

Table S1: Primer and probe sequences designed for custom TaqMan MGB Allelic Discrimination Assays. Probes are listed with the dyes used for each probe which are listed as VIC and FAM. The target is named starting with the gene name and then followed by SNP with chromosome and base pair location.

Gene	Primer	Probe
<i>ALPL</i> SNP_2:1318372 01	Forward Primer: CGTGCTAAGTCACTTCAGTCATGTC	Probe 1 (VIC): ACTCTGTGATCCTACG GA
	Reverse Primer: CCCAGATCAAAGAAAAGAGTAAGATA AAT	Probe 2 (FAM): CTGTGATCCTACAGAC T
<i>ESR1</i> SNP_9:9011565 0	Forward Primer: AAAAGTGATGGTGTCCCTTGAAA	Probe 1 (VIC): CTCAGGACGCCAGA
	Reverse Primer: CCCAAGGCTCTGTAAAAGATTAACC	Probe 2 (FAM): CTCAGGGCGCCAGAT
<i>ESR1</i> SNP _9:90015095	Forward Primer: CAAGAGATGAACAAATAAACCAGCAA	Probe 1 (VIC): AGGTTGAAATCAGGTC T
	Reverse Primer: AGGTTGAAATCAGGCCT	Probe 2 (FAM): AGGTTGAAATCAGGCC T

Table S2: Custom primer designs used in targeted gene sequencing for locations. Primer target lists the gene of interested that was intended for sequencing. Some targets had two primer sets designed for it and that is denoted in the title after the gene name as “Set 1” or “Set 2”.

Primer Target	Primer Pair Sequence
<i>OSTERIX Set 1</i>	Forward Primer: 5'-AGACAAGACACTGCTTAGGGTGAGT- 3' Reverse Primer: 5'-TCTCTCTCCCACTCCTCTCTCTTCA -3'
<i>OSTERIX Set 2</i>	Forward Primer: 5'-GACTGCCCTCTCCTTTCTCTCATTG -3' Reverse Primer: 5'-ATGTACTCACTGTTGCCCACTGCCC -3'
<i>COL10A1</i>	Forward Primer: 5'-CTGAAATTCAGATTACAACATGTTT-3' Reverse Primer: 5'-CAAATACGCTGACATGGAGGTCTAC-3'
<i>PTHLH Set 1</i>	Forward Primer: 5'-AAAAATTGGCTCTGTTCCAAGACAG-3' Reverse Primer: 5'-GCTGAAGACAATTTCCAGAAATACAT-3'
<i>PTHLH Set 2</i>	Forward Primer: 5'-TCCTCTCCTTTAAAAGTTAGCCCTT-3' Reverse Primer: 5'-AGCAGACTAATGTTTTGTCTAGCAC-3'
<i>RUNX2 Set 1</i>	Forward Primer: 5'-AGGGTGGTAATGAGAAAAGATAGCC-3' Reverse Primer: 5'-AGCACCATAAATGCAAGAGTATAGT-3'
<i>RUNX2 Set 2</i>	Forward Primer: 5'-AAGTTTAGGGAGGTGGGAAAACAT-3' Reverse Primer: 5'-CCATGTGTTATCTATGGTTTTGTTT-3'
<i>RUNX2 Set 3</i>	Forward Primer: 5'-CAAGTTTAGGGAGGTGGGAAAACAT-3' Reverse Primer: 5'-CCATGTGTTATCTATGGTTTTGTTT-3'
<i>SOX 9</i>	Forward Primer: 5'-GCAGTTTTAAAGTTGTTTTTAGTCA-3' Reverse Primer: 5'-CTCACTTTAAGTTTTTGTCTTTAAA-3'
<i>BMP2 1</i>	Forward Primer: 5'-ATGCCTGAAACCCTGGCTTAAGCAA-3' Reverse Primer: 5'-CATGCCTTTTGGCCTCATCTTCCCC-3'
<i>ESR2 Set 1</i>	Forward Primer: 5'-TCCACAGTGGCTGTGTCATT – 3' Reverse Primer: 5'-GACCTATGACCTCTGTCCATCAA -3'
<i>ESR2 Set 2</i>	Forward Primer: 5'-GAGACCCCAGTTCGATTCCT -3' Reverse Primer: 5'-GACTCTGTGACCCCATGGAC -3'
<i>GHR</i>	Forward Primer: 5'-ATCCCTCCTCCAACCCTCTC-3' Reverse Primer: 5'-AGCAACAAGGATGCAACTAAAGA-3'

Table S3. Summary of SNPs that were identified in target genes and were not found to be significant.

Target Gene	No. SNPs
GHR	13
PTHLH	1
RUNX2	2
SP7 (Osterix)	1