

Supplemental Table S1. quantitative PCR primers

Gene		Primer sequences (5'→3')
<i>TDH2</i>	F	cggtagatacgtggtgaagtttc
	R	tggagatggagcagtgataacaac
<i>TDH3</i>	F	tttccacgatgacaagcac
	R	gaagcccatggcaagttagc
<i>RDN18</i>	F	aactcaccagggtccagacacaataagg
	R	aaggctctgttcgtatcgcaattaagc
<i>KRE11</i>	F	aactgggtctgttacccaactcaac
	R	aacgcttcaatgtgacttctgtttccc
<i>SGA1</i>	F	tccaaacggatatttctgggtggtactgag
	R	gcatgatctattgtgttacattagcgggtag
<i>PGM1</i>	F	tgatcctgccaaagcatatcg
	R	tgcgctgtttcgtaagaa
<i>PGM2</i>	F	gcctggtagctctggtttgc
	R	ccatcaccaccgacaacaag
<i>PRM15</i>	F	aagaagtcaccgctctctgc
	R	accagcagtgccaaactgaa
<i>PGL1</i>	F	acttcaccaaacccattg
	R	tcgaatggagcaaccaaatg
<i>HXX</i>	F	aggggaaggtagtgcattgg
	R	tccggtgaaggagattgg
<i>HXX1</i>	F	attccaatgattcccggttg
	R	ccgctcaacttgaccaacac
<i>HXX2</i>	F	aaattttgcgttggccttg
	R	tgtccatgacgaaaggcttg
<i>GLK1</i>	F	gccggtcatcgatgtattt
	R	gaccccatctgacattgat
<i>GAL10</i>	F	tgaatggcagaccgagttg
	R	gcctcgaaccccttaactg
<i>PFK1</i>	F	actcccggtccttgttgtt
	R	atcgccaccggtagcaatac
<i>FBP1</i>	F	cgcctcaaaaggcctctac
	R	tgtctgcttgggtgtttg
<i>FBA1</i>	F	ggctttgcaccaatctctc
	R	aaagcgatgtaccacgcgta
<i>TPH1</i>	F	ggtaccggtttgctgctac
	R	gctaccgttagcgggaacac
<i>TDH1</i>	F	atggtcacatccacaaggac
	R	ggcaagaccttaccgacagc
<i>PGK1</i>	F	attggtggtggtgacactgc
	R	agcaaacctggcaattcct
<i>TDA10</i>	F	gcgaacccagaatcaaat
	R	gcactgttcgctgctc
<i>ALD2</i>	F	tcattcccccaacctctc
	R	gcgagcccgtagcaagtatc
<i>ALD3</i>	F	tcattcccccaacctctc
	R	gcgagcccgtagcaagtatc
<i>ALD4</i>	F	aaccaacgggttgtctac
	R	gcctctccacatcgtctc
<i>ALD5</i>	F	aaggctgctgccgatactgt
	R	cgcagcaaaacttaccagag
<i>ALD6</i>	F	tgaatgggtaccgaagacc
	R	gtaacatccccacgggctaa
<i>HFD1</i>	F	gcgcacaaaaggaaaagctc
	R	ggcgtaacccccacttgtta
<i>GCY1</i>	F	tggcagtcgaaagagacga
	R	ttgatggcttgaccgacttg
<i>DAK1</i>	F	aggcggtaaaagctgcagag
	R	tgaatcgccgacataggaag
<i>DAK2</i>	F	ctgatcgatgctctgcaacc
	R	ttcggcaccatcataagcag
<i>GUT1</i>	F	atggcgactgacgactcta
	R	tagccattggaccaagcagc
<i>GPP1</i>	F	catcgaagttccagggtctg
	R	tgtcacgggtaccagaggtg
<i>GPP2</i>	F	cattgaagtccaggtgcag
	R	atcacgggtaccggaagtgtg
<i>GPT2</i>	F	accacccggaatcatcaag
	R	tccgggatttcttgatttg
