

Product datasheet for **SC315964**

Dystrophia myotonica protein kinase (DMPK) (NM_001081562) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dystrophia myotonica protein kinase (DMPK) (NM_001081562) Human Untagged Clone
Tag:	Tag Free
Symbol:	DMPK
Synonyms:	DM; DM1; DM1PK; DMK; MDPK; MT-PK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

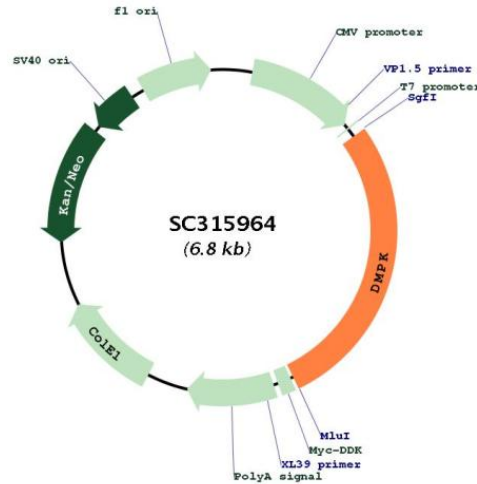
Fully Sequenced ORF: >SC315964 representing NM_001081562.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

```

GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGTCAGCCGAGGTGCGGCTGAGGCGGCTCCAGCAGCTGGTGTGGACCCGGGCTTCTGGGGCTGGAG
CCCCTGCTCGACCTTCTCTGGGCGTCCACCAGGAGCTGGGCGCCTCCGAACTGGCCAGGACAAGTAC
GTGGCCGACTTCTTGCAGTGGGCGGAGCCCATCGTGGTGAAGCTTAAGGAGGTCCGACTGCAGAGGGAC
GACTTCGAGATTCTGAAGGTGATCGGACCGGGCGTTCAGCGAGGTAGCGGTAGTGAAGATGAAGCAG
ACGGGCCAGGTGTATGCCATGAAGATCATGAACAAGTGGGACATGCTGAAGAGGGGCGAGGTGTCGTGC
TTCCGTGAGGAGAGGGACGTGTTGGTGAATGGGACCGGCGGTGGATCACGCAGCTGCACTTCGCCCTC
CAGGATGAGAACCTGTACCTGGTATGGAGTATTACGTGGGCGGGACCTGCTGACACTGCTGAGC
AAGTTTGGGAGCGGATCCGGCCGAGATGGCGCGCTTACCTGGCGGAGATTGTCATGGCCATAGAC
TCGGTGCACCGGCTTGGCTACGTGCACAGGACATCAAACCCGACAACATCCTGCTGGACCGCTGTGGC
CACATCCGCTGGCCGACTTCGGCTCTTGCTCAAGCTGCGGGCAGATGGAACGGTGCGGTGCCTGGTG
GCTGTGGGCACCCAGACTACCTGTCCCCGAGATCCTGCAGGCTGTGGGCGGTGGGCTGGGACAGGC
AGCTACGGGCCCGAGTGTGACTGGTGGGCGCTGGGTGTATTCCGCATGAAATGTCTATGGGCAGACG
CCCTTCTACGCGGATCCACGGCGGAGACCTATGGCAAGATCGTCCACTACAAGGAGCACCTCTCTCTG
CCGCTGGTGGACGAAGGGTCCCTGAGGAGGCTCGAGACTTCAATCAGCGGTTGCTGTGTCCCCGGAG
ACACGGCTGGGCCGGGTGGAGCAGGCGACTCCGGACACATCCCTTCTTCTGGCCTCGACTGGGAT
GGTCTCCGGGACAGCGTGCCCCCTTTACACCGGATTTGGAAGGTGCCACCGACACATGCAACTTCGAC
TTGGTGGAGGACGGGCTCACTGCCATGGAGACTGTCCGACATTCGGGAAGGTGCGCCGCTAGGGGTC
CACCTGCCTTTTGTGGGCTACTCTACTCCTGCATGGCCCTCAGGGACAGTGAGGTCCAGGCCCCACA
CCCATGGAAGTGGAGGCCGAGCAGCTGCTTGAGCCACACGTGCAAGCGCCAGCCTGGAGCCCTCGGTG
TCCCCACAGGATGAAACAGCTGAAGTGGCAGTTCAGCGGCTGTCCCTGCGGCAGAGGCTGAGGCCGAG
GTGACGCTGCGGGAGCTCCAGGAAGCCCTGGAGGAGGAGGTGCTCACCCGGCAGAGCCTGAGCCGGGAG
ATGGAGGCCATCCGCACGGACAACCAGAACTTCGCCAGTCAACTACGCGAGGCAGAGGCTCGGAACCGG
GACCTAGAGGCACACGTCCGGCAGTTGCAGGAGCGGATGGAGTTGCTGCAGGCAGAGGGAGCCACAGCT
GTCACGGGGTCCCCAGTCCCCGGGCCACGGATCCACCTTCCCATATGGCCCCCGGCCGTGGCTGTGG
GCCAGTGCCCGCTGGTGGGGCCAGGCCCATGCACCGCCGCCACCTGCTGCTCCCTGCCAGGGTCCCTA
GGCCTGGCCTATCGGAGGCGCTTCCCTGCTCCTGTTCCCGTGTCTGTCTCGTCCCGCCGCCCTGG
GCTGCATTGGGTTGGTGGCCACGCCGCAACTCACCGCAGTCTGGCGCCGCCAGGAGCCGCCGCG
CTCCCTGAACCTAG
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
  
```

Restriction Sites: SgfI-MluI

Plasmid Map:



ACCN: NM_001081562

Insert Size: 1878 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).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_001081562.2](#)

RefSeq Size: 2855 bp

RefSeq ORF: 1878 bp

Locus ID: 1760

UniProt ID: [Q09013](#)

Cytogenetics: 19q13.32

Protein Families: Druggable Genome, Protein Kinase

MW: 69.6 kDa

Gene Summary: The protein encoded by this gene is a serine-threonine kinase that is closely related to other kinases that interact with members of the Rho family of small GTPases. Substrates for this enzyme include myogenin, the beta-subunit of the L-type calcium channels, and phospholemman. The 3' untranslated region of this gene contains 5-38 copies of a CTG trinucleotide repeat. Expansion of this unstable motif to 50-5,000 copies causes myotonic dystrophy type I, which increases in severity with increasing repeat element copy number. Repeat expansion is associated with condensation of local chromatin structure that disrupts the expression of genes in this region. Several alternatively spliced transcript variants of this gene have been described, but the full-length nature of some of these variants has not been determined. [provided by RefSeq, Jul 2016]

Transcript Variant: This variant (4) has multiple differences in the presence and absence of exons at its 5' end and in the CDS, compared to variant 1. These differences produce a distinct 5' UTR, and cause translation initiation at an alternative start codon, the loss of an in-frame portion of the coding region and a frameshift in the 3' coding region, compared to variant 1. The encoded protein (isoform 4) has a distinct N-terminus and a unique C-terminus, and is shorter than isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.