

## Product datasheet for **MC220343**

### **Foxo3 (NM\_019740) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Foxo3 (NM_019740) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Foxo3
Synonyms:	1110048B16Rik; 2010203A17Rik; C76856; Fkhr2; FKHRL1; Foxo3a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC220343 representing NM\_019740  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGAGGCCACAGCCTCCCGGTCCCGCTCTCTCCGCTCGAAGTGGAGCTGGACCCAGAGTTCGAGC  
 CACAGAGTCGGCCACGCTCCTGTACGTGGCCCTGCAGAGGCCGGAGCTGCAGGGCAGCCCGCCAAGCC  
 CTCGGGGGAGACGGCCGAGACTCCATGATCCCGAGGAGGACGACGATGAAGACGACGAGGACGGCGGC  
 GGCCGAGCCAGCTCGGCCATGGTATCGGTGGCGGCTGAGCAGCAGCTGGGTTCCGGGCTGCTCCTCG  
 AGGATTCGGCCATGCTGCTGGCTCCAGGAGGGCAGGACCTCGGGTCGGGGCCAGCGTCCGCCGAGGCGC  
 TCTGAGTGGGGCAGCCGACGAGCTGCAGCCTCAGCAGCCACTGCCACAGCCGAGCCGGGGCGGCT  
 GGGGGCTCTGGCAACCAAGGAAATGCTCCTCGCGGCGGAATGCCTGGGGAACTGTCTATGCCGACC  
 TGATCACCCGCGCCATCGAGAGCTCCCGGACAAACGGCTCACTTTGTCCAGATCTACGAGTGGATGGT  
 GCGCTGTGTGCCCTACTCAAGGATAAGGGCGACAGCAACAGCTCTGCGGGCTGGAAGAACTCCATCCGG  
 CACAACCTGTCCCTGCACAGCCGTTTCATGCGCGTTTCAAGTGAAGGCACGGGCAAGAGCTCTTGGTGG  
 TCATCAACCCCGATGGGGAAAGAGCGGGAAGGCCCGCGCGGCTGCGGTCTCCATGGACAACAGCAA  
 CAAGTACACCAAGAGCCGAGGCCGGGCAGCCAAGAAGAAGGGCGGCCCTGCAGGCTGCCCCAGAGTCGGCA  
 GACGACAGTCTTCCCAGCTCTCCAAGTGGCCTGGCAGCCCCACGTCCTCCGAGCAGCGACGAGCTGGATG  
 CGTGGACCGACTTCCGCTCGCGCACCAATTCACACGCCAGCACCCTGAGCGGGCCGCTGTGCGCCATCCT  
 GGCAAGCAGGAGCTGGATGACGTCCAGGATGATGATGGACCCCTGTCCCCATGCTGTACAGCAGCTCT  
 GCCAGCCTGTGCGCCTCCGTGAGCAAGCCGTGTACTGTGGAGCTTCCGCGGCTGACGGACATGGCCGGCA  
 CCATGAATCTGAATGATGGCTGGCCGAGAACCCTCATGGACGACCTGTGGATAACATCGCGCTCCCGCC  
 ATCGCAGCCATCGCCTCCTGGCGGGCTTATGCAGCGGGGCTCCAGCTTCCCATATACCGCCAAGAGCTCC  
 GGCTGGGCTCCCAACCGGCTCCTAACAGTACCGTGTGGACCTTCTGACTCTGAACCTCTTGCCTC  
 AGTCACCCATGCAGACTATCCAGGAGAACAGACCACCTTCTCTTCCGTGTACACTACGGCAACCA  
 GACTCTCAAGACCTGCTTGCTTCCAGACTCACTCAGCCACAGCGACGTCATGATGACCCAGTCGGACCCC  
 TTGATGTCTCAGGCTAGCACCGCGTGTCCGCCAGAATGCCCGCGGAACGTGATGCTTCGCAACGATC  
 CAATGATGTCTTTGCTGCCAGCCTACCCAGGGGAGTTGGTCAATCAGAACTGTCCACCACCAGCA  
 CCAAACCCAGGGCGCTTTGGTGGCAGCCGTGCCTTGTCAAATCTGTGCAACATGGGCTTGAGTGAC  
 TCCAGCAGCCTTGCTCAGCCAAACACCAGCAGCAGTCTCCCGCCAGCCAGTCTATGCAAACCTCTCGG  
 ACTCTCTCTCAGGCTCCTCACTGTATTCAGCTAGTGCAAACCTTCCCGTCATGGGCCACGATAAGTCCC  
 CAGTGACTTGACCTGGACATGTTCAATGGGAGCTTGAATGTGACATGGAGTCCATCATCCGTAGTGAA  
 CTCATGGATGCTGACGGGTTGGATTTAACTTTGACTCCCTCATCTCCACACAGAACGTTGTTGGTTGA  
 ATGTGGGGAACCTCACTGGTGCTAAGCAGGCCTCATCTCAAAGCTGGGTACCAGGCTGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_019740  
**Insert Size:** 2019 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_019740.2](#), [NP\\_062714.1](#)

**RefSeq Size:** 2889 bp

**RefSeq ORF:** 2019 bp

**Locus ID:** 56484

**UniProt ID:** [Q9WVH4](#)

**Cytogenetics:** 10 22.79 cM

**Gene Summary:**

Transcriptional activator that recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3' and regulates different processes, such as apoptosis and autophagy (PubMed:18054316, PubMed:18054315, PubMed:23805378). Acts as a positive regulator of autophagy in skeletal muscle: in starved cells, enters the nucleus following dephosphorylation and binds the promoters of autophagy genes, such as GABARAP1L, MAP1LC3B and ATG12, thereby activating their expression, resulting in proteolysis of skeletal muscle proteins (PubMed:18054316, PubMed:18054315, PubMed:25402684). Triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress (By similarity). Participates in post-transcriptional regulation of MYC: following phosphorylation by MAPKAPK5, promotes induction of miR-34b and miR-34c expression, 2 post-transcriptional regulators of MYC that bind to the 3' UTR of MYC transcript and prevent its translation (By similarity). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription (PubMed:23283301).[UniProtKB/Swiss-Prot Function]