

*Full Length Research Paper*

# A single nucleotide polymorphism (SNP) assay for population stratification test between eastern Asians in association studies

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Accepted 5 December, 2011

**Population subdivision or recent admixture of populations can lead to spurious associations between the certain phenotypes and unlinked candidate loci in case-control and cohort studies of association. False positive associations due to population stratification can be controlled by genotyping a few dozen unlinked genetic markers. Lots of researches have reported SNP markers with high ethnic differentiation among African and European populations, but very few SNP panels can test stratification among Asians, especially in eastern Asians. Therefore, we developed the first SNP assay to test stratification between Chinese and Japanese populations living in East Asia. The ancestry informative SNP markers (AIMs) were selected from HapMap Affymetrix 500K data and evaluated on 113 unrelated subjects recruited from Xi'an City, located Northwest of China. This SNP based assay has proven very reliable, and made it possible to perform population stratification analyses with Sequenom MassARRAY SNP genotyping technology. The SNP assay showed excellent promise as a highly potential application to test population stratification in case-control studies of association in Eastern Asians.**

**Key words:** Chinese, Japanese, population stratification, ancestry informative markers (AIMs).

## INTRODUCTION

Great efforts and expenses have been expended in attempts to detect genetic polymorphisms contributing to susceptibility to complex human disease. Single nucleotide polymorphisms (SNPs), as the most abundant form of genomic sequence variation, are very robust and useful for a variety of different applications such as genome wide associations (GWAS), forensic genetics, clinical genetics and pharmacogenetics (Quintáns et al., 2004; Kidd et al., 2006; de Bakker et al., 2006; Marsh et al., 2002). SNPs have been increasingly used as a means for investigation of the genetic causes of complex human diseases in Chinese populations (Lee et al., 2010; Tsai et al., 2010; Han et al., 2009; Yang et al., 2009; Niu

et al., 2010), and extensive catalogues of SNPs across the genome have been constructed.

For many diseases, population-based studies of unrelated individuals in which case-control and cohort studies serve as standard designs for genetic association analysis can be the most practical and powerful approach (Cardon and Palmer, 2003). Population subdivision or recent admixture of populations can lead to biased or spurious associations between a phenotype and unlinked candidate loci in association studies (Pritchard and Rosenberg, 1999). False positive associations due to population stratification can be controlled by genotyping a few dozen unlinked genetic markers (Freedman et al., 2004).

Lots of papers have reported SNP markers with high ethnic differentiation among African and European populations, but there are very few SNP panels that can test stratification among Asians, which should be noticed by association analysis in eastern Asian populations (Xu et

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**Table 1.** Median  $F_{ST}$  value between HapMap populations based on Affymetrix 500k data.

$F_{ST}$	CHB	JPT	CAU	AFAM
CHB	-	0.0065	0.0197	0.0392
JPT	0.0065	-	0.0395	0.0526
CAU	0.0197	0.0395	-	0.0437
AFAM	0.0392	0.0526	0.0437	-

$F_{ST}$ , Population diversity index; CAU, Caucasians, AFAM, Africa Americans; JPT, Japanese; CHB, Chinese.

al., 2008, 2009; Reich et al., 2009). Some SNPs show little allele frequency variation between populations with near genetic background still remaining highly informative (Kidd et al., 2006).

Therefore, we have developed the first SNP detection assay to test population stratification between Chinese and Japanese populations on genotype-phenotype association studies, set up a method to detect and account for it, and present suggestions for future study design and analysis in eastern Asians. We also discussed the possibility of using the panel on forensic identification.

## MATERIALS AND METHODS

SNP markers for all autosomal chromosomes deposited by the Affymetrix 500K panels of HapMap samples were used to determine ancestry informative markers (AIMs). The data set was downloaded from <http://www.affymetrix.com>. The Affymetrix 500K array sets contain SNPs that are spread evenly across the genome, and were developed for genome-wide association and fine mapping studies. The samples used to generate allele frequency datasets of the 500K SNP array consist of 90 unrelated HapMap Japanese (JPT) and Chinese (CHB) samples (45:45). We used another Chinese population to validate the population stratification test effects of the candidate SNPs.

113 unrelated Chinese Han adult subjects were recruited in Xi'an city in China (CHX), and consisted of 84 males and 29 females. All subjects were healthy and unrelated. Sample collection was approved by the respective ethics panel of Xi'an Jiaotong University and signed informed-consent documents were obtained from all participants before they entered the study. The study was approved by the ethics committees of Fourth Military Medicine University. Genomic DNA was extracted from whole blood using the phenol-chloroform extraction method. DNA concentration was measured by spectrometry (DU530 UV/VIS spectrophotometer, Beckman Instruments, Fullerton, CA, USA).

### SNP assay design and genotyping

Multiplexed SNP MassEXTEND assay was designed with Sequenom MassARRAY Assay Design 3.0 Software. SNP genotyping was performed by Sequenom MassARRAY RS1000 using the standard protocol recommended by the manufacturer. Data management and analyses were performed using Sequenom Typer 4.0 Software. Assay design and mass spectrometric genotyping were performed as previously described (Gabriel et al., 2009; Thomas et al., 2007).

### Statistical analysis

A computer program using Perl <http://www.perl.org> was written to export and pre-process the SNP information from the HapMap Affymetrix 500K data sets (the codes are available upon request). Heterozygosity of each locus was calculated with Microsoft Excel software. Population diversity index ( $F_{ST}$ ) value was performed with Arlequin software (Excoffier et al., 2005). Power of discrimination (DP) and cumulate power of discrimination (CDP) of candidate SNPs was with Microsoft Excel software (Fisher, 1951).

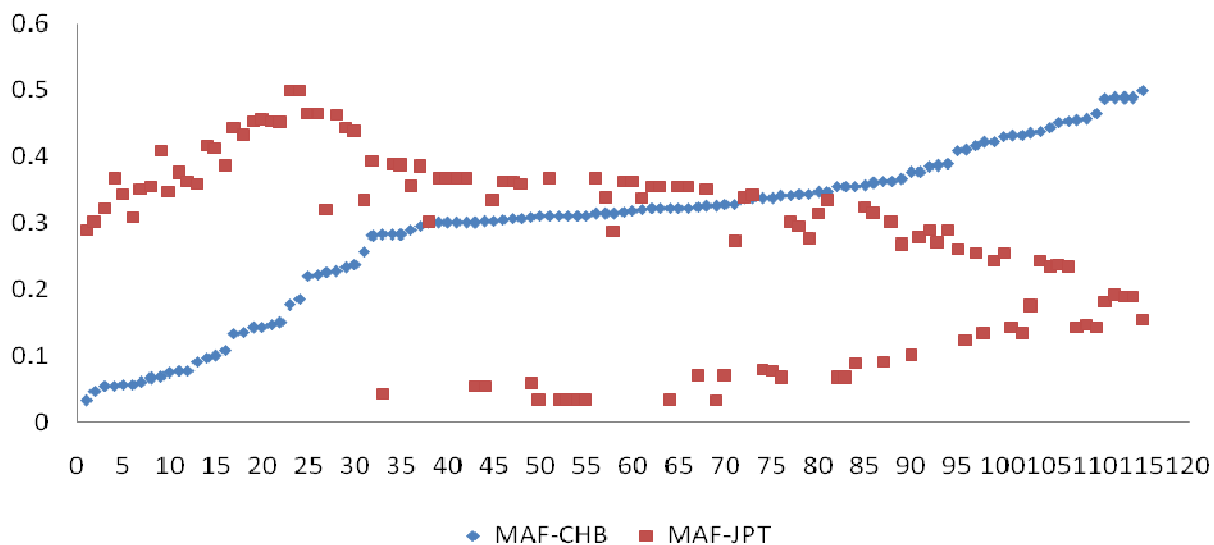
Detection of population substructure was carried out through the program STRUCTURE 2.0, which uses a Markov chain Monte Carlo (MCMC) algorithm to cluster individuals into different cryptic sub-populations (Pritchard et al., 2000). Admixture and correlated allele frequency models were selected for the HapMap data, and the number of subpopulations was assigned as  $K=2$ . 30,000 steps were run. Validation of informative SNPs on CHX population was tested by STRUCTURE 2.0 with un-admixture and correlated allele frequency models, and other parameters were set as that of HapMap data.

## RESULTS

### Selection of AIMs

We selected AIMs from HapMap Affymetrix 500K data sets, which contained 500,568 SNPs. After excluding SNPs whose call rate was  $< 95\%$  or Hardy-Weinberg equilibrium (HWE)  $p < 0.001$ , the final SNP set maintained in the subsequent analyses contained 379,319 SNPs, yielding an average marker spacing of  $\sim 7.9$  kb throughout the human genome. The median value of  $F_{ST}$  between CHB and JPT was 0.0065. The median value of  $F_{ST}$  between HapMap populations is shown in Table 1. The  $F_{ST}$  value indicated that CHB and JPT have very similar genetic background, compared to Caucasians (0.0197) and Africa Americans (0.0392).

We selected 115 SNPs with  $F_{ST}$  higher than 0.1 between CHB and JPT as AIMs for further analysis (supplementary Table 1). The largest  $F_{ST}$  of the SNPs between CHB and JPT was 0.2065, with an average of 0.1166. The minor allele frequency (MAF) of AIMs ranged from 0.033 to 0.5 in CHB and JPT as shown in Figure 1. Population structure analysis was performed with Structure 2.0 software. CHB and JPT were divided into two population clearly using 115 AIMs (Figure 2A). The



**Figure 1.** MAF distribution of 115 AIMs in HapMap populations. MAF, Minor allele frequency; JPT, Japanese; CHB, Chinese.

average proportion of CHB was 94.6% in Chinese cluster, while JPT was 93.7% in Japanese cluster. The results show the SNP assay was accurate in detecting population stratification between CHB and JPT in HapMap project.

### SNP Genotyping in CHX population

115 selected AIMs were genotyped in CHX using Sequenom MassARRAY SNP genotyping technology. Raw SNP genotype data are shown in supplementary Table 2. The average SNP call rate was 98.75 with a range from 87.6 to 100%. The average observed heterozygosity was 0.4188 with a range from 0.186 to 0.6 (Supplementary Table 3). All loci passed the HWE test ( $p > 0.01$ ).

### Ethnic origin validation of CHX samples

All selected CHX samples, together with CHB samples and JPT samples, used Structure 2.0 software to validate their ethnic origin. We assumed all samples were from two unrelated populations since we wanted to validate their ethnic background.

So we chose unrelated population model for structure analysis.

All CHX samples were identified to be from Chinese and the accurate rate of identification was nearly 100% (Figure 2B).

### Discrimination power analysis

In order to analyze the individual's DP of the informative

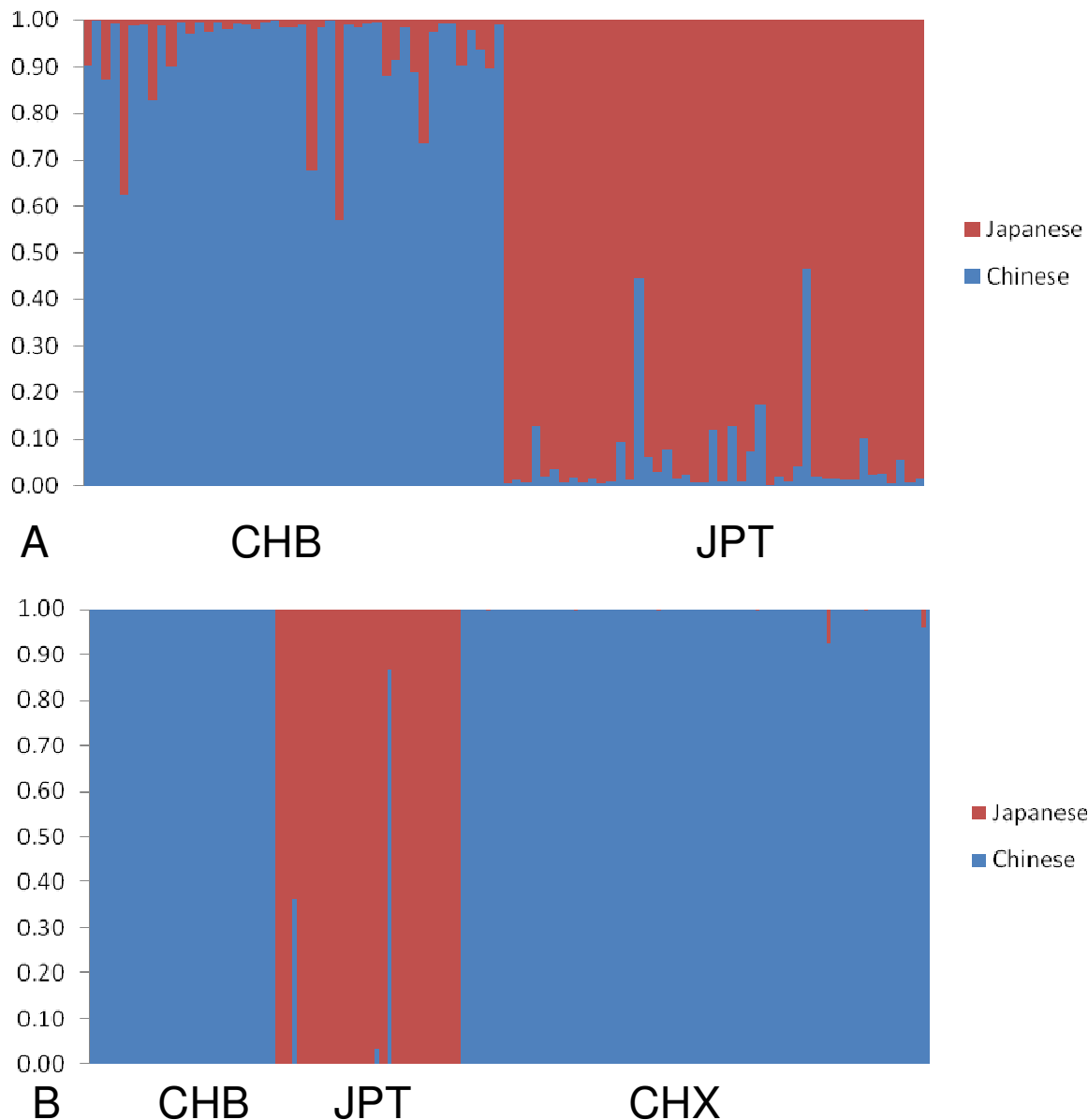
SNP markers, we calculated DP for each SNP and CDP. The average DP was 0.5448, ranging from 0.3444 to 0.6551 (supplementary Table 3), and the CDP was nearly equal to 1.

