

1 **Supplemental Table S3.** Sequences of primers used in this study.

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Gene	Number	Sequence (5'-3')	Usage
<i>LOX1</i>	XS234	CTCCAACAAGACTTATCTTCCACAT	qRT-PCR
	XS235	CAAGTACAGGCCGTGGGTTC	
<i>LOX2</i>	XS236	TCATCAGCTTATTTCCCATTGG	qRT-PCR
	XS237	CTTAGTAACTCTGAACAAAGACCG	
<i>LOX3</i>	XS238	GTCAATCACTGGTTACGGACACA	qRT-PCR
	XS239	CACCAGCAGTGAAGCCTCCT	
<i>LOX4</i>	XS240	CTGCTGATCTCATCCGAAGGG	qRT-PCR
	XS241	CTCAGTATCGGTTTGGATTAGGTT	
<i>LOX5</i>	XS242	AGGCATATCTTCCAAGTGAAACAC	qRT-PCR
	XS243	CAGGACCCTTGTCAGGAGCA	
<i>LOX6</i>	XS244	TTCGGACAGTACCCGTTTGG	qRT-PCR
	XS245	AGGGGAATGCGTTGAGAGC	
<i>AOS</i>	XS1372	ACGGTTTACCAATCGTAGGACC	qRT-PCR
	XS1373	TTGACTCTGTACACCGTGGAGTT	
<i>AOC1</i>	XS776	TGGGAAATACCGAAAACCCC	qRT-PCR
	XS777	TAAGAATTTTTGGGCTGTGTCGA	
<i>AOC2</i>	XS779	TTCAGCAGTGTCTCTCCAATCCA	qRT-PCR
	XS780	GCAGTGAGGTTCTTCTTGGCAGT	
<i>AOC3</i>	XS782	TCGTAATCATCAATCTCACCGC	qRT-PCR
	XS783	CTGGACCGTTAGATGAGATTCCA	
<i>AOC4</i>	XS230	TCCAGACCAACTAAGATCCAAGAG	qRT-PCR
	XS231	CTGTGTAGAGTTTGTGTGAAGGG	
<i>OPR3</i>	XS1323	CGGATTTGGTTTCGCGGTTCAAGA	qRT-PCR
	XS1324	TCCGTGTAGCCAACAACCTGGATCT	
<i>OPCL1</i>	XS1767	GCACCATACAAGAGGATACGAAAA	qRT-PCR

	XS1768	TGCCTGAAGGGTTCTTTGGTA	
<i>JAR1</i>	XS1370	AACGCTACTGACCCCTGAAGAAGC	qRT-PCR
	XS1371	GGTGAAGTGTCACCATCAACCA	
<i>VTC1</i>	XS2185	CAGGCTGCATTGTTGAGTCAG	qRT-PCR
	XS2186	CACATGAACATCCTCACCGAG	
<i>VTC2</i>	XS2187	CCGTTGTTTCGAACTACCAG	qRT-PCR
	XS2188	GCTCTATAGCCTCATGACTG	
<i>VTC5</i>	XS2630	AGCGTCGTTGCAATCAATGT	qRT-PCR
	XS2631	CTTCAGCCGCCATTTGAAGA	
<i>GSH1</i>	XS2626	GTGTGCCCTGCCAGCTTTCT	qRT-PCR
	XS2627	CAGGACATCTTCAGCGACA	
<i>GSH2</i>	XS2628	CTTGGTGCGAGAAGGCGTTTA	qRT-PCR
	XS2629	ACTCCAAAACCAGCTGCAACG	
<i>APX2</i>	XS2650	ACTCCTTGTCAGCAAACCCGAG	qRT-PCR
	XS2651	CTTGATGATCCTCTCTTTCTCCCA	
<i>DHAR1</i>	XS2644	CTCTGACAAACCCAGTGGTTC	qRT-PCR
	XS2645	CAACGATGACGTCGGAATCA	
<i>MDAR3</i>	XS2624	CTGAAGCCTGGTGAACCTCGC	qRT-PCR
	XS2625	GGTCGGATTGACTTCGAGGTC	
<i>GRI</i>	XS1145	TGTAGGAGATGCCACAAACCG	qRT-PCR
	XS1146	CACTACAGCTAGTGGTGGTATG	
<i>TUB3</i>	XS1771	GGTTGGTTTTGCTCCTCTCACC	qRT-PCR
	XS1772	TAGCGTCCGTGCCTTGGGTC	
<i>VTC1pro-P1</i>	XS2685	CAAAATGAAGGTACCTTGTCGG	ChIP-qPCR
	XS2686	GCTGTGAGTGAACGAACACT	
<i>VTC1pro-P2</i>	XS2687	GAAAGATTGGTGTATAAGCGTCTACG	ChIP-qPCR
	XS2688	CCGTTGAGAGAAAAATTGAGTGCG	

