

## Product datasheet for **SC334931**

### Oct4 (POU5F1) (NM\_001285987) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Oct4 (POU5F1) (NM_001285987) Human Untagged Clone
Tag:	Tag Free
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)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001285987, the custom clone sequence may differ by one or more nucleotides

ATGCACTTCTACAGACTATTCCTTGGGGCCACAGTAGGTTCTTGAATCCCGAATGGAAAGGGGAGATTG  
 ATAAGTGGTGTGTTATGTTCTTACAAGTCTTCTGCCTTTTAAAAATCCAGTCCCAGGACATCAAAGCTCT  
 GCAGAAAGAACTCGAGCAATTTGCCAAGCTCCTGAAGCAGAAGAGGATCACCTGGGATATACACAGGCC  
 GATGTGGGGCTCACCTGGGGTTCTATTTGGGAAGGTATTGAGCCAAACGACCATCTGCCGCTTTGAGG  
 CTCTGCAGCTTAGCTTCAAGAACATGTGAAGCTGCGGCCCTTGCTGCAGAAGTGGGTGGAGGAAGCTGA  
 CAACAATGAAAACTTCAGGAGATATGCAAAGCAGAAACCCTCGTGCAGGCCCGAAAGAGAAAGCGAACC  
 AGTATCGAGAACCGAGTGAGAGGCAACCTGGAGAATTTGTTCTGCAGTGCCCGAAACCCACACTGCAGC  
 AGATCAGCCACATCGCCCAGCAGCTTGGGCTCGAGAAGGATGTGGTCCGAGTGTGGTTCTGTAACCGGCG  
 CCAGAAGGGCAAGCGATCAAGCAGCGACTATGCACAACGAGAGGATTTTGAGGCTGCTGGGTCTCCTTTT  
 TCAGGGGGACCAAGTGTCTTTCTCTGGCCCCAGGGCCCCATTTTGGTACCCAGGCTATGGGAGCCCTC  
 ACTTCACTGCACTGTACTCCTCGGTCCCTTTCCCTGAGGGGGAAGCCTTTCCCTGTCTCCGTCAACAC  
 TCTGGGCTCTCCCATGCATTCAAAC**TGA**

Restriction Sites:	Sgfl-MluI
ACCN:	NM_001285987
OTI Disclaimer:	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).


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<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>NM_001285987.1, NP_001272916.1</u>
<b>RefSeq Size:</b>	2075 bp
<b>RefSeq ORF:</b>	798 bp
<b>Locus ID:</b>	5460
<b>UniProt ID:</b>	<u>Q01860</u>
<b>Cytogenetics:</b>	6p21.33
<b>Protein Families:</b>	Adult stem cells, Cancer stem cells, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency, Transcription Factors
<b>Gene Summary:</b>	<p>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]</p> <p>Transcript Variant: This variant (5, also known as OCT4B) differs in the 5' UTR, lacks a portion of the 5' coding region, and initiates translation at an alternate AUG start codon, compared to variant 1. The resulting isoform (3, also known as OCT4B-265) is shorter and has a distinct N-terminus, compared to isoform 1. This variant represents an allele of variant 2 that contains an AUG start codon that is polymorphic in human populations (see rs3130932). This variant may encode additional isoforms through the use of alternative downstream AUG and non-AUG start codons, as described in PMID:19489092.</p>