This SNP assay showed very powerful individual identification ability.

### DISCUSSION

We have reported the first SNP panel using Sequenom MassARRAY technology to test population stratification between Chinese and Japanese populations in our study. More AIMs between populations or sub-populations were identified by population genetic studies or by GWAS (Lee, 2003; Bittles, 2005; Campbell et al., 2005; Benn-Torres et al., 2008; Price et al., 2007). These findings offer us an opportunity to develop molecular methods to detect individual ethnic background in association studies. Recent research on Chinese Han populations by Li Jin *et al* revealed the genetic differentiation between South Han Chinese and North Han Chinese further proved the possibility to detect an individual's birthplace (or source) in Han subpopulations (Xu et al., 2009; Xu et al., 2009; HUGO et al., 2009).

This is also the first SNP assay to detect individual ethnic origin in East Asia using Sequenom MassARRAY SNP typing technology. It offered a molecular tool to help us in forensic investigations and anthropology studies. Forensic scientists have developed a series of STR and SNP panel for forensic identification of individuals by different technologies (Kidd et al., 2006; Pomeroy et al., 2009; Krjtskov et al., 2009; Li et al., 2006). Sequenom MassARRAY SNP typing technology had already been used in oncogene mutation research (Thomas et al.,



**Figure 2.** Estimated membership fractions of selected populations by Structure 2.0 software. A, Estimated membership fraction of Hapmap samples ( $K = 2$ ); B, ethnic origin validation of CHX samples. Estimated membership fraction in two clusters ( $K = 2$ ). Each individual is represented by a single vertical line, which is partitioned into Japanese and Chinese segments. JPT, Japanese; CHB, Chinese; CHX, Xi'an city in China.

2007; Zhao et al., 2006), complex disease related genes research (Craig et al., 2009; Cross et al., 2009; Huang et al., 2008), pharmacogenetics (Falzoi et al., 2010; Dorey, 2001), and human papilloma viruses examination (Soderlund-Strand et al., 2008). The Sequenom Mass-ARRAY platform has several attractive features for users desiring an accurate custom SNP genotyping assay with modest multiplexing and minimal assay setup costs due to unmodified oligonucleotide primers. It utilizes a homogeneous reaction format with a single extension primer to generate allele-specific products with distinct masses, multiplexed PCR reactions, a single termination

mix and universal reaction conditions for all SNPs, small reagent volumes, and a throughput of >100,000 genotypes per day/system (Gabriel et al., 2009).

### Conclusion

We have developed a SNP assay to detect population stratification in East Asians, and the SNP assay has been validated in CHX population with Sequenom Mass-ARRAY SNP genotyping technology. Our results show that the SNP assay is a real option for detecting

population stratification of East Asians in association studies and also a molecular tool to help us in forensic investigations and anthropology studies.

## ACKNOWLEDGEMENT

We would like to thank Dr. Bofeng Zhu (Xi'an Jiaotong University School of Medicine, China) for providing the population sample. This work was financially supported by the Talents Programme 2010, Tangdu hospital, the Fourth Military Medical University

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**Supplementary Table 1.** Genetic information of 115 informative SNPs.

RS ID	Chromosome	Physical Position	Allele	MAF-CHB	MAF-JPT	$F_{ST}$
rs1045574	8	143760960	C/T	0.2262	0.3214	0.2065
rs7827503	8	81980662	A/G	0.2576	0.3333	0.1683
rs6574531	14	79415287	C/T	0.4355	0.1744	0.1633
rs12516484	5	18764837	A/G	0.3	0.3	0.16
rs10768140	11	35467483	A/C	0.314	0.2875	0.159
rs35424097	4	182428190	C/T	0.0698	0.4091	0.1581
rs7865861	9	87408073	A/G	0.3293	0.2738	0.158
rs16991180	20	10096468	A/G	0.0556	0.3667	0.1453
rs16879241	6	49420834	C/T	0.3256	0.0341	0.144
rs372440	6	159923558	C/T	0.3444	0.2778	0.1434
rs545472	6	49426849	A/G	0.3222	0.0333	0.1427
rs4671730	2	66638104	A/G	0.3667	0.2667	0.1358
rs549464	6	49416010	C/T	0.3111	0.0333	0.1353
rs1924982	6	49414269	A/G	0.3111	0.0333	0.1353
rs556807	6	49410241	C/T	0.3111	0.0333	0.1353
rs532017	6	49420368	C/T	0.3111	0.0333	0.1353
rs568369	6	49430248	A/G	0.3111	0.0333	0.1353
rs7045959	9	4257787	A/C	0.5	0.1556	0.1346
rs12914971	15	70382625	A/T	0.0972	0.4167	0.1336
rs12499851	4	24559330	A/G	0.3026	0.3333	0.1326
rs7865106	9	87407405	A/C	0.3444	0.2955	0.13
rs6713102	2	196999893	C/T	0.061	0.3523	0.1294
rs10957988	8	81983149	C/T	0.3421	0.3	0.1283
rs17165352	7	88191793	C/T	0.0571	0.3438	0.1281
rs12143100	1	42178044	C/T	0.1	0.4125	0.1281
rs9389520	6	137924374	C/T	0.2895	0.3553	0.1268
rs7558972	2	197001488	A/G	0.0778	0.375	0.1261
rs10956197	8	125781601	C/T	0.0667	0.3556	0.1253
rs10814395	9	3650648	C/G	0.3556	0.0667	0.1253
rs1548299	9	3640174	A/C	0.3556	0.0667	0.1253
rs11150946	18	72203695	A/G	0.4667	0.1444	0.1223
rs6420159	8	26890163	A/G	0.314	0.3372	0.1218
rs16849378	2	197000245	A/G	0.0333	0.2889	0.1208
rs4850694	2	196975003	C/T	0.0778	0.3636	0.1188
rs595119	10	52845806	A/G	0.3864	0.2714	0.1187
rs4888666	16	76323785	C/T	0.3784	0.2791	0.1185
rs9944528	17	77894039	C/G	0.1341	0.4444	0.1171
rs2497706	10	116233203	A/G	0.3205	0.3382	0.1165
rs11622227	14	105169265	A/G	0.3415	0.0667	0.1162
rs2125657	15	27693153	A/G	0.0556	0.3222	0.116
rs7558213	2	133240403	C/T	0.1429	0.4545	0.1159
rs868868	1	148575181	A/G	0.1778	0.5	0.1159
rs12185723	2	147450570	C/T	0.1444	0.4556	0.1152
rs2101252	16	79049388	A/T	0.4556	0.1444	0.1152
rs9344924	6	65021755	A/G	0.3472	0.3143	0.1147
rs17618119	2	86254974	A/G	0.4231	0.2444	0.1142
rs27061	5	1415793	A/G	0.3636	0.3	0.1136
rs7849638	9	4254171	A/G	0.4884	0.1905	0.1132
rs1242810	3	4248489	A/G	0.4571	0.1486	0.1127
rs16964201	15	49302643	C/T	0.075	0.3488	0.1122
rs11819833	11	5569986	A/G	0.1477	0.4545	0.1118

Supplementary Table 1. Contd.

RS ID	Chromosome	Physical Position	Allele	MAF-CHB	MAF-JPT	$F_{ST}$
rs1351499	8	26875170	C/G	0.3	0.3667	0.1116
rs7832879	8	26878210	A/G	0.3	0.3667	0.1116
rs609098	6	65143469	A/G	0.3	0.3667	0.1116
rs1982324	8	81979195	A/G	0.3	0.3667	0.1116
rs9934131	16	79048819	A/G	0.4333	0.1333	0.1108
rs12440184	15	87308695	A/G	0.4091	0.2619	0.1106
rs7757305	6	65092239	A/C	0.3077	0.3605	0.1104
rs4235967	6	64943243	A/G	0.3049	0.3636	0.1103
rs17570449	3	45037099	A/G	0.0484	0.3	0.11
rs2100684	4	181130087	C/T	0.2841	0.3864	0.1097
rs9599610	13	69780707	A/T	0.4167	0.2564	0.1097
rs11059295	12	126659049	C/T	0.1857	0.5	0.1096
rs136575	22	44089782	A/G	0.2386	0.4375	0.1092
rs6427135	1	165312878	A/G	0.3068	0.3636	0.109
rs7039105	9	21845096	G/T	0.2333	0.4444	0.1087
rs12175881	6	64974739	C/T	0.4444	0.2333	0.1087
rs4710883	6	170345329	C/T	0.2841	0.3889	0.1081
rs6746781	2	147443596	C/T	0.1364	0.4318	0.1073
rs7695197	4	4463451	A/G	0.2821	0.3929	0.107
rs12786429	11	5570176	G/T	0.1512	0.4512	0.1069
rs4846593	1	216349460	A/G	0.3857	0.2895	0.1065
rs10762667	10	76897436	A/G	0.3778	0.1	0.1061
rs3807337	7	133921077	C/T	0.3372	0.3372	0.106
rs2476467	6	163516910	C/T	0.3636	0.0909	0.1059
rs4717331	7	65823036	C/T	0.3611	0.314	0.1058
rs10737511	1	162177188	C/T	0.0581	0.3095	0.1053
rs16965880	17	35927454	A/G	0.3889	0.2889	0.1049
rs964729	14	79410949	C/G	0.4872	0.1818	0.1047
rs11665827	19	8794061	A/C	0.1081	0.3875	0.1047
rs4257797	5	166801773	G/T	0.2841	0.0444	0.1046
rs4296050	11	123891682	A/G	0.439	0.2439	0.1045
rs9451209	6	65025847	A/C	0.3111	0.3667	0.1041
rs9929618	16	79044023	A/G	0.4222	0.1333	0.104
rs689011	15	32849574	C/T	0.0909	0.3605	0.1039
rs5002649	6	64954923	C/T	0.3222	0.3556	0.1039
rs2250486	17	19417180	C/T	0.3222	0.3556	0.1039
rs12174860	6	64974391	A/G	0.3222	0.3556	0.1039
rs7145482	14	28133583	A/T	0.3222	0.3556	0.1039
rs4900384	14	97568704	A/G	0.2209	0.4667	0.1039
rs7751978	6	8888960	C/T	0.3256	0.3523	0.1039
rs13177990	5	19721516	A/G	0.3095	0.0595	0.1038
rs13228455	7	39524398	C/G	0.4103	0.125	0.1038
rs12024761	1	184598563	A/G	0.3023	0.0556	0.1036
rs2508037	6	30026415	A/G	0.3286	0.0714	0.1033
rs7020669	9	87403580	C/T	0.3372	0.3415	0.1033
rs1414229	9	21763940	C/G	0.2955	0.3846	0.1032
rs7166281	15	73715247	G/T	0.2222	0.4667	0.1029
rs2220099	3	177528438	G/T	0.3556	0.0889	0.1029
rs1574477	3	114312711	A/G	0.4545	0.2333	0.1024
rs1080496	10	93434242	C/T	0.3372	0.0778	0.1023
rs1028484	6	65061863	C/T	0.314	0.3667	0.1023
rs601897	8	102538358	C/T	0.3	0.0556	0.1022
rs2057161	6	65026148	C/T	0.3171	0.3636	0.1022





Supplementary Table 2. Contd.

rs16879241	CT	TT	CT	TT	TT	TT	TT	TT	TT	TT	TT	TT
rs545472	AG	GG	AG	GG	GG	GG	GG	GG	GG	GG	GG	GG
rs568369	AG	AA	AG	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs4235967	AG	GG	AG	AG	AG	AA	AG	AG	AG	GG	AG	AG
rs5002649	CT	TT	CT	CT	CT	CC	CT	CT	CT	TT	CT	CT
rs12174860	AG	AA	AG	AG	AG	GG	AG	AG	AG	AA	AG	AG
rs12175881	CT	CC	CT	CT	CT	TT	CT	CT	CT	CT	CT	CT
rs9344924	AG	GG	AG	AG	AG	AA	AG	AG	AG	GG	AG	AG
rs9451209	AG	AA	AG	AG	AG	GG	AG	AG	AG	AA	AG	AG
rs2057161	CT	CC	CT	CT	CT	TT	CT	CT	CT	CC	CT	CT
rs1028484	CT	CC	CT	CT	CT	TT	CT	CT	CT	CC	CT	CT
rs7757305	AG	AA	AG	AG	AG	GG	AG	AG	AG	AA	AG	AG
rs609098	AG	GG	AG	AG	AG	AA	AG	AG	AG	GG	AG	AG
rs6454814	AG	AA	AG	AG	AG	GG	AG	AG	AG	AA	AG	AG
rs9389520	CC	CT	CT	CT	CT	CC	TT	CT	CT	CC	TT	TT
rs372440	TT	CT	CT	CT	TT	TT	CT	TT	CT	TT	CC	CC
rs2476467	CT	CC	CT	CC	CT	CT	CC	CT	CC	CC	TT	TT
rs4710883	CC	CT	CT	CC	CC	NN	CT	CC	CT	CT	CT	CT
rs13228455	CT	CT	CT	TT	CT	TT	CT	TT	TT	TT	TT	TT
rs4717331	TT	CC	TT	CC	TT	CC	CT	CT	TT	TT	CT	CT
rs17165352	CC	CC	CT	CT	CC	CC	CC	CT	CC	CT	NN	NN
rs3807337	CC	CC	CT	CT	CT	TT	CT	CT	CC	CC	TT	TT
rs1351499	CT	TT	CT	TT	CT	CT	CT	CC	CT	CT	CT	CT
rs7832879	NN	GG	AG	GG	AG	AG	AG	AA	AG	AG	AG	AG
rs6420159	AG	AA	AG	AA	AG	AG	AG	GG	AG	AG	AG	AG
rs1982324	GG	GG	GG	GG	GG	GG	GG	AG	AG	AA	GG	GG
rs7827503	GG	GG	GG	GG	GG	GG	GG	AG	AG	AA	GG	GG
rs10957988	CT	TT	CT	CT	TT	TT	TT	CT	CT	CC	CT	CT
rs601897	CC	CC	CC	TT	CC	CC	CC	CT	CC	CC	TT	TT
rs10956197	TT	TT	CT	TT	CT	TT	TT	TT	TT	TT	CT	CT
rs1045574	CT	CC	CC	CC	CC	CT	CC	TT	CC	CC	TT	TT
rs1548299	GG	AG	GG	GG	GG	GG	GG	AG	AG	GG	GG	GG
rs10814395	CT	CT	CC	CC	CC	CC	CC	CT	CT	CC	CC	CC
rs7849638	GG	AG	AG	AA	AG	AG	AA	GG	GG	AG	AG	AG
rs7045959	AA	AG	AG	GG	AG	AG	GG	AA	AA	NN	AG	AG
rs1414229	CC	CT	CT	CC	CC	CC	CT	CC	CT	CT	CC	CC
rs7039105	TT	GT	GT	TT	TT	TT	GT	TT	TT	GT	TT	TT
rs7020669	CC	CT	CT	CC	CT	CC	CT	CT	CT	CC	CT	CT
rs7865106	GG	AG	AG	GG	AG	GG	AG	AG	AG	GG	AG	AG
rs7865861	AA	AG	AG	AA	AG	AA	AG	AG	AG	AA	AG	AG
rs16910853	AG	AG	AA	AA	AA	AA	AG	AG	AG	AG	AG	AG
rs11011420	CC	CT	CC	TT	CT	CC	CT	TT	TT	CT	CT	CT
rs595119	AG	AA	AG	AG	AA	AG	AG	AG	AG	AA	GG	GG
rs10762667	GG	AG	AG	GG	GG	GG	GG	AA	GG	GG	AA	AA
rs1080496	CT	TT	CT	CC	CC	CT	CT	CT	CT	CT	CT	CT
rs10881957	CT	CC	TT	TT	TT	CT	CT	CT	TT	CT	CT	CT
rs2497706	AA	AA	AG	AG	GG	GG	GG	AG	AG	AG	AG	AG
rs11819833	AA	AA	AG	AG	AG	AA	GG	AA	AA	AA	AG	AG
rs12786429	TT	TT	GT	TT	GT	TT	GG	TT	TT	TT	GT	GT
rs10768140	AA	AA	AG	AA	GG	AG	GG	AA	AA	AA	AG	AG
rs648409	GG	AG	AG	AG	AG	AA	AA	AG	AA	AA	AA	AA
rs4296050	AA	AG	AA	GG	AG	GG	AG	GG	GG	AG	GG	GG

