

## Product datasheet for **RC216836**

### **PAX7 (NM\_013945) Human Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                     |
| Product Name:             | PAX7 (NM_013945) Human Tagged ORF Clone |
| Tag:                      | Myc-DDK                                 |
| Symbol:                   | PAX7                                    |
| Synonyms:                 | HUP1; MYOSCO; PAX7B; RMS2               |
| Mammalian Cell Selection: | Neomycin                                |
| Vector:                   | pCMV6-Entry (PS100001)                  |
| E. coli Selection:        | Kanamycin (25 ug/mL)                    |



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**ORF Nucleotide Sequence:**

>RC216836 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGGCCCTTCCCGGCACGGTACCGAGAATGATGCGGCCGGCTCCGGGCAGAACTACCCCCGACGG  
 GATTCCCTTTGGAAGTGTCCACCCCGCTTGCCCAAGGCCGGTCAATCAGCTGGGAGGGTCTTCATCAA  
 TGGGCGACCCCTGCCTAACCCACATCCGCCACAAGATAGTGGAGATGGCCACCATGGCATCCGGCCCTGT  
 GTCATCTCCCGACAGCTGCGTGTCTCCACGGCTGCGTCTCCAAGATTCTTTGCCGTACCAGGAGACCG  
 GGTCCATCCGGCCTGGGGCCATCGGCGGCAGCAAGCCAGACAGGTGGCGACTCCGGATGTAGAGAAAA  
 GATTGAGGAGTACAAGAGGGAAAACCCAGGCATGTTTCACTGGGAGATCCGGGACAGGCTGCTGAAGGAT  
 GGGCACTGTGACCGAAGCACTGTCCCTCAGTGAGTTCGATTAGCCGCGTCTCAGAATCAAGTTCGGGA  
 AGAAAGAGGAGGAGGATGAAGCGGACAAGAAGGAGGACGACGGCGAAAAGAAGGCCAAACACAGCATCGA  
 CGGCATCTGGGCGACAAAGGGAACCGGCTGGACGAGGGCTCGGATGTGGAGTCGGAACCTGACCTCCCA  
 CTGAAGCGCAAGCAGCGACGTCGGACCACATTCACGGCCGAGCAGCTGGAGGAGCTGGAGAAGGCTT  
 TGAGAGGACCCACTACCCAGACATATACACCCCGAGGAGCTGGCGCAGAGGACCAAGCTGACAGAGGC  
 GCGTGTGCAGGTCTGGTTCAGTAACCGCCGCGCCGTTGGCGTAAGCAGGCAGGAGCCAACCAGCTGGCG  
 GCGTTCAACCACCTTCTGCCAGGAGGCTTCCCGCCACCGGATGCCACGCTGCCCCCTACCAGCTGC  
 CGGACTCCACCTACCCACACCACCATCTCCAAGATGGGGGCAGCACTGTGCACCGGCCCTCAGCCCT  
 GCCACCGTCCACCATGCACCAGGGCGGGCTGGCTGCAGCGGCTGCAGCCGCCACACAGCTCTGCCTAC  
 GGAGCCCGCCACAGCTTCTCCAGCTACTCTGACAGTTCATGAATCCGGCGGCCCTCCAACACATGA  
 ACCCGGTCAGCAACCGCCTGTCTCCTCAGGTGATGAGCATCTTGGGCAACCCAGTCCGGTGCCTCCGCA  
 GCCACAGGCTGACTTCTCCATCTCCCGCTGCATGGCGGCTGGACTCGGCCACCTCCATCTCAGCCAGC  
 TGACGCCAGCGGGCCGACTCCATCAAGCCAGGAGACAGCCTGCCACCTCCAGGCTACTGCCACCCA  
 CCTACAGCACCACCGGCTACAGCGTGGACCCCGTGGCGGCTATCAGTACGGCCAGTACGGCCAGAGTGA  
 GTGCCTGGTGCCTGGGCGTCCCGCTCCCATTCCTTCTCCACCCCGAGGCTCCTGCTTGTATG  
 GAGAGCTACAAGGTGGTGTGAGGTGGGAATGCCATTCACAGATGGAAAAATTGAAGTCCAGCCAGA  
 TGGAACAGTTCACC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC216836 protein sequence  
 Red=Cloning site Green=Tags(s)