<i>VTC1pro-P3</i>	XS2689	ATTGTTTTGTGTCGGTTGCATC	ChIP-qPCR
	XS2690	TGATGCTCTAACTCCTTTTCCTG	
<i>GSH1pro-P1</i>	XS2673	AAACGCAAGCAATTCTGCATC	ChIP-qPCR
	XS2674	CTCCTATGAATTATGAAGCTGTGC	
<i>GSH1pro-P2</i>	XS2675	GGGATATTGTCAAATCCATCCCG	ChIP-qPCR
	XS2676	CTTAGTAGGTGGAATCAAATCCTGC	
<i>GSH1pro-P3</i>	XS2677	GTCGACACAATCAAACCAAATAG	ChIP-qPCR
	XS2678	GCCTCTTACTTTTCCATTTCTCAC	
<i>VTC2pro-P1</i>	XS2691	CGTCCCATGAATAAACACGACC	ChIP-qPCR
	XS2692	AGGATGGAGGCGATGAAGAG	
<i>VTC2pro-P2</i>	XS2693	AGTGTCGGGTTTCGTTTTAGCT	ChIP-qPCR
	XS2694	CGTGCGGCAAAGGATTAGT	
<i>VTC5pro-P1</i>	XS2695	CGCTACAATGGCTTGTTGCA	ChIP-qPCR
	XS2696	TCGCCGAGATCGCAACGA	
<i>VTC5pro-P2</i>	XS2697	CCTCATAGCTGGTCCTCTG	ChIP-qPCR
	XS2698	GAGTTAACCCCTAGCTACATAACC	
<i>VTC5pro-P3</i>	XS2699	CCACACGTCCAAATCACAACC	ChIP-qPCR
	XS2700	CGAGGTGGGTTTCAATCACTC	
<i>GSH2pro-P1</i>	XS2679	CACTATTAGGCACTGAAGAACG	ChIP-qPCR
	XS2680	GCCAGTCGAGCTTGTAAG	
<i>GSH2pro-P2</i>	XS2681	GACTGCAACCAAATGACAATACTG	ChIP-qPCR
	XS2682	GCACAAGCAACAACTTGTA ACTC	
<i>GSH2pro-P3</i>	XS2683	GGGAGTTACAAGTTTGTTGCTTG	ChIP-qPCR
	XS2684	CACTCTTTGTCCACAATGTTGC	
<i>ACTIN2pro</i>	XS2721	CGTTTCGCTTTCCTTAGTGTTAGCT	ChIP-qPCR
	XS2722	AGCGAACGGATCTAGAGACTCACCTTG	

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5 **Supplemental Table S4.** Oligonucleotide probes used in EMSA.

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Name	Sequence (5'-3')
<i>VTC1pro-EP2-F</i>	CCCCCAAAAAAGTCAACATTCAACATGTGAATAAAA ATCAATATTGGTTTC
<i>VTC1pro-EP2-R</i>	GAAACCAATATTGATTTTTATTACATGTTGAATGTTG ACTTTTTTGGGGG
<i>mVTC1pro-EP2-F</i>	CCCCCAAAAAAGTCAACATTCAAtttttAATAAAAATC AATATTGGTTTC
<i>mVTC1pro-EP2-R</i>	GAAACCAATATTGATTTTTATTaaaaaTTGAATGTTGAC TTTTTTGGGGG
<i>GSH1pro-EP2-F</i>	GGTGATTCATTATCTACCATTACATGTTTTTGTATCA TTAAATTGTTGA
<i>GSH1pro-EP2-R</i>	TCAACAATTTAATGATACAAAAACATGTGAATGGTAG ATAATGAATCACC
<i>mGSH1pro-EP2-F</i>	GGTGATTCATTATCTACCATTaaaaaTTTTTGTATCATT AATTGTTGA
<i>mGSH1pro-EP2-R</i>	TCAACAATTTAATGATACAAAAAtttttAATGGTAGATA ATGAATCACC

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