Supplementary Table 2. Contd.

rs735295	CT	CT	TT	CT	TT	TT	CT	TT	CT	CC	TT
rs11059295	CT	CC	TT	TT	CT	TT	CT	TT	TT	CT	CT
rs9599610	AG	GG	GG	AG	AG	AG	AG	AA	AG	AA	AA
rs7145482	AG	AA	AG	AG	AG	AA	AA	AG	GG	AG	AA
rs722200	CT	CC	TT	CT	CT	CC	TT	CT	CT	TT	CT
rs964729	CC	CC	CC	CT	CC	TT	CC	CT	CT	CC	CT
rs6574531	TT	TT	TT	CT	TT	CC	TT	CT	CT	TT	CT
rs4900384	GG	AG	AA	AG	AG	AG	GG	GG	GG	AG	GG
rs11622227	AG	AG	AA	GG	GG	GG	AG	AG	AG	AG	GG
rs2125657	AG	GG	GG	GG	GG	GG	AG	GG	GG	GG	GG
rs689011	TT	TT	CT	TT	CT	TT	TT	CT	CT	TT	TT
rs16964201	CC	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs12914971	AA	AA	AA	AA	AA	AA	AA	AG	AA	AA	AA
rs7166281	TT	GT	GT	GT	TT	GT	GT	GT	GT	TT	TT
rs12440184	AG	GG	AG	AG	NN	AA	AA	AG	AG	GG	AA
rs4888666	CT	TT	CT	CT	CC	CC	CT	CT	TT	TT	TT
rs9929618	GG	AG	AG	AA	AG	AG	AG	AG	GG	GG	GG
rs9934131	AG	AG	AG	AA	AG	AG	AG	AG	GG	GG	GG
rs2101252	AG	AG	AG	AA	AG	AG	AG	AG	GG	GG	GG
rs2250486	TT	TT	TT	TT	TT	CT	CT	TT	TT	TT	TT
rs16965880	AA	GG	AA	AG	GG	AG	AG	AG	AA	GG	AA
rs9944528	CC	CT	CC	CC	CC	CC	CC	TT	CT	CC	CT
rs11150946	AA	AG	AG	AG	GG	GG	AA	AA	AA	AA	AA
rs11665827	AG	AG	AG	AG	AG	AA	AA	AA	AA	AA	AA
rs11882543	CT	CT	CT	TT	TT	NN	TT	TT	CT	TT	TT
rs16991180	AG	GG	AA	GG	GG	GG	GG	AG	GG	GG	GG
rs16993168	TT	GT	GT	TT	GG	GT	GG	GT	GT	GT	GT
rs136575	GG	AG	AG	GG	GG	GG	AG	AG	AG	AG	GG
SNP ID	CHX012	CHX013	CHX014	CHX015	CHX016	CHX017	CHX018	CHX019	CHX020	CHX021	CHX022
rs12143100	CC	CC	CC	CT	CT	CC	CC	CC	CC	CT	CT
rs868868	AG	GG	GG	GG	AG	GG	GG	GG	GG	AG	GG
rs10737511	CC	CT	CT	CT	CT	CT	TT	CC	TT	CC	CC
rs6427135	AG	AG	GG	NN	AA	AG	AA	AG	AG	AG	AG
rs12024761	GG	AA	GG	AA	GG	AG	AA	AG	GG	AG	GG
rs4846593	AA	AG	GG	AA	AG	AG	AG	AA	AA	AA	AA
rs4671730	GG	AG	GG	AG	AG	GG	AA	AA	GG	AG	GG
rs17618119	GG	AA	AA	AG	AA	AG	AA	GG	GG	AG	GG
rs7558213	CT	TT	TT	TT	CC	CT	CT	CT	TT	CC	TT
rs6746781	TT	CT	NN	TT	NN	TT	TT	TT	TT	CT	TT
rs12185723	CC	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs4850694	TT	CC	CC	CC	CT	CC	CT	CC	CC	CT	CT
rs6713102	TT	CC	CC	CC	CT	CC	CT	CC	CC	CC	CT
rs16849378	AG	AA	AA	AA	AG	AA	AG	AA	AA	AA	AA
rs7558972	AA	GG	GG	GG	AG	GG	AG	GG	GG	AG	AG
rs1242810	AG	AG	AG	AA	AA	AG	AA	AG	AG	AG	AG
rs17570449	AA	AA	AA	AA	AG	AA	AG	AA	AA	AA	AA
rs12498130	CT	CT	CC	CT	CC	TT	CT	CC	TT	CC	CC
rs1574477	GG	AG	AG	GG	GG	GG	AG	AG	AG	AG	AG
rs2220099	TT	TT	TT	GT	GT	GT	TT	GG	TT	TT	GT
rs7695197	AG	AG	AG	AG	GG	AG	GG	AG	AG	AG	AG
rs12499851	AG	AG	AG	GG	AG	AG	GG	GG	AA	AG	AA
rs2949650	CC	CC	CC	CC	CC	CT	CC	CT	CT	CC	CT

Supplementary Table 2. Contd.

rs2100684	CC	TT	CC	NN	CT	CT	CT	NN	CT	TT	TT
rs35424097	CT	CC	CT	CC	CC	CC	CC	CC	CC	CC	CT
rs27061	AG	AA	AG	GG	GG	GG	AA	AA	AA	AG	AA
rs12516484	AA	GG	AA	AA	AG	AA	AA	AA	AA	AA	AG
rs13177990	GG	AG	GG	AG	AA	GG	GG	AG	GG	AG	GG
rs4257797	TT	GG	GT	GT	GG	GG	GG	GG	GG	GT	GG
rs7751978	TT	TT	CT	TT	TT	TT	TT	CT	CC	TT	CC
rs2508037	AG	AG	AG	AG	AG	AG	AA	GG	AG	AA	AG
rs556807	CT	CC	CC	CC	CC	CC	CT	CT	CT	CC	CT
rs1924982	AG	AA	AA	AA	AA	AA	AG	AG	AG	AA	AG
rs549464	CT	CC	CC	CC	CC	CC	CT	CT	CT	CC	CT
rs532017	CT	CC	CC	CC	CC	CC	CT	CT	CT	CC	CT
rs16879241	CT	TT	TT	TT	TT	TT	CT	CT	CT	TT	CT
rs545472	AG	GG	GG	GG	GG	GG	AG	AG	AG	GG	AG
rs568369	AG	AA	AA	AA	AA	AA	AG	AG	AG	AA	AG
rs4235967	AG	AG	AG	AG	AG	GG	AG	AG	GG	AG	GG
rs5002649	CT	CT	CT	CT	CT	TT	CT	CT	TT	CT	TT
rs12174860	AG	AG	AG	AG	AG	AA	AG	AG	AA	AG	AA
rs12175881	TT	CT	CT	CT	CT	CT	CT	CT	CT	TT	CC
rs9344924	AG	AG	AG	AG	AG	GG	AG	AG	AG	AG	GG
rs9451209	AG	AG	AG	AG	AG	AA	AG	AG	AA	AG	AA
rs2057161	CT	CT	CT	CT	CT	CC	CT	CT	CT	CT	CC
rs1028484	CT	CT	CT	CT	CT	CC	CT	CT	CT	CT	CC
rs7757305	AG	AG	AG	AG	AG	AA	AG	AG	AG	AG	AA
rs609098	AG	AG	AG	AG	AG	GG	AG	AG	GG	AG	GG
rs6454814	AG	AG	AG	AG	AG	AA	AG	AG	AG	AG	AA
rs9389520	TT	TT	CT	TT	TT	CT	CC	TT	TT	CC	TT
rs372440	CT	CC	TT	CT	CC	TT	CT	CT	CC	TT	CT
rs2476467	CT	CC	CC	TT	CC	CC	CT	CT	CC	CC	CT
rs4710883	CC	TT	CC	CC	CC	TT	CC	TT	CC	CC	CT
rs13228455	CT	CC	TT	TT	CT	CC	CT	TT	TT	CC	TT
rs4717331	CT	CC	CT	CT	CC	CC	CT	CT	CC	CC	CC
rs17165352	CC	NN	TT	CT	CT	CT	CC	CC	CT	CT	CC
rs3807337	CC	TT	CC	CC	CT	TT	TT	CC	CT	CC	CT
rs1351499	CT	TT	CC	CT	TT	CT	CT	TT	CT	TT	CT
rs7832879	AG	GG	AA	AG	GG	AG	AG	GG	AG	GG	AG
rs6420159	AG	AA	GG	AG	AA	AG	AG	AA	AG	AA	AG
rs1982324	AG	AG	AG	AG	AG	GG	GG	GG	AA	AG	AG
rs7827503	AG	AG	AG	AG	AG	GG	GG	GG	AA	AG	AG
rs10957988	CT	CT	CT	CT	CT	TT	TT	TT	CC	CT	CT
rs601897	CC	CC	CC	TT	CC	CT	CC	CC	CC	CC	CT
rs10956197	TT	CT	TT	TT	CT	TT	TT	TT	TT	CT	TT
rs1045574	CC	CT	CC	TT	CC	CT	CC	CC	CT	CC	CC
rs1548299	GG	GG	AA	AG	AG	AG	GG	AA	AG	AG	GG
rs10814395	CC	CC	TT	CT	CT	CT	CC	CT	CT	CT	CC
rs7849638	GG	GG	AA	AA	AG	AA	GG	AG	AG	AA	AG
rs7045959	AA	AA	GG	GG	AG	GG	AA	AG	AG	GG	AG
rs1414229	CT	CT	CT	CT	CC	CT	CT	NN	CT	CT	CC
rs7039105	GT	GT	GT	TT	TT	TT	GT	GG	GT	GT	TT
rs7020669	CC	CC	TT	CT	CT	CT	CC	TT	TT	CC	TT
rs7865106	GG	GG	AA	AG	AG	AG	GG	AA	AA	GG	AA
rs7865861	AA	AA	GG	AG	AG	AG	AA	GG	GG	AA	GG

Supplementary Table 2. Contd.

