

## Product datasheet for **MC220524**

### Phactr4 (NM\_175306) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Phactr4 (NM_175306) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Phactr4
Synonyms:	3110001B12Rik; AI527228; AW495572; C330013F19Rik; mKIAA4120; N28169
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC220524 representing NM\_175306  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAAGACCCATCGGAAGAAGCAGAGCAGCCCTCTGGAGACCCAGGCATGGGCATGGACAGTGTGGAAG  
 CAGGGGACACAACACCTCCACCAAAGGAAAAGCAAGTTCTCAGCGTTAGGCAAGATCTCAAGCCGTG  
 GAAATGGAGGAAAAAAAAAAGCAGTGATAGTTCAAAGAGACATCAGAAGTTTTAGAGCGAAAAATATCT  
 ATGCGAAAACCAAGAGAAGAACTGGTTAAACGAGGGTTCTGTTGGAGGACCCCGAGCAGGATGGTGAGG  
 ATTCAGGAAAGCTGAGCCATGCTGCATTAAGAACGGACACACCACCCCATAGGCAGTGCCAGGTCCTC  
 TAGCCAGTCCTGGTAGAAGAAGAGCCAGAGAGAAGTCTCAGGAACCTCACTCCAGAAGAGGAGTCAAAG  
 AAGAGACTTGGCTCAACTGGAAGCCAGCCTAACTCTGAAGCCGAGCCTGGTCCTGAGCATGCACCTAAGC  
 AGCCTCTGCTGCCCCCAAGAGACCCTTGTCTTCTTGTGAAGCAAAGGAGGTTCCGGCTGGCAGTAC  
 AGCAAGGTCGGTCTCCTCCACCTCTGGCTCTACCACCGTGACATCTGCTGCCACCACTGCTGCCACAGAC  
 ATGACAAAAGACTGTTAAGTCCTTTGTGGGCCCCACCCCGCTCCTGCCCCCGCCCCAGGACTCTGCCTG  
 CTGCTCCTGCCAGTGCTAACACTGCTGCCACCACTACAGCCCCTGCCAAGCAACCCCATCCACCCCC  
 TAAACCAGCTCAGAGAAACAGCAACCCCATCATTGCTGAACTATCCCAAGCAATGAACAGTGGCACAGTG  
 CTGTGAAACCATCCCCACCTTGGCACCAAGAGAGGCATTCCATCAACTTCGATACCCAGCTTGGAGC  
 CTGCTGCTTCGTTCACTAAGACAGCAAATGATCAAAGAGAAAAACTGTCTCTTTGTGTTTGGAAACC  
 ACCACTGATAATCCCGCCTTCGTCCTCATCCCCACTGCCTACCCACATACCTCCCGAGCCTCCACGG  
 TCCCTCTAGTGCCTGCTAAGACTTTTCAAATTGTGCCAGAGGTTGAGTTTTCTCTTCTCAGATCTAT  
 TCCAGGACATTTCCAGCAGGAGGATCAGAAAACAGAAGTCCCCAAGAAGATACAGGATCAGAGCTTGG  
 GGAGTCCCATATACCCTCCAGGCTGCCCCACTCCCCTGCATATCCGAATTCAGCAGGCCCTTACCAGC  
 CCCCTTCTGTGACCCCTCCCTTGAAGGCACTCACAGAGCCATTCACTGCTTTTTGAGAACAGTGACA  
 GCTTCTCCGAGGACACTGGTACCCTGGTCTGACAGGTCATCCCATCACGATTGAGATGTTGAAAGT  
 TCCAGATGATGAAGAGGAAGAGCAGACCTGCCGTTTGTGAAAGCGTGACGCTACCTCAGCCACTCCT  
 AGCCTACCACTGTGTCTGCGAGAGGAAGAGAAGGAGAGTGACTCAGATTCAGAGGTTCCCATTAAGTACC  
 GAGATGAAGAAGAAGATGATGATGATGATGAAAGCCATCAGAGTGCCCTGGCCAACAGAGTGAAGAGGAA  
 GGACACGCTGGCAATGAAGCTGAGCAGCAGACCCAGTGAACCAGAGACCAACCTGAATCTTGGCCTCGT  
 AAAAGCAAGGAGGAGTGGATGAAATACGGCACAGATCGGGAACACGCTGATCCGGCGGCTGAGTCAGA  
 GACCAACAGCAGAAGAATTGGAGCAGCGGAACATACTACAGCCTAAAAATGAAGCTGATCGCAAGCAGA  
 GAAACGGGAAATCAAGCGTCGCCTCACTAGAAAGCTCAGTCAAAGGCCAACTGTGGCTGAACTGCTTGCC  
 AGGAAGATTCTGCGGTTAATGAGTATGTGGAAGTAACTGATGCTCATGACTATGACCGCGAGCAGACA  
 AACCATGGACAAACTGACTCCTGCTGACAAGGCTGCCATAAGGAAAGAATTAATGAATTTAAGAGCTC  
 GGAGATGGAGGTTTCATGTAGACAGCAAACACTTACACGCTACCATCGCCATGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_175306  
**Insert Size:** 2085 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_175306.4](#), [NP\\_780515.2](#)

**RefSeq Size:** 4585 bp

**RefSeq ORF:** 2085 bp

**Locus ID:** 100169

**UniProt ID:** [Q501J7](#)

**Cytogenetics:** 4 D2.3

**Gene Summary:** Regulator of protein phosphatase 1 (PP1) required for neural tube and optic fissure closure, and enteric neural crest cell (ENCCs) migration during development. Acts as an activator of PP1 by interacting with PPP1CA and preventing phosphorylation of PPP1CA at 'Thr-320'. During neural tube closure, localizes to the ventral neural tube and activates PP1, leading to down-regulate cell proliferation within cranial neural tissue and the neural retina. Also acts as a regulator of migration of enteric neural crest cells (ENCCs) by activating PP1, leading to dephosphorylation and subsequent activation of cofilin (COF1 or COF2) and repression of the integrin signaling through the RHO/ROCK pathway.[UniProtKB/Swiss-Prot Function]  
 Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).