

Appendix 1. Primer sequences of candidate genes sequenced (5' -3').

Gene	Exon	Forward primer sequence	Reverse primer sequence
<i>AGGF1</i>	1	ccgttcggctacaagtgagt	tggaaattgtaactgcgctga
	2	agggaaacttgctgctcttg	ttcctccagaagaacaaattga
	3	tgtgtttaaatgccagtgtttg	tatgctgtgacggaccaaaag
	4	caggctcttgagttcagccaac	gatcactccactgcactcca
	5	ttgaatgtatttggcattttcg	tgggtatgtttgaaatgcaga
	6	cgaattcgttgaaacttgatg	catttttaatggttttgctctttt
	7	ccttaccatttgctgcgat	cagagcacaaactctgtctcaaaa
	8	cactgtgtgaaagcacaggaa	aaacagatctgcactgccttt
	9	aaggctcaagttaacatcatcatatc	cagcctttctggaaattcctt
	10	gggtgggtttgacaagttgct	tctaacctgacctgggtcac
	11	tgtgaaaggacatcatcaca	caaatacacgaaatcatactacacaa
	12	cagcttcccaaaatgctagg	agccctgaacatcagaccac
	13	aatgccaagcggttttctaa	tgccacaaaggcagtaatca
	14	aagttggacacagcagatttca	tgtgctgctgattcttttgg
<i>AGTRL1</i>	1A	ttgcagagtgggtgacagag	tgggcgatgaagaagtaaca
	1B	gggacttggagaacaccact	ttcagaaagcaagggcaaag
<i>AGTR1</i>	1A	cgtttatgactgagaaatgaatgttt	tgcaggtgactttggctaca
	1B	tgtgtttctactcacgtgtctca	ttctccttcaattctgaaaagtagc
<i>ALDH3A2</i>	1	ctgcacctgcatgcttcc	aaacaaaacccagccgaag
	2	tctgacattcagggccaagt	agccactatccttaattttccaa
	3	agcctgttcttccactgaa	agagctgggtgactccacac
	4	tgttgaagagattgctgatgtt	gccataagggtatggggttca
	5	tgaagacattcaaacacaca	caaccttgctcccagcata
	6	gcatggctggattttgtactt	ggtagagtataccagaaagcagga
	7	tatgacttgggtgggagagg	cagcaaagaaggaacatgactc
	8	aactgagcacacagccctct	acatttgccctatgctggag
	9	tttcccggtcggtgttagac	atatgcatctggcagccatc
	10	ctgggcaatagagcgagact	caacttggcccaccttacat
	11	aaccgtgcttcctaggcttc	ggaatgttgggacgtagttga
<i>ANG1</i>	1	gggggaaagagtcaaacaaa	caaatagtccccctaaggaac
	2	ccatttctccaactcccaga	tcacagtgtgaaatgtgctc
	3	atgtttgccaggatgggtctc	ttggcagagaggtgaaggat
	4	caccaaggaaccaaagaaa	cagcaatcaatgcactgtagaa
	5	tggaggaaatgaagacatgc	tcctttatggacctgggaaa
	6	gcagacctgttcgccttatt	acgcacacgtggaaatcat
	7	tgaaatgtcaatcactggagaaa	caattattaagtggctaggtaaaagg
	8	caagctgggtcttctgggttc	aattcgtgggcagaacaaaa
	9	gaacaagcaagtttcccatca	tttctcacctggcagcttct
<i>APLN</i>	1	ccaaggagcagcatgaatct	gcgctctgtcaatctgctg
	2	cgtttccaacaaccttcctc	gtccttctccctccgcttta
<i>CCM2</i>	1A	tgtttggattttgccaacag	tagctcacaatgggcaagc
	1B	ccgggtcgagcatgtagc	gaaagcccacctgaccatt

