

Product datasheet for **RR207530**

Pif1 (NM_001044253) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pif1 (NM_001044253) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pif1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide
Sequence:

>RR207530 representing NM_001044253
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGCCTTCTAGCACTGAGGTGGCGACCGATGAATGTGATGACACCGAGCTGCGGTGCCGGTAGCCGTAG
AGGAGCTGAGTCCTGGAGGGCAACCTCGCAAGCGCCAGGCTCTGCGCGCCGAGAGCTGAGCCTAGGTCG
GAATGAACGCGCGGAGTTGATGTGCGACTGCAGGCACCCGACCCGAAGGGCGGCCACGCTGTTTCCCA
CTGCGCGCGTGCCTCTTACCCGCTTCGCGCAGTTGGGCGCAGCACTTTGCGACTCCCGGCCGATG
GCGTGCCCGGGCTGGCTCAGTGCAACTGCTGCTCTGACTGTCCCGGAGCGCTTGCCTGCTTCT
GCGCACCTGCGCTGAAGCTGGCGGTGCGCCCTGGGCGGGACCCGCTCTGCCGTGCGCAATTGCTC
GGTCCGCGGCCCGAGACTTTGTACGATCAGTCCAGTGCAGCCGAGGAACTGCGCCGTGCTGCGGCCA
CCAAGGCTCCAGACTCAGCGCTGAAAAGCGGCAATGGAATCCAGCCTAGTATGGAAGCTCCAAGGTG
GCCCTGCTGTGAAGAAGCTACGCATGCCCTCCAGCAAACCGAAGCTTCCGAAGAGCAGGCCGCTGTG
CTGCGGATGGTTCTGAAAGGCCAGAGCATATTCTTACCAGGAGTGCAGGGACAGGGAAGTCTACCTGC
TGAAACATATCCTGGGTTCCCTGCTCCTACTGGCACTGTGGCCACTGCCAGCACTGGGGTGGCAGCCTG
CCACATTTGGGGCACCACCCTTCATGCCTTTGCAGGCATCGGTTCCAGGCCAGGCTCCCTGGCCAGTGT
GTGGCTCTGGCCATCGGCTGTGTGCGGCAGGGCTGGCTGAACTGCCAGCGTTTGGTCATTGATGAGA
TCTCCATGGTAGAGGCAGACTTCTTTGACAAGTTGGAAGCTGTGGCCAGAGCTGTCCGGCAACAGAAGAA
ACCATTTGGAGGGATCCAGCTTATTATCTGTGGGACTTCTACAGTTGCCGCCAGTGACCAAAGGTTCC
CAGCATCCTCGATTCTGCTTTCAGGCCAAGAGCTGGAGGAAGTGTGTACCAGTACTCTGGAGCTGACTG
AGGTGTGGAGGCAAGCAGACCAGACCTTCATCTCTCCTGAAGGCTGTGAGATTAGCCAGATGTTCAGA
TGAAGTGACCCGCCAGCTCAGGGCCACAGCTGCCATAAGGTGGGACGAGATGGAATTATAGCCACGAGA
CTGTGCACCCATCAGGATGATGTGGCCCTTACCAATGAGAAGCGGCTGAAGGAACTACCAGTGATGTAC
ACAGCTTTGAGGCTATAGACAGTGACCCTGAGCTAAGCCGGACCCCTGGATGCTCAGTGCCCTGTAGGCCG
TGTCTTCAGTTAAAGCTGGGGCTCAAGTCATGCTGGTGAAGAACTTAGCAGTGTCTCGGGCCTGGTG
AATGGTGGCCGAGGGTGGTAGTCGGTTTGTGTCAGAAGGAAGAGGGCTTCCCGGGTACGGTTCCTGT
GTGGCATACTGAGGTCATCCGCACCGACCGCTGGACAGTACAGGTCCTGGGGCCAGTACCTCAGCCG
GCAGCAGCTTCCCTACAGCTAGCCTGGCAATGTCCATCCACAAAAGCCAGGGCATGTCTCTGGACTGT
GTAGAGATCTCTCTGGCCGTGTGTTCCGCAAGTCAAGCCTATGTGGCCCTCTCCCGGGCCCGTAGCC
TCCAGGGTCTACGTGTGCTAGACTTCGACCCACTGTGGTTTCGATGCGACTCCCGAGTGCTGCAATTCTA
TGCCACCTGCGGCAGGGCAGGGCCTCAGTCTGGAGTCGCAAGACGATGAGGAGCAAGCTCAGATCTG
GAGAACATGGACCAAACCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR207530 representing NM_001044253
 Red=Cloning site Green=Tags(s)

