

S3 Table. sSNPs string sequence

chr	Chromosomal sSNPs											CDS Codon Number	CDS position	product	Position (original sequence)	CDS position Within Codon	Codon Change
	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12						
C	C	C	C	C	C	C	C	C	C	C	C	68	294	Transcriptional regulator	82,279	1	TTC > CTT
C	C	C	C	C	C	C	C	C	C	C	C	182	1443	RNA virus assembly protein, Ssb	144,554	17	TTC > TTC
C	C	C	C	C	C	C	C	C	C	C	C	332	96	putative dehydrogenase-related protein	221,271	1	TTC > GGA
C	C	C	C	C	C	C	C	C	C	C	C	451	638	RNAase	389,253	10	TTC > GGC
G	G	G	G	G	G	G	G	G	G	G	G	451	1,533	nicotinamide ribonucleotide synthase V8, large subunit	129,834	1	TCC > CAA
C	C	C	C	C	C	C	C	C	C	C	C	410	1,249	The I (y) glycy (Gram-negative bacterial) hydrophobe/Ampiphile (Flu-1 (HAE3) Family)	458,244	1	TGT > GTA
G	G	G	G	G	G	G	G	G	G	G	A	69	29	Transcriptional regulator/negative kinase	518,977	1	TTC > TCT
C	C	C	C	C	C	C	C	C	C	C	C	178	134	phosphatase regulator sensor kinase Phod	640,831	1	TCC > GGG
T	T	T	T	T	T	T	T	T	T	T	T	38	95	putative members of the alpha-Lacta hydrolyase superfamily	850,884	1	TTC > GTT
T	T	T	T	T	T	T	T	T	T	T	T	333	999	tetraacyldisaccharide 4-kinase	860,531	1	TCT > GCC
C	C	C	C	C	C	C	C	C	C	C	C	717	2,131	PA5 domain 5-oxo(d)glutamate cyclase (GGEF) domain protein	1,024,836	3	TTC > ATT
C	C	C	C	C	C	C	C	C	C	C	C	633	1,439	Nucleosubiquitin endonuclease subunit 5.10kDa (UBN5subunit) NsrY/antiporin, MnA subunit	1,056,869	3	TCC > GGG
C	C	C	C	C	C	C	C	C	C	C	C	16	48	soluble tyric muasin transglycosylase and related regulatory proteins (some containing LysM/inasin domains)	1,124,870	3	TGG > GGA
A	A	A	A	A	A	A	A	A	A	A	A	23	3	Type I secretion membrane fusion protein, YegJ family	1,175,246	1	TCA > GGC
T	T	T	T	T	T	T	T	T	T	T	T	189	587	Branched chain amino acid ABC-type transport system, permease component	1,242,101	3	TCT > GCC
G	G	G	G	G	G	G	G	G	G	G	G	241	723	delta-aminolevulinic acid dehydratase	1,265,809	1	TAA > GAA
G	G	G	G	G	G	G	G	G	G	G	A	143	429	hydroxynitrile synthase, alpha subunit	1,265,229	1	TTC > CTC
C	C	C	C	C	C	C	C	C	C	C	C	64	192	proton-disulfide isomerase	1,409,891	1	TGG > GGA
C	C	C	C	C	C	C	C	C	C	C	C	220	560	hydropetalic protein	1,482,851	1	TGG > GGA
A	A	A	A	A	A	A	A	A	A	A	A	40	120	Protein-L-isopentrate carboxymethyltransferase	1,598,952	1	TCA > GCA
C	C	C	C	C	C	C	C	C	C	C	C	219	592	ABC-type unactivated transport systems, ATPase component	1,623,428	1	TAC > TAT
C	C	C	C	C	C	C	C	C	C	C	C	483	1,449	Carbamoyl phosphate synthase, large subunit	1,680,606	1	TCC > GCC
C	C	C	C	C	C	C	C	C	C	C	C	41	123	FA-type K+ transport systems, membrane component	1,728,975	1	TTC > GTT
A	A	A	A	A	A	A	A	A	A	A	A	89	267	hydropetalic protein	1,766,054	1	TCA > GTG
G	G	G	G	G	G	G	G	G	G	G	A	75	105	ABC-type unactivated transport system, permease component	1,785,370	1	TTC > TTT
C	C	C	C	C	C	C	C	C	C	C	C	163	489	hydropetalic protein	1,828,037	1	TCC > ACC
C	C	C	C	C	C	C	C	C	C	C	C	270	810	Transcriptional regulator	1,818,248	1	TAC > TAT
G	G	G	G	G	G	G	G	G	G	G	G	150	439	Transcriptional regulator	1,828,932	1	TCC > GGA
