

Product datasheet for MR225487

Foxa1 (NM_008259) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids

Product Name: Foxa1 (NM_008259) Mouse Tagged ORF Clone

Tag: Myc-DDK

Symbol: Foxa1

Synonyms: Hnf-3a; Hnf3a; Tcf-3a; Tcf3a

Mammalian Cell Neomycin

Selection:

Vector: pCMV6-Entry (PS100001)

E. coli Selection: Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>MR225487 representing NM_008259
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGTTAGGGACTGTGAAGATGGAAGGGCATGAGAGCAACGACTGGAACAGCTACTACGCGGACACGCAGG AGGCCTACTCCTCTGTCCCTGTCAGCAACATGAACTCCGGCCTGGGCTCTATGAACTCCATGAACACCTA ACGGGCTTAGGGGCCGGCCTGAGTCCCGGTGCTGTGGCTGCCATGCCAGGGGCCTCTGCAGGCGCCATGA ACAGCATGACTGCGGCGGGCGTCACGGCCATGGGTACGGCGCTGAGCCCGGGAGGCATGGGCTCCATGGG CGCGCAGCCCGCCACCTCCATGAACGGCCTGGGTCCCTACGCCGCCGCCATGAACCCGTGCATGAGTCCC GCAGCTACCCTCACGCCAAGCCGCCTTACTCCTACATCTCGCTCATCACGATGGCCATCCAGCAGGCGCC CAGCAAGATGCTCACGCTGAGCGAGATCTACCAGTGGATCATGGACCTCTTCCCCTATTACCGCCAGAAC CAGCAGCGCTGGCAGAACTCCATCCGCCACTCGCTGTCCTTCAACGATTGTTTCGTCAAGGTGGCACGAT CCCCGGACAAGCCAGGCAAGGGCTCCTACTGGACGCTGCACCCGGACTCCGGCAACATGTTCGAGAACGG CTGCTACTTGCGCCGCCAAAAGCGCTTCAAGTGTGAGAAGCAGCCGGGGGCCGGAGGTGGGAGTGGGGGC GGCGGCTCCAAAGGGGGCCCAGAAAGTCGCAAGGACCCCTCAGGCCCGGGGAACCCCAGCGCCGAGTCAC CCCTTCACCGGGGTGTGCACGGAAAGGCTAGCCAGCTAGAGGGCCGCCGGCCCAGGGCCCCAGCCCAGCCCAG CCCCAGACTCTGGACCACAGCGGGGCCACGGCGACAGGGGGGCGCTTCGGAGTTGAAGTCTCCAGCGTCT TCATCTGCGCCCCCATAAGCTCCGGGCCAGGGGCGCTAGCATCTGTACCCCCCTCTCACCCGGCTCACG GCCTGGCACCCCACGAATCTCAGCTGCATCTGAAAGGGGATCCCCACTACTCCTTTAATCACCCCTTCTC CATCAACAACCTCATGTCCTCCTCCGAGCAACAGCACAAGCTGGACTTCAAGGCATACGAGCAGGCGCTG CAGTACTCTCCTTATGGCGCTACCTTGCCCGCCAGTCTGCCCCTTGGCAGCGCCTCAGTGGCCACGAGGA GCCCCATCGAGCCCTCAGCCCTGGAGCCAGCCTACTACCAAGGTGTGTATTCCAGACCCGTGCTAAATAC TTCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225487 representing NM_008259 Red=Cloning site Green=Tags(s)

MLGTVKMEGHESNDWNSYYADTQEAYSSVPVSNMNSGLGSMNSMNTYMTMNTMTTSGNMTPASFNMSYAN TGLGAGLSPGAVAGMPGASAGAMNSMTAAGVTAMGTALSPGGMGSMGAQPATSMNGLGPYAAAMNPCMSP MAYAPSNLGRSRAGGGGDAKTFKRSYPHAKPPYSYISLITMAIQQAPSKMLTLSEIYQWIMDLFPYYRQN QQRWQNSIRHSLSFNDCFVKVARSPDKPGKGSYWTLHPDSGNMFENGCYLRRQKRFKCEKQPGAGGGSGG GGSKGGPESRKDPSGPGNPSAESPLHRGVHGKASQLEGAPAPGPAASPQTLDHSGATATGGASELKSPAS SSAPPISSGPGALASVPPSHPAHGLAPHESQLHLKGDPHYSFNHPFSINNLMSSSEQQHKLDFKAYEQAL QYSPYGATLPASLPLGSASVATRSPIEPSALEPAYYQGVYSRPVLNTS

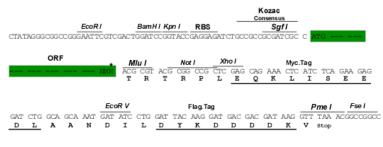
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-Mlul



Cloning Scheme:





^{*} The last codon before the Stop codon of the ORF

ACCN: NM_008259

ORF Size: 1404 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: <u>NM 008259.4</u>

RefSeq Size: 3188 bp
RefSeq ORF: 1407 bp
Locus ID: 15375
UniProt ID: P35582

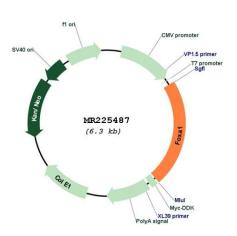


Cytogenetics: 12 24.7 cM MW: 49.3 kDa

Gene Summary:

Transcription factor that is involved in embryonic development, establishment of tissuespecific 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). Proposed to play a role in translating the epigenetic signatures into cell type-specific enhancer-driven transcriptional programs. Involved in the development of multiple endoderm-derived organ systems such as the liver, pancreas, lungs and prostate; FOXA1 and FOXA2 seem to have at least in part redundant roles. Plays a role in prostate morphogenesis and epithelial cell differentiation. 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 of 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. Is involved in ESR1-mediated transcription. Inhibits NKX2-1-mediated transcription from the SFTPC promoter in lung epithel independently from DNA-binding. Involved in regulation of apoptosis. Involved in cell cycle regulation. 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; activates the GCG promoter.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225487