

Table S3. Primers used

Detection or amplification	Name of primer	Sequence (5' to 3')	Melting temperature (°C)	Product size (kb)
dchs1 conditional targeting with Neo present	dchs1-2285	CCGGAGAGAGTCTGGAGTTCGAGTTT	61.3	4.4
	neo-219	CGAGGCCAGAGGCCACTTGTGTA	63.1	
dchs1 conditional targeting with Neo deleted, i.e. presence of left arm loxP	dchs1-2285	CCGGAGAGAGTCTGGAGTTCGAGTTT	61.3	4.2
	FRT-loxP	CGACCTGCAGGCATGCAAGCTTCAGAA	62.3	
presence of right arm loxP	dchs1-9380loxp	GGGAGGACCTCACAGCGGACGAGGAATAACTT	66.4	0.3
	dchs1-9639	GCTGGGCTTACAGTGTGAGCAATGAT	62.9	
dchs1 exon2 presence and deletion	dchs1-6232	CCCCAGACATTCTCAGCCCTTCTCTA	62.8	presence 3.4 deletion 0.47
	dchs1-9639	GCTGGGCTTACAGTGTGAGCAATGAT	62.9	
dchs1 targeting vector left arm	dchs1-2471	CAGGGTACCGCGATCGCCGTGCCTGCTGTGTCAGTCCACATGAA	73.1	4
	dchs1-6468	CAGCTCGAGCCTTGAAGATGTCTATGAAGAAAATTTGGAA	63.1	
dchs1 exon2 plus left and right partial introns	dchs1-6469	CAGGTCGACATGCATCTGTTCAACTCTAGTTTTAAGCTCCATGAAA	65.9	2.94
	dchs1-9404	GAGTCTAGAATTCATAACTTCGTATAATGTATGCTATACGAAGTTATTCCTCGTCC	63.2	
dchs1 targeting vector right arm	dchs1-9405	CAGTCTAGAAAAGAGATGGGGAGAACATGAATCTAA	59.9	3.9
	dchs1-13395	CAGGCGGCCGCCAGCCTCAAGGTAGGAACCTACATATT	69.9	
dchs1 left arm Southern blotting probe	Dchs1-1257	CCCTGGAGTGCCTCTTGAAAA	57.1	1.11
	Dchs1-2369	CCCTAGGGCCTCTGTCTGGACTAT	58.3	
dchs1 right arm Southern blotting probe	Dchs1-13515	CCCCAAGTAGAACAGTGTAGTTT	54.4	1.13
	Dchs1-14647	GAGGGGAGAAGTCTTGAAAA	57.1	
quantitative real-time PCR for dchs1	dchs1-F	GGCCTGCCTCTTTAGTCTC	57.5	0.16
	dchs1-R	TGTCAGCATCTGTGGCTGTT	57	
quantitative real-time PCR for fat4	fat4-F	ATGCCCAAAAACCCCAAAGAG	56.2	0.102
	fat4-R	CCCATAGGGAGGGATGTTGTC	57	
quantitative real-time PCR for ret	ret-F	GCAGCGAGGAAATGTACCGT	57.8	0.151
	ret-R	GAGTCCGAAGGTGTGGATGC	58.1	
quantitative real-time PCR for fjsx1	fjsx1-qF	ATCCTCTTCGATTACCTGACGG	56	0.119
	fjsx1-qR	TTGTCCAGAAAGACCAACGCC	57.9	
quantitative real-time PCR for wnt11	wnt11-F	GCTGGCACTGTCCAAGACTC	58.3	0.23
	wnt11-R	CTCCCGTGTACCTCTCTCCA	57.8	
quantitative real-time PCR for GDNF	GDNF-F	CCAGTGA CTCCAATATGCCTG	55.4	0.185
	GDNF-R	CTCTGCGACCTTCCCTCTG	57.6	
quantitative real-time PCR for β -actin	actin- β F	GGCTGTATTCCCTCCATCG	57.6	0.154
	Actin- β R	CCAGTTGGTAAACAATGCCATGT	55.9	

The sequences of PCR primers used for cloning and quantitative RT-PCR.