rs16910853	AA	AA	AG	AG	AA	AA	AA	AA	AG	AA	AG
rs11011420	CT	TT	CT	TT	CT	TT	CC	TT	CT	CT	TT
rs595119	AA	AG	GG	AA	AG	GG	AG	AG	GG	GG	GG
rs10762667	GG	GG	AG	GG	GG	AG	AG	GG	GG	AG	GG
rs1080496	CC	CC	CC	CC	CC	CT	CC	CT	CC	CC	CT
rs10881957	TT	TT	TT	TT	TT	CT	TT	TT	TT	TT	TT
rs2497706	AG	AA	AA	GG	AG	GG	AG	AG	AG	GG	AA
rs11819833	AA	AG	AG	GG	AA	AA	AA	AG	AA	AA	AG
rs12786429	TT	GT	GT	GG	TT	TT	TT	GT	TT	TT	GT
rs10768140	AG	AG	AG	NN	GG	GG	AA	NN	AG	AA	AG
rs648409	AA	AA	AG	AA	AG	AA	AA	AG	AG	AA	AA
rs4296050	AA	GG	GG	AG	AG	AA	GG	AG	GG	GG	AA
rs735295	CT	CT	CT	CT	CT	CT	CT	TT	TT	CT	CC
rs11059295	CT	TT	TT	TT	CT	TT	TT	CT	TT	CC	CT
rs9599610	GG	GG	AA	GG	AA	AG	AG	GG	AA	AG	AA
rs7145482	AG	AG	AA	AG	AG	AG	AA	AA	AA	AG	AA
rs722200	TT	TT	CC	TT	CT	TT	CC	TT	TT	TT	CT
rs964729	TT	CC	TT	CT	CC	CC	CC	CT	CT	CT	CC
rs6574531	CC	TT	CC	CT	TT	TT	TT	CT	CT	CT	TT
rs4900384	GG	AG	AA	AA	AG	GG	AG	AG	AA	AG	AA
rs11622227	AG	GG	AA	AG	AA	GG	AA	GG	GG	AG	GG
rs2125657	GG	GG	GG	AG	AG	GG	GG	GG	GG	GG	GG
rs689011	TT	TT	TT	TT	CC	TT	TT	TT	CT	TT	TT
rs16964201	CC	CC	CC	CT	CC	CC	CC	CC	CC	CC	CC
rs12914971	AG	AA	AA	AA	AA	AA	AA	NN	AA	AA	AA
rs7166281	TT	GT	TT	GT	TT	GT	TT	TT	TT	TT	GT
rs12440184	AG	AA	GG	AG	AG	AG	AG	AG	AG	AG	AG
rs4888666	CT	TT	CT	NN	CT	CC	TT	CT	TT	CC	CC
rs9929618	GG	GG	AA	AG	GG	GG	GG	GG	GG	AG	AG
rs9934131	AG	GG	AA	AG	GG	GG	GG	GG	GG	GG	AG
rs2101252	AG	GG	AA	AG	GG	GG	GG	GG	GG	AG	AG
rs2250486	TT	CT	TT	CT	CT	TT	TT	CT	TT	CT	CT
rs16965880	AA	GG	AG	GG	AG	AA	GG	AG	AG	AG	AG
rs9944528	CC	CC	TT	CT	CC	CC	CT	CT	CT	CC	CT
rs11150946	AG	GG	GG	AG	AA	AA	AG	AG	AG	AG	AA
rs11665827	AA	AA	GG	AA	AA	AA	AA	AA	AA	AA	AA
rs11882543	CT	TT	CC	TT	TT	CT	CC	TT	CC	TT	TT
rs16991180	GG	GG	GG	GG	GG	AG	GG	GG	GG	GG	GG
rs16993168	GT	GG	GT	GT	TT	GG	GT	GT	GT	GG	GG
rs136575	GG	AG	GG	GG	GG	AG	AA	AG	AG	GG	GG
SNP ID	CHX023	CHX024	CHX025	CHX026	CHX027	CHX028	CHX029	CHX030	CHX031	CHX032	CHX033
rs12143100	CC	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs868868	GG	GG	AG	GG	GG	AG	GG	AG	AG	GG	GG
rs10737511	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC	CC
rs6427135	GG	AG	AG	AG	GG	AG	AG	GG	AA	AG	AG
rs12024761	GG	AG	AG	GG	NN	GG	AG	GG	GG	AG	AG
rs4846593	GG	GG	GG	GG	AA	AG	AA	GG	AG	AG	AA
rs4671730	AG	AG	AA	AA	AG	AA	AG	AG	GG	AG	AA
rs17618119	AG	AA	GG	AG	AG	GG	AA	AG	AG	GG	AG
rs7558213	CT	CT	TT	CT	TT	CT	CT	CT	CT	TT	CT
rs6746781	NN	NN	TT	TT	TT	TT	TT	NN	CT	TT	CT

Supplementary Table 2. Contd.

rs12185723	CC	CT	CC	CC	CC	CC	CC	CC	CT	CC	CC
rs4850694	CC	CT	CC	CT	CT	CC	CT	CC	CC	CC	CC
rs6713102	CC	CT	CC	CT	CT	CC	CT	CC	CC	CC	CC
rs16849378	AA	AG	AA	AG	AA	AA	AG	AA	AA	AA	AA
rs7558972	GG	AG	GG	AG	AG	GG	AG	GG	GG	GG	GG
rs1242810	GG	AG	AG	AG	AG	AG	AG	AG	GG	AA	GG
rs17570449	AA	AA	AA	AA	AG	AA	AA	AA	GG	AA	AA
rs12498130	CT	TT	CT	CC	CT	CT	TT	CT	CC	CT	TT
rs1574477	AG	GG	AA	GG	AG	AG	AG	AG	AG	GG	AA
rs2220099	TT	TT	GT	TT	GT	TT	TT	GT	TT	GT	TT
rs7695197	AG	AA	GG	AG	AG	GG	NN	AG	AA	AA	AG
rs12499851	AA	AG	GG	GG	AA	AG	AG	GG	AA	AA	AG
rs2949650	CT	CT	CT	CC	CT	CC	CC	CT	CC	CC	CC
rs2100684	CC	CT	TT	TT	CT	CC	CT	CC	CT	CT	TT
rs35424097	CC	CC	CT	CC	CC	CC	CC	CC	CT	CT	CC
rs27061	AG	AA	AA	AG	AG	NN	GG	GG	AG	AG	AG
rs12516484	AA	AG	AG	AG	GG	AG	AG	AG	AG	AG	AG
rs13177990	AG	GG	GG	GG	GG	GG	GG	GG	GG	GG	AG
rs4257797	GG	GG	NN	GT	GG	GG	GG	GG	GT	GT	GG
rs7751978	TT	CT	CT	CC	CT	CT	CT	TT	CT	TT	CC
rs2508037	AG	AA	GG	AG	AG	AG	AG	AG	AG	AG	AG
rs556807	CT	CC	CC	CT	CT	CC	CC	CC	CC	CT	CC
rs1924982	AG	AA	AA	AG	AG	AA	AA	AA	AA	AG	AA
rs549464	CT	CC	CC	CT	CT	CC	CC	CC	CC	CT	CC
rs532017	CT	CC	CC	CT	CT	CC	CC	CC	CC	CT	CC
rs16879241	CT	TT	TT	CT	CT	TT	TT	TT	TT	CT	TT
rs545472	AG	GG	GG	AG	AG	GG	GG	GG	GG	AG	GG
rs568369	AG	AA	AA	AG	AG	AA	AA	AA	AA	AG	AA
rs4235967	GG	AG	AG	GG	GG	AG	GG	AG	AG	AG	AG
rs5002649	TT	CT	CT	TT	TT	CT	TT	CT	CT	CT	CT
rs12174860	AA	AG	AG	AA	AA	AG	AA	AG	AG	AG	AG
rs12175881	CC	CT	CT	CC	CC	CT	CC	TT	CT	CT	CT
rs9344924	GG	AG	AG	GG	GG	AG	GG	AG	GG	AG	AG
rs9451209	AA	AG	AG	AA	AA	AG	AA	AG	AA	AG	AG
rs2057161	CC	CT	CT	CC	CC	CT	CC	CT	CC	CT	CT
rs1028484	CC	CT	CT	CC	CC	CT	CC	CT	CC	CT	CT
rs7757305	AA	AG	AG	AA	AA	AG	AA	AG	AA	AG	AG
rs609098	GG	AG	AG	GG	GG	AG	GG	AG	GG	AG	AG
rs6454814	AA	AG	AG	AA	AA	AG	AA	AG	AA	AG	AG
rs9389520	TT	CT	TT	TT	CC	TT	CT	TT	CT	CT	TT
rs372440	TT	TT	CT	CT	CT	CT	TT	CT	CT	CC	CC
rs2476467	CT	CC	CT	CT	CC	CC	CT	CT	CC	CC	CC
rs4710883	CC	CC	CT	CT	TT	CT	CT	CC	TT	CC	CT
rs13228455	TT	CC	TT	TT	TT	CT	CC	TT	CT	TT	NN
rs4717331	TT	CT	CC	CT	CT	CC	CT	CT	CT	CC	CT
rs17165352	CC	CC	CC	CC	CT	CT	CT	CC	CC	CC	CC
rs3807337	CC	TT	TT	TT	TT	CC	TT	CT	CC	TT	TT
rs1351499	TT	TT	TT	CT	TT	CT	TT	CT	CT	CT	CT
rs7832879	GG	GG	GG	AG	GG	AG	GG	AG	AG	AG	AG
rs6420159	AA	AA	AG	AG	AA	GG	AG	AG	AG	AG	AG
rs1982324	AG	GG	GG	AG	GG	AA	GG	GG	GG	GG	GG
rs7827503	AG	GG	GG	AG	GG	AA	GG	GG	GG	GG	GG
rs10957988	CT	TT	TT	CT	CT	CC	TT	CT	TT	CT	TT

Supplementary Table 2. Contd.

rs601897	CT	CC	CT	CT	CC	CT	CT	CT	CC	CC	CT
rs10956197	TT	TT	TT	TT	TT	CT	TT	TT	TT	TT	CT
rs1045574	CT	CT	CC	CT	CC	CC	CT	CC	CC	CC	CC
rs1548299	AA	AG	AG	GG	GG	GG	AG	AG	GG	GG	AG
rs10814395	TT	CT	CT	CT	CC	CC	CT	CT	CC	CC	CT
rs7849638	AG	AG	GG	AG	AG	AG	AA	GG	AA	AA	AA
rs7045959	AG	AG	AA	AG	AG	AG	GG	AA	GG	GG	GG
rs1414229	CT	CC	CC	CC	CT	CC	CC	CT	CT	CT	CC
rs7039105	GT	GT	TT	GT	TT	TT	TT	TT	GT	TT	TT
rs7020669	CT	CT	CC	CT	CT	CT	CT	CT	CC	TT	CT
rs7865106	AG	AG	GG	AG	AG	AG	AG	AG	GG	AA	AG
rs7865861	AG	AG	AA	AG	AG	AG	AG	AG	AA	GG	AG
rs16910853	AA	AA	AG	AA	AA	AG	AA	AG	AA	AG	AA
rs11011420	CT	CC	CT	TT	CC	TT	CC	TT	CT	CT	CC
rs595119	AG	AG	AG	AA	GG	GG	AG	GG	AG	AG	GG
rs10762667	GG	AG	AG	GG	GG	AG	AG	GG	AG	GG	AG
rs1080496	CT	CC	CT	CC	CC	CC	CT	CT	CC	CC	CC
rs10881957	CT	TT	CT	TT	NN	TT	CT	CT	TT	TT	TT
rs2497706	GG	AA	AA	AG	GG	AA	GG	AA	AA	AG	AG
rs11819833	AA	AG	AG	AA	AA	AG	AA	AG	AA	AA	AA
rs12786429	TT	GT	GT	TT	TT	GT	TT	GT	TT	TT	TT
rs10768140	AG	AG	AG	NN	GG	AG	AG	AA	AA	AG	AA
rs648409	AA	GG	AA	AG	AA	AA	AA	AA	AA	AA	AA
rs4296050	AG	AG	AG	GG	GG	AA	AA	AG	AA	AG	AG
rs735295	CT	CT	CT	CC	TT	CT	CT	TT	CT	TT	CT
rs11059295	TT	CT	CT	TT	TT	TT	CT	CT	CC	CT	CT
rs9599610	AA	AG	AG	AG	GG	AG	AG	AG	GG	AG	GG
rs7145482	AA	AG	AG	AA	AA	GG	AA	AA	AG	AG	AG
rs722200	CT	TT	CT	CT	CC	TT	TT	CT	TT	CT	TT
rs964729	CT	CT	CT	CT	CT	CC	CT	CC	TT	CC	CT
rs6574531	CT	CT	CT	CT	CT	TT	CT	TT	CC	TT	CT
rs4900384	AG	GG	GG	AG	AG	AG	GG	GG	AG	GG	AG
rs11622227	AG	AG	GG	GG	GG	AG	GG	GG	GG	GG	AG
rs2125657	GG	GG	GG	AG	GG	AG	GG	AG	AG	GG	AG
rs689011	CT	TT	CT	CT	CT	TT	CT	CT	TT	TT	CT
rs16964201	CC	CT	CT	CT	CC	CC	CC	CC	CC	CC	CC
rs12914971	AG	AA	AG	AA	AA	AG	AA	AA	AG	GG	AA
rs7166281	GT	GT	GG	GT	GT	GT	GT	GG	GT	GT	GT
rs12440184	AG	AG	AA	AA	AG	AG	AG	GG	AA	AG	AG
rs4888666	CC	CC	CC	TT	CT	CT	TT	TT	CT	CT	CC
rs9929618	AG	AA	AG	AG	GG	AG	GG	GG	AG	GG	GG
rs9934131	AG	AG	AG	AG	GG	AG	AG	GG	AG	GG	GG
rs2101252	AG	AG	AG	AG	GG	AG	AG	GG	AG	GG	GG
rs2250486	CT	CT	TT	TT	CT	TT	CT	TT	CT	NN	TT
rs16965880	AG	AG	GG	AA	AG	GG	AA	AG	AG	AA	AA
rs9944528	CC	CT	CT	CT	CC	CT	CC	CT	CT	CT	CT
rs11150946	AG	AG	AG	AA	AA	AG	AA	AA	AG	AG	GG
rs11665827	AG	AG	AG	AA	AA	GG	AA	GG	AA	AG	AA
rs11882543	CT	TT	CT	CT	TT	TT	TT	TT	TT	CT	TT
rs16991180	GG	GG	GG	GG	AG	GG	AG	GG	AG	GG	GG
rs16993168	GG	TT	TT	GT	GT	GT	TT	GT	GG	GT	GG
rs136575	AG	GG	GG	NN	AG	AG	GG	GG	AG	AG	GG

Supplementary Table 2. Contd.

