

Product datasheet for **MR227240**

Foxo1 (NM_019739) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Foxo1 (NM_019739) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Foxo1
Synonyms:	Afxh; AI876417; FKHR; Fkhr1; Foxo1a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MR227240 representing NM_019739
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCGAAGCGCCCCAGGTGGTGGAGACCGACCCGGACTTCGAGCCGCTGCCCCGGCAGCGCTCCTGTA
 CCTGGCCGCTGCCCAGGCCGGAGTTTAACCACTCCAACCTCGACCACCTCCAGTCCGGCGCCGTCGGGCGG
 CGCGGCCGCCAACCCCGACGCCGCGGCGAGCCTGGCCTCGGCGTCCGCTGTCAGCACCGACTTTATGAGC
 AACCTGAGCCTGCTGGAGGAGAGTGAGGACTTCGCGCGGGCGCCAGGCTGCGTGGCCGTGGCGGGCGG
 CTGCGGCCAGCAGGGGCTGTGCGGGGACTTCCAGGGCCCGAGGCGGGTGCCTGCACCCAGCGCCGCC
 ACAGCCCCACCGACCGGGCCGCTGTGCGACCCCCACCCGTGCCTCCCTCCGCTGCCGCCCGCCGGGG
 CCACTCGCGGGACAGCCGCGCAAGACCAGCTCGTCGCGCCGAACGCGTGGGGCAACCTGTCGTACGCCG
 ACCTCATACCAAGGCCATCGAGAGCTCAGCCGAGAAGAGGCTCACCTGTGCGAGATCTACGAGTGGAT
 GGTGAAGAGCGTCCCTACTTCAAGGATAAGGGCGACAGCAACAGCTCGGCGGGTGAAGAATTCAATT
 CGCCACAATCTGTCCCTTACAGCAAGTTTATTGAGTGCAGAATGAAGGAACTGAAAAGAGTTCTTGTT
 GGATGCTCAATCCAGAGGGAGGCAAGAGCGGAAAAATCACCCGGAGAAGAGCTGCGTCCATGGACAACAA
 CAGTAAATTTGCTAAGAGCCGAGGGCGGGCTGCTAAGAAAAAAGCATCTCTCCAGTCTGGGCAAGAGGGT
 CCTGGAGACAGCCCTGGGTCTCAGTTTTCTAAGTGGCCTGCGAGTCTGGGTCCCACAGCAACGATGACT
 TTGATAACTGGAGTACATTTCTGCTCGAACCAAGCTCAATGCTAGTACCATCAGTGGGAGACTTTCTCC
 CATCATGACAGAGCAGGATGACCTGGGAGATGGGACGTGCATTCCCTGGTGTATCCACCCTCTGCTGCC
 AAGATGGCGTCTACGCTGCCAGTCTGTCTGAAATCAGCAATCCAGAAAACATGGAGAACCTTCTGGATA
 ATCTCAACCTTCTCTCGTCCCCAACATCTTTAACTGTGTCCACCAGTCCCTCGCTGGCAGCATGATGCA
 GCAGACACCATGCTATTGTTTTGCACCGCAAACACCAGTCTAAATTCACCCAGTCCAAACTACTCAAAG
 TACACATACGGCCAATCCAGCATGAGCCCTTTGCCCCAGATGCCTATGCAGACACTTCAGGACAGCAAAT
 CAAGTTACGGAGGATTGAACCAGTATAACTGTGCCCCAGGACTCTTGAAAGAGTTGTTGACTTCTGACTC
 TCCTCCCCACAATGACATTATGTACCCGGTTGATCCCGGAGTGGCCCAACCCAACAGTCCGGTCTGGGC
 CAAAATGTAATGATGGGCCCTAATTCGGTTCATGCCAGCGTATGGCAGCCAGGCATCTCATAACAAAATGA
 TGAACCCAGTCCCACACCCACCCTGGACATGCACAGCAAACGGCTTCGGTCAACGGCCGTACCCTGCC
 CCATGTGGTGAACACCATGCCTCACACATCTGCCATGAACCGCTTGACCCCGTGAAGACACCTTTACAA
 GTGCCCTGTGCCACCCATGCAGATGAGTGCCTGGGCAGTACTCCTCGGTGAGCAGCTGCAATGGCT
 ATGGTAGGATGGGTGTCCTCCACCAGGAGAAGCTCCCAAGTACTGGATGGCATGTTTATTGAGCGCTT
 GGACTGTGACATGGAGTCCATCATTGGAATGACCTCATGGATGGAGATACCTTGGAATTTAACTTTGAT
 AATGTGTTGCCCAACAAAGCTTCCCACACAGTGTCAAGACTACAACACACAGCTGGGTGTCAAGC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR227240 representing NM_019739
Red=Cloning site Green=Tags(s)

