



Supplementary Methods

Supplementary Table S1: Primer/probe sequence of genes analyzed

Target Gene	Forward	Reverse	Probe
NOS1	TATGTACAGGACGTGCTGCA	GCCTCCTTGCTCCTTCAGG	CAGCTGGCCGAGTCTGTGTAC-CGC
NOS2	TTGCTCCCTTCCGAAGTTTCT	CCTCCTTTGAGCCCTTTGTG	CAGCGGCTCCATGACTCCCA
NOS3	CTGGATGAAGCCGGTGAC	GCAATGTGAG-TCCGAAAATG	CTGCGGGATCAGCAACGCTACC
NOX1	GTGGGGGTTTTCTTATGTGG	CCAGACTCGAG-TATCGCTGA	ACTTTGGCAAAAAGCCTGCG-CAAAC
NOX2	CACCACAATAGGCGTTTTCC	CGGATTCTGAGTTGGA-GATGC	CCCTGAAGCCTT-GGCTGAAACTCTCA
NOX4	ATTGGGCGTCCTCGGTGGAA	TGGGTCCACAG-CAGAAAATC	ATAGCAAAATGTAACAGAGGGA-AAACAGT
GUCY1A1	CGTCTTTTAGAGATGGAGA-TAGAGCTT	TCACACCGCTTGGGTGA-GAATA	TGACAAAGCACTTGTCTAG-CATTTAGGCAGTCC
GUCA1A2	CCAGACAACTTTCCGAAGGA	GGCTTTGGGTCAG-TCCTTAAC	TTCTGGGGTCTGC-TATTCCTGGA
GUCY1B1	TCTGTT-GCCAATGAGCTGAGA	AGGATGGTCACATTGTGCTATCTTT	CAAGCGCCCAGTGCCTGCC
GUCY1B2	CAGGTGTTGTGGGAGACAAG	TCCTA-GAGGCCGTGTTTACG	CCCGGTACTGCCTGTTT-GGTGACAC
PRKG1	GAGGGCTTTAATTGGGAAGG	TGCTTGTGTCTGTGGGTGA	CACCTCCCATAATTCCAAGTGT-GCG
PRKG2	TGGCCGAGGGTAGACTTGAG	AATAGCCAG-TTCCCCAAACGT	CCAGGGAGAGAAGTTGC-TATCATCCATCC
PDE1a	GACGAGGTCGGACGTTGCT	CTGCGCTGACGTGGTGATT	TTCTGTACAACGACCGCTCAG-TGCTTGA
PDE1b	GACTCGG-CATAGCCTCATCAG	ATAGCCTGTCTCCAAGGCC TC	CGCTTTAAGATTCCCACAG-TGTTTCTGATGA
PDE1c	CCACCGGCTGTAATCGATG	TGGCCTCATT-GAGGGAAAAG	CGAAGGACCAC-GTATCCACATCCTTCA
PDE2a	ATCCTGAACATCCCAGATGC	AGGGAAGCAGA-GAATGTTGC	CCCATCCGCTTTTCTATCGCGG
PDE3a	AGAGCAGATCCAGGC-TATCAA	CCAGGGTCTCCTCTGCTCTT	AGGAAGAGGAAGAGAAGGG-GAAGCC
PDE3b	TGGATCGTTCTTCTCCTCAA	CAGCATCATAGGAGTT-GCACA	CTTTTATCACCCACATT-GTGGGCCC
PDE4a	CAAATGGGGCCTGAACAT	ACATGATACAGCTGAG-TGAACG	TTTGTGTGTCGGAGTACGCTG-GAGG
PDE4b	CAACGCCAGACACTCAG-GAA	GGAGGCTCATGTGTTT-GGACA	TGGTGATTGACATGGTGTGG-CAACTG
PDE4c	CCACACCAGCCTTCCCACAG	CTGCTCCTCCTGATCTGTCT	ATCCACGCTTTGGGGTCC
PDE4d	CTCGGAACTCGCTCTGATGT	ACTTAAAGCCAC-CGCCAAG	CAACGACTCCTCGGTCCTAGA-GAACCATCA
PDE5a	CCGACTTCAGCTTCAG-TGACTT	GGTCAG-TGAACATCCGAATTG	TGTCTGATCTG-GAAACAGCGCTGTG

