## Supplemental Table 1

| Gene name | Forward primer | Reverse primer |
|-----------|----------------|----------------|
| **Gapdh** | 5' CATTGACCTCAACTACATGG3' | 5' CTCAGTGTAGCCAGGATGC3' |
| **Msx2**  | 5' TCCGCCAGAAACAGTACCTC3' | 5' GCAGCCATTTCAGCCTTTTC3' |
| **Fst**   | 5' TTTCTGTCCAGGCAGCTCCAC3' | 5' GCAAGATCCGGAGTGCATTC3' |
| **Sp6**   | 5' CCGGCAATGCTAACCCTGTCTGTG3' | 5' GGCTCAGTTGAGGACGCGGACGCTG3' |
| **Lama3** | 5' GGCCAAGTGGAGTTTGACAT | 5' TGTCTCCACTCAGAATGCTG3' |
| **Sprouty2** | 5' GGTTTAGGGGATTGGTTT3' | 5' GCAATGTTGGGTCTCAAATTC3' |
| **Sp3**   | 5' AGCCTGAGGCTCCAGATT3' | 5' AGTTGGCCAGGAAATGATG3' |
| **Connexin45** | 5' GAACACAGGCAAGTGAAGAT | 5' GAGCGAGAGACACCAAGAAGAC3' |
| **Wnt3**  | 5' GCCAGTTCTCCAGGACAAG3' | 5' AAAAGTTGGGAGGAGTCTCGT3' |
| **Tgfβ1** | 5' TTGGCTTCTCCACAGACAAG3' | 5' TGATTGTAGAGGGACAGGACA3' |
| **Enamelin** | 5' AACCAGTCCACAGGACAAG3' | 5' CCAGAGCCCAATCCTCATA3' |
| **Tbx1**  | 5' ATGGGACGAGTCTCAGGAG3' | 5' GTACCGGTAGCCTCCTGAT3' |
| **Amelogenin** | 5' CAAGAAATGGGGGACCTGGATC3' | 5' GCTGCATTTATGCTGCTTGG3' |
| **Ameloblastin** | 5' CATGTCTTTATGAGGAACAAAC3' | 5' TCTTGCAGTTGAGGACGCTTCT3' |

### Primers for Msx2 promoter binding Regions

| Primer | Forward primer | Reverse primer |
|--------|----------------|----------------|
| F1-R1  | 5' TGCAGAAATTCTCTCCTC3' | 5' AAAGCACAACATCAGGCTA3' |
| F2-R2  | 5' ATGGTGTGCATTGGAACATTT3' | 5' TTCTATTTGAGGCTCAGAC3' |
| F3-R3  | 5' TTGGCTTCTCTGATGGAATA3' | 5' CAACATGGAGGACGACTCA3' |
| F4-R4  | 5' CTGAACCTTCTGCTCCACCT3' | 5' CTTGTGGTCCACATGAC3' |
| F5-R5  | 5' AGTCCCTTCTGAGAGGACATCA3' | 5' CACCAGTCCTGAACTTACG3' |
| F6-R6  | 5' GCTTTTCTCACTCCCTCT3' | 5' CGACAAGGGAGCTAAAACCA3' |