<i>SCT1</i>	F	tatggctcttggtgcatgg
	R	atggggtcaccgaattcaac

Gene		Primer sequences (5'→3')
<i>PHM8</i>	F	ttgcaaatgggttgcgag
	R	atggataaatggcccatcc
<i>GPM2</i>	F	gcaagcacaccatccaatgt
	R	gcgtcaatccaaccaagaa
<i>ENO1</i>	F	tgacgaaggtggtgtgtc
	R	cttaccgtcgtgaccagcag
<i>CDC19</i>	F	cgatttgcgcctttgtctg
	R	aaaacatcggttggcgggtct
<i>PCK1</i>	F	cagaatcaaatgcccgggtg
	R	ctgaccagcgttccagacag
<i>PDA1</i>	F	cttcattcaaacgccaaacca
	R	tgctctcaggggccttcta
<i>PDB1</i>	F	ccgctttgaagggttgaag
	R	tttgcagcgaattgacaac
<i>THI3</i>	F	gcaagctctttggggtatcg
	R	ttgcggggaatttatccttg
<i>PDC1</i>	F	catgatcagatggggttga
	R	gagcctttggaccgtgaatc
<i>PDC5</i>	F	gatcagaaacgccacttcc
	R	ctgggacagcaaacaggttgg
<i>PDC6</i>	F	gcctcacgagatgacaacg
	R	tgggatcttggatttctg
<i>LPD1</i>	F	gccacgggctctgaagtac
	R	aaccatttccaatccgatg
<i>LAT1</i>	F	ggctaaaggggccaagatg
	R	gtggcaacagcgactgagac
<i>ACS1</i>	F	ttttatgttgcaccaatgc
	R	acccaagcaacgaaagatt
<i>ACS2</i>	F	ccttgggtaccgcctcaata
	R	tgggtagccttggacgttg
<i>ADH1</i>	F	cgttaagggtctgaagatcg
	R	ccagacaagtcagcgtgagg
<i>ADH2</i>	F	cgttaagggtctgaagatcg
	R	ccagacaagtcagcgtgagg
<i>ADH3</i>	F	aagccgcaaaattcaacag
	R	accagagatggcaaccaggt
<i>ADH4</i>	F	gctgtgtctgcaacgacc
	R	gaagcgtgggaacataaag
<i>ADH5</i>	F	tcgatgggtgtaatccaag
	R	actccatgagaaccgccatt
<i>ADH6</i>	F	tccatcacatttggctgtc
	R	ttttaccctggaccgcaacc
<i>ADH7</i>	F	ggcgatcatgacgttgatgt
	R	tgggactggaccccaattac
<i>SFA1</i>	F	aatgactgatgggggtctgg
	R	ggcagccacccaatgataa
<i>CIT1</i>	F	acccttggcacaatgttgat
	R	ggagcaccacaagccctatc
<i>CIT2</i>	F	attcggatcacgaagggtgt
	R	caaacctgatgcaagggaca
<i>CIT3</i>	F	tgcgttgatgacccgtatc
	R	cttgtgctgctaaccatgc
<i>ACO1</i>	F	tgcatacaagagaccattg
	R	tccagcgtttccacattctg
<i>IDP1</i>	F	atgtgccaccatcactctg
	R	cggcggaatgtttctgatg
<i>IDP2</i>	F	tcggcacaatttgaaagc
	R	tagattccaccgcgtcaatg
<i>IDP3</i>	F	ataggccgtcatgcttttgg
	R	gcgatccaccacttttagg
<i>IDH1</i>	F	atccgtccctgggtagtgg
	R	ggcgaaatgcaaggcacaatc
<i>IDH2</i>	F	aaagggtgtcaccacccatc
	R	taagaaccggcgctcaaac
<i>KGD1</i>	F	accattcccatttgcacg
	R	tctgtgatgcccacgaacc
<i>KGD2</i>	F	tattccagccgtcaatggtg
	R	ttacgaacgacggggtaac
<i>LSC1</i>	F	atgggtgggtgatgcttttcc