	2	gggggccatggtagtagttt	ggtgtttgtgtggctgtgtc
	3	tagtaggagatggggcagca	actggctcattcctcacagc
	4	ttggtgtccctggaataagc	caacacgaagctgcaaaaac
	5	tgagccaggtaaaggctctc	gcaatggcagaggaagtagc
	6	gcagagggacacattctgg	acaaaaggccaccatgtca
	7	gcacacagcacattccagag	gcctcagccattcactaagc
	8	acacacggcatggactaggt	ccaggaaaaggcagtgatgt
	9	ttagtggctgtggcaaggt	ctcatgccatctctggttca
	10	ccaggatgctagatgcagtg	ccctgctccttcacagtaga
<i>CFB</i>	1	cgggaaagtgatgtgggttag	aaaggccaaggagggtatg
	2	accttcccttcctgctgtct	caccctgcctagtctcatcc
	3	cgagaccaggaggatacac	agtgtccggagccgagtg
	4	tgtctctaccttgctcacg	gaggtggggagagaagacagt
	5	atgatccccgctctctttg	tcaggctccagcattaacag
	6	actgggggaaaatggagaag	caggagctagtctctggaag
	7	gcaaagtcgctgaaatctcc	gcaaagtcgctgaaatctcc
	8	tgtgggatttcagttgcaga	ggacttaagggccacatgct
	9	ccatgtgtatccctgccttt	aggaaggatgaggggtccaag
	10	tctgggtgagtaacctgccta	agaaggctttccaggcaact
	11	gcctttgctccccatagact	tcccatttcaccttgacctc
	12	atgggagtaggggaaggaaa	ggagggtgttgccctggagag
	13/14	aatgacacggggccagag	cccacttgctctctgggatct
	15	agaagggttaggggacatc	gaaggattggggcctagagt
	16/17	ctaggccccaatccttccta	gcattgagctttcctgcttt
	18	ccatgcttcaggattagga	cagtgcctgttccccact
<i>DKK1</i>	1	ctccctgcagtcaggactct	taccaaagtctccctgaacc
	2	gggcagtaacagggttttgga	atagacgctcaaaggctgga
	3	ggcataacagactgccactg	cacagtctgatgaccggaga
	4	tccagaagaaccaccttgtct	ccttaggattgagttgatgaagg
<i>FZD4</i>	1	gtgcaaactgggggtgtct	tagtaggatcgggcttcctc
	2A	actcagctttgtgggagcat	acacaaagtagagggtgacg
	2B	aggagcctgaactgtgtgct	ataaagggtgaacgtcggt
	2C	tttggcagcaggactcaaat	ggacaataaaaaacttttagaggtt
	2D	agttcctgcaacgtgtgtga	gtcgtaaaacctcctttaaga
<i>GSTP1</i>	1	cgggaccctccagaagag	cctgatgctgcgggttgg
	2	gccttggcatacctcccc	gtaaaagccacacgacggag
	3	gaaatcttcggaggaaacctg	tctccgtcctggaacttgg
	4	cttagggggctgtgactagg	ggtctcagtttcctccactccc
	5	tccccagtgactgtgtgttg	agccccctttctttgttcagc
	6	gctgggagggtgagagtag	aaacaaatggctcacacctg
	7	acacagggtgtgaggcatttg	ctggagaaaggaaggcaaac
<i>HIF1A</i>	1	tggacttgcccttctctctc	ggcaagcagggtcagac
	2	ccttctgtgataagcagaaatgtaa	gaggatatacaaaatcaaacattgc
	3/4	gcgagaaaactttgtaaaaacatc	tgggtaagtacaatagcaaagtttaat

	5	ggcaagcagggctcagac	cggttctgcattttggagat
	6	gaggtatacaaaatcaaaacattgc	gcgctgaatctttgctatgg
	7	tgggtaagtacaatagcaaagtttaat	gggtagccaaactgtacagagg
	8	ggcaagcagggctcagac	tggactggaaacctagggtcag
	9	gaggtatacaaaatcaaaacattgc	gttgaaatggggcttgtagc
	10	tgggtaagtacaatagcaaagtttaat	aaaattcaaacacacacacaaatg
	11	ggcaagcagggctcagac	tttttacaatggccacacctt
	12	gaggtatacaaaatcaaaacattgc	ttgcgttagggcatatatatcaga
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	14	ggcaagcagggctcagac	ctcccaaagtgtctgggatta
	15	gaggtatacaaaatcaaaacattgc	ggggatcaaaattgaactaacc
<i>IGFBP3</i>	1	gcctggattccacagcttc	cagtgagaagaaaagcggagt
	2	agcgtttgtctgccttcttt	cgtctggggtttgttgagta
	3	ggggactttcgtgctacatc	agcagcactcagagcaacaa
	4	ggctcttgtgttgcccttagc	cagctcctgggtctgtaagc
<i>LRG1</i>	2A	gcggatttgctggtgtat	tttcaataccaggggtgtccag
	2B	tccaagaattgcacctctcc	cttgcaatttgttgcccttct
	2C	atctggacctgtctgggaac	ggagatgtcgaagccatcc
	2D	ctcttcctgaacggcaaca	gccaaaggcaggattat
<i>LRP5</i>	1	ccatggagcccagtgag	ggaaacaggcttgcgaac
	2	catcccagggctgtgtatct	ggagtcgcagcagggttta
	3	ggagtcgcagcagggttta	aagaaggaacgccttcaaaa
	4	attgggtcagcagcaatgac	cagagcatgggcttctgc
	5	cagaaacaagtgacggctctc	tcaagcaatcctcccaactc
	6	tggctgagtatttcccttgc	ccagaatgacagggtccagggt
	7	ctcttggcactggggatg	atgtggccaaatagcagagc
	8	gcattgaacccgtcttgttt	gcattgaacccgtcttgttt
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	11	gcggtgagagcagactcact	acttgcaggccacagggtat
	12	cattcatgtggtcgctaggc	cccagaaccagcctgatcta
	13	ccagctcctctgtggcttac	tcctccctctgctaaggaca
	14	agaagtgtggcctctgctgt	ctgtgagaggctggcattc
	15	ctgagaggcaggggcttt	cagggtctcggacaatgtgg
	16	tctgtcctcccaagctgagt	cacacaggatcttgcactgg
	17	ggttctgagggtgggagacag	cagcctagcaggcagagaat
	18	cttctgctttgaagcccagt	agccccaagctcgtatcc
	19	gaggggtgggtggagactgta	cgtctcctccccataaactcc
	20	gtgtctgcccccaaggag	ccaaagctgcccagactact
	21	tagtgggagcagaggagagc	agaaagcaagcatgcctcag
	22	gtgggaggaaggaaggaatg	tagtgtggttggcagagcag
	23	gacaggcctttcccgttc	caccccatcacagttcacat
<i>NDP</i>	1	atcctggccctttcc	ttctccatcccctgacaaag
	2	gcaagcagtgtaggggtctt	gctggtcgaactgcctctac

