

Appendix 1. PRIMER SEQUENCES FOR PCR AMPLIFICATION OF COL2A1 GENE

Coding exon	Forward Primer	Reverse Primer	Product size (bp)
Exon 1	GCGGTAGAGACCCGGAC	GGGAGCCGTTTTAGCCC	284
Exon 2	TCAAGTTGACTGCAACCTCTC	CATCTATGGGAGCGTGTTTG	373
Exon 3-5	CGCCTTCCTTGATTGTGTC	GGTCCCTGAAGGTGAAGAAC	632
Exon 6-7	TCTCTTTCTCCGTCCCTTCC	CCAGGTAAGTGCAAGCAGC	489
Exon 8	GTTCTTTGTATCCATATAGAGCTTACC	GGTTGTCAGACTCTCTGGCTC	242
Exon 9-10	CTGTTGGCTGGGAGAAGATG	AGCTGCGGTCCTAGTGGTC	361
Exon 11	TGTCAAAGTTTTGTCCATTGC	GTCACCTCCCAAGCACACAC	206
Exon 12-13	GAAGGAGGGAAGCCCTCTG	CAAGTTGGAAGAAATGCACG	654
Exon 14-15	GAGAAAAGCACTTTGGGGTG	GAACCTTGCACAAAGGGAGC	574
Exon 16	GCCTGCAGGTAGAAATGGTC	CGAGGGTCAAGAGAAACAAAC	206
Exon 17	TCGTTTTCTGTAAGGGTGGG	AGACTGCCTTGGGCTGC	200
Exon 18	GAGTGTGAGGTGTCGGGG	AGCAATGAGCAAGGGTTACG	211
Exon 20-1	AGCTGGCCCTGAGCTATTG	GAGAAGAAGGGAGGGGTGTC	607
Exon 22-3	GCCAAAGGATCTGCTGTGAG	ATAGAGCCCTGGAGGAGGG	549
Exon 24	TTGCCAAGGCTACTTCCTTC	AACACGGACCACAAGGACTC	276
Exon 25-7	GTTGGTGGGTAGTGGGATG	CCATCTCTCTTTTCCCTTGC	593
Exon 28	TGCCATGTAGGCCCTTAGTG	CTTTCCCAAGAGGGCAG	252
Exon 29	CTCAGTCCCTGCAGCCC	CCGTTCCCCTGTCCTCC	202
Exon 30-31	GAAGTACCTTTGCCCAATCC	GATAGTGCCTGCTGCTGTCC	616
Exon 32-33	GCTTCCTTTCTTTGGGTCTG	GGAAAGGAGCAGGAGCATAG	513
Exon 34-35	CTATGCTCCTGCTCCTTTCC	AAGCGATCACAAGGGGC	609
Exon 36-37	GGGTGGGACTGAGCAAAC	AAGACAGAACCGCCTTTGG	538
Exon 38-9	AATGCACTTTGCCCTCTCC	GACAAGCTCCGATGCCC	636
Exon 40	ACCATCATGTCCAGACCAGG	CCTGCGAACCATCCTCTG	325
Exon 41	AAAACCTCAGGGGTCCATTG	CAGGGCTGGGAAAACAGTC	255
Exon 42	TACCAGGCTCTGAGACCACC	AGACCCTGTTGGGTGCTG	220
Exon 43-4	GAAACTGCTGTCACTGAGGC	GTGCTGAGGGAGGTAGAAGC	630
Exon 45	CCCTGAAGGGTCAGTGGG	GGCCCTGACTGGGACTTG	277
Exon 46-47	CTGGGCTTCTGAGAGGGG	AGAGACTGCGGAAACCCAG	498
Exon 48-49	TTCCGCAGTCTCTGGAATAAG	CACAGGGAGCTCAAGTGGG	512
Exon 50	GGGCTGGGACATAAAGCTG	CTCCCATGGGAACACAG	215
Exon 51	GAGTGGCTGGTGCTATCAGG	GGATGCCATCACTGTTAGCTG	328
Exon 52	TCTAGCAAATGGGGATGGAC	AGAGAGGAACCCTCTGGCG	495
Exon 53	AGTCAGGCCTGGGTCTCTC	ATGGGGAAGGTGCTAAAAGC	357
Exon 54	GAACCTTTGGCAGCCCCTAC	CCAACCCTCAGCCCTGC	392
Exon 55	CTTCTGGGCAGCTGGAAC	CAGCCATTCACTGCAGAGTC	312