	R	ttcgatttcggccttaccac

Gene		Primer sequences (5'→3')
<i>LSC2</i>	F	ggatttcacagcttcaactcc
	R	cctctacctccggtcaatgc
<i>SDH1</i>	F	attccacacgaagtggaatgg
	R	ttggcaccatggacagaaac
<i>SDH2</i>	F	ggaaggcctttgtttggtg
	R	tagcacttggtcgtcttgg
<i>SDH3</i>	F	ctccgcttttcaagagcag
	R	ccgcttgggtgtcatttca
<i>SDH4</i>	F	cagggtgtgttaggggcact
	R	acgacggacaaaggcaaat
<i>SDH9</i>	F	gggtctggctgcctaatcac
	R	ttccatgggtgattgctctgg
<i>SHH3</i>	F	ccccgagcatctgtattcgt
	R	cggccattgtggaattctt
<i>SHH4</i>	F	aaagcagagctcagggttcg
	R	accaggggaactgcgatcag
<i>FUM1</i>	F	aagaatgccattgcctttgg
	R	ggcctgttgaatagccttgg
<i>MDH1</i>	F	tccgtgtcgaagggtttac
	R	atggcgaacaaagtcatcacg
<i>MDH2</i>	F	acatggaacgcaccaaagt
	R	tcgatgcaacgaattccaag
<i>MDH3</i>	F	tggaaaagtcgaccaaagt
	R	ctgcacgtaccaggtcaagg
<i>HIS1</i>	F	agtggttccgtggaaggcatc
	R	gtggcttaggacgttggctc
<i>HIS2</i>	F	cgggcaactgcaacgaagaa
	R	gcgccgccataggagcttat
<i>HIS3</i>	F	caccactgaagactgcggga
	R	gcgtacggcctgttcgaaag
<i>HIS4</i>	F	ggtgccaactgcgaacctt
	R	cctcctcttggcaacgcac
<i>HIS5</i>	F	tgttggtctctacagctccac
	R	ctggccaactctgctgttgc
<i>HIS6</i>	F	gacggctgttgattgtggc
	R	ccttcacgtctgcagcgtg
<i>HIS7</i>	F	agctctaagtgcttgggga
	R	gccactggaatgcaatgacgg
<i>PRS1</i>	F	ggtgacgatgaggcagacga
	R	tcgtcttcggagtcgacagc
<i>PRS2</i>	F	ggtgcaaaaagggtgcttc
	R	cgaacagcagcattcgcgaa
<i>PRS3</i>	F	gcttcgaagactgcgtctgc
	R	tgatcacaccggctgttgt
<i>PRS4</i>	F	tggatctcatgctcccaa
	R	ctgcatcaggcgacaccaa
<i>PRS5</i>	F	tcacagtggttgggtccag
	R	taaccctcgaggcagagcg
<i>RK11</i>	F	tcgatgcggatttcgggaa
	R	tgtttccaccacgccacta
<i>RPE1</i>	F	agggcataaaagctgcatgc
	R	ttggcctccaaacccagggt
<i>TKL1</i>	F	aactcaggteaccaggtgc
	R	ccagctgggttgggtgggt
<i>TKL2</i>	F	atagcgcaaggccaactttgc
	R	cccaattgcagatgtcccgc
<i>NQM1</i>	F	ttggtggaattcggcacc
	R	agagccttcttaccgfcgc
<i>TAL1</i>	F	tgccgaaggcccaagttactt
	R	aacacctgggtcgggttcac
<i>ARO1</i>	F	ggtgcccatgctgctttgt
	R	tcagggaacaactgccaatt
<i>ARO2</i>	F	ggcgacttcacgtactcga
	R	ctgaagcgacacggccaatc
<i>ARO3</i>	F	ccatcggcgccagaactact
	R	gttcattgtcagcggctctc
<i>ARO4</i>	F	ctcaattgctgcccgggtcc
	R	tggcgttttcaccgttagcg
<i>ARO7</i>	F	tcaccaattctccgttgaaga
	R	cgttgtaggggtccacacca

