

Table S1. Primers used

A Quantitative RT-PCR		
Gene	Primer name	Sequence
Ascl1/Xash1	Fxash1qRT	CCCCAACTATTCCCACGATA
Ascl1/Xash1	Rxash1qRT	TGCTACTCCGCATCTCAGAA
Bambi	F xBambi	AAAAGCTGCTGCCTGACCTGT
Bambi	R xBambi	CTGTACATCCCCCAATGGAC
Bmp4	xBmp4 F	ACCCATAGCTGCAAATGGAC
Bmp4	xBmp4 R	CATGCTTCCCCTGATGAGTT
Bmp7	xBmp7 F	TGAGTTCTTTCCGCACA
Bmp7	xBmp7 R	CAGTCTTCTCCAGCATTATT
Brachyury	Xbra F	AGCTCACCAACGAGATGATCG
Brachyury	Xbra R	AACCGTATACATTGCATTGGGAT
Brat	xBrat F	GAGAACTGCTGTCGGGAAT
Brat	xBrat R	GGCAGGTAGAGGGAGTCTTG
Btg1	xBtg1 F	GCCAACATGAAGCCAGAGA
Btg1	xBtg1 R	TTATAGTGATCGGCCAGCAT
Ccnd1	xCcnd1 F	TGATCTCCTTCTGGCAACAT
Ccnd1	xCcnd1 R	GTGTCCACTTCGAGCATAG
Chd	Fx Chd3	ATGCCTATGGGCTCTTTCCT
Chd	Rx Chd3	CCAAGCAAATCCTTCTCTCG
Cxcr4	Fx Cxcr4	ACTGCATTTGGGAGAACACC
Cxcr4	Rx Cxcr4	CTGAGGTGAATGCGTTCTGA
Dlx3	Fx Dlx3	GGTTCAGCGAAATGTTCCAT
Dlx3	Rx Dlx3	ATGGAGTGGCACTGGATTTC
Dlx5	F xDlx5	GCGCTGAATGCGTATCAGTA
Dlx5	R xDlx5	AGGGCTCCCATAGCCATAGT
Dlx6	F xDlx6	ATCCGGTTTAAATGGGAAAGG
Dlx6	R xDlx6	AGTGCCAGGTAAGGGTTTG
Dullard	xDullard F	CTGGAGCTTCGTCTCTACC
Dullard	xDullard R	TTCCGTTTCACTGACTGAG
Dusp1	xDusp1 F	GGTCGTTCTTCTCTTCAGC
Dusp1	xDusp1 R	CACCTCTGCTCCTCATTGG
Ef1a	xEf1a F	CACCATGAAGCCCTACTGA
Ef1a	xEf1a R	ACCTGTGCGGTAAGAAACC
Efna1	Fx Efna1	TGAGTGGAGTGTTGGAGCTG
Efna1	Rx Efna1	ACCGTGAATCCTCTGCAC
Elf1	xElf1 F	CGCCTGAAAGCAAACAGAC
Elf1	xElf1 R	GGAGAAGGAAACCCGTTAGG
Epiker	FxEpiKerqRT	CACCAGAACACAGAGTAC
Epiker	RxEpiKerqRT	CAACCTTCCCATCAACCA
Etv5/Xer81	xER81/ETV5 F	CGAGCCGTGCAATTCTTT
Etv5/Xer81	xER81/ETV5 R	CCTTGTGGAGGAAACTGAATG
Foxd5a	xFoxD5a F	CCAATCTGTGACCCTCCACT
Foxd5a	xFoxD5a R	CTTCCCGGACAACCTTGTA
Foxi1	F xFoxi1	TCCTCAGCGACCTTCAAAC
Foxi1	R xFoxi1	TCCTGGCAGATATGGAGGAG
Fzd10	Fx Fzd10b	GACGCAAGACAAGTGCAAAA
Fzd10	Rx Fzd10b	CTGCTGGGATAGAGCTGGTC
Fzd7	Fx Fzd7	AAACACACCTTGTGCCTTCC
Fzd7	Rx Fzd7	GGCCCATTTAAAGCAAAACA
Gadd45a	xGadd45a F	AGTCAGCAAGCGAAGAACAC
Gadd45a	xGadd45a R	AGGTTGCACTCCTCTGCAC
Gnb1	Fx Gnb1	GCCGGTTTCTTGATGACAAT
Gnb1	Rx Gnb1	GTCTTCTGCTGTCCCGTCTC
Goosecoid	xGoosecoid F	TTCACCGATGAACAACCTGGA
Goosecoid	xGoosecoid R	TTCCACTTTTGGGCATTTTC
Gos2	Fx G0S2	CCGATATGGAAACCATCCAC
Gos2	Rx G0S2	AATGACCACTCCGAACAAGG
GPR143	Fx Gpr143	TCCAATGCAAGGCTTCTCT
GPR143	Rx Gpr143	CCATTGTGTGACGCTTCAGT
Grhl1	xGrhl1 F	AAGACGGTGCCTTTAACAT
Grhl1	xGrhl1 R	CTCTGGGATTCGGTTTTGAT
Grhl3	xGrhl3 F	GGCACGAGACCTCAGTTTTAC
Grhl3	xGrhl3 R	CAATCATCTGTGACCCTCCTC
Hist2h2aa	xHist2h2aa F	GCCAGGGACAACAAGAAACT
Hist2h2aa	xHist2h2aa R	CAGCAGAGCAGATTGGATGT
Id2	xId2 F	GCATCGTCAGTCTCCATCAT

