

Product datasheet for **MR226631**

Foxo3 (NM_019740) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Foxo3 (NM_019740) Mouse Tagged ORF Clone
Tag:	Myc-DDK
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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ORF Nucleotide
Sequence:

>MR226631 representing NM_019740
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGGCAGAGGCCACCGCTCCCCGGTCCCCTCTCTCCGCTCGAAGTGGAGCTGGACCCAGAGTTCCGAGC
CACAGAGTCGGCCACGCTCCTGTACGTGGCCCCCTGCAGAGGCCGGAGCTGCAGGCCGAGCCCGCCAAAGCC
CTCGGGGAGACGGCCGACACTCCATGATCCCGAGGAGGACGACGATGAAGACGACGAGGACGGCGGC
GGCCGAGCCAGCTCGGCCATGGTGTGCGGTGGCGGCTGAGCAGCAGCTGGGTTCCGGGCTGCTCCTCG
AGGATTCGGCCATGCTGCTGGCTCCAGGAGGGCAGGACCTCGGGTCCGGGCCAGCGTCCGCCGAGGCGC
TCTGAGTGGGGCACGCCGACGCTGCAGCCTCAGCAGCCACTGCCACAGCCGAGCCGGGGCGGCT
GGGGGCTCTGGCAACCAAGGAAATGCTCCTCGCGCGGAATGCCTGGGGAACTGTCTATGCCGACC
TGATCACCCGCGCCATCGAGAGCTCCCCGACAAACGGCTCACTTTGTCCAGATCTACGAGTGGATGGT
GCGCTGTGTGCCCTACTCAAGGATAAGGGCGACAGCAACAGCTCTGCGGGCTGGAAGAACTCCATCCGG
CACAACCTGTCCCTGCACAGCCGTTTCATGCGCGTTTCAAGTGAAGGCACGGGCAAGAGCTTTGGTGG
TCATCAACCCCGATGGGGAAAGAGCGGGAAGGCCCCCGCGGCGTGGGCTCTCCATGGACAACAGCAA
CAAGTACACCAAGAGCCGAGGCCGGCAGCCAAGAAGAAGGCCGGCCCTGCAGGCTGCCCCAGAGTCGGCA
GACGACAGTCTTCCCAGCTCTCCAAGTGGCCTGGCAGCCCCACGTCGCCGAGCAGCAGGAGCTGGATG
CGTGGACCGACTTCCGCTCGCGCACCAATTCCAACGCCAGCACCCTGAGCGGCCGCTGTGCGCCATCCT
GGCAAGCACGGAGCTGGATGACGTCCAGGATGATGATGGACCCCTGTCCCCATGCTGTACAGCAGCTCT
GCCAGCCTGTGCGCCCTCCGTGAGCAAGCCGTGTACTGTGGAGCTTCCGCGGCTGACGGACATGGCCGGCA
CCATGAATCTGAATGATGGGCTGGCCGAGAACCCTCATGGACGACCTGCTGGATAACATCGCGCTCCCGCC
ATCGCAGCCATCGCCTCCTGGCGGGCTTATGCAGCGGGGCTCCAGCTTCCATATACCGCCAAGAGCTCC
GGCCTGGGCTCCCAACCGGCTCCTTCAACAGTACCGTGTGGACCTTCGTCTCTGAACTCCTTGCCTC
AGTCACCCATGCAGACTATCCAGGAGAACAGACCACCTTCTCTTCCGTGTACACTACGGCAACCA
GACTCTCAAGACCTGCTTGCTTCAAGTCACTCAGCCACAGCGACGTCATGATGACCCAGTCGGACCCC
TTGATGTCTCAGGCTAGCACCCGCTGTCCGCCAGAATGCCCGCCGGAACGTGATGCTTCCGCAACGATC
CAATGATGTCTTTGCTGCCAGCCTACCCAGGGGAGTTGGTCAATCAGAACTGTCCACCACCAGCA
CCAAACCCAGGGCGCTTTGGTGGCAGCCGTGCCTTGTCAAATCTGTGCAACATGGGCTTGAGTGAC
TCCAGCAGCCTTGCTCAGCCAAACACCAGCAGCAGTCTCCCGCCAGCCAGTCTATGCAAACCTCTCGG
ACTCTCTCTCAGGCTCCTCACTGTATTCAGCTAGTGCAAACCTTCCCGTCATGGGCCACGATAAGTTCCC
CAGTGACTTGGACCTGGACATGTTCAATGGGAGCTTGAATGTGACATGGAGTCCATCATCCGTAGTGAA
CTCATGGATGCTGACGGGTTGGATTTAACTTTGACTCCCTCATCTCCACACAGAACGTTGTTGGTTTGA
ATGTGGGGAACCTCACTGGTGCTAAGCAGGCCTCATCTCAAAGCTGGGTACCAGGC

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR226631 representing NM_019740
 Red=Cloning site Green=Tags(s)

MAEAPASPVPLSPLEVELDPEFEPQSRPRSCTWPLQRPELQASPAKPSGETAADSMIPEEDDEDEDG
 GRASSAMVIGGGVSSTLGSGLLLED SAMLLAPGGQDLGSGPASAAGALSGGTPTQLQPQQPLPQPQGA
 GSGGQPRKCSSRRNAWGNLSYADLITRAIESSPKRLTLSQIYEMVRCVPYFKDKGDSNSAGWKN SIR
 HNL SLHSRFRMRVQNEGTGKSSWWIINPDGKSGKAPRRRAVSMDNSNKYTKSRGRAAKKKAALQAPE SA
 DDSPSQLSKWPGSPTSRSSDELDAWDFRSTNSNASTVSGRLSPILASTE LDDVQDDDGPLSPMLYSS
 ASLSPSVSKPCTVELPRLTDMAGTMNLNDGLAENLMDDLNDNIALPPSQSPGGMLMQRGSSFPYAKSS
 GLGSP TGSFNSTVFGPSSLNSLRQSPMQTIQENRPA TFSVSHYGNQTLQDLLASDSLHSDVMMTQSDP
 LMSQASTAVSAQNARRNVMLRNDPMMSF AAQPTQGSLVNQNL LHHQHTQGALGGSRALSNSVSNMGLSD
 SSSLGSAKHQQQSPASQSMQTLSDSLGSSLYSASANLPVMGHDKFPSDLDLDMFNGLSLECDMESIIRSE
 LMDADGLDFNFDLSLSTQNVVGLNVGNFTGAKQASSQSWVPG

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1585_a01.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:



ACCN: NM_019740

ORF Size: 2016 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 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](#)

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_019740.3](#)

RefSeq Size: 2889 bp

RefSeq ORF: 2019 bp

Locus ID: 56484

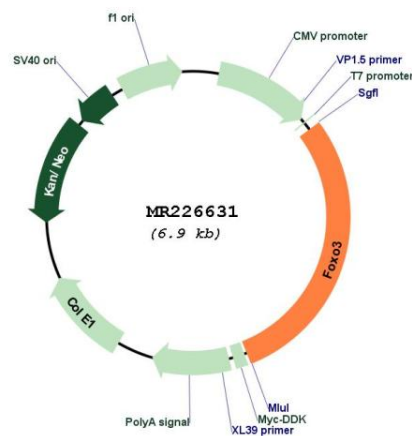
UniProt ID: [Q9WVH4](#)

Cytogenetics: 10 22.79 cM

MW: 71.5 kDa

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]

Product images:


Circular map for MR226631