MAALPGTVPRMMPAPGQNYPRTFPLEVSTPLGQGRVNLGGVFINRPLPNHIRHKIVEMAHHGIRPC  
 VISRQLRVSHGCVSKILCRYQETGSIRPGAIGGSKPRQVATPDVEKKIEEYKRENPGMFSWEIRDRLKLD  
 GHCDRSTVPSVSSISRVLRIFKFKKEEEDADKEDDGEKKAKHSIDGILGDKGNRLDEGSDVESEPDLP  
 LKRKQRRSRTTFTAEQLEELEKAFERTHYDPIYTRELAQRKLTARVQVWFSNRRARWRKQAGANQLA  
 AFNHLLPGGFPTGMPTLPPYQLPDSTYPTTTSIQDGGSTVHRPQPLPPSTMHQGLAAAAAADTSSAY  
 GARHSFSSYSDFMNPAAPSNHMNPVSNGLSPQVMSILGNPSAVPPQPQADFSISPLHGGLDATSISAS  
 CSQRADSIKPGDSLPTSQAYCPPTYSTTGYSVDPVAGYQYQYQYQSECLVPWASPVPIPSPTPRASCLFM  
 ESYKVVSWGMSISQMEKLLKSSQMEQFT

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6441\\_c04.zip](https://cdn.origene.com/chromatograms/mk6441_c04.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_013945

ORF Size: 1554 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\\_013945.3](#)

RefSeq Size: 2265 bp

RefSeq ORF: 1557 bp

Locus ID: 5081

UniProt ID: [P23759](#)

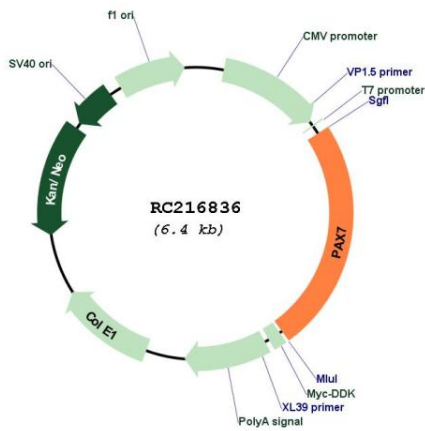
Cytogenetics: 1p36.13

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

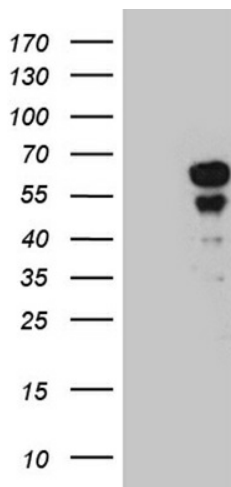
**MW:** 56.7 kDa

**Gene Summary:** This gene is a member of the paired box (PAX) family of transcription factors. Members of this gene family typically contain a paired box domain, an octapeptide, and a paired-type homeodomain. These genes play critical roles during fetal development and cancer growth. The specific function of the paired box 7 gene is unknown but speculated to involve tumor suppression since fusion of this gene with a forkhead domain family member has been associated with alveolar rhabdomyosarcoma. Three transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2008]

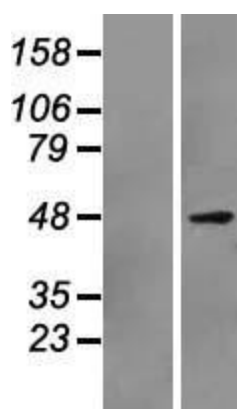
**Product images:**



Circular map for RC216836



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PAX7 (Cat# RC216836, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PAX7 (Cat# [TA811671])(1:2000). Positive lysates [LY415548] (100ug) and [LC415548] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY415548]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216836 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).