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Product datasheet for SC125252

Oct4 (POU5F1) (NM_002701) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Oct4 (POU5F1) (NM_002701) Human Untagged Clone
Tag:	Tag Free
Symbol:	Oct4
Synonyms:	Oct-3; Oct-4; OCT3; OCT4; OTF-3; OTF3; OTF4
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene sequence for NM_002701 edited
CTGCGGGGTGGCTGGATTTGGCCAGTATCGGGATGGGAATGCCTAGGATTCTGGATGGAT
CGGGGGAAGGCATAAGGGAGCAGCTGGCCATTGTGCTTATGGCTGTTGATGCATTGAGGG
ATAGCGCCACACACACATTCAATAAATTTGAGGAGCTGAGAGGGTGACTGGCCCCTGAAG
GCACAGTGCCAGAGGTCTGTGGAGAGGGGGTCAAGCACCTGGGTTCCTGAAGAACATGGA
GGTGTGGGAGTGATTCCAGACAGCTGGGATGTGCAGAGCCTGAGAGAGTGCCAGGGAGCG
GGTTGGGAGTTGAAAGTTGGGTGTGGTGGCTCACGCCTTTAATCATGACACTGGGCGGCA
GAGGCGGGAGGATTTCTTGAGGACAGGAATTCAAGACCAGCCTGGGTAACATAGCAAGGC
CCCATCTCTACTAAAAATAAAAAAACTAACAGGGCACAGTGGTCCAAGCCTGTAGTCCCA
GCCACTTAGGAGGCTGGAGCAGAAGGATTGCTTTGGCCCAGTAGATCGAGGCTACATTGA
GCCATCATTGTACTCCACTGCACTCCAGTCTGGGCAACAAAGTGAGACCCTGTCTTAAAA
AATAAAAATAAAAAAAGTTTCTGTGGGGGACCTGCACTGAGGTCCTGGAGGGGCGCCAGT
TGTGTCTCCCGGTTTTCCCCTTCCACAGACACCATTGCCACCACCATTAGGCAAACATCC
TTCGCCTCAGTTTCTCCCCCCACCTCCCTCTCCTCCACCCATCCAGGGGGCGGGGCCAGA
GGTCAAGGCTAGTGGGTGGGACTGGGGAGGGAGAGAGGGGTTGAGTAGTCCCTTCGCAAG
CCCTCATTTCACCAGGCCCCCGGCTTGGGGCGCCTTCCTTCCCCATGGCGGGACACCTGG
CTTCGGATTTCGCCTTCTCGCCCCCTCCAGGTGGTGGAGGTGATGGGCCAGGGGGGCCGG
AGCCGGGCTGGGTTGATCCTCGGACCTGGCTAAGCTTCCAAGGCCCTCCTGGAGGGCCAG
GAATCGGGCCGGGGGTTGGGCCAGGCTCTGAGGTGTGGGGGATTCCCCCATGCCCCCCGC
CGTATGAGTTCTGTGGGGGGATGGCGTACTGTGGGCCCCAGGTTGGAGTGGGGCTAGTGC
CCCAAGGCGGCTTGGAGACCTCTCAGCCTGAGGGCGAAGCAGGAGTCGGGGTGGAGAGCA
ACTCCGATGGGGCCTCCCCGGAGCCCTGCACCGTCACCCCTGGTGCCGTGAAGCTGGAGA
AGGAGAAGCTGGAGCAAAACCCGGAGGAGTCCCAGGACATCAAAGCTCTGCAGAAAGAAC
TCGAGCAATTTGCCAAGCTCCTGAAGCAGAAGAGGATCACCCTGGGATATACACAGGCCG
ATGTGGGGCTCACCCTGGGGGTTCTATTTGGGAAGGTATTCAGCCAAACGACCATCTGCC
GCTTTGAGGCTCTGCAGCTTAGCTTCAAGAACATGTGTAAGCTGCGGCCCTTGCTGCAGA
AGTGGGTGGAGGAAGCTGACAACAATGAAAATCTTCAGGAGATATGCAAAGCAGAAACCC
TCGTGCAGGCCCGAAAGAGAAAGCGAACCAGTATCGAGAACCGAGTGAGAGGCAACCTGG
AGAATTTGTTCCTGCAGTGCCCGAAACCGACACTGCAGCAGATCAGCCACATCGCCCAGC
AGCTTGGGCTCGAGAAGGATGTGGTCCGAGTGTGGTTCTGTAACCGGCGCCAGAAGGGCA
AGCGATCAAGCAGCGACTATGCACAACGAGAGGATTTTGAGGCTGCTGGGTCTCCTTTCT
CAGGGGGACCAGTGTCCTTTCCTCTGGCCCCAGGGCCCCATTTTGGTACCCCAGGCTATG
GGAGCCCTCACTTCACTGCACTGTACTCCTCGGTCCCTTTCCCTGAGGGGGAAGCCTTTC
CCCCTGTCTCCGTCACCACTCTGGGCTCTCCCATGCATTCAAACTGAGGTGCCTGCCCTT
CTAGGAATGGGGGACAGGGGGAGGGGAGGAGCTAGGGAAAGAAAACCTGGAGTTTGTGCC
AGGGTTTTTGGGATTAAGTTCTTCATTCACTAAGGAAGGAATTGGGAACACAAAGGGTGG
GGGCAGGGGAGTTTGGGGCAACTGGTTGGAGGGAAGGTGAAGTTCAATGATGCTCTTGAT
TTTAATCCCACATCATGTATCACTTTTTTCTTAAATAAAGAAGCCTGGGACACAGTAGAT
AGAAAAAAAAAAAAAAAAAAAAAAAAAAAA