PDE6a	CATGCTGGATGGGATCACTA	GCCTTCATCTTGGCTTCGTA	AAGGAATGGAAGGCGCTGGCTGA T
PDE6b	TCGATTTCACGAAGAGATCC	TCGTCAGCTAG- TGCTTTCCA	CCCATGTTTGACCGACTG- CAAAATA
PDE6c	CAGGCTGCTGAACGTCAC	CCAGCCAAC- TATCCCAATGT	AGGACAACCTCGTGGCCCCCTGA
PDE6d	CGAGTTTGGCTTTGTGATCC	ACTCAGGCGCTGCTTC- TATC	ACTCCACAAACACCTGGCAG- TCCTT
PDE6h	AGCGTTCAGCCATCTGGA	AGCCTCTGGGCTCCTCATA	CATGAGCTTGCTCAGTTTCG- GATCA
PDE7a	TGGAGGCTCAGATAGGTGCT	CCAAGTGA- GATCTAAACAATGACA	CACGGATATCAGTCGCCAGAAC- GAG
PDE7b	CTGGGCTCCCTCATCTTG	TCTTTATTGTG- GAGGTGAGCTTT	CAGACAGAATGAG- TTTCTGACCCGC
PDE8a	TCGTTGACCTGCCTAACCTT	TTCGAA- GCTTCTTCTCATCCA	TGCAGCACCTA- GATGACAACCTCAGG
PDE8b	CTGGATGACCTCAAGTGCAA	TCACAGTGTCCCCTTCTCG	CTTCCATCTGACAGCTGAA- GCCACG
PDE9a	CATGGACCGAGA- CAAAGTGA	TGGGATCAG- GACAAACTTGA	AAGCAACAGCCCCAAATT- GGTTCA
PDE10a	GAGCAGGTGCTGGAGATCAT	TCCTCCAACTGCTTCCTGTT	CGCAAAGCCATCATCGCCAC
PDE11a	TTTTCCCTTGATGTTGATGC	TTCTGTAC- CATCCCCAGCTC	TCACAGCCGCTCTAC- GGATGTTTCT
TNF	TCTCAAAATTTCGAG- TGACAAGC	CAGCCACTCCAGCTGCTC	CACGTCGTAGCAAACCAC- CAAGTG
SPP1	ATTTGCTTTTGCCTGTTTG	CTCCTCTGAGCTGCCAGAA T	CTCCTCCCTCCCGGTGAAAGTGAC T
IL-1 β	GACCTTCCAGGATGAGGACA	TGAGTCACAGAG- GATGGGCT	AGCACCTTCTTTTCTTCATCTTT- GAAGAA
IL-6	CGGACACTGGCTGTGGAATT	GCCAGGATCTTGGGCAACT	AAATGATGTCTGAAGTTATTGCTG CC
CCL2	AAGAGGATCACCAGCAG- CAG	TTCTTGGGGTCAGCACAGA	TCCCAAAGAAGCTGTAGTTTTT- GTCACCA
ICAM1	AACCAGACCCTGGAAGTGC	AGGTCCAGTTCCCCAAGC	TGCTGTATGGTCTCTCGGCTGGA
COL1A1	GACCTCAAGATGTGCCACTC	AGGTTCAGCCTT- GGTTAGG	ACTGGAAGAGCGGAGAGTACTG- GATC
COL1A2	TGCAGGGTTCCAACGATGTT	CGACTAGGACAGAG- TAGGTGAACCT	AACTTGTTGCTGAGGGC
COL3A1	CTGGTGAGCGAGGAC- GACCA	GAATCCTGCAGTTCCAG- GAGG	CTCGAGGCAATGATGGTGCTCGG GGCAG
TGF β 1	TGAGTGGCTGTCTTTTGACG	AGCCCTGTATTCCGTCTCCT	ACTGGAGTTGTACGGCAG- TGGCTGA
TGF β 2	ACCTTTTTGCTCCTGCATCTG	GTCGAGGGTGCTGCAGGTA	TCCCGGTGGCGCTCAGTCTGT
TGF β 3	CCCTATCAGGTCTGGCACTT	CCTCTCCCCGTGCATCTCT	AACAGCACCCGGGAGTTGCTGG
MMP2	CTATGTCCACTGTGGGTG- GAAA	TTGTTGCCAG- GAAAGTGAAG	CAGAAGGTGCCCCATGTGTCTTC
MMP9	CCTGGAACCTCACACGACATC	GAAACTCACAC- GCCAGAAGA	CCAAGACAAAGCC- TATTTCTGCCATGG
TIMP1	TGCCTGCCACGGAATCCAGG	TCCTGGGG- GAAGGCTTCAGGT	TGCACCTGGAGATCCCTT- GGGGCCCG

TIMP3	CCCCAGGATGCCTTCTG- CAAC	CCTCCTTCAC- CAGCTTCTTTC	CCGACATCGTGATCCGGGCCAAA
ACTA2	TTGCTGACAGGATGCAGAAG	GTTCTGGAGGGGCAATGAT	CTCGCACCCAGCACCATGAAGA
Fibronectin	GTCATTGCCCTGAAGAACA	AACCAGTTGGGGAA- GTCAT	AAGAGTGAGCCCCTGATTGG- GAGG
CTGF	CCGCCAACCGCAAGATC	CACCGACCCACCGAAGAC	TGTGCACTGCCAAAGATGGTG- CAC
SERPINE	CCCCACGGAGATGGTTATAG	ATCACTTGGCCCATGAA- GAG	CGGCACAACCCGACAGAGACAA
RPL32	ACTGGAG- GAAACCCAGAGGC	CATCAG- GATCTGGCCCTTGA	TCGACAACAGGGTGCGGAGAAGG