

## Product datasheet for **MC223261**

### Fan1 (NM\_177893) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Fan1 (NM\_177893) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Fan1  
**Synonyms:** 6030441H18Rik; mFAN1; Mtmr15  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC223261 representing NM\_177893  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGCCGTCACAAAGGAAATCACCTGATCAAAAAAGACCCCGTAGAAGCTTATCTACCAGCAAACTGCAA  
AAAGCCAGTGTCACTTCGATTACTTCGATTTTAAACAGTGCACCACCTGCTAAACTGTCATGTTCACTTG  
TCATAAAATGGTCCCAGGTATGACCTCATTTCGGCACCTTGATGAGTCTTGTGCTAACAACGGTGTGGT  
GATGACGTTCAAGTAGAGCCTGCTCAGGCTGGATTAATGAGTCCAACCTGTGCCTACATCAGATTTACCCA  
GTGGTCCCTTAGAGAATGTGACACCTCAGAAATATCACCACCAAGAGAAGTTAATTTCTGTCCAATG  
TGGTTCAAACTGGGCATACAACAGCAGACCAGTCCCTACTTTAAAGATGCCTTAGTGTCCAAAGATCAA  
AATGAGCTTCAAATCAGAGTGTAGAAATATGCCTTTGGGAAGTCTGACATCGAAATTGTCAGACGAT  
ACTTAAACGCTAAAAATCACTCGCTAAGAATGAGGGACTAGCCAGTCACTGCCACAGACTTCTCCGTC  
CACACCTGGCACCAGCCTGACTGATAACTGTCCAGAGATGGAAGACAAAGATGAGGTTTTGAACAGTTCC  
CAAAAGGAAAACATTTATTCATGTGCACCTCTAAAAGAAGAGAATGCTTCAGAACAGAAGGTAAGAACA  
ATAAAATAACGGGAGATGAAAGCCAGAAAGCTTCTCGGGGAGCCAGCCCTCACCCCTGCATCTGCAGA  
GCATGCTTCCATATTACTGTCTCAGATTCAACTCTCGTCAGTAACACGAAATCCTCTCCGGGAGACACT  
CTTGTAAGCAAGAAAGTCCAGAAAGGGCAGATGTAGGGCTTGCTGAGCCGCTCGAGGTGCGCAGTCACA  
AAGAAGTACAAATGACTTTCGATGCTGCGGCCAAAACGCTGGTGTCTGGGGAGGCAGAATCAAATGGTCC  
TACCGATGTTGACATGTCTGACTACGTGGAGTAACAACCAAGAGCTTGTGAGGAAAGCTGGCAGT  
GTCTTACACTGCCCTCTGGAGCAGGGTCCAGCTGCGGTGGCCCCAGTGAGACAGCTCAACTGGCACTGA  
GTCACCCGTAACCTGCGGAGCTTCTGGTGGTGTGTCAGGCCCTCTTGGGAACGAAGAGGACATGAA  
GCTCTTCGATGAGCAGGAGAAGGCGATTATCACCAGGTTTTACCAGTTGTCAGCTAGTGGTCAAAGTTG  
TATGTGAGGCTCTTCAACGTAATTAACCTGGATTAATAAGTAAACTGGAGTATGAAGAGATTGCCT  
CCGACTTAACCCCTGTGGTTGAAGAATTGAAGGACTCAGGCTTTCTACAGACAGAATCTGAGTTGCAAGA  
ACTCTCTGATGTAAGTAACTCCTTTCTGCTCCTGAGCTGAAAGCCCTGGCCAAAACCTTCCACTGGTG  
AGTCCCGTGGGCAAGCAGCAGCTGGTAGAGCCTTTCACAACTGGCCAAAACAGCGCTCAGTCTGCA