5' Read Nucleotide Sequence:

>OriGene 5' genomic read for NM_002701 unedited
ACTATAGGGCGGCCGCGAATTCGGCACGAGGCTGCGGGGTGGCTGGATTTGGCCAGTATC
GGGATGGGAATGCCTAGGATTCTGGATGGATCGGGGGAAGGCATAAGGGAGCAGCTGGCC
ATTGTGCTTATGGCTGTTGATGCATTGAGGGATAGCGCCACACACACATTCAATAAATTT
GAGGAGCTGAGAGGGTGACTGGCCCCTGAAGGCACAGTGCCAGAGGTCTGTGGAGAGGGG
GTCAAGCACCTGGGTTCCTGAAGAACATGGAGGTGTGGGAGTGATTCCAGACAGCTGGGA
TGTGCAGAGCCTGAGAGAGTGCCAGGGAGCGGGTTGGGAGTTGAAAGTTGGGTGTGGTGG
CTCACGCCTTTAATCATGACACTGGGCGGCAGAGGCGGGAGGATTTCTTGAGGACAGGAA
TTCAAGACCAGCCTGGGTAACATAGCAAGGCCCCATCTCTACTAAAAATAAAAAAACTAA
CAGGGCACAGTGGTCCAAGCCTGTAGTCCCAGCCACTTAGGAGGCTGGAGCAGAAGGATT
GCTTTGGCCCAGTAGATCGAGGCTACATTGAGCCATCATTGTACTCCACTGCACTCCAGT
CTGGGCAACAAAGTGAGACCCTGTCTTANAAAATAAAAATAAAAAAAGTTTCTGTGGNGG
ACCTGCACTGAGGTCCTGGAGGGGCGCCAGTTGTGTCTCCCGGTTTTCCCCTTCCACAGA
CACCATTGCCACCACCN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_002701 unedited
CCAGGAGAGGCACTGGGGAGGGGTCACAGGGATGCCACCCGGGATCTGTTCAGGAAACAG
CTATGACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTC
TATCTACTGTGTCCCAGGCTTCTTTATTTAAGAAAAAAGTGATACATGATGTGGGATTAA
AATCAAGAGCATCATTGAACTTCACCTTCCCTCCAACCAGTTGCCCCAAACTCCCCTGCC
CCCACCCTTTGTGTTCCCAATTCCTTCCTTAGTGAATGAAGAACTTAATCCCAAAAACCC
TGGCACAAACTCCAGGTTTTCTTTCCCTAGCTCCTCCCCTCCCCCTGTCCCCCATTCCTA
GAAGGGCAGGCACCTCAGTTTGAATGCATGGGAGAGCCCAGAGTGGTGACGGAGACAGGG
GGAAAGGCTTCCCCCTCAGGGAAAGGGACCGAGGAGTACAGTGCAGTGAAGTGAGGGCTC
CCATAGCCTGGGGTACCAAAATGGGGCCCTGGGGCCAGAGGAAAGGACACTGGTCCCCCT
GAGAAAGGAGACCCAGCAGCCTCAAAATCCTCTCGTTGTGCATAGTCGCTGCTTGATCGC
TTGCCCTTCTGGCGCCGGTTACAGAACCACACTCGGACCACATCCTTCTCGAGCCCAAGC
TGCTGGGCGATGTGGCTGATCTGCTGCAGTGTCGGTTTCGGGCACTGCAGGAACAAAATC
TCCAGGTTGCCTCTCACTCGN

Restriction Sites: NotI-NotI

ACCN: NM_002701

Insert Size: 2300 bp

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).

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_002701.3, NP_002692.2
RefSeq Size:	1417 bp
RefSeq ORF:	1083 bp
Locus ID:	5460
UniProt ID:	Q01860
Cytogenetics:	6p21.33
Protein Families:	Adult stem cells, Cancer stem cells, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency, Transcription Factors
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] Transcript Variant: This variant (1, also known as OCT4A) represents the shortest transcript and encodes the longest isoform (1).