<i>OXGR1</i>	1A	tcatattgccaaactgaactct	ggctgatctgttggtcctgt
	1B	ccaatgagctgcttttccat	ttccattgagggagacatcc
<i>PEDF</i>	1	ggtgggggaaagtgactagc	ctctgttttgctgctggaga
	2	ccctgaactcaaaccaaga	ccctgagctcctgcttacac
	3	cctacttgggctctcagcag	agcgagactccgtctcaaaa
	4	ctcaaagacgggatgcttgt	gcaccactgcactccagtta
	5	ttttcaacaacgtgctctgg	ttcccactaccctgttttgc
	6	agtccttggtgtgtctgtc	tgcgttctgcttagcacagt
	7	atcccttggttggggtgt	ttcgtgtcctgtggaatctg
<i>PLVAP</i>	1	ggatcgagcaaattgggtct	agcattggtcctgtgatcgt
	2	gaccatgcccttgtgaactc	accaggagaccaggaagat
	3A	gtggactccctgccagct	caggggatggtagaggttgt
	3B	aggagcaactgcaaaagggtg	accctcttggcatctggac
	4/5	agaagcctgtctgggaagc	caccctcagtcctggctcta
	6	ggtccccaggatgttgtgt	caccacggtgatattgtgacg
<i>SCARB1</i>	1	cataaaaccactggccacct	cctttagggcgggtcagg
	2	gccctcatcactctcctcac	ccgactatgacttgccctgct
	3	aggcgagtagaagggaaacg	cacctcagggactgctctct
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	6	cagcacctgagagggcttat	tttgggtggtgtgacaaaga
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	8	tggggctttttacagaatgg	gtgctccaaccaggaatcac
	9	agcctgtggcttgttttagg	cactggagtctgggaccact
	10	cctggggacagttttgtcat	tccatgtcacagtccgggtta
	11	aagcttgagggtggggaaaag	cagaggggtccgatctgagg
	12	tcacttctgacagcctgggtg	ccctacaagtcccttcagca
	13	atcgttgaggggtgttggac	taagccgccagcattctact
<i>SSPN</i>	1	agtcggctccaaatgttttc	gagcagagcgcgagttaga
	2	ccaccagttgaaagaaaaaca	gtctggatcaatgccctctt
	3	gttttgatgaattcgctttgc	tttaacctcagctactccatgtg
<i>SUCNR1</i>	1	ggcaatatggaacaagtaaaagc	atggaggggtggcagtgac
	2A	ttcaccattcaagtgtttttca	aggtggtgccattgtcagtt
	2B	tgccaacctctataaccagca	ttgtcgtcccattcttttca
<i>TGFB2</i>	1	ctttgagaattgttgatttctttt	agctgctgcggttttgag
	2	cccaggtagcagggacctta	tctaggcacctttgtgatcg
	3	ttaaactggccgttggaac	agctgtgatcatgccactgt
	4	gaccatgcaattgagatgaca	caaggagggtcatttgtatgtgtg
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	5	taactgttgccagctgatgc	agaaagggcaaaggcagttt
	6	tgagggtggtgaatcagctt	tgcgaatacttttgcaccaa
	8	ttgcctactcagtgctgtgac	cactgatgaaccaaggctct
<i>THBS1</i>	1	ccagcatctctttcctccac	caagagggagaggacagcac
	2	agccccctactgctggtc	ggatttctctgtagccctcct

