

**Table S1 – related to Materials & Methods**

**Oligos and probes used for indicated experiments**

qPCR analysis	Forward	Reverse
<i>Nkx2-5</i>	AAGTGCTCTCCTGCTTTCCCA	TTTGTCCAGCTCCACTGCCTT
<i>Swhtr</i>	CCGCAAACCGAACAACCTCAG	CTGCCTAAGTGGGGGAAGTG
<i>Eaf1</i>	agagctgtggttggcatt	agagagcaaacctggagcc
<i>Tnni1</i>	CCATGGATCTGCGGGCCAACC	GCGGCCTTCCATGCCAGACA
<i>Cdh5</i>	TTGGACCGAGAGAAACAGGC	CTTGCCCACTCGGATGTCTT
<i>Ptprc</i>	GGCTTCAAGGAACCCAGGAA	GAGTGCCTTCTCCATGCTT
<i>Ddr2</i>	AGCGAGGTACAGGACTCCAT	TCCCCGCTCCTCCTCAATTA
<i>Xist</i>	agggtgtgtgcatatgga	ccgccatctttcctgtacg
<i>Snrnp70</i>	tgctcctcctcaacaagag	cagagtctgaaggcatcgc
<i>Hmbs</i>	CCTGGGCGGAGTCATGTC	ACTCGAATCACCTCATCTTTGA

  

RACE analysis	Reverse
5' <i>Swhtr</i>	GATTACGCCAAGCTTTCTCCATCCCGCTTTTCACC
3' <i>Swhtr</i>	GATTACGCCAAGCTTATCCCCTGGAAGTGGGGTTA

  

smFISH probes	<i>Nkx2-5</i>	<i>Swhtr</i>
1	ctggagtaggggggattcag	accacttacaacctgattca
2	caggtggtagcagagagtg	atgtgcacctgaaagcttg
3	gagaaaggcgtgggtgtgag	aatgtctctttaagggtct
4	caggttcaggatgtcttga	gttcacactaattggtgtgc
5	gaaagcaggagagcacttg	aaaggccctatcgattactt
6	taggctcccgggtaaaatgt	gaagtggagcagttgaagca
7	gcgcacagctcttttatc	caaagagtatctggcctac
8	ctgcgagaagagcagcgctg	gtattgcagccaagaagtga
9	ggtaccgctgttgcctgaag	ggcaattggaaggagcaag
10	tggacgtgagcttcagcacg	ctcagcagttgagtaatcc
11	tggaaccagatcttgacctg	ctacttgtttccgtacaga
12	tcgcttgacctgtagcgac	aacctttgctattgccaag
13	agaagctccagagtctggtc	cctgaagggaaggactagtt
14	ttgtagccataggcattgag	ctgaacactctgcctaagtg
15	gacgcaaagttcacgaagt	tgtagagggaagacaccc
16	gactctgcacggtgttcaag	taggacaggaagagagccat
17	ttctcctaaaggtgggagtc	gaaaaggtctaaggtccct
18	tgggtgtgaaatctgagggg	ttaccaaccaggcactatag

19	gggatggatcggagaaagg	gtcacagatagagcagga
20	acaccaggctacgtcaataa	gtgtctttcgttcagttg
21	gtgtggaatccgtcgaaggt	ctagtttcgggtcaagagt
22	cgacggcaagacaaccaggg	tcatgaaccacattgcata
23	aacataaatacgggtgggtg	gtcaagaatgctaacctgg
24	gagggttctcatttcttaca	gttcagactgtaggcattt
25	gtagcgactcactttaat	ctttcattgataggcaga
26		gggatactgcctacatatt
27		tatcccttggatttgagt
28		ccatccagaatggatagagt
29		aatccatagcattggctgg
30		atagctcgattcttaggtg
31		caacctcaaggccagaagaa
32		agacttccttggtgaagg
33		aatcgcttagactgcgtgg
34		gacccaaaacaacagccatg
35		ctagtcttaccaccaagta
36		gcccaatagttagaacatgc
37		ctagaaccaaagccctact
38		ttgtcctgtggacttaacac
39		tctggtgctcaaggtaaaa
40		gatgtccaggatggaaatgc
41		aatacattggaacaccctgc
42		ttccaatctgtgcagaagtc
43		aggcccaggtaaaagaactc
44		ttgttatctatttgccacg
45		atgcattactatatagccca
46		attcacatttatcctgacct
47		tatcttattccatgctcact
48		tgccaactgaaccagtttta

Genotyping	Forward	Reverse	Internal
<i>Swthr3xpA/3xpA</i>	CCCGCATGAAGATTCTGGGA	GCCTGAAATGAGCCTTGGGA	CAGGTTGGAAGTGGAGCAG
<i>Swthr3xpA/3xpA;tg</i>	TGACCGAGTACAAGCCCAC	GCGCAGACAGGTCCCCAGAC	

WISH probes	Forward	Reverse
<i>Nkx2-5</i>	aATTTAGGTGACACTATAGAA CAAGTGCTCTCCTGCTTTCC	aTAATACGACTCACTATAGG GTGGAATCCGTCGAAAGT

*Swthr*

aATTTAGGTGACACTATAGAA  
AATCTTTGGGCCAGGACTTT

aTAATACGACTCACTATAGG  
TCCACCTCTTTTTCCATTGC