

**Appendix 1: COL8A2 primer sequences and reaction conditions**

Primer name	Sequence (5' → 3')	Amplicon length	Reaction conditions*
COL8A2_2_FWD	CTGGCTTGATGACTTTCTCTGTTC	250 bp	1
COL8A2_2_REV	CTCTCACCCAGGTAAGTGGCCTTTGC		
COL8A2_3_FWD	CCAGTGAAGTACATCCAGCCCATGC	254 bp	1
COL8A2_3_REV	CCAGCTAACTGCACCGTTTCCAGG		
COL8A2_6_FWD	GTGTACCTCATACTGGAATGG	250 bp	1
COL8A2_6_REV	GGACCAGCCTTGCCCATCCGG		
COL8A2_7.2_FWD	CTGGCCCACTCCATTATCC	471 bp	1
COL8A2_7.2_REV	TGACTGCCCTTTCTCTTTC		
COL8A2_8.2_FWD	CAGGAATACGAGGGGACCAG	399 bp	1
COL8A2_8.2_REV	CGTCTACTCCAGGAGGTCCTTTT		
COL8A2_9_FWD	CTGGTCCAGCTGGCTTAGGCCAAAC	265 bp	1
COL8A2_9_REV	CCTGGCATCCCATAGCCAGT		
COL8A2_11.2_FWD	GGAGTCCTGGGATTCTGA	588 bp	1
COL8A2_11.2_REV	AAGGACCTCCTGGAGTAGACG		
COL8A2_11.3_FWD	GGAGTCCTGGGATTCTGAG	584 bp	1
COL8A2_11.3_REV	ACCTCCTGGAGTAGACGGTGT		
COL8A2_12_FWD	CAGGAGTGCCTGGCATTGAGGTGAC	256 bp	1
COL8A2_12_REV	CCAGCTGGACCCTGGAGTCCTGGGATTC		
COL8A2_13.2_FWD	AGGTGAGAGGGGACTTCCTG	474 bp	1
COL8A2_13.2_REV	AGCCCAAAGTGTGGCTTG		
COL8A2_14_FWD	GATGAGACTGGCATCGCAGGCTTG	225 bp	1
COL8A2_14_REV	GATGCCAGTGGCTGGGTTGTAG		
COL8A2_15_FWD	GGAATCTCTACAATGGCCACAG	227 bp	1
COL8A2_15_REV	GTCGTTGGGCCGCAGCTGGAGCACGG		
COL8A2_16_FWD	GATGAGTACAAGAAGGGCTACCTGG	223 bp	1
COL8A2_16_REV	GGTCGCTCTACCACTAAAGGG		

\* Refer to **Supplementary Table S4** for details regarding the reaction conditions.