MPSSTEVATDECDDTELRCRVAVEELSPGGQPRKRQALRAAELSLGRNERREMLRLQAPGPEGRPRCFP
 LRAVRLFTRFAAVGRSTLRLPADGVPRAGSVQLLLSDCPPERLRRFLRTLRLKLAVAGPGPASARAQLL
 GPRPRDFVTISPVQPEELRRAAATKAPDSALEKRPMSQPSMEAPRWPLPVKKLRMPSSKPKLSEEQAAV
 LRMVLKQSQSIFFTGSAAGTGSYLLKHILGSLPPTGTVATASTGVAACHIGGTTLHAFAGIGSQAPLAQC
 VALAHRPGVVRQGLNCQRLVIDEISMVEADFDKLEAVARAVRQKPFGGIQLIICGDFLQLPPVTKGS
 QHPRFCFQAKSWRKCVPTLEL TEVWRQADQTFISLLKAVRLGRCSEVTRQLRATAAHKVG RDGIATR
 LCTHQDDVALTNEKRLKELPGDVHSFEAIDSDPEL SRTLDAQCPVGRVLQKLGAQVMLVKNLAVSRGLV
 NGARGVVVGFSEGRGLPRVRF LCGITEVIRTDRTVQVTGGQYLSRQQLPLQLAWAMSIHKSQGM SLDC
 VEISLGRVFA SQAYVALSRARSLQGLRVLDFDPTVVRCD SRVLQFYATLRQGRGLSLESQDDEEASDL
 ENMDPNL

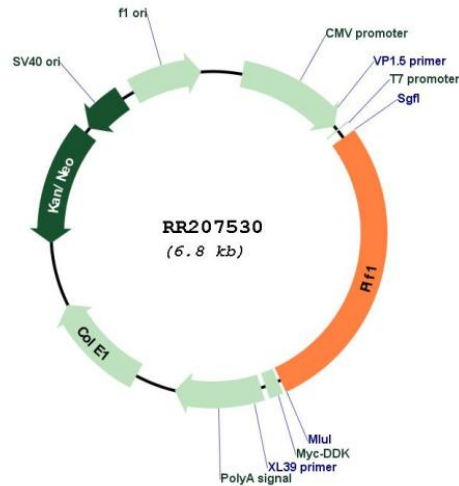
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001044253

ORF Size: 1911 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:	<u>NM_001044253.1, NP_001037718.1</u>
RefSeq Size:	1915 bp
RefSeq ORF:	1914 bp
Locus ID:	367645
UniProt ID:	<u>Q1HG60</u>
Cytogenetics:	8q24
MW:	69.8 kDa
Gene Summary:	DNA-dependent ATPase and 5'-3' DNA helicase required for the maintenance of both mitochondrial and nuclear genome stability. Efficiently unwinds G-quadruplex (G4) DNA structures and forked RNA-DNA hybrids. Resolves G4 structures, preventing replication pausing and double-strand breaks (DSBs) at G4 motifs. Involved in the maintenance of telomeric DNA. Inhibits telomere elongation, de novo telomere formation and telomere addition to DSBs via catalytic inhibition of telomerase. Reduces the processivity of telomerase by displacing active telomerase from DNA ends. Releases telomerase by unwinding the short telomerase RNA/telomeric DNA hybrid that is the intermediate in the telomerase reaction. Possesses an intrinsic strand annealing activity.[UniProtKB/Swiss-Prot Function]