SNP ID	CHX034	CHX035	CHX036	CHX037	CHX038	CHX039	CHX040	CHX041	CHX042	CHX043	CHX044
rs12143100	CT	CT	CT	CC	CT	CC	CT	CT	CC	CT	NN
rs868868	GG	GG	AG	GG	AG	AG	GG	GG	AG	GG	GG
rs10737511	CT	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC
rs6427135	GG	GG	GG	AG	AA	AG	AA	AG	GG	AA	AG
rs12024761	AA	GG	GG	GG	AG	GG	AG	GG	AG	GG	AG
rs4846593	AG	GG	AA	GG	AG	AG	AG	AA	AG	AG	AG
rs4671730	GG	GG	AA	AG	GG	AA	AG	AA	AG	AG	GG
rs17618119	AG	GG	GG	AG	AG	GG	GG	AG	GG	GG	GG
rs7558213	TT	TT	TT	CT	TT	NN	TT	CT	CT	CT	NN
rs6746781	TT	CT	TT	CT	TT	TT	CT	CT	NN	NN	CT
rs12185723	CC	CT	CC	CT	CC	CC	CT	CT	CC	TT	CT
rs4850694	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CT
rs6713102	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CT
rs16849378	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs7558972	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	AG
rs1242810	AG	AA	AA	AG	AA	AG	AA	AG	AG	AA	AA
rs17570449	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs12498130	CT	CC	CC	CT	CT	TT	CC	CT	CC	CC	CC
rs1574477	GG	GG	GG	AG	AG	AG	AG	AG	GG	GG	GG
rs2220099	TT	GT	TT	TT	TT	TT	GT	GT	GT	TT	GG
rs7695197	AA	AA	GG	AA	GG	GG	AG	AG	AG	GG	AG
rs12499851	AA	GG	GG	AG	AG	AG	AG	AG	AA	GG	AG
rs2949650	CT	CC	TT	NN	TT	CT	CT	CC	NN	CT	CC
rs2100684	CT	TT	TT	TT	TT	NN	TT	CT	TT	CT	CT
rs35424097	CT	CT	CC	CC	CC	CC	CC	CT	CT	CC	TT
rs27061	GG	GG	AA	AA	AG	AG	AG	GG	AG	GG	GG
rs12516484	AG	AG	AG	AG	AG	GG	AA	AG	AA	AA	AG
rs13177990	GG	GG	AA	AA	AG	AG	GG	GG	GG	AG	AG
rs4257797	GG	GG	GT	GG	GG	GT	GG	GG	GG	GG	GG
rs7751978	CT	CT	CT	TT	CT	CT	CT	CT	CC	NN	TT
rs2508037	AG	GG	GG	GG	GG	AG	GG	AG	AG	GG	GG
rs556807	CT	CC	CC	CT	CC	CC	CC	CC	CC	CC	CT
rs1924982	AG	AA	AA	AG	AA	AA	AA	AA	AA	AA	AG
rs549464	CT	CC	CC	CT	CC	CC	CC	CC	CC	CC	CT
rs532017	CT	CC	CC	CT	CC	CC	CC	CC	CC	CC	CT
rs16879241	CT	TT	TT	CT	TT	TT	TT	TT	TT	TT	CT
rs545472	AG	GG	GG	AG	GG	GG	GG	GG	GG	GG	AG
rs568369	AG	AA	AA	AG	AA	AA	AA	AA	AA	AA	AG
rs4235967	AG	GG	GG	GG	GG	GG	GG	AG	AA	AG	GG
rs5002649	CT	TT	TT	TT	TT	TT	TT	CT	CT	CT	TT
rs12174860	AG	AA	AA	AA	AA	AA	AA	AG	AG	AG	AA
rs12175881	CT	CC	CC	CC	CC	CC	CC	CT	CT	CT	CC
rs9344924	AG	GG	GG	GG	GG	GG	NN	AG	AG	AG	GG
rs9451209	AG	AA	AA	AA	AA	AA	AA	AG	AG	AG	AA
rs2057161	CT	CC	CC	CC	CC	CC	CC	CT	CT	CT	CC
rs1028484	CT	CC	CC	CC	CC	CC	CC	CT	CT	CT	CC
rs7757305	AG	AA	AA	AA	AA	AA	AA	AG	AG	AG	AA
rs609098	AG	GG	GG	GG	GG	GG	GG	AG	AG	AG	GG
rs6454814	AG	AA	AA	AA	AA	AA	AA	AG	AG	AG	AA
rs9389520	TT	CC	CT	TT	CT	CT	CT	TT	CT	TT	CC
rs372440	CT	CT	CC	CC	CT	TT	CT	TT	TT	CT	CC
rs2476467	CC	CT	CC	TT	CT	CC	CC	CC	CC	CT	CC



Supplementary Table 2. Contd.

rs4710883	CT	CC	CT	TT	CT	CT	CT	CC	CC	CT	CT
rs13228455	CT	TT	CT	CC	CT	TT	TT	CT	CT	TT	NN
rs4717331	CT	CT	TT	CC	CC	TT	TT	TT	TT	CC	CT
rs17165352	CC	CT	CC	CT	CT	CC	CT	CC	CC	CT	TT
rs3807337	CT	CT	CC	CT	CC	CT	CT	CT	TT	TT	CT
rs1351499	CT	NN	CT	TT	CT	CT	CT	TT	TT	CT	TT
rs7832879	AG	GG	AG	GG	AG	AG	AG	GG	GG	AG	GG
rs6420159	AG	AA	AG	AG	AG	AG	AG	AA	AG	AG	AA
rs1982324	AG	AA	GG	AG	GG	AG	AG	AG	GG	AG	GG
rs7827503	AG	AA	GG	AG	GG	AG	AG	AG	GG	AG	GG
rs10957988	CT	CC	NN	CT	CT	CT	CT	CT	TT	CT	TT
rs601897	CT	CT	CT	NN	CC	CC	CT	CC	CC	CC	TT
rs10956197	TT	TT	TT	TT	CT	TT	CT	TT	TT	CT	TT
rs1045574	CT	CT	TT	CC	CC	CT	CT	CT	CC	CC	CT
rs1548299	GG	GG	GG	AG	AG	GG	GG	GG	GG	GG	AG
rs10814395	CC	CC	CC	CT	CT	NN	CC	CC	CC	CC	CT
rs7849638	AG	GG	AA	AG	AG	AA	AG	AG	AG	AA	AG
rs7045959	AG	AA	GG	AG	AG	GG	AG	AG	AG	GG	AG
rs1414229	TT	CT	CC	CT	CT	CT	CC	CC	CT	CC	CT
rs7039105	GT	GT	TT	GT	GT	GT	TT	TT	GT	TT	TT
rs7020669	CT	CT	CT	CC	CT	CT	CC	CT	TT	CT	TT
rs7865106	AG	AG	AG	AG	AG	AG	GG	AG	AA	AG	AA
rs7865861	AG	AG	AG	AG	AG	AG	AA	AG	GG	AG	GG
rs16910853	AG	AG	GG	AG	AA	AG	AA	AA	AG	AA	AA
rs11011420	CT	TT	CC	TT	TT	CT	CT	CT	CC	CC	CC
rs595119	NN	AG	AA	AG	AA	GG	AG	AG	AA	AG	GG
rs10762667	GG	GG	GG	GG	AG	GG	AG	GG	GG	GG	AG
rs1080496	CC	CT	CC	CT	CT	CT	CT	CT	CT	TT	CT
rs10881957	CT	CT	NN	NN	CT	TT	CT	CT	CT	CC	CT
rs2497706	AG	AG	AA	AG	AG	AG	AG	AG	GG	AG	AG
rs11819833	AA	AG	AA	AA	AA	AG	AG	AG	AG	AA	AA
rs12786429	TT	GT	TT	TT	TT	GT	GT	GT	GT	TT	TT
rs10768140	AA	AG	AA	AA	AA	AG	AA	AG	AG	AG	AG
rs648409	GG	AG	AA	AA	AG	GG	AG	AA	AG	AG	AG
rs4296050	GG	GG	AG	AG	GG	GG	AG	AG	AG	AG	AA
rs735295	TT	CT	TT	TT	CT	TT	CC	CT	CT	CC	CC
rs11059295	CT	TT	TT	TT	CT	CT	CT	CT	CT	CT	TT
rs9599610	AA	AA	AG	GG	GG	AA	AA	AA	GG	AG	AG
rs7145482	NN	AG	AG	AG	AG	AA	AA	AG	AG	AG	AA
rs722200	TT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT
rs964729	CC	CC	CT	TT	CC	CT	CT	TT	CT	TT	CC
rs6574531	TT	TT	CT	CC	TT	CT	CT	CC	CT	CC	TT
rs4900384	AA	GG	AG	AG	AG	AG	GG	AG	AG	GG	GG
rs11622227	AG	GG	AG	AG	AG	AG	GG	GG	AG	GG	AG
rs2125657	AG	AG	AG	GG	GG	GG	AG	GG	AG	GG	GG
rs689011	TT	TT	TT	CT	TT	CT	TT	TT	CT	TT	TT
rs16964201	CT	CC	CC	CT	CT	CC	CT	CC	CC	CT	CT
rs12914971	AA	AA	NN	AA	AA	AG	AA	AA	AA	AG	AA
rs7166281	GT	TT	GG	GT	TT	GG	GG	GG	GT	TT	GT
rs12440184	AA	AA	AA	AG	AG	GG	AA	AA	AA	AA	GG
rs4888666	TT	TT	CT	TT	CT	CC	CT	CT	TT	TT	CT
rs9929618	AG	GG	GG	AG	GG	AG	GG	AG	GG	GG	GG

Supplementary Table 2. Contd.

rs9934131	AG	GG	GG	AG	GG	AG	GG	AG	GG	GG	GG
rs2101252	AG	GG	GG	AG	GG	AG	GG	AG	GG	GG	GG
rs2250486	TT	CT	TT	CT	CT	TT	TT	CT	CT	TT	CT
rs16965880	AG	AA	GG	AA	AG	AG	AG	AA	AG	AA	AG
rs9944528	CC	CT	CC	CC	CT	CC	CT	CC	CC	CC	CC
rs11150946	AG	GG	AG	AG	AG	AA	AG	AA	AA	AA	AG
rs11665827	AA	AA	AG	AA	AA	NN	AA	GG	AG	AG	AG
rs11882543	TT	TT	CT	TT	TT	CC	CT	CT	CC	TT	CT
rs16991180	GG	AA	GG	GG	GG	GG	GG	GG	AG	AG	GG
rs16993168	GT	GT	GT	GT	TT	GT	GG	GT	GT	GG	GT
rs136575	GG	AG	AA	GG	GG	GG	GG	GG	AA	AG	AG
SNP ID	CHX045	CHX046	CHX047	CHX048	CHX049	CHX050	CHX051	CHX052	CHX053	CHX054	CHX055
rs12143100	CC	CC	CT	CC	CT	CC	CC	CC	CC	CC	CT
rs868868	GG	AA	GG	GG	GG	AG	AG	AG	GG	GG	AG
rs10737511	CC	CC	CT	CC	CC	CC	CC	CC	CT	CC	CC
rs6427135	AG	NN	AG	AG	AG	AG	AG	GG	AA	GG	AG
rs12024761	GG	AG	GG	GG	GG	AG	AG	GG	AG	GG	GG
rs4846593	AG	AG	AG	AA	AG	AA	AA	AG	GG	GG	AG
rs4671730	AA	AG	AA	GG	GG	AA	AG	GG	GG	AG	AA
rs17618119	AG	AA	AG	GG	GG	AA	AG	AG	GG	AG	AG
rs7558213	CT	NN	TT	TT	CT	CT	TT	TT	CT	CT	CT
rs6746781	CT	TT	CT	CC	TT	CT	TT	TT	CT	TT	TT
rs12185723	CT	CC	CT	TT	CT	CT	CC	CC	CT	CC	CC
rs4850694	CC	CC	CC	CC	CC	CT	CC	CT	CC	CC	CC
rs6713102	CC	CC	CC	CC	CC	CT	CC	CT	CC	CC	CC
rs16849378	AA	AA	AA	AA	AA	AG	AA	AG	AA	AA	AA
rs7558972	GG	GG	GG	GG	GG	AG	GG	AG	GG	GG	GG
rs1242810	AA	AG	GG	AG	AG	GG	AG	AG	AA	AA	GG
rs17570449	AA	AA	AA	AA	GG	AA	AA	AA	AA	AA	AG
rs12498130	CT	CT	TT	CT	TT	TT	CC	CC	CC	CC	CC
rs1574477	AG	AG	GG	AA	AG	GG	GG	GG	AG	AG	GG
rs2220099	GT	GT	TT	TT	TT	TT	GT	GT	GT	GT	TT
rs7695197	GG	AG	AG	AG	GG	GG	AG	AA	AA	AG	GG
rs12499851	AA	AG	AA	AA	AA	GG	AA	AA	GG	AG	GG
rs2949650	CT	NN	CC	TT	CC	CT	CC	CC	CT	CT	CC
rs2100684	TT	CT	CT	CT	CT	CC	TT	CT	CT	CT	CC
rs35424097	CC	CC	CC	CC	CC	CT	CC	CC	CC	CC	CC
rs27061	AG	AG	AA	GG	AG	AG	AG	AG	GG	AA	AG
rs12516484	AG	AA	AG	AG	GG	AG	AG	AG	GG	AG	AG
rs13177990	GG	GG	GG	GG	AG	AG	AG	GG	AG	GG	AG
rs4257797	GG	GG	GG	GT	GG	GG	GT	GT	GT	GG	GG
rs7751978	CT	TT	CC	CT	TT	CT	TT	TT	CC	TT	CT
rs2508037	AG	AG	AA	GG	GG	GG	AG	AG	AG	GG	AG
rs556807	CC	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs1924982	AA	AG	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs549464	CC	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs532017	CC	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs16879241	TT	CT	TT	TT	TT	TT	TT	TT	TT	TT	TT
rs545472	GG	AG	GG	GG	GG	GG	GG	GG	GG	GG	GG
rs568369	AA	AG	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs4235967	AG	AG	AG	AG	AG	GG	AG	AG	AG	GG	AG
rs5002649	CT	CT	CT	CT	CT	TT	CT	CT	CT	TT	CT

Supplementary Table 2. Contd.

