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Product datasheet for MR229860

Foxa2 (NM_001291067) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Foxa2 (NM_001291067) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Foxa2
Synonyms:	Hnf-3b; HNF3-beta; Hnf3b; HNF3beta; Tcf-3b; Tcf3b
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR229860 representing NM_001291067 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGAACGCCGGCCTGGGGATGAATGGCATGAACACATACATGAGCATGTCCGCGGCTGCCATGGGCGGCG GTTCCGGCAACATGAGCGCGGGCTCCATGAACATGTCATCCTATGTGGGCGCTGGAATGAGCCCGTCGCT AGCTGGCATGTCCCCGGGCGCCGGCGCCATGGCGGGCATGAGCGGCTCAGCCGGGGCGGCCGGCGTGGCG GGCATGGGACCTCACCTGAGTCCGAGTCTGAGCCCGCTCGGGGGACAGGCGGCCGGGGCCATGGGTGGCC TTGCCCCCTACGCCAACATGAACTCGATGAGCCCCATGTACGGGCAGGCCGGCCTGAGCCGCGCTCGGGA CCCCAAGACATACCGACGCAGCTACACACACGCCAAACCTCCCTACTCGTACATCTCGCTCATCACCATG GCCATCCAGCAGAGCCCCAACAAGATGCTGACGCTGAGCGAGATCTATCAGTGGATCATGGACCTCTTCC CTTTCTACCGGCAGAACCAGCAGCGCTGGCAGAACTCCATCCGCCACTCTCTCTCCTTCAACGACTGCTT TCTCAAGGTGCCCCGCTCGCCAGACAAGCCTGGCAAGGGCTCCTTCTGGACCCTGCACCCAGACTCGGGC AACATGTTCGAGAACGGCTGCTACCTGCGCCGCCAGAAGCGCTTCAAGTGTGAGAAGCAACTGGCACTGA AGGAAGCCGCGGGTGCGGCCAGTAGCGGAGGCAAGAAGACCGCTCCTGGGTCCCAGGCCTCTCAGGCTCA GCTCGGGGAGGCCGCGGGCTCGGCCTCCGAGACTCCGGCGGGCACCGAGTCCCCCCATTCCAGCGCTTCT CCGTGTCAGGAGCACAAGCGAGGTGGCCTAAGCGAGCTAAAGGGAGCACCTGCCTCTGCGCTGAGTCCTC CCGAGCCGGCGCCCTCGCCTGGGCAGCAGCAGCAGGCTGCAGCCCACCTGCTGGGCCCACCTCACCACCC AGGCCTGCCACCAGAGGCCCACCTGAAGCCCGAGCACCATTACGCCTTCAACCACCCCTTCTCTATCAAC AACCTCATGTCGTCCGAGCAGCAACATCACCACAGCCACCACCACCATCAGCCCCACAAAATGGACCTCA AGGCCTACGAACAGGTCATGCACTACCCAGGGGGCTATGGTTCCCCCATGCCAGGCAGCTTGGCCATGGG CCCAGTCACGAACAAAGCGGGCCTGGATGCCTCGCCCCTGGCTGCAGACACTTCCTACTACCAAGGAGTG TACTCCAGGCCTATTATGAACTCATCC ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

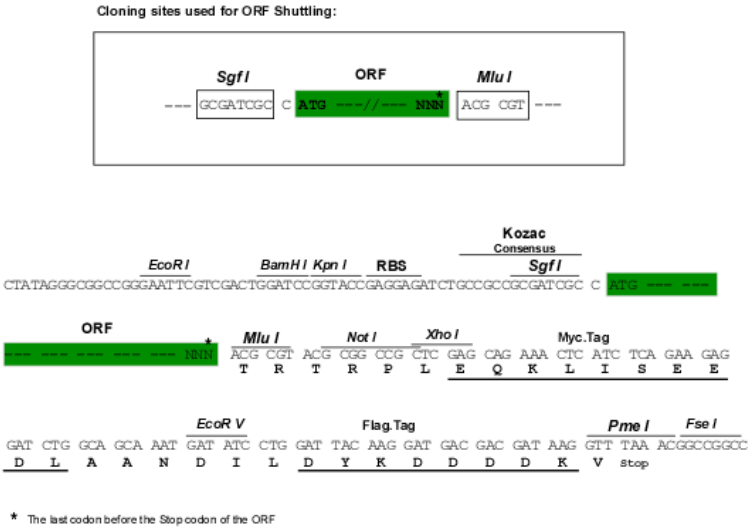
>MR229860 representing NM_001291067
Red=Cloning site Green=Tags(s)

MNAGLGMNGMNTYMSMSAAAMGGGSGNMSAGSMNMSSYVGAGMSPSLAGMSPGAGAMAGMSGSAGAAGVA
GMGPHLSPSLSPLGGQAAGAMGGLAPYANMNSMSPMYGQAGLSRARDPKTYRRSYTHAKPPYSYISLITM
AIQQSPNKMLTLSEIYQWIMDLFPFYRQNQQRWQNSIRHSLSFNDCFLKVPRSPDKPGKGSFWTLHPDSG
NMFENGCYLRRQKRFKCEKQLALKEAAGAASSGGKKTAPGSQASQAQLGEAAGSASETPAGTESPHSSAS
PCQEHKRGGLSELKGAPASALSPPEPAPSPGQQQQAAAHLLGPPHHPGLPPEAHLKPEHHYAFNHPFSIN
NLMSSEQQHHHSHHHHQPHKMDLKAYEQVMHYPGGYGSPMPGSLAMGPVTNKAGLDASPLAADTSYYQGV
YSRPIMNSS

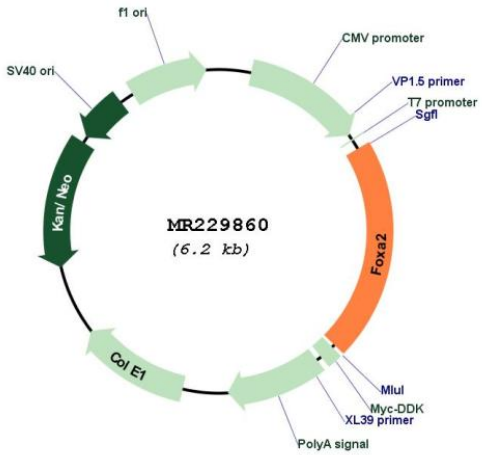
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001291067

ORF Size:	1287 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_001291067.1, NP_001277996.1
RefSeq Size:	2138 bp
RefSeq ORF:	1290 bp
Locus ID:	15376
Cytogenetics:	2 73.38 cM
MW:	45.7 kDa

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]