

Product datasheet for **MR208772L2V**

Foxc1 (NM_008592) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Foxc1 (NM_008592) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Foxc1
Synonyms:	ch; fkh-1; Fkh1; FREAC3; frkhda; Mf1; Mf4
Mammalian Cell Selection:	None
Vector:	pLenti-C-mGFP (PS100071)
Tag:	mGFP
ACCN:	NM_008592
ORF Size:	1659 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR208772).
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.
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



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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 TGFβ1-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]