rs12174860	AG	AG	AG	AG	AG	AA	AG	AG	AG	AA	AG
rs12175881	CT	CT	CT	CT	CT	CC	CT	CT	CT	CC	CT
rs9344924	AG	AG	AG	AG	AG	GG	AG	AG	AG	GG	AG
rs9451209	AG	AG	AG	AG	AG	AA	AG	AG	AG	AA	AG
rs2057161	CT	CT	CT	CT	CT	CC	CT	CT	CT	CC	CT
rs1028484	CT	CT	CT	CT	CT	CC	CT	CT	CT	CC	CT
rs7757305	AG	AG	AG	AG	AG	AA	AG	AG	AG	AA	AG
rs609098	AG	AG	AG	AG	AG	GG	AG	AG	AG	GG	AG
rs6454814	AG	AG	AG	AG	AG	AA	AG	AG	AG	AA	AG
rs9389520	TT	CC	CT	CT	TT	CT	TT	CT	CT	CT	CT
rs372440	CT	CC	TT	CT	TT	TT	CT	TT	TT	CT	CT
rs2476467	CC	CC	CT	CC	CT	CC	CT	CC	CT	CC	CC
rs4710883	CT	CC	CC	CT	CC	CT	TT	CC	CT	TT	TT
rs13228455	CC	TT	CC	CT	TT	CT	TT	CT	CT	CC	TT
rs4717331	CT	CT	CT	CT	CC	TT	TT	CT	CT	CT	CC
rs17165352	CC	CC	CC	CC	NN	CC	CT	CT	CT	CC	CC
rs3807337	CT	CC	CT	CT	TT	CC	CT	CT	CT	CT	TT
rs1351499	TT	TT	CT	TT	CC	CC	CT	CT	CT	TT	TT
rs7832879	GG	GG	AG	GG	AA	AA	AG	AG	AG	GG	GG
rs6420159	AA	AA	AG	AA	GG	GG	AG	AG	GG	AA	AA
rs1982324	GG	AG	AG	AA	GG	AG	AA	GG	GG	GG	AG
rs7827503	GG	AG	AG	AA	GG	AG	AA	GG	GG	GG	AG
rs10957988	TT	CC	CC	CC	CC	CC	CC	TT	TT	CT	CC
rs601897	CC	CT	CC	CT	CT	CC	CT	CT	CC	CT	CT
rs10956197	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	CT
rs1045574	CC	CC	CC	CT	CC	CC	CT	CT	CC	CC	CT
rs1548299	GG	AG	GG	GG	AG	GG	AG	GG	GG	GG	AG
rs10814395	CC	CT	CC	CC	CT	CC	CT	CC	CC	CC	CT
rs7849638	AA	AG	AA	AG	AG	AA	AG	GG	AG	AG	AA
rs7045959	GG	AG	GG	AG	AG	GG	AG	AA	AG	AG	GG
rs1414229	CC	CT	CC	CC	CT	NN	CC	CT	CC	CT	CT
rs7039105	TT	GT	GT	TT	GT	TT	GT	GG	TT	TT	GT
rs7020669	CT	CT	TT	CT	CC	CT	CC	CT	TT	TT	CT
rs7865106	AG	GG	AA	AG	GG	AG	GG	AG	AA	AA	AG
rs7865861	AG	AG	GG	AG	AA	AG	AA	AG	GG	GG	AG
rs16910853	AA	AA	AA	GG	AA	AG	AA	AG	AA	AA	AA
rs11011420	CT	CC	CT	CC	CT	CC	CT	CT	CT	CC	CC
rs595119	AG	AA	AA	AA	AA	AG	AA	AG	AG	GG	GG
rs10762667	AG	AG	GG	GG	AA	AG	AG	AG	GG	GG	AG
rs1080496	CC	CC	TT	CC	CC	CT	CT	CT	CT	CC	CT
rs10881957	TT	TT	CC	TT	TT	TT	CT	CT	CT	TT	CT
rs2497706	AA	AA	AG	AG	AA	GG	AA	AG	AG	AA	AA
rs11819833	AG	AA	AA	AA	AA	AA	AG	AG	AG	AA	AG
rs12786429	GT	TT	TT	TT	TT	TT	GT	GT	GT	TT	GT
rs10768140	AG	AG	AG	AA	AA	AG	AG	AG	AA	AG	AG
rs648409	AA	AA	AG	AA	AG	AA	AG	AG	AG	AG	AG
rs4296050	GG	AG	AG	AG	AG	AG	AA	AG	AG	GG	AA
rs735295	TT	TT	TT	TT	CT	CT	TT	TT	CT	TT	CT
rs11059295	TT	TT	TT	TT	CT	CT	CT	CT	CT	TT	TT
rs9599610	AG	GG	AA	AA	AA	AG	AA	GG	GG	AA	AA
rs7145482	GG	AG	AA	GG	GG	GG	AG	AG	AG	GG	AG
rs722200	TT	CT	CT	TT	TT	TT	TT	TT	CT	TT	CT

Supplementary Table 2. Contd.

rs964729	CC	CC	CT	CC	TT	CT	CT	CT	TT	CC	CC
rs6574531	TT	TT	CT	TT	CC	CT	CT	CT	CC	TT	TT
rs4900384	AG	GG	GG	GG	NN	GG	GG	AG	GG	GG	GG
rs11622227	GG	GG	GG	GG	AG	GG	AA	AG	GG	GG	GG
rs2125657	AG	AG	GG	GG	AG	AG	GG	AG	AG	AG	GG
rs689011	TT	CT	TT	TT	TT	CT	CT	CT	CT	TT	TT
rs16964201	CT	CT	CC	CT	CC	CC	CC	CC	CC	CC	CT
rs12914971	AA	AG	AA	AG	AG	AA	AA	AA	AA	AG	AA
rs7166281	TT	TT	GT	GT	TT	TT	GT	TT	TT	TT	GT
rs12440184	AG	AG	AG	AA	AG	AG	AA	AA	AG	AG	AG
rs4888666	CC	TT	CC	TT	CC	TT	TT	TT	CC	TT	CT
rs9929618	AG	GG	GG	GG	GG	GG	GG	AA	AG	AG	GG
rs9934131	AG	GG	GG	GG	GG	GG	GG	AA	AG	AG	GG
rs2101252	AG	GG	GG	GG	GG	GG	GG	AA	AG	AG	GG
rs2250486	CC	CC	CT	CC	TT	TT	CT	TT	TT	TT	CT
rs16965880	AG	AA	AA	AA	AG	AA	AA	AG	AA	GG	AA
rs9944528	CT	CT	CC	CC	CC	CC	CC	CC	CC	CT	CT
rs11150946	AA	AG	AG	GG	GG	AG	AG	AG	AG	AG	AA
rs11665827	AA	AG	AA	AG	AA	AA	AA	AA	AG	AG	AA
rs11882543	CT	CC	CC	TT	TT	CC	CT	CC	CT	CT	TT
rs16991180	AG	GG	GG	GG	AG	GG	GG	GG	GG	GG	AG
rs16993168	TT	GG	GT	GG	GG	TT	GT	TT	GG	GG	GT
rs136575	GG	AG	AG	AA	AG	AG	GG	GG	AA	GG	GG
SNP ID	CHX056	CHX057	CHX058	CHX059	CHX060	CHX061	CHX062	CHX063	CHX064	CHX065	CHX066
rs12143100	CC	CC	CC	CC	CT	CT	CT	CC	CC	CT	CC
rs868868	GG	AG	GG	AG	GG	AG	GG	GG	GG	GG	GG
rs10737511	CC	CC	CT	CC	CT	CC	CC	CT	CC	CC	CC
rs6427135	AG	AG	GG	AA	AG	GG	AG	AG	AG	AA	AG
rs12024761	GG	AG	GG	GG	GG	GG	AG	GG	GG	GG	GG
rs4846593	AA	AG	AG	AG	AG	AA	AG	AG	AG	AG	AG
rs4671730	AG	AG	GG	AA	AA	AA	AA	AG	AA	AA	AA
rs17618119	AA	AG	AG	AA	GG	AG	AG	GG	GG	GG	AA
rs7558213	CT	TT	NN	TT	CT	TT	CT	CT	TT	TT	TT
rs6746781	CT	TT	TT	TT	TT	TT	TT	NN	TT	CT	TT
rs12185723	CT	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC
rs4850694	CC	CT	CC	CC	CC	CC	CC	CC	CC	CT	CC
rs6713102	CC	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC
rs16849378	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs7558972	GG	AG	GG	GG	GG	GG	GG	GG	GG	AG	GG
rs1242810	AG	AG	AG	AA	AG	AG	AA	AG	AG	AG	AG
rs17570449	AA	AA	AA	AG	AA	AA	AA	AG	AA	AG	AA
rs12498130	CC	CC	CT	CT	TT	CC	CT	TT	CT	CC	CT
rs1574477	GG	GG	GG	GG	AG	AG	AA	GG	AA	AG	AA
rs2220099	GG	GT	GG	TT	TT	TT	TT	GT	TT	GT	TT
rs7695197	AG	AA	AA	AG	AG	AG	AA	AA	GG	NN	GG
rs12499851	AA	NN	AG	GG	GG	NN	GG	AA	AG	AG	AG
rs2949650	CC	CT	CT	CT	TT	NN	CC	TT	CT	CT	CT
rs2100684	CT	CT	CT	TT	CT	TT	CT	NN	CT	CC	TT
rs35424097	CC	CT	CC	CC	CC	CC	CC	CC	CT	CC	CT
rs27061	GG	AG	GG	AG	AG	GG	AA	AG	NN	AA	AA
rs12516484	AA	AG	AA	GG	AG	AG	AG	GG	AG	AA	AG
rs13177990	AG	AG	GG	GG	GG	AG	AG	GG	GG	GG	GG

Supplementary Table 2. Contd.

rs4257797	GG	GT	GG	NN	GG	GG	GG	GG	GG	GT	GG
rs7751978	CT	CT	CT	CT	CC	TT	CT	CT	CT	TT	CC
rs2508037	GG	AA	AG	AG	GG	AG	AG	GG	GG	GG	GG
rs556807	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC	CT
rs1924982	AA	AA	AA	AA	AA	AA	AA	AA	AG	AA	AG
rs549464	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC	CT
rs532017	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC	CT
rs16879241	TT	TT	TT	TT	TT	TT	TT	TT	CT	TT	CT
rs545472	GG	GG	GG	GG	GG	GG	GG	GG	AG	GG	AG
rs568369	AA	AA	AA	AA	AA	AA	AA	AA	AG	AA	AG
rs4235967	GG	AG	GG	GG	AG	GG	GG	AG	GG	GG	GG
rs5002649	TT	CT	TT	TT	CT	TT	TT	CT	TT	TT	TT
rs12174860	AA	AG	AA	AA	AG	AA	AA	AG	AA	AA	AA
rs12175881	CC	CT	CT	CC	CT	CC	CC	CT	CC	CT	CC
rs9344924	GG	AG	GG	GG	AG	GG	GG	AG	GG	AG	GG
rs9451209	AA	AG	AA	AA	AG	AA	AA	AG	AA	AA	AA
rs2057161	CC	CT	CC	CC	CT	CC	CC	CT	CC	CT	CC
rs1028484	CC	CT	CC	CC	CT	CC	CC	CT	CC	CT	CC
rs7757305	AA	AG	AA	AA	AG	AA	AA	AG	AA	AG	AA
rs609098	GG	AG	GG	GG	AG	GG	GG	AG	GG	GG	GG
rs6454814	AA	AG	AA	AA	AG	AA	AA	AG	AA	AG	AA
rs9389520	TT	TT	TT	TT	CT	CC	CT	TT	TT	CT	TT
rs372440	TT	CC	CT	TT	TT	CT	CC	TT	TT	CT	TT
rs2476467	CC	CT	CC	CC	CT	CT	CC	CC	CT	CT	CT
rs4710883	CT	CC	CT	CC	CT	CC	CT	TT	CC	CT	CC
rs13228455	CT	TT	CC	TT	TT	TT	CC	TT	CT	TT	TT
rs4717331	CT	CC	CT	CT	CC	CT	CT	CT	CC	TT	CC
rs17165352	CC	CT	CC	CT	CT	CT	CC	CT	CC	NN	CC
rs3807337	CC	CC	CC	CC	CT	TT	CC	TT	TT	CT	TT
rs1351499	CT	TT	TT	CT	CT	CT	CT	CT	TT	NN	CC
rs7832879	AG	GG	GG	AG	AG	AG	AG	AG	GG	GG	AA
rs6420159	AG	AG	AA	AG	AG	AG	AG	GG	AA	AA	GG
rs1982324	AG	GG	AG	AG	GG	AG	GG	AG	AG	GG	GG
rs7827503	AG	GG	AG	AG	GG	AG	GG	AG	AG	GG	GG
rs10957988	CT	CT	CT	CC	TT	CT	TT	CT	CT	TT	TT
rs601897	CC	CT	CC	CC	CT	CC	CT	CC	CT	CC	CT
rs10956197	CT	CT	TT	TT	TT	TT	TT	TT	CT	CT	TT
rs1045574	CT	CC	CC	CC	CC	TT	CT	CC	TT	CT	CC
rs1548299	AG	GG	AG	GG	GG	AG	AG	AG	AG	AG	AG
rs10814395	CT	CC	CT	CC	CC	CT	CT	CT	CT	TT	CT
rs7849638	AA	AG	AG	AA	AG	AA	AG	GG	AG	GG	AG
rs7045959	GG	AG	AG	GG	AG	GG	AG	AA	AG	AA	AG
rs1414229	CC	CT	CC	CC	CC	CT	CT	CC	CT	CC	CT
rs7039105	TT	TT	TT	TT	TT	TT	GT	TT	GT	TT	GT
rs7020669	CT	CT	CT	CT	CT	CT	CC	CT	NN	CT	TT
rs7865106	AG	AG	AG	AG	AG	AG	GG	AG	AA	AG	AA
rs7865861	AG	AG	AG	AG	AG	AG	AA	AG	GG	AG	GG
rs16910853	AG	AG	AA	AG	AA	AA	AG	AG	AA	GG	AA
rs11011420	CC	CT	CT	CT	CT	CC	CC	TT	CT	CT	CC
rs595119	AG	GG	AG	GG	AG	AG	GG	AG	AG	AA	AG
rs10762667	AG	AA	GG	GG	AG	AG	GG	GG	AG	AG	AG
rs1080496	CT	CT	CC	CT	CT	CC	CT	CC	CC	CC	CT

Supplementary Table 2. Contd.