	3	tttggcgattaatgttgctg	ccccttggagtcacttctgt
	4/5	acccctctacctgcacctt	tcaaacaaaagccgtcgatt
	6	gacagccctgaccatgtttt	tcaaacaaaagccgtcgatt
	7	ccctgaacagagccctctaa	tgcagcaagaaactgaatgg
	8	tgatgggagcctctatattg	ttggtgacgacaacaaggac
	9	tcttgaacgggcttaggaga	gcaggactttgcttctgtttg
	10/11	gcagtatggcagcttagacca	ggacagctctcctgtcctct
	12	ttccaaatggagcctctgtc	ataaggatgatgggccctctt
	13	aggtacactccctcgtgcat	tcttggcaacatctacatcctt
	14/15	ggcttgagctgttttcaagg	caaaggccatgaaagggata
	16	ctgtggtgggggcataagt	caaatgctttgagccttggt
	17	gacaggatgaagggacacaaa	tttggttttccccatgtatgc
	18	gggtgctgaggatgtctagg	ctggtgatgctgggaacttt
	19/20	gcattgtttctgatggaatgaa	cccataaccgtcatccttga
	21	tgctaattgtgcttgaacaacct	attcattggaggctgaatgc
<i>TIE2</i>	1	ctccctgtgctcagacagaa	ttctaacacaggggccaatc
	2	aggctttgtgagcaccagtt	gctgccaaagacaaaagggtgt
	3	ggaagtgaccatccctttca	gtaaccaaataatgtcacctaagagg
	4	tcattctttctccacatcca	attcatttgctttgcagcat
	5	ttcaccattgtccactgaatg	tctgacctaacagaggccattt
	6	ctctgtggggcagtttcatt	tgacagcaaactggatctcct
	7	ccccagctttttaagttcctg	gccggcacaagaattacact
	8	cccgtgcatgacttactaaa	ggcattttatcaaagccaaca
	9	atggacctttgcgtttatgc	atcctggaaattaccccaaaa
	10	gcaaaagcaaagcagagagc	aattctcctgggtgccacatc
	11	cacatcgcaataacaacaacc	ctgtcactttcccacccatt
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	13	ccaattgattgggggtaccat	gctgcctatagggtgcac
	14	acggtgtgggtctgtttctc	gaggcttgcctaaggggaaat
	15	ggatgccaaccagaagacat	gaggaaagaatgagcaggaaa
	16	tggtgactgagggtagctga	aaaacaaggcaaaccacagc
	17	cctgggtggtgttgctagat	cttagagggaactccacagg
	18	cctgttcccaaggttttca	tttcccagggcacacagtat
	19	gctgggacatacacaaagca	tgattctgcactcctctgga
	20	gtgtgcaagggcctatccta	catacaaacggcatcctgtg
	21	tcaccctctcttgccataacc	aaggggaggggttcctattt
	22	tcctaggggctgtactttgg	tggaggggacatcctttgttt
	23	tttctcagcaggtgtcaagg	tttctcagcaggtgtcaagg
<i>VHL</i>	1	cgcgaagactacggagggt	cttcagaccgtgctatcgtc
	2	ggacgggtcttgatctcctga	tggataacgtgcctgacatc
	3	gttggcaaagcctcttgttc	aaggaaggaaccagtcctgt
<i>VLDLR</i>	1	caactccttcccctccttct	gtgggcaaacggagacctac
	2	tcccatccatgggtattag	tgataacccccacgtcaaaca
	3	agtgcccatcgactcagctt	aatgatttgactgcccttgg

	4	cacaggtattagcgcttcca	tcagtgcgtcttcaggctta
	5A	tgaacggaccaatcttgatg	cagagccgcactggatttt
	5B	agtgatgagctggactgtgc	ggaggaaacaccatggaatg
	6/7	tcaactgggacaatttgctg	tggattgtgtcaaaacttccag
	8	gacaaatcgtgggtttgacc	tctgggagggaaatcagaat
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	10	tgggaggaggtggtttagaa	cccacagatcacttccaag
	11	caaaaagtccattctccaagc	gaaagctcctgacctacacaga
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	14	tgtcccagttcagcattcag	ttctgtgtcatgctgcttcc
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	16	acagctagccatgctggaac	ccaattggggcagaaatagt
	17	tttggctccttacctgatgg	catgaaaggggtagctccag
	18	tggattcctgaacgttattacc	tcacccaggtctcctttctg
	19	caactcaaaagcaaggtcca	agtgcataatttggccagagg