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CGTGGGGCAAGACTCAGCCTGGAATCCGAGCAGTGATTTAAAAAGAGCCAAAGACTTGGCTGGCCGGTC
GCTTCGAGTCTGTAAAGGCCCTAGGGCTGTGTTTGCCCGAATCTTGCTTCTGTTCTCATTGACTGATTCC
ATGGAAGACGAAGAAGCTGCTTGTGGGGTCAAGGTACAGTGTCTACTGTGCTATTGGTCAATCTGGGCC
GAATGGAGTTTCCTCAGTACCCATCTGCCGAAGACCCAGATCTTCAGGGACAGAGAGGACCTCATCAG
ATACGCAGCAGCCGCACACATGCTGAGTGACATCTCAGCTGCCATGGCCAGTGGGAACTGGGAGGACGCT
AAGGACTTGCTCGGAGTGCAAAAAGGGACTGGGAACAACGAAAAGCCACCCTTCCTCAGGTACCACG
AGGCTTGCCCGCCTTCCTGCGCTGCTTACCGTCGGGTGGATCTACACAAGGATTTCTCTCGGGCTGT
TGAAGTCTAGAGAGGCTTCACATGTACGAGGAAGCTGTCAAGGAACTGAAAACCTCTTGCTCAGAAA
ATCTATTGTCCTGACAGCAGAGGCCGCTGGTGGGATCGCCTGGCTCTAACCTGCACCAGCACCTGAAGC
GTCTGGAAGAGGCAATTAGTGCATCAGGGAAGGCCTGGCAGACCACACGTGAGGACAGGACACCGACT
TTCTCTTTATCAGCGAGCCGTGCGCCTGCGAGAGTCTCCGAGCTGCAGGAAGTACAAGCACCTCTCAGC
CGGCTGCCCGAGGTTGCCGTGGGAGACGTCAAGCATGTGACCATCACGGCAGGCTGTGCCACAGCATG
GCATGGCAAGTCTGTGTTGTCATGGAGAGTGGAGACGGCGCCAACCCACCACAGTCTGTGTTCTGT
GGAGGAGCTGGCCCTGGGTTATTACAGGCAGAGTGGCTTTGACCAAGGGATTCATGGAGAAGGGTCCACC
TTCAGCACCTGTGTGGCCTCCTGCTGTGGGATATCATCTTCATGGATGGAATACCAGACGTCTTCAGAA
ATGCCTACCAGGCATCCCACTGGATTTGCTCACGGACAGCTTCTTCGAAGCAGGGAGCAGGCCCTGGA
AGCCAGGCTGCAGCTGATCCACAGCGCCCTGCTGAGAGCCTGCGGGCCTGGGTGGGCGAAGCATGGCAG
GCCAGCAAGGCAGAGTGGCCTCTCTGGTCAAGTGGGACCGCTTACCTCCCTACAGCAAGCTCAGGATC
TTGTCTCCTGCCTCGGGGTCTGTCTCAGTGGTGTGTGCAGGCGCCTGGCTGCTGACTTTCGGCACTG
CCGAGGGGGCCTCCAGACTTGGTGGTGTGAAATTCTCAGAGCCACCATTGCAAGCTGGTGGAGGTGAAA
GGCCCCAGTGATCGACTTTCATGTAAGCAGATGATCTGGCTGTACGAACTCCAAAAGCTGGGGGCTGATG
TAGAAGTGTGCCATGTGGTTGCAGTTGGTGCTAAGAGCAAAGGTCTTGGCTGA
```

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

SgfI-MluI

**ACCN:**

NM\_177893

**Insert Size:**

3063 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_177893.3](#), [NP\\_808561.2](#)**RefSeq Size:**

3475 bp

**RefSeq ORF:**

3063 bp

Locus ID: 330554

UniProt ID: [Q69ZT1](#)

Cytogenetics: 7 C

**Gene Summary:** Nuclease required for the repair of DNA interstrand cross-links (ICL) recruited at sites of DNA damage by monoubiquitinated FANCD2. Specifically involved in repair of ICL-induced DNA breaks by being required for efficient homologous recombination, probably in the resolution of homologous recombination intermediates (By similarity). Not involved in DNA double-strand breaks resection. Acts as a 5'-3' exonuclease that anchors at a cut end of DNA and cleaves DNA successively at every third nucleotide, allowing to excise an ICL from one strand through flanking incisions (PubMed:24981866). Probably keeps excising with 3'-flap annealing until it reaches and unhooks the ICL. Acts at sites that have a 5'-terminal phosphate anchor at a nick or a 1- or 2-nucleotide flap and is augmented by a 3' flap (By similarity). Also has endonuclease activity toward 5'-flaps (PubMed:24981866).[UniProtKB/Swiss-Prot Function]