Id2	xld2 R	GGATTTGCTCTCGTCTGTGA
Id3	Fx Id3	GTTATTTGCCACCCCATCTG
Id3	Rx Id3	TTACTAGCCAAGCCCCACAC
Kitlg	Fx Kitlg	CTTGTACCATGCCTGCAGAA
Kitlg	Rx Kitlg	GACCTGGCAGAGGAATCAAA
Klf2	F xKlf2	GCTGGTTGTGGGAAGACCTA
Klf2	R xKlf2	GTTTCATCAGATCGGGCAAAT
Ldb1	Fx ldb1	TTGGAGGATGGACCAAAGAG
Ldb1	Rx ldb1	CTTGGGGTGCTTCAAGACAT
Lhx5	Fx Lhx5	GTGCAACCTGACCGAAAAAT
Lhx5	Rx Lhx5	CTCGCTTTCCTGACCAAGTC
Lmo4	xLMO4 F	TCATCCCAGCTTCTTCTTT
Lmo4	xLMO4 R	GATCAACTCGGCGCTATTCT
Map2k7	xMap2k7-A F	GAGCAGAAACTCTCCCGTCT
Map2k7	xMap2k7-A R	GAATGTCCATCATTGGCAAG
MGC81002	Fx MGC81002	GAACGTGGAGACCTCAGAGC
MGC81002	Rx MGC81002	AAGAAACGAGGCCACTGAGA
Mix.2	Fx Mix.2	GAA GGA CTT CCA GCA GCA TC
Mix.2	Rx Mix.2	GCG TCT TTG GGT CTG ACA TT
Mos	Fx mosxe	TGGGGCAATTCATACCAAGT
Mos	Rx mosxe	GGCCATTACACTTCTGAT
Msx1	FxMsx1qRT	TTATGCAACTGCCAGAGGAG
Msx1	RxMsx1qRT	GGGCTTTCTGTTGGTTTTGT
Msx2	xMsx2 F	TCATTTAGGGATCAGGGACAGC
Msx2	xMsx2 R	TGGTGCCATCTTCGGAGTTTTT
Myo10	xMyo10 F	GTGAAGAAGCGTTGCAGTGT
Myo10	xMyo10 R	CTCGATGAAGGATGATGACG
Oct1/Pou2f1	xOct-1 F	AACTACCTCAGCAAAGCCAAG
Oct1/Pou2f1	xOct-1 R	GTACAGGGGTGGCAGCTATT
Oct25/Pou5f1	xOct-25 F	CCTTCACCTTTTGTTTTTA
Oct25/Pou5f1	xOct-25 R	TTTTTGGGTTTGGGAATG
Oct60/Pou5f1	xOct-60 F	ACTACAATGCCCGTCCTACCC
Oct60/Pou5f1	xOct-60 R	ACTCCCCGGCGTTTTCTCCT
Oct91/Pou5f1	xOCT-91 F	ATGAAGGGCAGTTATGGTA
Oct91/Pou5f1	xOCT-91 R	CAGTGGGGGTGGTGCTCA
Otx1	Fx Otx1	CTTGGTACAGCCCTGGGATA
Otx1	Rx Otx1	GCCAGAAGCTACACGAGTCC
Pax6	Fx Pax6	CCAATCAGCCTAGGATTCCA
Pax6	Rx Pax6	CGCTAAGATCCTGTGTGCAA
Pcgf2	xPcgf2 F	CCTGCAAGAGGTTGAGGTTT
Pcgf2	xPcgf2 R	CTGGGGAGAGAGGATGATGT
Per1	xPer1-A F	GGGCTTCTTCTCTCTCTCT
Per1	xPer1-A R	GAACTTGGGCTGGTGTCTCT
Rab27A	Fx Rab27a	TCCGATGGGGATTACGATTA
Rab27A	Rx Rab27a	TCAATGCCCACTGTTGTGAT
Sall1	F xSall1	TGAACAAATCCGTACCAAA
Sall1	R xSall1	GGGACAAATGGGAACCTAGA
Sizzled/Szl	xSzl F	GGCAGAACCTCCTACAAACC
Sizzled/Szl	xSzl R	GAACGTGTCCAGGCAGACT
Smad7	Fx Smad7	GGCGACTTTAGAGCGACATC
Smad7	Rx Smad7	TAGCAACAGCATCAGCATCC
Sox11	xSox11 F	GGCAGAAGGCACATCATAC
Sox11	xSox11 R	CATTAGGAAAACAGGCCAAAAG
Sox2	Xsox2 F	CCAGTCCACCTGTAGTCACCTCT
Sox2	Xsox2 R	CACTTCTGCCCAAGGTAGGTAC
Sox7	F xSox7	CAGAGAGCCTGGACTGTTCC
Sox7	R xSox7	GTCTTCGGATACGGGTCTCA
Suv39h1	xSuv39h1 F	GCAACAATCTCCTGAAGCAA
Suv39h1	xSuv39h1 R	TAGTGGGAAAGGCTCTGGTC
Szl	xSzl F	GGCAGAACCTCCTACAAACC
Szl	xSzl R	GAACGTGTCCAGGCAGACT
Tbx3	F xTbx3	GATCCCAGAGTCTCCATCCA
Tbx3	R xTbx3	CTGACACAGCCAGGAGTTCA
Tbx6/Brat	xBrat	GAGAAACTGGTGTGGGAAT
Tbx6/Brat	xBrat	GGCAGGTAGAGGGAGTCTTG
Tead1	Fx Tead1	CGTTTCTTTACCGAATCCA
Tead1	Rx Tead1	GTGTCCCGTTTGTAAACCAC
Tiarin	xTiarin F	GGAACCTGGCAAACATGGAG
Tiarin	xTiarin R	TGCAGAGGAGCTACCCAAT
Tmem45b	xTmem45b	AGTGGGACCAGACTGACCAC

