

Product datasheet for **MC218787**

Foxc1 (NM_008592) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Foxc1 (NM_008592) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Foxc1
Synonyms:	ch; fkh-1; Fkh1; FREAC3; frkhda; Mf1; Mf4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC218787 representing NM_008592
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGGCGCGCTACTCGGTGTCCAGCCCCAACTCCCTGGGAGTGGTGCCTACCTCGGCGGCGAGCAGA
 GCTACTATCGCGCTGCCGCGGCGGCGGGGGCGGCTACACCGCCATGCCGGCCCTATGAGCGTGTA
 CTCGCACCCTGTCTACGCCGAGCAGTACCCGGGCAGCATGGCGCGCCTACGGGCTTATACGCCGAG
 CCGCAGCCCAAGGACATGGTGAAGCCGCCCTACAGCTACATCGCTTTATCACCATGGCCATCCAGAATG
 CCCCAGACAAGAAGATCACTCTGAATGGCATCTACCAGTTCATCATGGACCGTTCCTTCTATCGGGA
 CAATAAGCAGGGTGGCAGAACAGCATAACGACCACTCTCGCTCAACGAGTGTTCGTCGAAGTGCC
 CGCGACGACAAGAAGCCAGGCAAGGGCAGCTACTGGACGCTCGACCCGGACTCTACAACATGTTGAGA
 ACGGCAGCTTCTGCGGCGGCGGCGCTTCAAGAAGAAGGACGAGTGAAGGACAAGGAGGAGAAGGG
 CCGGCTGCACCTCCAAGAACCAGCCAGCCGCGAGCCGCGCCAGCCCGCGCCCGCCCGGAGCAG
 GCCGAGGGCTCCGCTCCCGGGCCACAGCCGCGCCGTCGCGCATCCAGGACATCAAGACGGAGAACGGTA
 CGTGTCCCTCGCCTCCCCAGCCCCTGTCCCGGCTGCCGCCCTAGGCAGCGGCAGCGCCGACAGTGCC
 CAAAATCGAGAGCCCCGACAGCAGCAGCAGCTTGTGAGCGGGAGCAGCCCCCGGGCAGCCTGCCG
 TCGGCGCGCCGCTCAGCCTGGACGCTGCAGAACCAGCGCCGCCACAGCCTGCGCCGCGCCGATC
 ACAGCCAGGGTTCAGCGTGGACAACATCATGACGTGCTGCGGGGGTGCAGCAGGGTTCGGCCGCTGA
 GCTCGGTTCCGGCCTCTGGCCTCGGCGGCTGCGTCTCGCGCGGGGCATCGCGCCCCGCTGGCGTG
 GGTGCCTACTCTCCGGCCAGAGCTCCCTCTACAGTCCCCCTGCAGCCAGAGCTCCAGTGCAGGAGCT
 CGGGCGGCGGGGTGGCGGCGGCGGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG
 CACTTACCACTGCAACCTGCAGGCTATGAGCCTGTACGCGGCGGGCAGGCTGGCGGCCACTTGCAGGGT
 CCGGCGGAGGCGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG
 GCAGCAGCTTTCGTCCTGAGTCATGGCGGGGCGGCCAGGAGGCCAGCCACCACCTGCATCCCACCA
 GGGCCGACTCACCTCGTGGTACCTGAACCAGGCAGGTGGAGACCTGGGCCACTTGGCGAGCGCGGCGG
 GCTGCGG
 AGCGGATCGGCTTGAACAACTCCCGGTGAATGGGAATAGTAGTGTGAGATGGCTTCCCTGCCAGTCA
 GTCTGTACCGCACGTGGGGGCTTTCGTCTATGACTGTAGCAAATTC**TGA**

ACGCGTACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM_008592
- Insert Size:** 1662 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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_008592.2](#), [NP_032618.2](#)

RefSeq Size: 3990 bp

RefSeq ORF: 1662 bp

Locus ID: 17300

UniProt ID: [Q61572](#)

Cytogenetics: 13 13.52 cM

Gene Summary:

DNA-binding transcriptional factor that plays a role in a broad range of cellular and developmental processes such as eye, bones, cardiovascular, kidney and skin development (PubMed:9635428, PubMed:9106663, PubMed:10479458, PubMed:10395790, PubMed:11562355, PubMed:18187037, PubMed:19668217, PubMed:22493429, PubMed:24590069, PubMed:25808752, PubMed:28223138). Acts either as a transcriptional activator or repressor (PubMed:28223138). Binds to the consensus binding site 5'-[G/C][A/T]AAA[T/C]AA[A/C]-3' in promoter of target genes (PubMed:25808752). Upon DNA-binding, promotes DNA bending. Acts as a transcriptional coactivator (PubMed:25808752). Stimulates Indian hedgehog (Ihh)-induced target gene expression mediated by the transcription factor GLI2, and hence regulates endochondral ossification (PubMed:25808752). Acts also as a transcriptional coregulator by increasing DNA-binding capacity of GLI2 in breast cancer cells. Regulates FOXO1 through binding to a conserved element, 5'-GTAAACAAA-3' in its promoter region, implicating FOXC1 as an important regulator of cell viability and resistance to oxidative stress in the eye (By similarity). Cooperates with transcription factor FOXC2 in regulating expression of genes that maintain podocyte integrity (PubMed:28223138). Promotes cell growth inhibition by stopping the cell cycle in the G1 phase through TGF β 1-mediated signals. Involved in epithelial-mesenchymal transition (EMT) induction by increasing cell proliferation, migration and invasion (By similarity). Involved in chemokine CXCL12-induced endothelial cell migration through the control of CXCR4 expression (PubMed:18187037). Plays a role in the gene regulatory network essential for epidermal keratinocyte terminal differentiation (By similarity). Essential developmental transcriptional factor required for mesoderm-derived tissues formation, such as the somites, skin, bone and cartilage (PubMed:9106663, PubMed:10479458, PubMed:10395790, PubMed:10704385, PubMed:11562355, PubMed:15196959). Positively regulates CXCL12 and stem cell factor expression in bone marrow mesenchymal progenitor cells, and hence plays a role in the development and maintenance of mesenchymal niches for haematopoietic stem and progenitor cells (HSPC) (PubMed:24590069). Plays a role in corneal transparency by preventing both blood vessel and lymphatic vessel growth during embryonic development in a VEGF-dependent manner (PubMed:22171010). May function as a tumor suppressor (By similarity).[UniProtKB/Swiss-Prot Function]