Gene		Primer sequences (5'→3')
<i>ARO8</i>	F	accttcccggtgccaattga
	R	ggagcaccagggtgtccagtt
<i>TRP1</i>	F	gcagggtgggacaggfgaact
	R	gcagggtgggacaggfgaact
<i>TRP2</i>	F	gaaaggagaagcgtgggggt
	R	caataccaccgccagcttgc
<i>TRP3</i>	F	gctgaagtcaagcgtgcctc
	R	atgcaccagcctctgcgtat
<i>TRP4</i>	F	atgtccgagggcacttttct
	R	ccagcaacgcctcgtgtagg
<i>TRP5</i>	F	taccaggtgtcgggtcaga
	R	agcctgagcgtcagtagctg
<i>PHA2</i>	F	cggccgattgcgacaactt
	R	gcctgcgtctcctctctct
<i>TYR1</i>	F	tggatccaggcaaaagcact
	R	tccggcagcttacaaactgt
<i>SER1</i>	F	caacatttcggagcagggcc
	R	tggcatccttcgaacggfga
<i>SER2</i>	F	tggfeggtgacggfgtgaac
	R	ttctgcacctttggcttggc
<i>SER3</i>	F	gcctfgggtactgccagaca
	R	gcgccatcctcatagagc
<i>SER33</i>	F	tcgctgctatgaaggacggg
	R	gcacctgcaattttgtggcc
<i>CHA1</i>	F	tgattgaaccggcatgtggc
	R	aggagccgccacaagcaata
<i>ILV1</i>	F	tgaagagcgtggcttgacga
	R	cgggaacaaagacagaccg
<i>MYC1</i>	F	cattgctggctgcggfctg
	R	tccgctagaacgacatggca
<i>MET2</i>	F	agggaaggagacacgcaaac
	R	tggacaccacgctttgacct
<i>MET6</i>	F	acgttgcgtgctgccctagaa
	R	ccttaacggcagcatcgtgg
<i>MET17</i>	F	aagggtggtgctgcttctg
	R	caccagtggtgtgccaaacct
<i>CYS3</i>	F	aatcgcttcctcagggtcc
	R	gcgttggcgactttggtgaa
<i>CYS4</i>	F	ttgctggtgctggfctgtgt
	R	cgaatgggtcagcaccaacg
<i>IRC7</i>	F	ggcaatgttaccagggtgccg
	R	gatttccgagccaagcagcc
<i>STR2</i>	F	atcttcagcggcgactcgaa
	R	cgcactctcgcaccataggc
<i>STR3</i>	F	ggattacgctcacaaccggga
	R	tcgaaggacccegtttcgaa
<i>SAM1</i>	F	tgtgaaaccgcggcaaaagac
	R	agtcgaaacccttggcggaa
<i>SAM2</i>	F	tggctctcaagggtgacgtg
	R	ttaccggagaaggcaccacc
<i>SHM1</i>	F	tgatcgtggccggfcttcc
	R	ggacaacattggctgccacc
<i>SHM2</i>	F	atcgccgacaaatgtgtgct
	R	agattggatgacacctggg
<i>GLY1</i>	F	acgacttgcggctcagacaca
	R	acagcgtcaccgatagaggg
<i>THR1</i>	F	gtcaggtgcaggcccaacta
	R	tagcaccatcgtaggcaggg
<i>THR4</i>	F	aacacaacgtcggfctgtt
	R	accgttgggtggcttgggaaga
<i>ILV2</i>	F	ttacaacgggtgtggggcga
	R	caacttgagcaccgatggcg
<i>ILV3</i>	F	accgggtgacactttggcaga
	R	tttgcaagtgaccgttggcc
<i>ILV5</i>	F	gctgccatcgaagacggfctg
	R	gagcggcatcggacaacaag

Gene		Primer sequences (5'→3')
<i>ILV6</i>	F	caagacctcccttgcccaca
	R	acaccgggttcgtttgac
<i>ALT1</i>	F	ggcagttcaagaagtcgcc