Tmem45b	xTmem45b	TGCCAGACAACCTTCTGTGC
Vdac1	Fx Vdac1	TGGTGTCCGCAACATAGAA
Vdac1	Rx Vdac1	TGGGTGTTTGCATACCAGA
Vent1	xVent1 F	TGGTTCAACAGGGATTCTTC
Vent1	xVent1 R	CTGCTAAGGAAGGATTTGC
Vent2	FxVent2qRT	GCTACACAGGGACACAACCTC
Vent2	RxVent2qRT	GCCTGAGTCAGTGCTAGTGC
Xer81/Etv5	XER81/ETV5 F	CGAGCCGTGCAATTCTTT
Xer81/Etv5	XER81/ETV5 R	CCTTGTGGAGGAAACTGAATG
Xhel	F xXhel	CACATTCTGTGGACCCCTCT
Xhel	R xXhel	AGCCGTTCTTCTGCACTGAT
Xpo	xXpo F	GTGCAGGAGATCAAAAAGAGAG
Xpo	xXpo R	CAATGTGAGACCAACTGCTGTA
Zic1	xZic1 F	TCCGTTACATGAGGCAGCC
Zic1	xZic1 R	TTGTTGCACGACTTTTGGG
Zic2	Fx Zic2	TCAACAACCCCAAGAAAAGC
Zic2	Rx Zic2	ACACTCCTCCAGAAGCAGA
Zic3	xZic3 F	CCTGTGTGCACCCTGATATG
Zic3	xZic3 R	TACATGAGGCAACCCATCAA

#### B Chromatin immunoprecipitation

Gene	Primer name	Sequence
Goosecoid	Fx Gsc-1	CAGGGAGAGTCTGCGATTTT
Goosecoid	Rx Gsc-1	GGATGGGGTGAGAGGAGACT
Goosecoid	Fx Gsc-2	TAATGTCCCATCACGCTCAA
Goosecoid	Rx Gsc-2	AAGCACAGCAGCTCCACTCT
Goosecoid	Fx Gsc-3	AGAGTGGAGCTGCTGTGCTT
Goosecoid	Rx Gsc-3	CGACTTTGTGTGTGCGTCTC
Brachyury	Fx Bra-1	GGGTGACACACCACTTCCTC
Brachyury	Rx Bra-1	GAGCACAGAAACCCAGAGA
Brachyury	Fx Bra-2	TCTCTGGGGTTTCTGTGCTC
Brachyury	Rx Bra-2	AGGCAGCTCATTGGTCAGTT
Brachyury	Fx Bra-3	CACAGCTTGTCCAGGCCTAT
Brachyury	Rx Bra-3	TGCGATTGATCAGCAGGTAG

Each primer set was designed using the Primer 3 program and parameters recommended for quantitative PCR (qPCR). Some primer sequences were also analyzed using the NCBI primer-BLAST program to assure that they only recognized the intended gene and not related genes. PCR products were run on a 2% agarose gel and tested by melting curve to ensure that they produced a single product of the expected size.