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Product datasheet for RC224121

Dystrophia myotonica protein kinase (DMPK) (NM_001081560) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dystrophia myotonica protein kinase (DMPK) (NM_001081560) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dystrophia myotonica protein kinase
Synonyms:	DM; DM1; DM1PK; DMK; MDPK; MT-PK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>RC224121 representing NM_001081560
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCAGCCGAGGTGCGGCTGAGGCGGCTCCAGCAGCTGGTGTTGGACCCGGGCTTCCTGGGGCTGGAGC
CCCTGCTCGACCTTCTCCTGGGCGTCCACCAGGAGCTGGGCGCCTCCGAACTGGCCCAGGACAAGTACGT
GGCCGACTTCTTGCAGTGGGCGGAGCCCATCGTGGTGAGGCTTAAGGAGGTCCGACTGCAGAGGGACGAC
TTCGAGATTCTGAAGGTGATCGGACGCGGGGCGTTCAGCGAGGTAGCGGTAGTGAAGATGAAGCAGACGG
GCCAGGTGTATGCCATGAAGATCATGAACAAGTGGGACATGCTGAAGAGGGGCGAGGTGTCGTGCTTCCG
TGAGGAGAGGGACGTGTTGGTGAATGGGGACCGGCGGTGGATCACGCAGCTGCACTTCGCCTTCCAGGAT
GAGAACTACCTGTACCTGGTCATGGAGTATTACGTGGGCGGGGACCTGCTGACACTGCTGAGCAAGTTTG
GGGAGCGGATTCCGGCCGAGATGGCGCGCTTCTACCTGGCGGAGATTGTCATGGCCATAGACTCGGTGCA
CCGGCTTGGCTACGTGCACAGGGACATCAAACCCGACAACATCCTGCTGGACCGCTGTGGCCACATCCGC
CTGGCCGACTTCGGCTCTTGCCTCAAGCTGCGGGCAGATGGAACGGTGCGGTCGCTGGTGGCTGTGGGCA
CCCCAGACTACCTGTCCCCCGAGATCCTGCAGGCTGTGGGCGGTGGGCCTGGGACAGGCAGCTACGGGCC
CGAGTGTGACTGGTGGGCGCTGGGTGTATTCGCCTATGAAATGTTCTATGGGCAGACGCCCTTCTACGCG
GATTCCACGGCGGAGACCTATGGCAAGATCGTCCACTACAAGGAGCACCTCTCTCTGCCGCTGGTGGACG
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TCACTGCCATGGAGACACTGTCGGACATTCGGGAAGGTGCGCCGCTAGGGGTCCACCTGCCTTTTGTGGG
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GAGCAGCTGCTTGAGCCACACGTGCAAGCGCCCAGCCTGGAGCCCTCGGTGTCCCCACAGGATGAAACAG
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AACCAGAACTTCGCCAGTCAACTACGCGAGGCAGAGGCTCGGAACCGGGACCTAGAGGCACACGTCCGGC
AGTTGCAGGAGCGGATGGAGTTGCTGCAGGCAGAGGGAGCCACAGCTGTCACGGGGGTCCCCAGTCCCCG
GGCCACGGATCCACCTTCCCATCTAGATGGCCCCCCGGCCGTGGCTGTGGGCCAGTGCCCGCTGGTGGGG
CCAGGCCCCATGCACCGCCGCCACCTGCTGCTCCCTGCCAGGGTCCCTAGGCCTGGCCTATCGGAGGCGC
TTTCCCTGCTCCTGTTCGCCGTTGTTCTGTCTCGTGCCGCCGCCCTGGGCTGCATTGGGTTGGTGGCCCA
CGCCGGCCAACTCACCGCAGTCTGGCGCCGCCCAGGAGCCGCCCGCGCTCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC224121 representing NM_001081560
Red=Cloning site Green=Tags(s)