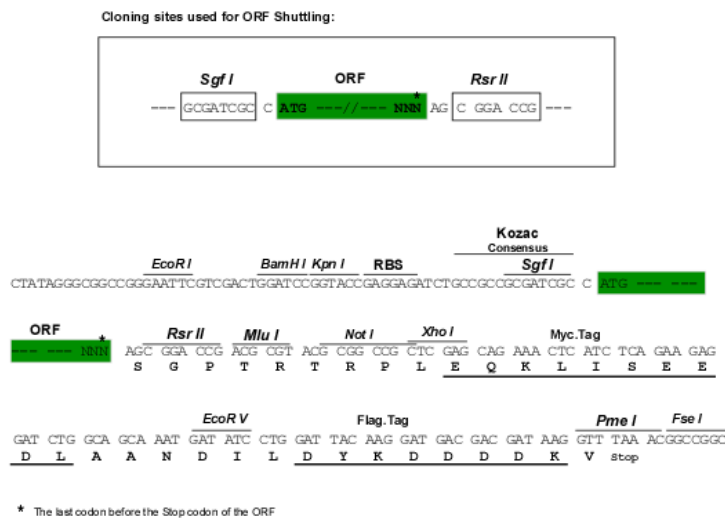
```
MAEAPQVVETDPDFEPLPRQRSCWPLPRPEFNQSNSTTSSPAPSGGAAANPDAAASLASASAVSTDFMS
NLSLLEESEDFARAPGCVAVAAAAAASRGLCGDFQGPEAGCVHPAPPQPPPTGPLSQPPPVPSSAAAAAG
PLAGQPRKTSSSRRNAWGNLSYADLITKAIESSAEKRLTLSQIYEWVKSVPYFKDKGDSNSSAGWKNSI
RHNL SLHSKFIRVQNEGTGKSSWWM LNPEGGKSGKSPRRRAASMDNNSKF AKSRGRAAKKKASLQSGQEG
PGDSPGSQF SKWPASPGSHSNDDFDNWSTFRPRTSSNASTISGRLSPIMTEQDDLGDGDVHSLVYPPSAA
KMASTLPSLSEISNPENMENLLDNLNLLSSPTSLTVSTQSSPGSMMQQTPCYSFAPPNTSLNSPSPNYSK
YTYGQSSMSPLPQMPMQLQDSKSSYGGLNQYNCAPGLLKELLTSDSPPHNDIMSPVDPGVAQPNSRVLG
QNVMMGPNVMPAYGSQASHNKMMPSSHTHPGHAQQTASVNGRTLPHVVNTMPHTSAMNRLTPVKTPLQ
VPLSHPMQMSALGSYSSVSSCNGYGRMGVLHQEKLPSDLDMFIERLDCDMESIIRNDLMDGDTLDFNFD
NVLPNQSFPHSVKTTTHSWVSG
```

SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1543_b03.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM_019739

ORF Size: 1956 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_019739.3](#), [NP_062713.2](#)

RefSeq Size: 5552 bp

RefSeq ORF: 1959 bp

Locus ID: 56458

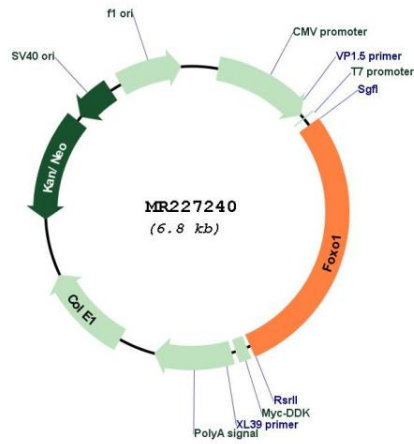
UniProt ID: [Q9R1E0](#)

Cytogenetics: 3 23.19 cM

MW: 70 kDa

Gene Summary: Transcription factor that is the main target of insulin signaling and regulates metabolic homeostasis in response to oxidative stress. Binds to the insulin response element (IRE) with consensus sequence 5'-TT[G/A]TTTTG-3' and the related Daf-16 family binding element (DBE) with consensus sequence 5'-TT[G/A]TTTAC-3'. Activity suppressed by insulin. Main regulator of redox balance and osteoblast numbers and controls bone mass. Orchestrates the endocrine function of the skeleton in regulating glucose metabolism. Acts synergistically with ATF4 to suppress osteocalcin/BGLAP activity, increasing glucose levels and triggering glucose intolerance and insulin insensitivity. Also suppresses the transcriptional activity of RUNX2, an upstream activator of osteocalcin/BGLAP. In hepatocytes, promotes gluconeogenesis by acting together with PPARGC1A and CEBPA to activate the expression of genes such as IGFBP1, G6PC and PCK1. Important regulator of cell death acting downstream of CDK1, PKB/AKT1 and STK4/MST1. Promotes neural cell death. Mediates insulin action on adipose tissue. Regulates the expression of adipogenic genes such as PPARG during preadipocyte differentiation and, adipocyte size and adipose tissue-specific gene expression in response to excessive calorie intake. Regulates the transcriptional activity of GADD45A and repair of nitric oxide-damaged DNA in beta-cells. Required for the autophagic cell death induction in response to starvation or oxidative stress in a transcription-independent manner. Mediates the function of MLIP in cardiomyocytes hypertrophy and cardiac remodeling (By similarity). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR227240