

Product datasheet for **KN506070**

Foxc1 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 linear donor
Donor DNA:	EF1a-GFP-P2A-Puro
Symbol:	Foxc1
Locus ID:	17300



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Components:
KN506070G1, Foxc1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN506070G2, Foxc1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN506070D, Linear donor DNA containing LoxP-EF1a-tGFP-P2A-Puro-LoxP:

The sequence below is cassette sequence only. The linear donor DNA also contains proprietary target sequence.

LoxP-EF1a-tGFP-P2A-Puro-LoxP (2739 bp)

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ATAACTTCGT ATAATGTATG CTATACGAAG TTATCGTGAG GCTCCGGTGC CCGTCAGTGG GCAGAGCGCA
CATCGCCAC AGTCCCCGAG AAGTTGGGG GAGGGGTCGG CAATTGAACC GGTGCCTAGA GAAGGTGGCG
CGGGTAAC TGGGAAAGTG ATGTCGTGTA CTGGCTCCG CTTTTCCCG AGGGTGGGG AGAACCGTAT
ATAAGTCAG TAGTCGCCGTAACGTTCTT TTTCCGAACG GGTTCGCCG CAGAACACAG GTAAGTGCCG
TGTGTGGTTC CCGCGGGCCT GGCCTCTTTA CGGGTTATGG CCCTTGCGTG CCTTGAATTA CTTCCACCTG
GCTGCAGTAC GTGATTCTTG ATCCCGAGCT TCGGGTTGGA AGTGGGTGGG AGAGTTCGAG GCCTTGCGCT
TAAGGAGCCC CTTCGCCTCG TGCTTGAGTT GAGGCCTGGC CTGGGCGCTG GGGCCCGCG GTGCGAATCT
GGTGGCACCT TCGCGCCTGT CTCGCTGCTT TCGATAAGTC TCTAGCCATT TAAAATTTT GATGACCTGC
TGCAGCGCTT TTTTCTGGC AAGATAGTCT TGTAATGCG GGCCAAGATC TGCACACTGG TATTTTCGTT
TTTGGGGCCG CGGGCGGCGA CGGGGCCCGT GCGTCCCAGC GCACATGTTC GGCAGGCGG GGCCTGCGAG
CGCGGCCACC GAGAATCGGA CGGGGGTAGT CTAAGCTGG CCGGCCTGCT CTGGTGCCTG GCCTCGCGCC
GCCGTGTATC GCCCGCCCT GGGCGGCAAG GCTGGCCCG TCGGCACCAG TTGCGTGAGC GGAAAGATGG
CCGTTCCCG GCCCTGTGC AGGGAGCTCA AAATGGAGGA CGCGGCGCTC GGGAGAGCGG GCGGGTGAGT
CACCCACACA AAGGAAAAGG GCCTTCCCGT CCTCAGCCGT CGCTTCATGT GACTCCACGG AGTACCGGGC
GCCGTCAGG CACCTCGATT AGTTCTCGAG CTTTTGGAGT ACGTCGTCTT TAGTTGGGG GGAGGGGTTT
TATGCGATGG AGTTTCCCA CACTGAGTGG GTGAGACTG AAGTTAGGCC AGCTTGGCAG TTGATGTAAT
TCTCCTTGGG ATTTGCCCTT TTTGAGTTTG GATCTTGGTT CATTCTCAAG CCTCAGACAG TGGTTCAAAG
TTTTTTCTT CCATTTCAAG TGTCGTGAAT GGAGAGCGAC GAGAGCGGCC TGCCCGCCAT GGAGATCGAG
TGCCGCATCA CCGGCACCCT GAACGGCGTG GAGTTCGAGC TGGTGGGCGG CGGAGAGGGC ACCCCCGAGC
AGGGCCGCAT GACCAACAAG ATGAAGAGCA CCAAAGGCGC CCTGACCTTC AGCCCTACC TGCTGAGCCA
CGTGATGGG TACGGCTTCT ACCACTTCGG CACCTACCCC AGCGGCTACG AGAACCCCTT CCTGCACGCC
ATCAACAACG GCGGCTACAC CAACACCCG ATCGAGAAGT ACGAGGACGG CGGCGTGCTG CACGTGAGCT
TCAGCTACCG CTACGAGGCC GGCCGCGTGA TCGGCGACTT CAAGGTGATG GGCACCGGCT TCCCGGAGGA
CAGCGTGATC TTCACCGACA AGATCATCCG CAGCAACGCC ACCGTGGAGC ACCTGCACCC CATGGCGGAT
AACGATCTGG ATGGCAGCTT CACCCGACC TTCAGCCTGC GCGACGGCGG CTACTIONAGC TCCGTGGTGG
ACAGCCACAT GCACTTCAAG AGCGCCATCC ACCCCAGCAT CCTGCAGAAC GGGGGCCCA TGTTCCCTT
CCGCCCGTG GAGGAGGATC ACAGCAACAC CGAGTGGGG ATCGTGGAGT ACCAGCACGC CTTCAAGACC
CCGGATGCAG ATGCCGGTGA AGAAAGAGGA AGCGGAGCTA CTAACCTCAG CCTGCTGAAG CAGGCTGGAG
ACGTGGAGGA GAACCTGGA CCTATGACCG AGTACAAGC CACGGTGC GCCTGCCACC GCGACGACGT
CCCCAGGGCC GTACGCACC TCGCCGCCG GTTCGCCGAC TACCCGCCA CGGCCACAC CGTCGATCCG
GACCGCCACA TCGAGCGGGT CACCGAGCTG CAAGAATCT TCCTCACGCG CGTCGGGCTC GACATCGGCA
AGGTGTGGG CGCGGACGAC GGCGCCGCG TGGCGGTCTG GACCAGCCG GAGAGCGTGC AAGCGGGGGC
GGTGTTCGCC GAGATCGGCC CGCGCATGGC CGAGTTGAGC GGTTCGGG TGGCCCGCA GCAACAGATG
GAAGCCCTCC TGCGCCGCA CCGGCCAAG GAGCCCGCT GGTTCCTGGC CACCCTCGGC GTCTCGCCG
ACCACCAGG CAAGGTCTG GGCAGCGCG TCGTGTCCC CGGAGTGGAG GCGGCCGAGC GCGCCGGGT
GCCCGCTTC CTGGAGACT CCGCGCCCG CAACCTCCC TTCTACGAGC GGCTCGGCT CACCGTCACC
GCCGACGTC AGGTGCCGA AGGACCGCG ACCTGGTGA TGACCCGCA GCCCGGTGCC TGAACCTGT
TTATTGCAGC TTATAATGGT TACAAATAA GCAATAGCAT CACAAATTC ACAAATAAG CATTTTTTTC
ACTGCATTCT AGTTGTGGT TGTCCAACT CATCAATGA TCTTAATAAC TTCGTATAAT GTATGCTATA CGAAGTTAT
    
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Disclaimer:	These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.
RefSeq:	NM_008592
UniProt ID:	Q61572
Synonyms:	ch; fkh-1; Fkh1; FREAC3; frkhda; Mf1; Mf4
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]

Product images:

