

## Product datasheet for **MG225487**

### **Foxa1 (NM\_008259) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Foxa1 (NM_008259) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Foxa1
Synonyms:	Hnf-3a; Hnf3a; Tcf-3a; Tcf3a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG225487 representing NM\_008259  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTTAGGGACTGTGAAGATGGAAGGGCATGAGAGCAACGACTGGAACAGCTACTACGCGGACACGCAGG  
 AGGCCTACTCCTGTCCCTGTGTCAGCAACATGAACTCCGGCCTGGGCTCTATGAACTCCATGAACACCTA  
 CATGACCATGAACACCATGACCACGAGCGGCAACATGACCCCGGCTTCTTCAACATGTCCTACGCCAAC  
 ACGGGCTTAGGGGCGGCCTGAGTCCCGGTGCTGTGGCTGGCATGCCAGGGGCTCTGCAGGCGCCATGA  
 ACAGCATGACTGCGGGCGGCGTACGGCCATGGGTACGGCGCTGAGCCCGGAGGATGGGCTCCATGGG  
 CGCGCAGCCGCCACCTCCATGAACGGCTGGGTCCCTACGCCCGCCATGAACCCGTGCATGAGTCCC  
 ATGGCGTACGCGCGTCCAACCTGGGCCGAGCCGCGGGGGGGCGGGCGACGCAAGACATTCAAGC  
 GCAGCTACCTCAGCCAAGCCGCTTACTCCTACATCTCGTTCATCACGATGGCCATCCAGCAGGGCC  
 CAGCAAGATGCTCAGCTGAGCGAGATCTACCAGTGGATCATGGACCTCTTCCCCTATTACCGCCAGAAC  
 CAGCAGCGCTGGCAGAATCCATCCGCCACTCGCTGTCCTTCAACGATTGTTTCGTCAAGGTGGCAGCAT  
 CCCCAGCAAGCCAGGCAAGGGCTCCTACTGGACGCTGCACCCGACTCCGGCAACATGTTCCGAGAACGG  
 CTGCTACTTGGCGCGCCAAAAGCGCTTCAAGTGTGAGAAGCAGCCGGGGCCGGAGGTGGGAGTGGGGG  
 GGCGGCTCAAAGGGGGCCAGAAAGTCGCAAGGACCCCTCAGGCCCGGGGAACCCAGCGCCGAGTAC  
 CCCTTACCGGGGTGTGCACGAAAGGCTAGCCAGCTAGAGGGCGCGCCGGCCAGGGCCCGCCAG  
 CCCCAGACTCTGGACCACAGCGGGGCCACGGCAGAGGGGGCGCTTGGAGTTGAAGTCTCCAGCGTCT  
 TCATCTGCGCCCCCATAAGCTCCGGCCAGGGGCGCTAGCATCTGAAAGGGGATCCCCTACTCTTAAACCCCTCTC  
 CATCAACAACCTCATGTCTCCTCCGAGCAACAGCACAAGCTGGACTTCAAGGCATACGAGCAGGGCGTG  
 CAGTACTCTCTTATGGCGCTACCTTGGCCGCGCTGCCCCCTTGGCAGCGCCTCAGTGGCCACGAGGA  
 GCCCATCGAGCCCTCAGCCCTGGAGCCAGCCTACTACCAAGGTGTGATTCCAGACCCGTGCTAAATAC  
 TTCC

**ACGCGT**ACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG225487 representing NM\_008259  
 Red=Cloning site Green=Tags(s)

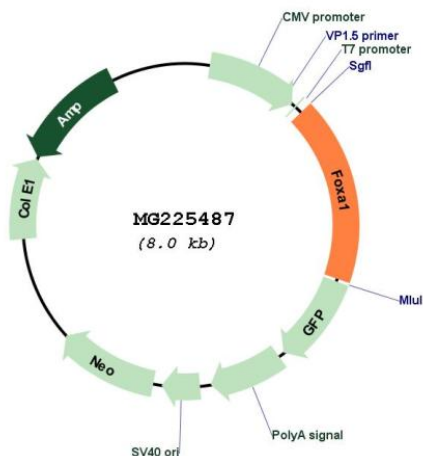
MLGTVKMEGHESNDWNSYYADTQEAYSSVPVSNMNSGLGSMNSMNTYMTMNTMTTSGNMTPASFNMSYAN  
 TGLGAGLSPGAVAGMPGASAGAMNSMTAAGVTAMGTALSPGGMGSMGAQPATSMNGLGPYAAAMNPCMSP  
 MAYAPSNLGRSRAGGGDAKTFKRSYPHAKPPYSYISLITMAIQQAPSKMLTSEIYQWIMDLFPYYRQN  
 QQRWQNSIRHLSFNDFVVKVARSPDKGKGSYWTLHPDSGNMFENGCYLRRQKRFKCEKQPGAGGGSGG  
 GGSKGGPESRKDPSGPNPSAESPLHRGVHGKASQLEGAPAPGPAASPQTLDHSGATATGGASELKSPAS  
 SSAPPISSGP GALASVPPSHPAHGLAPHESQLHLKGDPHYSFNHPFSINNLMSSSEQQHKLDFKAYEQAL  
 QSPY GATLPASLPLGSASVATRSPIEPSALEPAYYQGVYSRPVLNTS

**TR**TRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

**Plasmid Map:**


**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:** [NM\\_008259.4](#)

**RefSeq Size:** 3188 bp

**RefSeq ORF:** 1407 bp

**Locus ID:** 15375

**UniProt ID:** [P35582](#)

**Cytogenetics:** 12 24.7 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). 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, PEPCCK, etc. Interacts with the cis-acting regulatory regions of these genes. Involved in glucose homeostasis; activates the GCG promoter.[UniProtKB/Swiss-Prot Function]