

Product datasheet for **RG211998**

Oct4 (POU5F1) (NM_002701) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Oct4 (POU5F1) (NM_002701) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Oct4
Synonyms:	Oct-3; Oct-4; OCT3; OCT4; OTF-3; OTF3; OTF4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG211998 representing NM_002701 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGGGACACCTGGCTTCGGATTTTCGCCTTCTCGCCCCCTCCAGGTGGTGGAGGTGATGGCCAGGGG
GGCCGGAGCCGGGCTGGTTGATCCTCGGACCTGGCTAAGCTTCCAAGGCCCTCTGGAGGGCCAGGAAT
CGGGCCGGGGTGGGCCAGGCTCTGAGGTGTGGGGATTCCCCATGCCCCCGCCGTATGAGTCTGT
GGGGGATGGCGTACTGTGGCCCCAGGTTGGAGTGGGGCTAGTCCCCAAGCGGCTTGGAGACCTCTC
AGCCTGAGGGCGAAGCAGGAGTCGGGGTGGAGAGCAACTCCGATGGGGCCTCCCCGGAGCCCTGCACCGT
CACCCCTGGTGCCGTGAAGCTGGAGAAGGAGAAGCTGGAGCAAAACCCGGAGGAGTCCCAGGACATCAAA
GCTCTGCAGAAAGAACTCGAGCAATTTGCCAAGCTCCTGAAGCAGAAGAGGATCACCCCTGGGATATACAC
AGGCCGATGTGGGGCTCACCCCTGGGGTCTATTTGGGAAGGTATTCAGCCAAACGACCATCTGCCGCTT
TGAGGCTCTGCAGCTTAGCTTCAAGAACATGTGTAAGCTGCGGCCCTTGCTGCAGAAGTGGTGGAGGAA
GCTGACAACAATGAAAATCTTCAGGAGATATGCAAAGCAGAAACCCCTCGTGCAGGCCCGAAAAGAGAAAGC
GAACCAGTATCGAGAACCGAGTGAAGGCAACCTGGAGAATTTGTTCTCGAGTGCCCGAAACCGACACT
GCAGCAGATCAGCCACATCGCCAGCAGCTTGGGCTCGAGAAGGATGTGGTCCGAGTGTGGTTCTGTAAC
CGGCGCCAGAAGGGCAAGCGATCAAGCAGCGACTATGCACAACGAGAGGATTTTGGGCTGCTGGGTCTC
CTTCTCAGGGGACCAGTGTCTTCTCTGGCCCCAGGGCCCAATTTGGTACCCAGGCTATGGGAG
CCCTCACTTCACTGCACTGTACTCCTCGTCCCTTCCCTGAGGGGAAGCCTTCCCCCTGTCTCCGTC
ACCACTCTGGGCTCTCCCATGCATTCAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG211998 representing NM_002701
 Red=Cloning site Green=Tags(s)

MAGHLASDFAFSPPPGGGGDGGPGPEPGWVDPRTWLSFQPPGGPGIGPGVGPSEVWGIPPCPPPYEFC
 GGMAYCGPQVGVGLVPQGGLETSQPEGEAGVGVESNSDASPEPCTVTPGAVKLEKEKLEQNPEESQDIK
 ALQKELEQFAKLLKQKRITLGYTQADVGLTLGLVLF GKVF SQTTCRFEALQLSFKNMCKLRPLLQKWVEE
 ADNENLQEICKAETLVQARKKRRTSIENRVRGNLENLFLQCPKPTLQQISHIAQQLGLEKDVVRVWFCN
 RRQKGRSSDYAQREDFEAAGSPFSGGPVSFPLAPGPHFGTPG YGSPHFTALYSSVPFPEGEAFPPVSV
 TTLGSPMHSN

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002701

ORF Size: 1080 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_002701.6](#)

RefSeq Size: 1417 bp

RefSeq ORF: 1083 bp

Locus ID: 5460

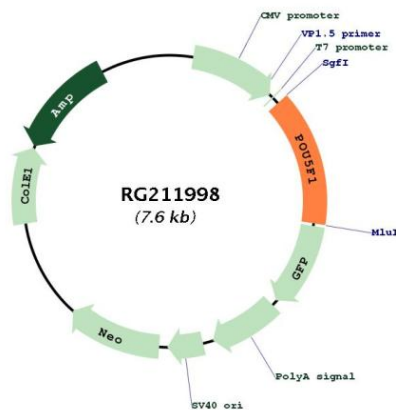
UniProt ID: [Q01860](#)

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]

Product images:



Circular map for RG211998