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Product datasheet for MC223434

Dna2 (NM_177372) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dna2 (NM_177372) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Dna2
Synonyms:	Dna2l; E130315B21Rik
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC223434 representing NM_177372 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGAGCCGCTGGACGAGCTGGACCTGCTGCTGCTGGAAGAGGACGGCGGAGCGGAGGCCGTGCCGCGGG TGGAGCTACTTCGGAAGAAGGCGGACGCTTTGTTTCCAGAGACAGTTCTGAGCCGAGGAGTGGATAACCG GTACCTGGTGCTAGCTGTTGAGACCTCGCAGAATGAAAGAGGAGCCGAGGAGAAGCGCTTGCACGTCACG GCGTCCCAGGACCGAGAGCACGAAGTTCTGTGCATCCTGAGGAATGGCTGGAGCTCAGTACCAGTTGAGC CAGGGGACATCGTTCACTTAGAGGGAGACTGCACATCTGAGCCGTGGATAATAGACGATGACTTTGGATA TTTTATTCTGTACCCGGACATGATGATCTCCGGCACAAGCGTCGCTAGCAGCATTCGGTGTCTGAGAAGA GCTGTCCTGAGCGAGACCTTCAGGGGCTCTGATCCAGCCACTCGCCAGATGCTGATCGGTACAATTCTCC ACGAAGTCTTTCAGAAAGCGATAAGTGAGAGCTTTGCTCCAGAAAGGCTACAAGAGCTTGCTCTTCAGAC CCTCCGAGAAGTGAGGCATTTGAAGGAAATGTATCGCTTGAATCTGAGCCAAGATGAAATACTCTGTGAA GTTGAGGAGTATCTCCCTTCTTTCTCTAAGTGGGCGGAGGACTTCATGCGTAAGGGCCCTTCGTCTGAAT TCCCTCAAATGCAGCTCTCTCTGCCAAGCGATGGCAGTAACAGAAGTTCACCTTGTAACATTGAAGTAGT CAAGTCACTGGATATCGAAGAAAGCATCTGGTCCCCTAGGTTTGGACTGAAGGGCAAAATAGACGTCACA GTCGGGGTCAAAATACATCGAGATTGTAAAATGAAATACAAGGTAATGCCACTGGAGCTGAAGACCGGCA AAGAGTCCAACTCCATCGAGCACCGGAGTCAGGTGGTCCTGTACACGCTGCTAAGCCAGGAGAGGCGAGA GGACCCCGAGGCTGGCTGGCTTCTCTACCTCAAGACCGGGCAGATGTACCCTGTGCCCGCCAACCATCTG GACAAAAGAGAACTGCTGAAGCTCAGGAACTGGCTGGCCGCCTCGCTGCTGCACCGTGTGAGCCGAGCAG CTCCGGGGGAGGAAGCTCGGCTCTCTGCCTTGCCACAGATAATCGAGGAAGAGAAAACTTGTAAATACTG TTCGCAGATAGGCAACTGTGCTCTTTATAGCAGAGCAGTTGAAGAGCAGGGAGATGACGCATCCATCCCA GAAGCCATGCTGTCCAAAATCCAGGAAGAAACACGGCACCTGCAGCTGGCGCACTTGAAGTATTTCAGCC TGTGGTGTCTCATGTTAACGCTGGAGTCGCAATCTAAAGACAACCGGAAGACTCACCAGAGTATCTGGTT AACGCCTGCCTCTGAACTGGAGGAGAGTGGCAACTGTGTTGGAAACCTGGTCAGGACGGAGCCTGTATCA AGAGTTTGTGATGGACAGTATTTACATAATTTTCAGCGGAAAAATGGTCCCATGCCAGCCACCAATCTGA

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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_177372

Insert Size: 3189 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_177372.3, NP_796346.2

RefSeq Size: 4122 bp

RefSeq ORF:	3189 bp
Locus ID:	327762
UniProt ID:	Q6ZQJ5
Cytogenetics:	10 B4
Gene Summary:	Key enzyme involved in DNA replication and DNA repair in nucleus and mitochondrion. Involved in Okazaki fragments processing by cleaving long flaps that escape FEN1: flaps that are longer than 27 nucleotides are coated by replication protein A complex (RPA), leading to recruit DNA2 which cleaves the flap until it is too short to bind RPA and becomes a substrate for FEN1. Also involved in 5'-end resection of DNA during double-strand break (DSB) repair: recruited by BLM and mediates the cleavage of 5'-ssDNA, while the 3'-ssDNA cleavage is prevented by the presence of RPA. Also involved in DNA replication checkpoint independently of Okazaki fragments processing. Possesses different enzymatic activities, such as single-stranded DNA (ssDNA)-dependent ATPase, 5'-3' helicase and endonuclease activities. While the ATPase and endonuclease activities are well-defined and play a key role in Okazaki fragments processing and DSB repair, the 5'-3' DNA helicase activity is subject to debate. According to various reports, the helicase activity is weak and its function remains largely unclear. Helicase activity may promote the motion of DNA2 on the flap, helping the nuclease function (By similarity).[UniProtKB/Swiss-Prot Function]