G	G	G	G	G	G	G	G	G	G	G	G	294	868	positive endonucleases (related to aryl-alcohol dehydrogenase)	1,856,580	1	TTC > ATA
G	G	G	G	G	G	G	G	G	G	G	G	29	87	3'-5'-bisecting (cycl) carrier protein synthase	2,077,485	1	TTC > CCA
G	G	G	G	G	G	G	G	G	G	G	G	503	1,500	carboxy integral membrane protein	2,182,487	1	TGG > GCC
G	G	G	G	G	G	G	G	G	G	G	G	114	342	ABC-type sugar transport systems, ATPase component	2,192,267	1	TGG > GGT
T	T	T	T	T	T	T	T	T	T	T	T	121	392	kinases of the glucanase family	2,271,482	1	TCC > GGT
T	T	T	T	T	T	T	T	T	T	T	T	409	1,497	Tooth dependent siderophore receptor	2,376,972	1	TCT > GCC
G	G	G	G	G	G	G	G	G	G	G	G	193	573	ABC-type sugar transport systems, permease component	2,396,225	1	TTC > TTG
C	C	C	C	C	C	C	C	C	C	C	C	130	390	acyl dehydrogenase	2,397,458	1	TCC > ATT
A	A	A	A	A	A	A	A	A	A	A	A	172	515	MNA polymerase sigma factor, sigma-70 family	2,401,354	2	TAA > TGA
C	C	C	C	C	C	C	C	C	C	C	C	104	308	hydropetalic protein	2,628,138	1	TCC > TCT
A	A	A	A	A	A	A	A	A	A	A	A	455	1,365	Lacton/multidrug efflux pump	2,691,912	1	TGA > GGG
C	C	C	C	C	C	C	C	C	C	C	C	223	669	ABC-type detergent transport system, permease component	2,822,671	1	TTC > CTT
C	C	C	C	C	C	C	C	C	C	C	C	173	517	hydropetalic protein	2,948,778	1	TTC > CTC
C	C	C	C	C	C	C	C	C	C	C	C	34	102	hydropetalic protein	2,948,848	1	TGG > GGA
C	C	C	C	C	C	C	C	C	C	C	C	13	41	hydropetalic protein	2,949,009	1	TAA > AAA
G	G	G	G	G	G	G	G	G	G	G	G	732	2,198	hydropetalic protein	2,968,778	1	TCC > GCG
C	C	C	C	C	C	C	C	C	C	C	C	38	108	members of the diglycosyltransferase (DMT) superfamily	3,086,376	1	TTC > GCG
C	C	C	C	C	C	C	C	C	C	C	C	211	633	Arabinose efflux permease	3,030,279	1	TCC > GGT
G	G	G	G	G	G	G	G	G	G	G	G	160	492	pyruvate kinase	3,086,922	1	TCC > AGC
C	C	C	C	C	C	C	C	C	C	C	C	40	120	Response regulator containing CheY-like receiver, AAA-type ATPase, and DNA-binding domains	3,098,219	1	TCC > GGT
C	C	C	C	C	C	C	C	C	C	C	C	154	462	Transcriptional regulator	3,219,241	1	TGG > GCT
C	C	C	C	C	C	C	C	C	C	C	C	345	1,001	Resonant C6a1 synthase, beta subunit	3,305,218	1	TCC > GGT
C	C	C	C	C	C	C	C	C	C	C	C	340	1,02	C-terminal peptidase [act]	3,412,118	1	TCC > AGC
G	G	G	G	G	G	G	G	G	G	G	G	143	429	thiamine ABC transporter, permease protein	3,509,599	1	TCC > CCA
G	G	G	G	G	G	G	G	G	G	G	G	17	44	hydropetalic protein	3,549,778	1	TTC > TCA
C	C	C	C	C	C	C	C	C	C	C	C	438	1,314	FAD/NMN containing dehydrogenase	3,548,363	1	TCC > GGT
C	C	C	C	C	C	C	C	C	C	C	C	167	501	cellulose synthetase-related transposase	3,529,782	1	TCC > GCT
C	C	C	C	C	C	C	C	C	C	C	C	177	511	DNA polymerase II, delta subunit	3,611,109	1	TCC > GGG

chr	sSNPs											CDS Codon Number	CDS position	product	Min (original sequence)	CDS Position Within Codon	Codon Change
	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12						
G	G	G	G	G	G	G	G	G	G	G	G	368	1,194	putative dehydrogenase-related protein	39,808	3	TCC > GCT
C	C	C	C	C	C	C	C	C	C	C	C	74	222	ABC-type sugar transport system, permease component	88,337	1	TCC > GCA
G	G	G	G	G	G	G	G	G	G	G	G	182	546	Ribosa/Arabinose/Galactoside ABC type transport systems, permease component	100,115	1	TGG > GGT
C	C	C	C	C	C	C	C	C	C	C	C	61	183	thiamine biosynthesis protein, ThiS	104,599	1	TCC > GCA
