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**Product Data Sheet**


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Product Name: FEN1 Human  
 Cat. No.: GP21623  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	FEN-1; MF1; RAD2; Maturation Factor-1; MF-1; Flap endonuclease 1; Flap structure-specific endonuclease 1; Maturation factor 1; hFEN-1; DNase IV; FEN1.		
Amino Acid Sequence	MGIQGLAKLI ADVAPSAIRE NDIKSYFGRK VAIDASMSIY QFLIAVRQGG DVLQNEEGET TSHLMGMFYR TIRMMENGIK PVYVFDGKPP QLKSGELAKR SERRAEAEKQ LQQAQAAGAE QEVEKFTKRL VKVTKQHND ECKHLLSLMGI PYLDAPSEAE ASCAALVKAG KVYAAATEDM DCLTFGSPVL MRHLTASEAK KLPIQEFHLS RILQELGLNQ EQFVDLCILL GSDYCESIRG IGPKRAVDLI QKHKSIEEIV RRLDPNKYPV PENWLHKEAH QLFLEPEVLD PESVELKWSE PNEEELIKFM CGEKQFSEER IRSGVKRLSK SRQGSTQGRL DDFKVTGSL SSAKRKEPEP KGSTKKKAKT GAAGKFKRGK.		
Formulation	The protein contains 20mM Tris-HCl buffer pH-8.0, 1mM DTT, 10% glycerol.		

**Introduction**

FEN1 removes 5' overhanging flaps in DNA repair and processes the 5' ends of Okazaki fragments in lagging strand DNA synthesis. The interaction between FEN1 and AP endonuclease 1 during long-patch base excision repair provides coordinated loading of the proteins onto the substrate, therefore passing the substrate from one enzyme to another. FEN1 is part 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.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

FEN1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 380 amino acids (1-380 a.a.) and having a molecular mass of 42.5 kDa. The FEN1 protein is purified by standard chromatography techniques.

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