

## Product datasheet for **RC215181**

### **PAX3 (NM\_181457) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PAX3 (NM_181457) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAX3
Synonyms:	CDHS; HUP2; WS1; WS3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC215181 representing NM\_181457  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGACCACGCTGGCCGGCGCTGTGCCAGGATGATGCGGCCGGGCCGGGGCAGAACTACCCGCGTAGCG  
 GGTCCCCTGGAAGTGTCCACTCCCCTCGGCCAGGGCCGCGTCAACCAGCTCGGCGCGTTTTTATCAA  
 CGGCAGGCCGCTGCCAACCACATCCGCCACAAGATCGTGGAGATGGCCACCACGGCATCCGGCCCTGC  
 GTCATCTCGCGCCAGCTGCGCGTGTCCACGGCTGCGTCTCCAAGATCCTGTGCAGGTACCAGGAGACTG  
 GCTCCATACGTCCTGGTCCATCGGCGGCAGCAAGCCCAAGCAGGTGACAACGCCTGACGTGGAGAAGAA  
 AATTGAGGAATACAAAAGAGAGAACCCTGGGCATGTTGAGTGGGAAATCCGAGACAAATTACTCAAGGAC  
 GCGGTCTGTGATCGAAACACCGTGCCGTCAGTGAGTTCATCAGCCGCATCCTGAGAAGTAAATTCGGGA  
 AAGGTGAAGAGGAGGAGCGGACTTGGAGAGGAAGGAGGCAGAGGAAAGCGAGAAGAAGGCCAAACACAG  
 CATCGACGGCATCCTGAGCGAGCGAGCCTCAGCACCCCAATCAGATGAAGGCTCTGATATTGACTCTGAA  
 CCAGATTTACCACTAAAGAGGAAACAGCGCAGAAGCCGAACCACCTTCACAGCAGAACAGCTGGAGGAAC  
 TGGAGCGTGCTTTTGGAGAACTCATTACCTGACATTTATACTAGGGAGGAACTGGCCAGAGGGCGAA  
 GCTCACCGAGGCCGAGTACAGGTCTGGTTTAGCAACCGCCGTGCAAGATGGAGGAAGCAAGCTGGGGCC  
 AATCAACTGATGGCTTTCAACCATCTCATTCCCGGGGGTTCCCTCCCCTGCCATGCCGACCTTGCCAA  
 CGTACCAGCTGTGCGAGACCTCTACCAGCCACATCTATTCCACAAGCTGTGTCAGATCCCAGCAGCAC  
 CGTTCACAGACCTCAACCGCTTCTCCAAGCACTGTACACCAAGCAGATTCTTCCAACCCAGACAGC  
 AGCTCTGCCTACTGCCTCCCAGCACCAGGCATGGATTTCCAGCTATACAGACAGCTTTGTGCCTCCGT  
 CGGGCCCTCAACCCCATGAACCCACCATGGCAATGGCTCTCACCTCAGTAAATGGGACTCCTGAC  
 CAACCCAGGTGGGTACCTCATCAGCCCAAGACTGATTACGCGCTCTCCCTCTCACCGGGGTCTGGAA  
 CCTACCACCAGGTGTCGGCCAGCTGCAGTCAGAGACTAGACCATATGAAGAGCTTGACAGTCTGCCAA  
 CATCTCAGTCTACTGTCCACCCACCTATAGCACACAGGCTACAGTATGGACCCTGTCACAGGCTACCA  
 ATATGGGCAGTATGGACAAAGTAAGCCTTGGACTTTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC215181 representing NM\_181457  
 Red=Cloning site Green=Tags(s)

MTTLGAVPRMMPGPGQNYPRSGFPLEVSTPLGQGRVNLGGVFINRPLPNHIRHKIVEMAHHGIRPC  
 VISRQLRVSHGCVSKILCRYQETGSIRPGAIGGSKPKQVTPDVEKKIEEYKRENPMFMSWEIRDKLLKD  
 AVCDRNTVPSVSSISRILRSKFGKGEERKEAESEKKAKHSIDGILSERASAPQSDGSDIDSE  
 PDLPLKRKQRRSRTTFTAEQLEELERAFERTHYDPIYTREELAQRAKLEARVQVWF SNRRARWRKQAGA  
 NQLMAFNHLIPGGFPPTAMPPTLPTYQLSETSYQPTSIPQAVSDPSSTVHRPQPLPPSTVHQSTIPSNPDS  
 SSAYCLPSTRHGFSSYTDSFVPPSGPSNPMNPTIGNLSPQVMGLL TNHGGVPHQPQTDYAL SPLTGGL  
 PTTTVSASCSQRLDHMKSLSLPTSQSYPPTYSTTGYSMDPVTGYQYQYQSKPWTF

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg4900\\_a09.zip](https://cdn.origene.com/chromatograms/mg4900_a09.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_181457

ORF Size: 1437 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: [NM\\_181457.1](#), [NP\\_852122.1](#)

RefSeq Size: 3193 bp

RefSeq ORF: 1440 bp

Locus ID: 5077

UniProt ID: [P23760](#)

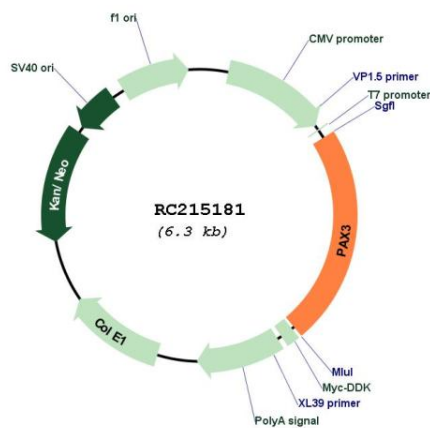
Cytogenetics: 2q36.1

**Protein Families:** Adult stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Transcription Factors

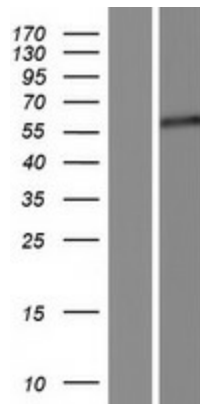
**MW:** 52.8 kDa

**Gene Summary:** This gene is a member of the paired box (PAX) family of transcription factors. Members of the PAX family typically contain a paired box domain and a paired-type homeodomain. These genes play critical roles during fetal development. Mutations in paired box gene 3 are associated with Waardenburg syndrome, craniofacial-deafness-hand syndrome, and alveolar rhabdomyosarcoma. The translocation t(2;13)(q35;q14), which represents a fusion between PAX3 and the forkhead gene, is a frequent finding in alveolar rhabdomyosarcoma. Alternative splicing results in transcripts encoding isoforms with different C-termini. [provided by RefSeq, Jul 2008]

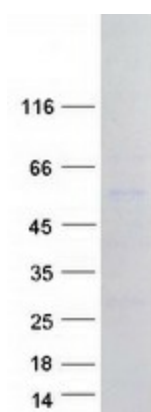
**Product images:**



Circular map for RC215181



Western blot validation of overexpression lysate (Cat# [LY405766]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215181 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAX3 protein (Cat# [TP315181]). The protein was produced from HEK293T cells transfected with PAX3 cDNA clone (Cat# RC215181) using MegaTran 2.0 (Cat# [TT210002]).