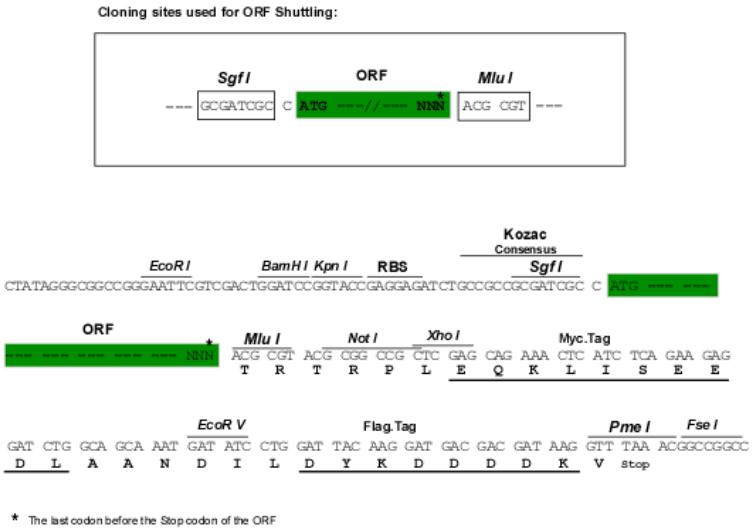
MSAEVRLRRLQQLVLDPGFLGLEPLLDLLLGVHQELGASELAQDKYVADFLQWAEPIVVRLKEVRLQRDD
FEILKVIGRGAFSEVAVVKMKQTGQVYAMKIMNKWDMLKRGEVSCFREERDVLVNGDRRWITQLHFAFQD
ENYLYLVMEYYVGGDLLTLLSKFGERIPAEMARFYLAEIVMAIDSVHRLGYVHRDIKPDNILLDRCGHIR
LADFGSCLKLRADGTVRSLVAVGTPDYLSPEILQAVGGGPGTGSYGPECDWWALGVFAYEMFYGQTPFYA
DSTAETYGKIVHYKEHLSLPLVDEGVPEEARDFIQRLLCPPETRLGRGGAGDFRTHPFFFGLDWDGLRDS
VPPFTPDFEGATDTCNFDLVEDGLTAMETLSDIREGAPLGVHLPFVGYSYSCMALRDSEVPGPTPMELEA
EQLLEPHVQAPSLEPSVSPQDETAEVAVPAAVPAAEAEAEVTLRELQEALEEEVLTRQSLSREMEAIRTD
NQNFASQLREAEARNRDLEAHVRQLQERMELLQAEGATAVTGVPSPRATDPPSHLDGPPAVAVGQCPLVG
PGPMHRRHLLLPARVPRPGLSEALSLLLFAVVLSRAAALGCIGLVAHAGQLTAVWRRPGAARAP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8070_c09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001081560

ORF Size: 1872 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).

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.

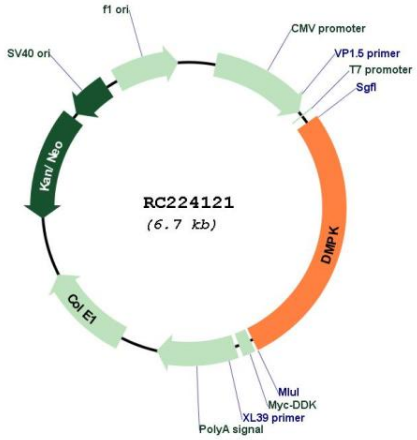
RefSeq: NM_001081560.3

RefSeq Size: 2877 bp

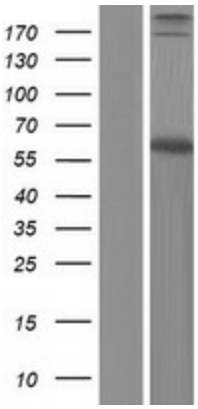
RefSeq ORF: 1875 bp

Locus ID:	1760
UniProt ID:	Q09013
Cytogenetics:	19q13.32
Protein Families:	Druggable Genome, Protein Kinase
MW:	68.8 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]

Product images:



Circular map for RC224121



Western blot validation of overexpression lysate (Cat# [LY421164]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224121 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).