRAEAEKQ LQQAQAAGAE QEVEKFTKRL VKVTKQHNDE CKHLLSLMGI PYLDAPSEAE ASCAALVKAG KVYAAATEDM DCLTFGSPVL MRHLTASEAK KLPIQEFHLS RILQELGLNQ EQFVDLCILL GSDYCESIRG IGPKRAVDLI QKHKSIEEIV RRLDPNKYPV PENWLHKEAH QLFLEPEVLD PESVELKWSE PNEEELIKFM CGEKQFSEER IRSGVKRLSK SRQGSTQGRL DDFFKVTGSL SSAKRKEPEP KGSTKKKAKT GAAGKFKRGK
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT 10% glycerol

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Molecular Weight	42.5 kDa (380aa)
Purity	> 90% by SDS - PAGE
Concentration	1 mg/ml (determined by Bradford assay)
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.
Pathways	Base excision repair; DNA replication; Non-homologous end-joining; Cell Cycle, Mitotic; DNA Repair; DNA Replication; Telomere Maintenance.

GENE INFORMATION

Gene Name	FEN1 flap structure-specific endonuclease 1 [Homo sapiens]
Synonyms	MF1; RAD2; FEN-1; FEN1; flap structure-specific endonuclease 1; flap structure-specific endonuclease 1; EC 3.1.-.-; hFEN-1; DNase IV; Maturation factor 1; maturation factor-1.
Gene ID	2237
mRNA Refseq	NM_004111
Protein Refseq	NP_004102
MIM	600393
UniProt ID	P39748
Chromosome	11q12

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Location	
Function	5"-3" exonuclease activity; 5"-flap endonuclease activity; 5"-flap endonuclease activity; damaged DNA binding; double-stranded DNA binding; double-stranded DNA specific exodeoxyribonuclease activity; endonuclease activity; hydrolase activity; magnesium ion binding; manganese ion binding; protein binding; ribonuclease H activity.

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