

## Product datasheet for **RC223743**

### Oct4 (POU5F1) (NM\_203289) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Oct4 (POU5F1) (NM_203289) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Oct4
Synonyms:	Oct-3; Oct-4; OCT3; OCT4; OTF-3; OTF3; OTF4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC223743 representing NM_203289 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCACTTCTACAGACTATTCCTTGGGGCCACACGTAGGTTCTTGAATCCCGAATGGAAAGGGGAGATTG  
ATAATTGGTGTGTTTATGTTCTTACAAGTCTTCTGCCTTTTAAAATCCAGTCCCAGGACATCAAAGCTCT  
GCAGAAAGAACTCGAGCAATTTGCCAAGCTCCTGAAGCAGAAGAGGATCACCTGGGATATACACAGGCC  
GATGTGGGGCTCACCTGGGGTCTATTTGGGAAGGTATTCAGCCAAACGACCATCTGCCGCTTTGAGG  
CTCTGCAGCTTAGCTTCAAGAACATGTGAAGCTGCGGCCCTTGCTGCAGAAGTGGTGGAGGAAGCTGA  
CAACAATGAAAATCTTCAGGAGATATGCAAAGCAGAAACCTCGTGCAGGCCCGAAAAGAGAAAGCGAACC  
AGTATCGAGAACCGAGTGAGAGGCAACCTGGAGAATTTGTTCTGCAGTGCCCGAAAACCGACACTGCAGC  
AGATCAGCCACATCGCCAGCAGCTTGGGCTCGAGAAGGATGTGGTCCGAGTGTGGTTCTGTAACCGGCG  
CCAGAAGGGCAAGCGATCAAGCAGCGACTATGCACAACGAGAGGATTTTGAGGCTGCTGGGTCTCCTTTC  
TCAGGGGGACAGTGTCTTCTCTGGCCCCAGGGCCCCATTTGGTACCCAGGCTATGGGAGCCCTC  
ACTTCACTGCACTGTACTCCTCGTCCCTTCCCTGAGGGGAAGCCTTCCCCCTGTCTCCGTACCAC  
TCTGGGCTCTCCCATGCATTCAAAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC223743 representing NM\_203289  
Red=Cloning site Green=Tags(s)

MHFYRLFLGATRRFLNPEWKGEIDNWCVYVLTSLLPFKIQSQDIKALQKELEQF AKLLKQKRITLGYTQA  
 DVGLTLGLVLF GKVFSQTTICRFEALQLSFKNMCKLRPLLQKWVEEADNNENLQEICKAETLVQARKRKRT  
 SIENRVRGLENLFLQCPKPTLQQISHIAQQLGLEKDVVRVWFVFCNRRQKGRSSSDYAQREDFEAAGSPF  
 SGGPVSFPLAPGPHFGTPTYGYSPTHFTALYSSVFPPEGEAFPPVSVTTLGSMPHSN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6503\\_h10.zip](https://cdn.origene.com/chromatograms/mk6503_h10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_203289

**ORF Size:** 795 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\\_203289.3](#), [NP\\_976034.3](#)

**RefSeq Size:** 1155 bp

**RefSeq ORF:** 573 bp

**Locus ID:** 5460

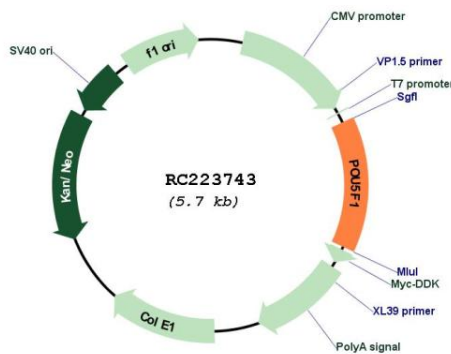
**Cytogenetics:** 6p21.33

**Protein Families:** Adult stem cells, Cancer stem cells, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency, Transcription Factors

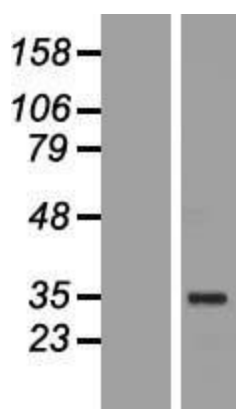
**MW:** 21.1 kDa

**Gene Summary:** This gene encodes a transcription factor containing a POU homeodomain that plays a key role in embryonic development and stem cell pluripotency. Aberrant expression of this gene in adult tissues is associated with tumorigenesis. This gene can participate in a translocation with the Ewing's sarcoma gene on chromosome 21, which also leads to tumor formation. Alternative splicing, as well as usage of alternative AUG and non-AUG translation initiation codons, results in multiple isoforms. One of the AUG start codons is polymorphic in human populations. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12. [provided by RefSeq, Oct 2013]

**Product images:**



Circular map for RC223743



Western blot validation of overexpression lysate (Cat# [LY404373]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223743 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).