

Product datasheet for **RR205054**

Pef1 (NM_001007651) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pef1 (NM_001007651) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Pef1
Synonyms: Peflin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR205054 representing NM_001007651
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCCAGCTATCCAGACGGGCAGAGTTACCCAGGAGCTGCAGGACAGGTACCTGGACCACACCCCGGTG
GCTACTATCCTGGACCTCCCATGGTGGGGCCAGTATGGCAGTGGATCCCCCTGGTGGTTACGGAGC
TCCTGCCCTGGAGGACCCTATGGCTACCCAGTCTGGAGGAACCCCTCTGGAATCCAGGCGGACCA
TATGGCGGTGGACCTCCAGGAGGCCCTATGGTGGTGGACCTCCAGGAGGCCCTATGGTCAGGCACATC
CAAGTCCCTATGGTACCCAGCCGCTGGACCTTATGGACAGGGTGGCGTCCCCCAATGTCGATCCTGA
GGCCTACTCCTGGTCCAGTCAGTGGATGCCGACCACAGTGGCTATATCTCACTCAAGGAGCTGAAGCAG
GCCCTGGTCAACTCCAATGGTCTCATTAATGATGAGACGTGCCTCATGATGATAAACATGTTTGACA
AGACCAAGACTGGCCGAATTGATGTCGTCGGCTTCTCAGCCTTATGGAAGTTCTCCAGCAGTGGAAAGAA
CCTCTTTCAGCAGTATGACCGGGACCACTCGGGATCCATCAGTCCACAGAGCTGCAGCAAGCGCTGTCC
CAGATGGGCTACAACCTGAGCCCTCAGTTCACGCAGCTCCTGGTTTCCCGATACTGTACGCGCTCTGCCA
TTCCCGCCATGCAGCTGGACTGCTTCATCAAGGTGTGTACCCAGCTTTCAGGTGTTGACTGAGGCCCTCCG
GGAGAAGGATACGGCTGTACAGGCAACATCCGGCTCAGCTTTGAGGACTTTGTACCATGACGGCTTCA
AGGATGCTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RR205054 representing NM_001007651
Red=Cloning site Green=Tags(s)

MASYPDGQSYPGAAGQVPGPHPGGYYPGPPHGGGQYGSGFPPGGYGAPAPGGPYGYPSAGGTPSGTTPGGP
 YGGPPGGPYGGGPPGGPYGQAHPSPYGTQPPGPYQGGVPPNVDPEAYSWFQSVADADHSGYISLDELKQ
 ALVNSNWSFNDLCLMMINMFDKTKTGRIDVVGFSALWKFLQWKNLFQYDRDHSISSTELQALS
 QMGYNLSPQFTQLLVSRYCTRSAIPAMQLDCFIVKVTQLQVLEAFREKDTAVQGNIRLSFEDFVTMTAS
 RML

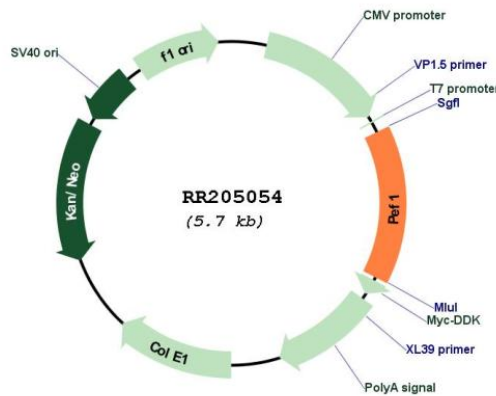
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001007651
ORF Size: 849 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:	<ol style="list-style-type: none">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_001007651.1 , NP_001007652.1
RefSeq Size:	1523 bp
RefSeq ORF:	852 bp
Locus ID:	297900
UniProt ID:	Q641Z8
Cytogenetics:	5q36
MW:	30 kDa
Gene Summary:	Calcium-binding protein that acts as an adapter that bridges unrelated proteins or stabilizes weak protein-protein complexes in response to calcium. Together with PDCD6, acts as calcium-dependent adapter for the BCR(KLHL12) complex, a complex involved in endoplasmic reticulum (ER)-Golgi transport by regulating the size of COPII coats. In response to cytosolic calcium increase, the heterodimer formed with PDCD6 interacts with, and bridges together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export, which is required for neural crest specification. Its role in the heterodimer formed with PDCD6 is however unclear: some evidence shows that PEF1 and PDCD6 work together and promote association between PDCD6 and SEC31 in presence of calcium. Other reports show that PEF1 dissociates from PDCD6 in presence of calcium, and may act as a negative regulator of PDCD6 (By similarity). Also acts as a negative regulator of ER-Golgi transport; possibly by inhibiting interaction between PDCD6 and SEC31 (PubMed:27276012).[UniProtKB/Swiss-Prot Function]