rs10881957	CT	CT	TT	CT	CT	TT	CT	TT	TT	TT	CT
rs2497706	AG	AG	AG	AG	AA	AA	AG	AG	AA	AG	AG
rs11819833	AA	AA	GG	GG	AA	AG	GG	AA	AA	AA	AG
rs12786429	TT	TT	GG	GG	TT	GT	GG	TT	TT	TT	GT
rs10768140	AG	AA	GG	AG	AA	AA	AG	AG	AA	AA	AG
rs648409	AA	AG	AG	AG	AA	AG	AA	AA	AA	AG	AG
rs4296050	AG	AA	GG	GG	AA	AG	AG	GG	AG	AG	AA
rs735295	CC	TT	CC	CT	TT	TT	CT	CT	TT	CC	CT
rs11059295	TT	CT	TT	CT	CT	TT	TT	TT	TT	CC	CT
rs9599610	AA	GG	GG	AA	AG	AG	AA	AG	GG	AA	GG
rs7145482	AA	AG	AG	AA	AG	AA	AA	AG	AG	AA	AG
rs722200	CT	TT	CT	CT	TT	TT	TT	TT	CT	CC	CT
rs964729	CC	CT	CT	CC	CC	TT	CC	CC	CC	CC	CC
rs6574531	TT	CT	CT	TT	TT	CC	TT	TT	TT	TT	TT
rs4900384	AG	AG	GG	GG	AG	AG	AG	AG	AA	AG	AG
rs11622227	AG	GG	GG	AG	AG	AG	GG	GG	GG	GG	AA
rs2125657	GG	GG	GG	GG	GG	GG	GG	GG	GG	AG	GG
rs689011	TT	CT	CT	TT	TT	TT	TT	TT	TT	CT	TT
rs16964201	CC	CC	CC	CC	CC	CT	CT	CT	CC	CT	CC
rs12914971	AA	AG	AA	AA	AA	AA	GG	AA	AG	AA	AA
rs7166281	GT	TT	TT	TT	GT	TT	TT	TT	TT	TT	TT
rs12440184	GG	AG	AA	AG	AA	AA	AG	AA	GG	AG	AG
rs4888666	CT	CT	CC	CT	TT	TT	NN	TT	CT	CT	CT
rs9929618	AG	AG	GG	GG	GG	GG	GG	AG	GG	AG	GG
rs9934131	AG	AG	GG	AG	GG	GG	GG	AG	GG	AG	GG
rs2101252	AG	AG	GG	AG	GG	GG	GG	AG	GG	AG	GG
rs2250486	CT	TT	CC	TT	CC	TT	TT	TT	CT	TT	TT
rs16965880	AG	AG	AG	AG	AG	AA	GG	AG	AG	AG	GG
rs9944528	CC	CC	CT	CT	TT	CT	CC	CT	CT	CC	TT
rs11150946	AA	AG	AA	AA	AA	AA	AA	GG	AG	AA	AA
rs11665827	AA	AG	AG	AG	GG	AG	AG	NN	AA	AA	AG
rs11882543	CC	NN	CT	CT	TT	CT	TT	TT	TT	TT	TT
rs16991180	GG	GG	GG	GG	GG	GG	GG	AG	GG	NN	GG
rs16993168	TT	GG	GG	GT	GG	GG	GG	GT	TT	GT	GT
rs136575	AG	GG	GG	GG	GG	NN	AG	GG	AG	GG	GG
SNP ID	CHX067	CHX068	CHX069	CHX070	CHX071	CHX072	CHX073	CHX074	CHX075	CHX076	CHX077
rs12143100	CC	CT	CC	CC	CC	CT	CC	CT	CC	CC	CT
rs868868	AG	GG	GG	AG	GG	GG	AG	GG	AG	GG	AG
rs10737511	CC	CT	CC	CC	CC	CC	CC	CC	CC	CT	CC
rs6427135	AG	AA	AG	AG	GG	AG	GG	AG	GG	AG	AG
rs12024761	GG	GG	GG	AG	GG	GG	AG	AA	AA	GG	AG
rs4846593	AG	AG	AG	AA	AA	GG	GG	GG	AG	GG	AA
rs4671730	AA	AG	AA	AG	AG	AG	AG	AG	AA	AG	GG
rs17618119	AA	GG	AG	GG	GG	AG	AG	AG	AG	GG	AG
rs7558213	CT	NN	TT	NN	TT	CT	CT	CT	CT	CT	CC
rs6746781	TT	TT	CT	TT	CT	TT	CT	TT	TT	TT	TT
rs12185723	CC	CC	CT	CC	CT	CC	CT	CC	CT	CC	CC
rs4850694	CC	CC	CC	CC	CC	CC	CC	TT	CC	CC	CC
rs6713102	CC	CC	CC	CC	CC	CC	CC	TT	CC	CC	CC
rs16849378	AA	AA	AA	AA	AA	AA	AA	GG	AA	AA	AA
rs7558972	GG	GG	GG	GG	GG	GG	GG	AA	GG	GG	GG
rs1242810	GG	AA	GG	AA	AG	AA	AA	GG	GG	AG	AA



Supplementary Table 2. Contd.

rs7849638	AA	AG	GG	AA	AG	AG	AG	AG	AA	AG	AG
rs7045959	GG	AG	AA	GG	AG	AG	AG	AA	GG	AG	AG
rs1414229	CC	CT	CC	TT	CT	CT	CC	CC	CT	CT	CT
rs7039105	TT	GT	TT	GG	TT	TT	GT	GT	GT	GT	TT
rs7020669	CC	CC	CC	CT	CT	TT	CT	CC	CC	CC	CC
rs7865106	GG	GG	GG	AG	AG	AA	AG	GG	GG	GG	GG
rs7865861	AA	AA	AA	AG	AG	GG	AG	AA	AA	AA	AA
rs16910853	AA	AA	AG	AA	AA	AG	AG	AG	AG	AG	AA
rs11011420	CT	TT	CT	CT	CC	CT	CT	CC	CC	CT	CT
rs595119	AG	GG	AG	AA	AG	GG	AG	AG	AG	AG	GG
rs10762667	AG	AG	AG	GG	GG	GG	GG	AG	GG	AG	GG
rs1080496	CT	CC	CC	CT	CT	TT	CC	CT	CT	CT	CC
rs10881957	CT	TT	TT	TT	CT	CT	TT	CT	CT	TT	TT
rs2497706	AG	AG	AG	GG	GG	AA	AA	AA	AG	GG	AG
rs11819833	AA	AG	AA	AA	AA	AA	AG	AA	AG	AA	AA
rs12786429	TT	GT	TT	TT	TT	TT	GT	TT	GT	TT	TT
rs10768140	AA	AG	AG	AA	AG	GG	NN	AA	AG	AG	AA
rs648409	AG	AA	AA	AG	AG	GG	AA	AA	AG	AA	AA
rs4296050	GG	AG	AG	GG	GG	AG	AA	AG	AA	GG	GG
rs735295	CT	TT	TT	CT	CC	CT	CT	CT	CT	CT	CT
rs11059295	CT	CT	TT	CT	TT	CT	CT	TT	CT	TT	CC
rs9599610	AG	AG	AA	AA	AA	AG	AA	AA	AG	AG	AA
rs7145482	AA	GG	AG	AA	AG	AG	AG	GG	AG	GG	AA
rs722200	TT	TT	TT	CT	TT	CT	TT	TT	TT	TT	CT
rs964729	TT	CC	CC	CT	CT	CC	CT	CT	CC	CT	CT
rs6574531	CC	TT	TT	CT	CT	TT	CT	CT	TT	CT	CT
rs4900384	AG	AG	AG	GG	AG	GG	AG	AA	GG	GG	GG
rs11622227	GG	AG	GG	GG	AG	GG	AG	AG	AG	GG	GG
rs2125657	GG	AG	GG	GG	GG	AG	GG	GG	AG	GG	AG
rs689011	TT	TT	TT	TT	TT	CT	TT	CT	TT	TT	TT
rs16964201	CC	CT	CC	CC	CC	CC	CT	CC	CC	CC	CT
rs12914971	AG	AA	AG	AA	AA	AA	AA	AA	AA	AA	AA
rs7166281	GT	TT	TT	GT	TT	GT	TT	TT	TT	GT	GT
rs12440184	AA	AG	GG	AG	AG	AA	AG	AG	AG	AG	AA
rs4888666	TT	CC	CT	CT	CC	CT	CT	CT	TT	CT	CT
rs9929618	AG	GG	AG	GG	AG	GG	GG	GG	AG	GG	GG
rs9934131	AG	GG	AG	NN	AG	GG	GG	GG	AG	GG	GG
rs2101252	AG	GG	AG	GG	AG	GG	GG	GG	AG	GG	GG
rs2250486	CT	CT	TT	NN	CT	TT	CT	TT	CT	TT	TT
rs16965880	AG	AG	AG	AA	AG	AG	AG	AA	AG	AA	AG
rs9944528	CT	CC	TT	CC	TT	CC	CT	CC	CT	TT	CC
rs11150946	AG	AA	AG	AG	AA	AA	AA	AG	AA	AG	AA
rs11665827	AG	AG	AA	AA	AG	AG	AA	AA	GG	AA	AA
rs11882543	TT	TT	CT	TT	TT	CT	CC	CC	TT	NN	TT
rs16991180	AG	GG	GG	GG	GG	AG	GG	GG	AG	GG	AG
rs16993168	GG	GT	TT	GG	TT	TT	GT	GG	GG	GT	GT
rs136575	GG	GG	AG	NN	GG	AG	AG	AG	AG	GG	GG
SNP ID	CHX078	CHX079	CHX080	CHX081	CHX082	CHX083	CHX084	CHX085	CHX086	CHX087	CHX088
rs12143100	CC	CC	CT	CT	CT	CT	CT	CC	NN	CC	CT
rs868868	AG	AG	GG	GG	GG	GG	GG	GG	AG	GG	GG
rs10737511	CC	CC	CC	CC	CC	CC	CC	CC	CT	CC	CC
rs6427135	AG	AG	AG	AG	AG	GG	AG	AA	GG	AG	AG



Supplementary Table 2. Contd.

rs12024761	AG	GG	GG	GG	GG	GG	GG	AG	GG	AG	AA
rs4846593	AA	GG	AG	AG	AG	AG	AG	AG	AG	AG	AG
rs4671730	AG	AA	AG	AG	GG	AA	AG	AG	AA	AG	AA
rs17618119	AG	GG	AG	AG	GG	NN	GG	AG	NN	AA	AG
rs7558213	NN	TT	TT	TT	TT	TT	TT	NN	TT	TT	NN
rs6746781	CT	TT	CT	TT	CT	TT	TT	TT	TT	TT	TT
rs12185723	CT	CC	CT	CC	CT	CC	CC	CC	CC	CC	CC
rs4850694	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs6713102	CT	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs16849378	AG	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs7558972	AG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
rs1242810	AA	AA	GG	AG	AG	GG	AG	AG	AG	NN	AA
rs17570449	AG	AA	AA	AA	AA	AA	AA	AG	AA	AA	AA
rs12498130	TT	CT	TT	CT	CC	TT	CC	TT	TT	CC	CC
rs1574477	GG	AG	GG	AA	AG	AG	AG	AG	GG	GG	GG
rs2220099	TT	GT	TT	TT	TT	GT	TT	GT	TT	GG	TT
rs7695197	GG	GG	NN	AG	GG	AA	GG	AG	AA	NN	AG
rs12499851	GG	AG	AG	GG	NN	AA	NN	AA	NN	AG	AA
rs2949650	CT	CC	CC	TT	CC	CT	TT	CT	CC	TT	CT
rs2100684	CT	TT	TT	CT	CC	CT	TT	TT	CT	TT	TT
rs35424097	CC	CC	CC	CT	CC	CC	CC	CT	CC	CT	CC
rs27061	GG	AG	AG	GG	AG	AG	AG	AG	AA	GG	AG
rs12516484	AA	GG	AG	AG	AA	GG	GG	GG	AA	AG	AG
rs13177990	GG	GG	GG	GG	GG	AG	AG	AA	AA	GG	GG
rs4257797	GT	GG	GG	GG	GG	GG	GG	GT	TT	GG	GT
rs7751978	TT	CT	NN	TT	CT	CT	CT	CT	TT	TT	TT
rs2508037	GG	AA	AG	AG	GG	AG	GG	AA	GG	GG	GG
rs556807	CC	CC	CC	CC	CT	CC	CT	CC	CC	CC	CC
rs1924982	AA	AA	AA	AA	AG	AA	AG	AA	AA	AA	AA
rs549464	CC	CC	CC	CC	CT	CC	CT	CC	CC	CC	CC
rs532017	CC	CC	CC	CC	CT	CC	CT	CC	CC	CC	CC
rs16879241	TT	TT	TT	TT	CT	TT	CT	TT	TT	TT	TT
rs545472	GG	GG	GG	GG	AG	GG	AG	GG	GG	GG	GG
rs568369	AA	AA	AA	AA	AG	AA	AG	AA	AA	AA	AA
rs4235967	AG	AG	AG	AG	AG	AG	GG	AG	AA	AA	GG
rs5002649	CT	CT	CT	CT	CT	CT	TT	CT	CC	CC	TT
rs12174860	AG	AG	AG	AG	AG	AG	AA	AG	GG	GG	AA
rs12175881	CT	CT	CT	CT	CT	CT	CT	CT	TT	TT	CT
rs9344924	AG	AG	AG	AG	AG	AG	GG	AG	AA	AA	GG
rs9451209	AG	AG	AG	AG	AG	AG	AA	AG	GG	GG	AA
rs2057161	CT	CT	CT	CT	CT	CT	CC	CT	TT	TT	CC
rs1028484	CT	CT	CT	CT	CT	CT	CC	CT	TT	TT	CC
rs7757305	AG	AG	AG	AG	AG	AG	AA	AG	GG	GG	AA
rs609098	AG	AG	AG	AG	AG	AG	GG	AG	AA	AA	GG
rs6454814	AG	AG	AG	AG	AG	AG	AA	AG	GG	GG	AA
rs9389520	CC	CT	CT	TT	CT	TT	CT	CC	TT	CT	CT
rs372440	CC	TT	TT	CT	TT	CT	CT	TT	TT	CC	CT
rs2476467	CC	CC	CC	CT	CC	CT	CC	CC	CC	CT	CC
rs4710883	NN	CC	TT	CT	CT	CC	CT	CT	CT	CT	CT
rs13228455	CT	TT	CT	CT	CT	TT	TT	CT	TT	TT	CC
rs4717331	TT	TT	CT	CT	CC	CT	TT	CT	TT	TT	CT
rs17165352	CC	CC	CC	NN	CC	CT	CC	CC	CC	CC	CC

Supplementary Table 2. Contd.