C	C	C	C	C	C	C	C	C	C	C	C	273	819	Transcriptional regulator	223,297	1	TCC > TCT
G	G	G	G	G	G	G	G	G	G	G	G	6	18	hydroxypyruvate isomerase	271,887	1	TCC > GGG
C	C	C	C	C	C	C	C	C	C	C	C	127	383	hydropetalic protein	305,017	1	TCC > AGC
G	G	G	G	G	G	G	G	G	G	G	G	306	918	hydroxynitrile a subunit endonuclease, subunit 1	331,399	1	TGG > GGG
C	C	C	C	C	C	C	C	C	C	C	C	209	623	hydropetalic protein	358,343	1	TCC > GGG
G	G	G	G	G	G	G	G	G	G	G	A	148	444	4-aminobutyrate aminotransferase and related aminotransferase	527,241	1	TGG > GGA
G	G	G	G	G	G	G	G	G	G	G	G	290	877	Pd6 domain 5-oxo	574,861	1	TCC > GGG
G	G	G	G	G	G	G	G	G	G	G	A	139	417	ABC-type sugar transport systems, ATPase component	601,243	1	TCT > CTC
G	G	G	G	G	G	G	G	G	G	G	A	1,601	4,803	hydropetalic protein	650,927	1	TCC > GGT
G	G	G	G	G	G	G	G	G	G	G	G	164	490	Dicentric/Dimeric acid oxidase (dicamminal)	682,664	1	TAC > GAT
C	C	C	C	C	C	C	C	C	C	C	C	172	516	ABC-type diglycoyl/diglycoyl/nickel transport systems, permease component	790,565	1	TGG > GGC
A	A	A	A	A	A	A	A	A	A	A	A	138	414	NAD-dependent aldehyde dehydrogenase	805,428	1	TAT > CAC
C	C	C	C	C	C	C	C	C	C	C	C	191	573	amidoaryloxyase	883,951	1	TCC > GGT
G	G	G	G	G	G	G	G	G	G	G	G	198	594	hydroxylase sugar dehydrogenase	1,054,847	1	TCC > CTC
G	G	G	G	G	G	G	G	G	G	G	A	38	114	Ribosa/Arabinose/Galactoside ABC type transport systems, permease component	1,115,162	1	TCC > GCA
G	G	G	G	G	G	G	G	G	G	G	G	130	477	Catalase/peroxidase expert protein	1,130,420	1	TCA > GCG
G	G	G	G	G	G	G	G	G	G	G	A	186	558	SGCA family	1,141,488	1	TTC > CTT
C	C	C	C	C	C	C	C	C	C	C	C	68	180	Roseo-tyrosinase isomerase B	1,342,935	1	TCC > CGG
C	C	C	C	C	C	C	C	C	C	C	C	114	336	Protein of unknown function (POU 1365)	1,362,509	1	TTC > ATG
G	G	G	G	G	G	G	G	G	G	G	G	314	942	FAP transporter, DTM subunit	1,441,115	1	TTC > ATT
C	C	C	C	C	C	C	C	C	C	C	C	306	918	NAD-dependent aldehyde dehydrogenase	1,472,753	1	TCC > GGT
C	C	C	C	C	C	C	C	C	C	C	C	63	189	hydroxyltransferase	1,496,925	1	TCC > TCT
A	A	A	A	A	A	A	A	A	A	A	A	169	507	functional 5-hydroxymethylglutathione dehydrogenase (class II alcohol dehydrogenase)	1,506,339	1	TCC > GGA
A	A	A	A	A	A	A	A	A	A	A	A	194	582	functional 5-hydroxymethylglutathione dehydrogenase (class II alcohol dehydrogenase)	1,505,545	1	TCT > CTC
A	A	A	A	A	A	A	A	A	A	A	A	681	2,043	Aerobic-type carbon monoxide dehydrogenase, large subunit CoxI, hcn-like protein	1,605,960	1	TTC > GGC
G	G	G	G	G	G	G	G	G	G	G	G	107	309	ABC-type unactivated transport system, permease component	1,613,155	1	TTC > CTC
T	T	T	T	T	T	T	T	T	T	T	T	141	423	Lysozymine endonuclease-like protein	1,655,309	1	TAA > GAG
G	G	G	G	G	G	G	G	G	G	G	G	23	69	hydropetalic protein	1,676,823	1	TTC > ATG
G	G	G	G	G	G	G	G	G	G	G	G	212	636	ABC-type Fish-oligosacchare transport system, permease component	1,688,119	1	TCC > GGT

chr	sSNPs											CDS Codon Number	CDS position	product	Min (original sequence)	CDS Position Within Codon	Codon Change
	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12						
G	A	A	A	A	A	A	A	A	A	A	A	26	78	Short-chain alcohol dehydrogenase of unknown specificity	32,229	1	TGG > GGT</