	R	accgggaacagtgcaaatgc
<i>ALT2</i>	F	aaagcgaagccttggatc
	R	aagtcctgggtcttggcgg
<i>BAT1</i>	F	ctcgtactgggtgcccatt
	R	tcgggaatgctggccgaa
<i>BAT2</i>	F	gctgccctgtgggtcttat
	R	ttgtcaccacagctctctgg
<i>LEU1</i>	F	atgtccacacatcggtcc
	R	tacaaaagccagcgaacca
<i>LEU2</i>	F	tgggtttgttgccatctgg
	R	accgtggcatgggtctaca
<i>LEU4</i>	F	tgggtgtgagtgctccga
	R	ccctcgacctggcacaaga
<i>LEU9</i>	F	gcaaccgaagcggcatctt
	R	ggagacacacacccacaca
<i>PYC1</i>	F	agaatgtgggtgggtgcca
	R	caccattggcaccacgaat
<i>PYC2</i>	F	ttcccgggtaccagacct
	R	gccacgtcgtacattctct
<i>AAT1</i>	F	gtccgcagttgggcattt
	R	tacagctaggcggcctgac
<i>AAT2</i>	F	gcactcttgcccataacc
	R	tccagtggaacacctgg
<i>HOM2</i>	F	actgcaggttgggtgcacc
	R	tgggagaacacagacctg
<i>HOM3</i>	F	gggtcgtcaaaagtctgg
	R	aagaacgggcggaacaacg
<i>HOM6</i>	F	cgttatgggtgccgggttg
	R	agaacgtcagcttcagcca
<i>ASN1</i>	F	acgattctcttcaacccaa
	R	ccgtatggacttcggccat
<i>ASN2</i>	F	gggcattcttgacccatg
	R	acagtgctgccagctctt
<i>LYS1</i>	F	cggtgccctgatctgttgc
	R	aaaggacaccacgggaag
<i>LYS2</i>	F	gcggctcactgttgat
	R	aaccattggcagagccact
<i>LYS4</i>	F	acggcctgtgatctggag
	R	accacaacctccaagctcc
<i>LYS9</i>	F	ccaattgctggaagaaaga
	R	gcctaaccaagaacccgg
<i>LYS12</i>	F	ccatgccatgtctgcacc
	R	cagcttctgttgcccaag
<i>LYS20</i>	F	gcttggaaaggtgggccag
	R	ttcttgcctagcccaact
<i>LYS21</i>	F	gcttggaaaggtgggccag
	R	ttcttgcctagcccaact
<i>ACO2</i>	F	aaagccggcttgaacacag
	R	gggcgcgcatgttctaa
<i>GLT1</i>	F	atgtccagaccctgtgagg
	R	agccagtgctgtactgg
<i>GLN1</i>	F	accgcttccatgaactgctt
	R	cttcttggcgacgtatct
<i>PRO1</i>	F	caaacccagatgccatgccg
	R	cggctccaaagtcagaaact
<i>PRO2</i>	F	aggggtgctgactctctgg
	R	actcaccagaccgtccaagc
<i>PRO3</i>	F	gtgcgggtgggtctctaca
	R	agccgttagagcatccatgt
<i>ARG1</i>	F	acgctctgaagccagaggt
	R	tgggttggcgacgggaata
<i>ARG2</i>	F	gcaccaagcatcttgcaca
	R	gttggcgacggcggaattac
<i>ARG3</i>	F	tgcctgagaaacggfagga
	R	cagcttggcctgtttcga
<i>ARG4</i>	F	gggggggagattactctgg
	R	ctcgcaagcccgctgtgat
<i>ARG7</i>	F	tttgcatgttggccaacgg
	R	tcgaacctcaccatcgga
<i>ARG8</i>	F	accaagtgagctcatccgg
	R	cattgacgatgtggcagcg
<i>ARG56</i>	F	tcaagggtgggtgggccatt
	R	ggctcaattccctgcttc
<i>CAR1</i>	F	cgcgccttttccatgacc
	R	tttgttctgggtgcacggc