

## Product datasheet for **RN205054**

### **Pef1 (NM\_001007651) Rat Untagged Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Pef1 (NM\_001007651) Rat Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Pef1  
**Synonyms:** Peflin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >RN205054 representing NM\_001007651  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCAGCTATCCAGACGGGCAGAGTTACCCAGGAGCTGCAGGACAGGTACCTGGACCACACCCCGGTG  
 GCTACTATCCTGGACCTCCCATGGTGGGGCCAGTATGGCAGTGGATCCCCCTGGTGGTTACGGAGC  
 TCCTGCCCTGGAGGACCCTATGGCTACCCAGTCTGGAGGAACCCCTCTGGAATCCAGGCGGACCA  
 TATGGCGGTGGACCTCCAGGAGGCCCTATGGTGGTGGACCTCCAGGAGGCCCTATGGTCAGGCACATC  
 CAAGTCCCTATGGTACCCAGCCGCTGGACCTTATGGACAGGGTGGCGTCCCCCAATGTCGATCCTGA  
 GGCTACTCCTGGTCCAGTCAGTGGATGCCGACCACAGTGGCTATATCTCACTCAAGGAGCTGAAGCAG  
 GCCCTGGTCAACTCCAATGGTCTCATTAATGATGAGACGTGCCTCATGATGATAAACATGTTTGACA  
 AGACCAAGACTGGCCGAATTGATGTCGTCGGCTTCTCAGCCTTATGGAAGTTCTCCAGCAGTGGAAAGAA  
 CCTTTTCAGCAGTATGACCGGGACCACTCGGGATCCATCAGTCCACAGAGCTGCAGCAAGCGCTGTCC  
 CAGATGGGCTACAACCTGAGCCCTCAGTTCACGCAGCTCCTGGTTTCCGATACTGTACGCGCTCTGCCA  
 TTCCCGCCATGCAGCTGGACTGCTTCATCAAGGTGTGTACCCAGCTTTCAGGTGTTGACTGAGGCCCTCCG  
 GGAGAAGGATACGGCTGTACAGGCAACATCCGGCTCAGCTTTGAGGACTTTGTACCATGACGGCTTCA  
 AGGATGCTATGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001007651  
**Insert Size:** 852 bp



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<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001007651.1</a></u> , <u><a href="#">NP_001007652.1</a></u>
<b>RefSeq Size:</b>	1523 bp
<b>RefSeq ORF:</b>	852 bp
<b>Locus ID:</b>	297900
<b>UniProt ID:</b>	<u><a href="#">Q641Z8</a></u>
<b>Cytogenetics:</b>	5q36
<b>Gene Summary:</b>	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]