

Product datasheet for **MC216114**

Foxa2 (NM_010446) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Foxa2 (NM_010446) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Foxa2
Synonyms:	Hnf-3b; HNF3-beta; Hnf3b; HNF3beta; Tcf-3b; Tcf3b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC216114 representing NM_010446
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGGGAGCCGTGAAGATGGAAGGGCAGGCCATCCGACTGGAGCAGCTACTACGCGGAGCCCGAGG
 GCTACTCTCCGTGAGCAACATGAACGCCGCCCTGGGGATGAATGGCATGAACACATACATGAGCATGTC
 CGCGGCTGCCATGGGCGCGGTTCCGGCAACATGAGCGCGGGCTCCATGAACATGTCATCTATGTGGC
 GCTGGAATGAGCCGCTGCTAGCTGGCATGTCCCCGGGCGCCGCGCCATGGCGGGCATGAGCGGCTCAG
 CCGGGGCGCGCGTGGCGGGCATGGGACCTCACCTGAGTCCGAGTCTGAGCCCCTCGGGGACAGGC
 GGCCGGGGCCATGGGTGGCCTTGCCCCCTACGCCAACATGAACTCGATGAGCCCCATGTACGGGCAGGCC
 GGCTGAGCCGCGCTCGGGACCCCAAGACATACCGACGCAGCTACACACACGCCAAACCTCCCTACTCGT
 ACATCTCGCTCATACCATGGCCATCCAGCAGAGCCCCAACAAAGATGCTGAGCTGAGCGAGATCTATCA
 GTGGATCATGGACCTTCCCTTTCTACCGGCAGAACAGCAGCGCTGGCAGAACTCCATCCGCCACTCT
 CTCTCCTCAACGACTGCTTTCTCAAGGTGCCCGCTCGCCAGACAAGCCTGGCAAGGGCTCCTTCTGGA
 CCCTGCACCCAGACTCGGGCAACATGTTTCGAGAACGGCTGCTACCTGCGCCGCCAGAAGCGCTTCAAGT
 TGAGAAGCAACTGGCACTGAAGGAAGCCGCGGGTGCAGCCAGTAGCGGAGGAAGAAGACCCTCCTGGG
 TCCCAGGCCTCTCAGGCTCAGCTCGGGGAGGCCGCGGGCTCGGCCTCCGAGACTCCGGCGGGCACCAGT
 CCCCCATTCCAGCGCTTCTCCGTGTGAGGAGCACAAGCGAGGTGGCCTAAGCGAGCTAAAGGGAGCACC
 TGCTCTGCGTGAGTCTCCGAGCCGCGCCCTCGCCTGGGCAGCAGCAGCAGGCTGCAGCCACCTG
 CTGGGCCACCTCACCACCCAGGCTGCCACAGAGGCCACCTGAAGCCCGAGCACCATTACGCCCTCA
 ACCACCCCTTCTATCAACAACCTCATGTGTCGTCGAGCAGCAACATCACCACAGCCACCACCATCA
 GCCCACAAAATGGACCTCAAGGCCTACGAACAGGTGATGCACTACCCAGGGGGCTATGGTTCCCCCATG
 CCAGGCAGCTTGCCATGGGCCAGTACGAACAAGCGGGCCTGGATGCCTCGCCCTGGCTGCAGACA
 TTCTACTACCAAGGAGTGTACTCCAGGCCTATTATGAACTCATCC**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: https://cdn.origene.com/chromatograms/ja2614_b11.zip

Restriction Sites: SgfI-MluI

ACCN: NM_010446

Insert Size: 1380 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](#)

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:	<ol style="list-style-type: none">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:	<u>NM_010446.2</u> , <u>NP_034576.2</u>
RefSeq Size:	2128 bp
RefSeq ORF:	1380 bp
Locus ID:	15376
UniProt ID:	<u>P35583</u>
Cytogenetics:	2 73.38 cM

Gene Summary:

Transcription factor that is involved in embryonic development, establishment of tissue-specific gene expression and regulation of gene expression in differentiated tissues. Is thought to act as a 'pioneer' factor opening the compacted chromatin for other proteins through interactions with nucleosomal core histones and thereby replacing linker histones at target enhancer and/or promoter sites. Binds DNA with the consensus sequence 5'-[AC]A[AT]T[AG]TT[GT][AG][CT]T[CT]-3' (By similarity). In embryonic development is required for notochord formation. Involved in the development of multiple endoderm-derived organ systems such as the liver, pancreas and lungs; Foxa1 and Foxa2 seem to have at least in part redundant roles. FOXA1 and FOXA2 are essential for hepatic specification. FOXA1 and FOXA2 are required for morphogenesis and cell differentiation during formation of the lung. FOXA1 and FOXA2 are involved in bile duct formation; they positively regulate the binding glucocorticoid receptor/NR3C1 to the IL6 promoter. FOXA1 and FOXA2 regulate multiple phases of midbrain dopaminergic neuron development; they regulate expression of NEUROG2 at the beginning of mDA neurogenesis and of NR4A2 and EN1 in immature mDA neurons. Modulates the transcriptional activity of nuclear hormone receptors; inhibits AR-mediated transcription from the LCN5 promoter. Binds to fibrinogen beta promoter and is involved in IL6-induced fibrinogen beta transcriptional activation. Originally described as a transcription activator for a number of liver genes such as AFP, albumin, tyrosine aminotransferase, PEPCK, etc. Interacts with the cis-acting regulatory regions of these genes. Involved in glucose homeostasis; regulates the expression of genes important for glucose sensing in pancreatic beta-cells and glucose homeostasis. In pancreatic beta cells activates transcription of potassium channel subunits KCNJ11 and ABCC8. Involved in regulation of fat metabolism; activates transcriptional programs of lipid metabolism and ketogenesis at low insulin state. Involved in transcriptional regulation of MUC2 in the intestine.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) contains alternate 5' exon structure, and it thus differs in the 5' UTR and initiates translation at a downstream in-frame start codon, compared to variant 1. The encoded isoform (b) is shorter at the N-terminus, compared to isoform a. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.