

Product datasheet for **RG238740**

Dystrophia myotonica protein kinase (DMPK) (NM_001288766) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dystrophia myotonica protein kinase (DMPK) (NM_001288766) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DMPK
Synonyms:	DM; DM1; DM1PK; DMK; MDPK; MT-PK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG238740 representing NM_001288766.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGTCAGCCGAGGTGCGGCTGAGGCGGCTCCAGCAGCTGGTGTGGACCCGGGCTTCTCTGGGGCTGGAG
CCCCTGCTCGACCTTCTCTGGGGCTCCACCAGGAGCTGGGCGCCTCCGAACTGGCCAGGACAAGTAC
GTGGCCGACTTCTTGCAGTGGGCGGAGCCCATCGTGGTAGGCTTAAGGAGGTCCGACTGCAGAGGGAC
GACTTCGAGATTCTGAAGGTGATCGGACCGGGCGTTCAGCGAGGTAGCGGTAGTGAAGATGAAGCAG
ACGGGCCAGGTGTATGCCATGAAGATCATGAACAAGTGGGACATGCTGAAGAGGGGCGAGGTGTCGTGC
TTCCGTGAGGAGAGGGACGTGTTGGTGAATGGGACCGGCGGTGGATCACGCAGCTGCACTTCGCCCTC
CAGGATGAGAACCTGTACCTGGTATGAGTATTACGTGGGCGGGGACCTGCTGACACTGCTGAGC
AAGTTTGGGGAGCGGATCCGGCCGAGATGGCGCGCTTCTACCTGGCGGAGATTGTCATGGCCATAGAC
TCGGTGCACCGGCTTGGCTACGTGCACAGGACATCAAACCCGACAACATCCTGCTGGACCGCTGTGGC
CACATCCGCTGGCCGACTTCGGCTCTTGCTCAAGCTGCGGGCAGATGGAACGGTGCAGGCTGCTGGT
GCTGTGGGCACCCAGACTACCTGTCCCCGAGATCCTGCAGGCTGTGGGCGGTGGGCTGGGACAGGC
AGCTACGGGCCCGAGTGTGACTGGTGGGCGCTGGGTGTATTCCGCTATGAAATGTCTATGGGCAGACG
CCCTTCTACGCGGATTCCACGGCGGAGACCTATGGCAAGATCGTCCACTACAAGGAGCACCTCTCTCTG
CCGCTGGTGGACGAAGGGGTCCCTGAGGAGGCTCGAGACTTCAATCAGCGGTTGCTGTGTCCCCGGAG
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GGTCTCCGGGACAGCGTGCCCCCTTTACACCGGATTTCAAGGTGCCACCGACACATGCAACTTCGAC
TTGGTGGAGGACGGGCTCACTGCCATGGAGACACTGTCGGACATTCGGGAAGGTGCGCCGCTAGGGGTC
CACCTGCCTTTTGTGGGCTACTCTACTCTGATGCCCCTCAGGGACAGTGAAGTCCAGGCCCA
CCCATGGAATGGAGGCCGAGCAGCTGCTTGAGCCACACGTGCAAGCGCCAGCCTGGAGCCCTCGGTG
TCCCCACAGGATGAAACAGCTGAAGTGGCAGTTCAGCGGCTGTCCCTGCGGCAGAGGCTGAGGCCGAG
GTGACGCTGCGGGAGCTCCAGGAAGCCCTGGAGGAGGAGGTGCTCACCCGGCAGAGCCTGAGCCGGGAG
ATGGAGGCCATCCGCACGGACAACCAGAACTTCGCCAGTCAACTACGCGAGGCAGAGGCTCGGAACCGG
GACCTAGAGGCACACGTCCGGCAGTTCAGGAGCGGATGGAGTTGCTGCAGGCAGAGGGACACAGTT
CCC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
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Protein Sequence:

>Peptide sequence encoded by RG238740
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MSAEVRLRRLQQLVLDPGFLGLEPLDLLLVGHQELGASELAQDKYVADFLQWAEPIVVRLKEVRLQRD
DFEILKVI GRGAFSEVAVVMMKQTGQVYAMKIMNKWDMLKRGEVSCFREERDVL VNGDRRITQLHFAF
QDENYL YL VMEYYVGGDLL TLLSKFGERIPAEMARFYLAIEVMAIDSVHRLGYVHRDIKPDNILLDRCG
HIRLADFGSCLKLRADGTVRSLVAVGTPDYL SPEILQAVGGPGTGSYGPECDWWALGVFAYEMFYGQT
PFYADSTAETYGKIVHYKEHLSLPLVDEGVPEEARDFIQRLCPPETRLGRGAGDFRTHPFFGLDWD
GLRDSVPPFPDFEGATDTCNFDLVEDGLTAMETLSDIREGAPLVHLPFVGYSSCMALRDSEVPPT
PMELEAEQLLEPHVQAPSLEPSVSPQDETAEVAVPAAPAAEAEAEVTLRELQEALEEEVLTRQSLSRE
MEAIRTDNQNFASQLREAEARNRDLEAHRQLQERMELLQAEATGP
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

Restriction Sites:

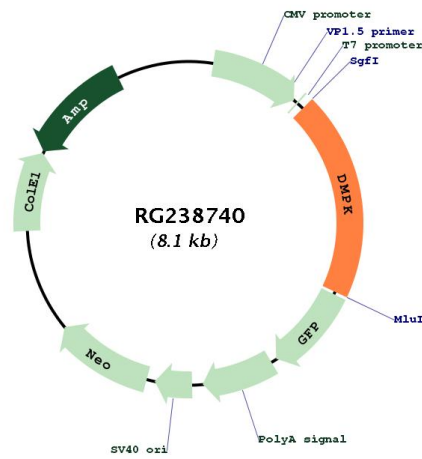
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN:	NM_001288766
ORF Size:	1590 bp
OTI Disclaimer:	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
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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).
RefSeq:	NM_001288766.2
RefSeq Size:	2722 bp
RefSeq ORF:	1593 bp
Locus ID:	1760
Cytogenetics:	19q13.32
Protein Families:	Druggable Genome, Protein Kinase
MW:	59.9 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]