

## Product datasheet for **RN207530**

### **Pif1 (NM\_001044253) Rat Untagged Clone**

#### **Product data:**

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



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**Fully Sequenced ORF:** >RN207530 representing NM\_001044253  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGCCTTCTAGCACTGAGGTGGCGACCGATGAATGTGATGACACCGAGCTGCGGTGCCGGTAGCCGTAG  
AGGAGCTGAGTCCTGGAGGGCAACCTCGCAAGCGCCAGGCTCTGCGCGCCGAGAGCTGAGCCTAGGTCG  
GAATGAACGCGCGAGTTGATGTGCGACTGCAGGCACCCGACCCGAAGGGCGGCCACGCTGTTCCCA  
CTGCGCGCGTGCCTCTTACCCGCTTCGCGCAGTTGGGCGCAGCACTTTGCGACTCCCGGCCGATG  
GCGTGCCCGGGCTGGCTCAGTGCAACTGCTGCTCTGACTGTCCCGGAGCGCTTGCCTGCTTCT  
GCGCACCTGCGCTGAAGCTGGCGGTGCGCCCTGGGCGGGACCCGCTCTGCCGTGCGCAATTGCTC  
GGTCCGCGGCCCGAGACTTTGTACGATCAGTCCAGTGCAGCCGAGGAACTGCGCCGTGCTGCGGCCA  
CCAAGGCTCCAGACTCAGCGCTGAAAAGCGGCCAATGGAATCCAGCCTAGTATGGAAGCTCCAAGGTG  
GCCCTGCTGTGAAGAAGCTACGCATGCCCTCCAGCAAACCGAAGCTTCCGAAGAGCAGGCCGCTGTG  
CTGCGGATGGTTCTGAAAGGCCAGAGCATATTCTTACCAGGAGTGCAGGGACAGGGAAGTCTACCTGC  
TGAAACATATCCTGGGTTCCCTGCCTCCTACTGGCACTGTGGCCACTGCCAGCACTGGGGTGGCAGCCTG  
CCACATTGGGGGACACCCTTCATGCCTTTCAGGCATCGGTTCCAGGCCAGGCTCCCTGGCCAGTGT  
GTGGCTCTGGCCATCGGCTGTGTGCGGCAGGGCTGGCTGAACTGCCAGCGTTTGGTCATTGATGAGA  
TCTCCATGGTAGAGGCAGACTTCTTTGACAAGTTGGAAGCTGTGGCCAGAGCTGTCCGGCAACAGAAGAA  
ACCATTTGGAGGGATCCAGCTTATTATCTGTGGGACTTCTACAGTTGCCGCCAGTGACCAAAGGTTCC  
CAGCATCTCGATTCTGCTTTCAGGCCAAGAGCTGGAGGAAGTGTGTACCAGTACTCTGGAGCTGACTG  
AGGTGTGGAGGCAAGCAGACCAGACCTCATCTCTCTCCTGAAGGCTGTGAGATTAGGCAGATGTTTCA  
TGAAGTGACCCGCGCAGCTCAGGGCCACAGCTGCCATAAGGTGGGACGAGATGGAATTATAGCCACGAGA  
CTGTGCACCCATCAGGATGATGTGGCCCTTACCAATGAGAAGCGGCTGAAGGAACTACCAGTGTATGAC  
ACAGCTTTGAGGCTATAGACAGTGACCCTGAGCTAAGCCGGACCTGGATGCTCAGTGCCTGTAGGCCG  
TGTCTTCAGTTAAAGCTGGGGCTCAAGTCACTGCTGGTGAAGAACTTAGCAGTGTCTCGGGCCTGGT  
AATGGTGGCCGAGGGTGGTGTGCGGTTTGTGAGTCAAGGAAGAGGGCTTCCCGGGTACGGTCTCTGT  
GTGGCATACTGAGGTCACTCCGACCGACCGCTGGACAGTACAGGTCCTGGGGCCAGTACCTCAGCCG  
GCAGCAGCTTCCCTACAGCTAGCCTGGCAATGTCCATCCACAAAAGCCAGGGCATGTCTCTGGACTGT  
GTAGAGATCTCTCTGGCCGTGTGTTCCGCAAGTCAAGCCTATGTGGCCCTCTCCCGGCCCGTAGCC  
TCCAGGGTCTACGTGTGCTAGACTTCGACCCCACTGTGGTTCGATGCGACTCCCGAGTGTGCAATTCTA  
TGCCACCTGCGGCAGGGCAGGGCCTCAGTCTGGAGTCGCAAGACGATGAGGAGCAAGCTCAGATCTG  
GAGAACATGGACCAAACCT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_001044253

**Insert Size:** 1914 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\\_001044253.1](#), [NP\\_001037718.1](#)

**RefSeq Size:** 1915 bp

**RefSeq ORF:** 1914 bp

**Locus ID:** 367645

**UniProt ID:** [Q1HG60](#)

**Cytogenetics:** 8q24

**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]