

**Supplementary Table 1.** Primers (from 5' to 3') for synthesizing antisense cRNA probes or for quantitative PCR and ChIP PCR.

In situ probes	Forward primer	Reverse primer	Notes
<i>Bmp4</i>	TGGTAACCGAATGCTGATGG	GATGGCATGGTTGGTTGAGTTG	Exon 3-4
<i>Bmp7</i>	AACGAGGTGCACTCCAGC	TCTTGGAGCGATTCTGGC	Genepaint.org
<i>Fgfr2</i>	CACCAACTGCACCAATGAAC	CAGCATACATGGTGGGTCAG	Exon 14-16
<i>GDNF</i>	CTTGGCCTTCTGATCCTCTG	CCTGCACAGTTCCTATGT	Exon 3
<i>GFR<math>\alpha</math>1</i>	AAGTCCCTGGTCACATCCAG	TATCTCCATCCCAGCCAGTC	Exon 11
<i>Lim1</i>	ATCTCTCCAAGCGATCTGGTTCGC	TCTCTGTACAACCACGAGCTCC	Exon 2-5
<i>Pax2</i>	TATGCACTGCAAAGCAGACC	GAAAGGCTGCTGAACTTTGG	Exon 1-4
<i>Pax8</i>	AAGGAAGAGACGCCTGGGCCTTGG	CACTCAAGGGCCTCGAGATGGTGC	Exon 1-7
<i>Ret</i>	ATCTGGGGAGGGAGTCAGTT	GAACCCTCTAGGGGCTGTTC	Exon 19
<i>Wnt4</i>	GCCGCGAGCAATTGGCTGTACC	GCATGTGTGTCAAGATGGCCTT	Exon 1-5
<i>Wnt9b</i>	TGTGTGTGGTGACAATCTGAA	AGGCCTAGCGCTTGCAG	Genepaint.org
<i>Wnt11</i>	ACCTGCTTGACCTGGAGAGA	ACCACTCTGTCCGTGTAGGG	Exon 4-7
<b>Q-PCR</b>			
<i>Ret</i>	GCATGTCAGACCCGAACTGG	CGCTGAGGGTGAAACCATCC	Exon 20
<i>Lrp6</i>	ACGGGACTTGAGATTGGTTG	CGGGGACAATAATCCAGAAA	Exon 2
<i>GAPDH</i>	TGCTGAGTATGTCGTGGAGTCT	CATATTTCTCGTGGTTCACACC	Exon 3-4
<b>ChIP</b>			
<i>Ret R1</i>	GGAGAGTTCGATTCTTCTGGCA	GTTTGTGATTCCCAGGACCGGT	
<i>Ret R2</i>	CAGGGGAAACTGAGGTTCAAGGC	GTCTCCCTGTACCTAGGGCAGGT	
<i>Ret R3</i>	CCCATGTCCACTCTGAGGGAC	ACCTGGAGCCCCCTTGAGTCTTGCT	
<i>Ret R4</i>	GCCTCTTCTAGGTTAGAAGGCTG	AGTATGCAGAGCCCCACCCTCCTG	