

Product datasheet for SC110892

FEN1 (NM_004111) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FEN1 (NM_004111) Human Untagged Clone
Tag:	Tag Free
Symbol:	FEN1
Synonyms:	FEN-1; MF1; RAD2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC110892 sequence for NM_004111 edited (data generated by NextGen Sequencing)

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ATGGGAATTC AAGCCTGGCCAACTAATTGCTGATGTGGCCCCAGTGCCATCCGGGAG
AATGACATCAAGAGCTACTTTGGCCGTAAGGTGGCCATTGATGCCTCTATGAGCATTTAT
CAGTTCCTGATTGCTGTTTCGCCAGGGTGGGGATGTGCTGCAGAATGAGGAGGGTGAGACC
ACCAGCCACCTGATGGGCATGTTCTACCGCACCATTTCGCATGATGGAGAACGGCATCAAG
CCCCTGTATGTCTTTGATGGCAAGCCGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGC
AGTGAGCGGGGGCTGAGGCAGAGAAGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCGAG
CAGGAGGTGGAAAAATCACTAAGCGGCTGGTGAAGGTCCTAAGCAGCACAATGATGAG
TGCAAACATCTGCTGAGCCTCATGGGCATCCCTTATCTTGATGCACCCAGTGAGGCAGAG
GCCAGCTGTGCTGCCCTGGTGAAGGCTGGCAAAGTCTATGCTGCGGCTACCGAGGACATG
GACTGCCTCACCTTCGGCAGCCCTGTGCTAATGCGACACCTGACTGCCAGTGAAGCCAAA
AAGCTGCCAATCCAGGAATCCACCTGAGCCGGATTCTGCAGGAGCTGGGCCTGAACCAG
GAACAGTTTGTGGATCTGTGCATCCTGTAGGCAGTGACTACTGTGAGAGTATCCGGGGT
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CGGCGACTTGACCCCAACAAGTACCCTGTGCCAGAAAATTGGCTCCACAAGGAGGCTCAC
CAGCTCTTCTTGAACCTGAGGTGCTGGACCCAGAGTCTGTGGAGCTGAAGTGGAGCGAG
CCAAATGAAGAAGAGCTGATCAAGTTCATGTGTGGTGAAGAAGCAGTTCTCTGAGGAGCGA
ATCCGCAGTGGGGTCAAGAGGCTGAGTAAGAGCCGCCAAGGCAGCACCCAGGGCCGCTG
GATGATTTCTTCAAGGTGACCCGGCTCACTCTTTCAGCTAAGCGCAAGGAGCCAGAACCC
AAGGGATCCACTAAGAAGAAGGCAAGACTGGGGCAGCAGGGAAGTTTAAAGGGGAAAA
TAA

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Clone variation with respect to NM_004111.5



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004111 unedited
 GACTCACTATAGGCGGCCGCAATTCGGCACGAGGCGCCGCTAAGCTGAGAAGGGAGAGC
 GAGCTTAGGACCGCTGCCCGGGCAACCCGAACCAAGCTTTAGCCGCCGAGGCCGCGT
 GTCCCAAAGGCCAGTCATCCCTCTGTGTTGCCATGGGAATCAAGGCCTGGCCAAAC
 TAATTGCTGATGTGGCCCCAGTGCCATCCGGGAGAATGACATCAAGAGCTACTTTGGCC
 GTAAGGTGGCCATTGATGCCTCTATGAGCATTATCAGTTCCTGATTGCTGTTGCCAGG
 GTGGGATGTGCTGCAGAATGAGGAGGGTGAGACCACCAGCCACCTGATGGGCATGTTCT
 ACCGCACCATTTCGATGATGGAGAACGGCATCAAGCCCGTGTATGTCTTTGATGGCAAGC
 CGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGAGTGAGCGGCGGGCTGAGGCAGAGA
 AGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCGAGCAGGAGGTGGAAAAATCACTAAGC
 GGCTGGTGAAGTCACTAAGCAGCACAATGATGAGTGCAAACATCTGCTGAGCCTCATGG
 GCATCCCTTATCTTATGACCCANTGAGGCAGAGGCCAGCTGTGCTGCCCTGGTGAAGG
 CTGGCANAGTCTATGCTGCGGCTACCGNAGACATGGACTGCCTCACCTTCGGCAGCCCTG
 TGCTAATGCGACACCTGNACTGCAGTGAAGCCAAAAGCTGCCCATCCAGGAAATTCACC
 TGAGCCGNATTCTGCANGAGCTGGGCCTGACCAGGAACAGTTTGTGGATCTGTGCATCTG
 CTAGCAGTGACACTGTGAGAGTTCGGGTATTGGCCCAAGCGGCTGTTGACTCATCAAAG
 CCAGAGCTGNGGGAATCTGCGGGACTACCCACAGTACCTGGCAGAAATGCTCACAGAGCT
 C

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004111 unedited
 TTTAGCTATGGACCGCGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTTTTTT
 TTTTACTTTTAAATTTTATTGACTTTTTTCTCATAACTTTAAACAAAAACAGCGCA
 TGAAAACCAAGTGTCTTATTCAAAGTCTCAACTCAGCTGATTGCCAGGTGAACATCACCA
 TCTTACTCCTCTGAATACTAGACACAAATTACATAGCAAGTTCGAGTTTCTGCCACCC
 AAGACACAGCCAGTAATCAGTCACAAACACAGACACAGCCAACCTCCAGGGGCTCCAGCTT
 TCTGCCATCTTCTCAGCAGTTCCTCCCATCTGCTAAGATGCGCCTTCTGGTGGCTC
 TCTCTAAGGGGGTCAAGGCTGAACAAGACAGAAAAGCACAGTCTAGGTCCACCATCAC
 CTCCCCTGGCCACCAGTTGGCCAGCCAGGAAATCATTCTGTACATCTTTTGTCTCCCC
 CTTTTATCTCCCTCTCTTCTCCAAAACCTTGTGCTATCTATCACTTTCATGTAACAAT
 GGACTTAGTGCCATTAACCTGCCTGAGAAGTGGTTTGAGCCTGACATATTTTCTGAGC
 TAAAAAAGGAAAAGTACCTCTGTGGCCTTCTTCCATTAAGATCAAGTAAAAAAGGGACT
 AGCACTACTGAAAAGGGTACGCTAGAAAAGCCTTAGAATCCTCTCTCCACCCCGTGAAG
 GTTTCTCTAGCTGTAGCTCTTAGGGTACAAGACGGCAAATATTCTGGGGTGAAGGAGGGT
 ATATGGGGGAAACACATTTATTTTCCCTTTAAACTTCTGCTGCCCCAGTCTTTGCC
 TTCTTCTTANGGGACCCNTNGGGTNTGGCTCCTTGCGCCTANNCTGAGAGAGTGAGCCG
 GNCACCTTTGAGAATCATCCAGNCGCCCTGGGTGCTGNCTTGGCGGCTTACTCAGCT
 T

Restriction Sites:

NotI-NotI

ACCN:

NM_004111

Insert Size:

2090 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_004111.4](#), [NP_004102.1](#)

RefSeq Size: 2265 bp

RefSeq ORF: 1143 bp

Locus ID: 2237

UniProt ID: [P39748](#)

Cytogenetics: 11q12.2

Domains: HhH2, XPG_N, XPG_I

Protein Families: Druggable Genome, Stem cell - Pluripotency

Protein Pathways: Base excision repair, DNA replication, Non-homologous end-joining

Gene Summary:

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]