rs3807337	CC	CC	CC	CT	CC	CC	CC	CT	CT	TT	CT
rs1351499	CT	TT	TT	CT	CT	TT	CT	CT	CT	CT	TT
rs7832879	AG	GG	GG	AG	AG	GG	AG	AG	AG	AG	GG
rs6420159	AG	AA	AA	AG	AG	AA	AG	AG	AG	AG	AA
rs1982324	GG	GG	AG	AG	GG	GG	AG	GG	NN	GG	AG
rs7827503	GG	GG	AG	AG	GG	GG	AG	GG	AG	GG	AG
rs10957988	CT	TT	CT	CT	TT	TT	CT	CT	CT	TT	CT
rs601897	CC	CC	CC	CC	CT	CT	CT	CT	CC	CT	CC
rs10956197	CC	CT	TT	CT	CT	TT	CT	CT	CT	TT	TT
rs1045574	CT	CC	CC	CT	CT	TT	CT	CC	CT	CC	CC
rs1548299	AG	AG	AG	AA	AG	GG	AG	GG	AG	AG	AG
rs10814395	CT	CT	CT	TT	CT	CC	CT	CC	CT	CT	CT
rs7849638	AG	GG	AA	AA	AG	AG	AA	AG	AA	AG	AG
rs7045959	AG	AA	GG	GG	AG	AG	GG	AG	GG	AG	AG
rs1414229	CC	CC	CC	CC	TT	CT	CT	TT	CC	CC	CT
rs7039105	TT	TT	TT	TT	GT	GT	GT	GT	TT	TT	GT
rs7020669	CC	TT	CT	CT	CC	CC	CC	CT	CT	CT	CC
rs7865106	GG	AA	AG	AG	GG	GG	GG	AA	AG	AG	GG
rs7865861	AA	GG	AG	AG	AA	AA	AA	GG	AG	AG	AA
rs16910853	AG	AA	GG	AA	AA	AG	AA	AA	AA	AA	AA
rs11011420	CT	CT	CC	CC	CT	CC	CT	CT	CC	CC	TT
rs595119	AA	GG	AG	AG	AA	AA	AG	AA	AA	GG	GG
rs10762667	AG	AA	GG	GG	AG	GG	AA	GG	AG	AA	AG
rs1080496	CC	CC	CT	CC	CC	CT	TT	CC	CT	CC	CT
rs10881957	TT	TT	CT	TT	TT	CT	CT	TT	CT	NN	CT
rs2497706	AA	AA	AA	AG	AG	AG	GG	AA	AG	GG	AA
rs11819833	AG	AA	NN	AG	AA	AA	AA	AA	AA	AA	AG
rs12786429	GT	TT	GT	GT	TT	TT	TT	TT	TT	TT	GT
rs10768140	AA	GG	AA	AA	AA	GG	AA	GG	AG	NN	AG
rs648409	AA	AA	AG	AA	AG	AA	AA	AG	AG	AA	AG
rs4296050	AG	AG	GG	GG	AG	AA	AG	AA	AG	GG	AG
rs735295	CT	TT	CT	TT	TT	CT	TT	CT	TT	CT	CC
rs11059295	CC	CT	TT	TT	CT	CT	CC	CT	TT	TT	TT
rs9599610	AA	AA	AG	AA	GG	AG	AG	AG	AG	AG	AG
rs7145482	AG	GG	AA	AA	AA	GG	GG	GG	GG	AG	AG
rs722200	CT	TT	CC	CC	CT	TT	TT	TT	TT	CT	CT
rs964729	TT	CT	CC	CC	CT	CC	TT	CT	CC	CC	CC
rs6574531	CC	CT	TT	TT	CT	TT	CC	CT	TT	TT	TT
rs4900384	GG	AG	GG	AG	AG	GG	AG	GG	AA	GG	GG
rs11622227	GG	AG	GG	NN	GG	GG	GG	GG	GG	AA	GG
rs2125657	GG	GG	GG	AG	GG	GG	GG	AG	GG	GG	GG
rs689011	TT	TT	TT	CT	CT	TT	TT	TT	TT	CT	CT
rs16964201	CC	CC	CT	CC	CC	CC	CC	CC	CC	CT	CC
rs12914971	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
rs7166281	TT	TT	GT	TT	GT	GT	TT	TT	GT	TT	GT
rs12440184	AG	AA	AA	AG	AG	AA	AG	GG	AG	AG	GG
rs4888666	TT	TT	CC	TT	TT	CT	CT	CT	CT	CT	TT
rs9929618	GG	GG	GG	AG	GG	AG	GG	GG	AA	GG	GG
rs9934131	GG	GG	GG	AG	GG	AG	GG	GG	AA	GG	GG
rs2101252	GG	GG	GG	AG	GG	AG	GG	GG	AA	GG	GG
rs2250486	CT	TT	TT	CT	TT	TT	CC	CT	CT	TT	TT
rs16965880	AG	AG	GG	AA	AA	AA	AG	AG	AG	AG	AG

Supplementary Table 2. Contd.

rs9944528	CC	CC	CT	CT	CC	CC	TT	CT	CC	TT	CC
rs11150946	AA	AG	AG	AG	AA	AA	GG	AA	AG	AG	AA
rs11665827	AA	AA	AG	AA	AA	AG	AG	AG	AA	AA	AA
rs11882543	CT	CT	CT	CT	TT	TT	CT	CT	NN	TT	TT
rs16991180	GG	GG	GG	AG	GG	GG	AG	GG	GG	AG	GG
rs16993168	GG	GT	GT	GG	GT	GT	GT	GT	GG	GG	GT
rs136575	AA	AG	GG	AG	GG	AG	GG	AG	AG	GG	GG
SNP ID	CHX089	CHX090	CHX091	CHX092	CHX093	CHX094	CHX095	CHX096	CHX097	CHX098	CHX099
rs12143100	TT	CC	CC	CT	NN	CC	CT	CT	CC	CC	CC
rs868868	GG	AA	GG	AG	AG	AA	GG	AG	AG	AG	GG
rs10737511	CT	CC	TT	CT	CC	CT	CT	CC	CC	CT	CT
rs6427135	GG	AG	GG	AA	AA	AG	AG	GG	AG	AA	GG
rs12024761	AG	GG	GG	AG	GG	GG	GG	AG	GG	GG	GG
rs4846593	AG	AG	GG	AA	AG	AA	AG	GG	AG	AA	AA
rs4671730	AA	GG	AG	AA	AG	AG	AA	GG	AG	AG	GG
rs17618119	GG	GG	AG	GG	AG	GG	AA	AA	GG	AG	NN
rs7558213	CT	CT	TT	CT	CT	TT	CC	TT	CT	TT	TT
rs6746781	NN	TT	CT	TT	TT	TT	CT	TT	TT	TT	TT
rs12185723	TT	CC	CT	CC	CC	CC	CT	CC	CC	CC	CC
rs4850694	CC	CC	CT	CT	TT	CC	TT	CC	CC	CC	CC
rs6713102	CC	CC	CT	CT	TT	CC	CT	CC	CC	CC	CC
rs16849378	AA	AA	AG	AG	GG	AA	AG	AA	AA	AA	AA
rs7558972	GG	GG	AG	AG	AA	GG	AA	GG	GG	GG	GG
rs1242810	AG	AA	AG	GG	GG	GG	AG	AA	AA	GG	AG
rs17570449	AA	AG	AG	AG	AG	AA	AA	AG	AA	AA	AG
rs12498130	CT	CC	NN	CC	TT	CC	CT	CT	CT	CT	CT
rs1574477	AG	AG	AA	GG	AA	GG	AG	AA	GG	AG	GG
rs2220099	TT	GT	GT	TT	GT	GT	TT	GT	TT	GT	TT
rs7695197	GG	GG	AA	AG	AG	GG	GG	GG	AG	GG	AA
rs12499851	NN	AG	AA	NN	AA	NN	NN	GG	GG	GG	NN
rs2949650	TT	CC	CC	TT	CT	CT	CC	CT	CC	TT	CC
rs2100684	TT	CT	CT	TT	CC	CT	CT	TT	CT	TT	CT
rs35424097	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
rs27061	AG	AA	GG	AG	AA	GG	AG	AG	GG	NN	AG
rs12516484	GG	AG	AG	AG	AA	AG	AA	AG	AG	AG	AA
rs13177990	GG	GG	GG	GG	GG	AG	GG	GG	GG	GG	AG
rs4257797	GG	GG	GT	GT	GG	GG	GG	GG	GG	GT	GG
rs7751978	CC	CT	TT	TT	TT	CT	NN	CT	TT	TT	CT
rs2508037	AG	AG	GG	AG	GG	AA	GG	AG	AG	GG	GG
rs556807	CC	CC	CT	CC	CC	CC	CC	CC	CT	CC	CC
rs1924982	AA	AA	AG	AA	AA	AA	AA	AA	AG	AA	AA
rs549464	CC	CC	CT	CC	CC	CC	CC	CC	CT	CC	CC
rs532017	CC	CC	CT	CC	CC	CC	CC	CC	CT	CC	CC
rs16879241	TT	TT	CT	TT	TT	TT	TT	TT	CT	TT	TT
rs545472	GG	GG	AG	GG	GG	GG	GG	GG	AG	GG	GG
rs568369	AA	AA	AG	AA	AA	AA	AA	AA	AG	AA	AA
rs4235967	AA	AG	AA	AG	GG	AG	GG	GG	AA	AA	AG
rs5002649	CC	CT	CC	CT	TT	CT	TT	TT	CC	CC	CT
rs12174860	GG	AG	GG	AG	AA	AG	AA	AA	GG	GG	AG
rs12175881	TT	CT	TT	CT	CC	CT	CC	CC	TT	TT	CT
rs9344924	AG	AG	AA	AG	GG	AG	GG	GG	AA	AA	AG
rs9451209	GG	AG	GG	AG	AA	AG	AA	AA	GG	GG	AG

SupplementaryTable 2. Contd.

rs2057161	TT	CT	TT	CT	CC	CT	CC	CC	NN	TT	CT
rs1028484	TT	CT	TT	CT	CC	CT	CC	CC	TT	TT	CT
rs7757305	GG	AG	GG	AG	AA	AG	AA	AA	GG	GG	AG
rs609098	AA	AG	AA	AG	GG	AG	GG	GG	AA	AA	AG
rs6454814	GG	AG	GG	AG	AA	NN	AA	AA	GG	GG	AG
rs9389520	TT	TT	CT	CC	TT	TT	CT	CT	CT	CT	TT
rs372440	CT	TT	CC	CT	CT	CT	TT	CT	CT	CT	TT
rs2476467	CC	CC	CC	CC	CC	CC	TT	CC	CC	CC	CT
rs4710883	CT	CT	TT	CT	CC	TT	CT	CT	TT	TT	CC
rs13228455	CT	CT	TT	TT	CT	CT	TT	TT	TT	CT	CT
rs4717331	CT	CC	CT	CT	CT	CT	CT	CT	CT	CC	TT
rs17165352	CT	CT	CC	CC	CC	CC	CC	CT	NN	NN	CC
rs3807337	CT	CC	TT	CT	CT	CT	CT	CC	CT	CC	CT
rs1351499	CT	CT	CT	CT	CT	TT	CT	CT	CC	TT	TT
rs7832879	AG	AG	AG	AG	AG	GG	AG	AG	AA	GG	GG
rs6420159	AG	AG	AG	AG	GG	AA	AG	AG	GG	AG	AA
rs1982324	GG	AA	AG	AA	AA	AA	AG	GG	GG	AG	GG
rs7827503	GG	AA	AG	AA	AA	AA	AG	GG	GG	AG	GG
rs10957988	CT	CC	CT	CC	CC	CC	CT	TT	TT	CT	TT
rs601897	CC	CC	TT	CC	CT	NN	CC	CC	TT	CC	CC
rs10956197	TT	TT	TT	TT	TT	CT	TT	TT	TT	TT	TT
rs1045574	CT	CC	CC	CC	CT	CC	CC	CT	CC	CC	CT
rs1548299	AG	AA	AG	AG	AG	GG	AG	GG	AA	GG	GG
rs10814395	CC	TT	CT	CT	TT	CC	CT	CC	TT	CC	CC
rs7849638	AA	GG	AG	AG	GG	AA	GG	AA	AG	GG	AG
rs7045959	GG	AA	AG	AG	AA	GG	AA	GG	AG	AA	AG
rs1414229	CT	CC	CT	CC	CT	CT	CC	CC	CC	CC	CC
rs7039105	GT	TT	GT	TT	GT	GT	TT	TT	TT	TT	TT
rs7020669	CC	TT	CT	CT	CC	CC	CT	CC	CT	CC	CT
rs7865106	GG	AA	AG	AG	GG	GG	AG	GG	AG	GG	AG
rs7865861	AA	GG	AG	AG	AA	AA	AG	AA	AG	AA	AG
rs16910853	AA	AG	AA	AA	AG	AA	AA	AA	AA	AA	AG
rs11011420	CC	CC	CC	CT	CC	CT	CT	CT	TT	TT	CT
rs595119	AA	AA	AA	GG	AG	AG	AG	AG	AA	GG	AA
rs10762667	GG	AG	AG	GG	GG	GG	GG	AG	GG	AG	GG
rs1080496	CT	TT	CC	CC	TT	CC	CT	CT	CC	CC	CC
rs10881957	CT	CT	TT	TT	CT	TT	CT	CT	TT	TT	TT
rs2497706	AA	AG	AG	AA	AG	AG	AA	GG	AA	AG	AG
rs11819833	AA	AA	AA	AA	AG	AG	NN	NN	AG	AA	AA
rs12786429	TT	TT	TT	TT	GT	GT	GT	GT	GT	TT	TT
rs10768140	AA	AA	AG	AA	GG	AA	GG	AA	AA	AA	GG
rs648409	AA	AA	AA	AA	AA	AA	AA	GG	AG	AA	AA
rs4296050	AA	GG	AG	AA	AA	AG	GG	AG	AG	NN	NN
rs735295	CT	TT	CT	TT	TT	TT	CT	CC	CT	TT	CT
rs11059295	CT	CT	TT	CT	TT	TT	TT	CT	CT	CT	TT
rs9599610	AA	AG	AA	AG	AG	AA	AG	AA	GG	AG	AG
rs7145482	AA	AA	AG	AG	AG	GG	AA	AG	AG	GG	AG
rs722200	CT	CT	TT	CT	CT	TT	CT	CT	TT	TT	CC
rs964729	CC	CC	CC	TT	CC	CT	CT	CC	TT	CT	TT
rs6574531	TT	TT	TT	CC	TT	CT	CT	TT	CC	CT	CC
rs4900384	AG	AG	GG	AA	AG	AA	GG	GG	AG	AG	GG
rs11622227	GG	GG	AG	GG	AG	AG	GG	AG	NN	AG	GG

Supplementary Table 2. Contd.

rs2125657	GG	GG	GG	GG	GG	GG	AG	GG	AG	GG	GG
rs689011	TT	TT	TT	TT	TT	TT	TT	TT	CT	TT	CT
rs16964201	CC	CC	CC	CC	CT	CC	CC	TT	CC	CC	CC
rs12914971	AG	AA	AA	AA	AA	AA	AA	AA	AG	AA	AA
rs7166281	TT	GT	GT	TT	TT	GT	TT	TT	TT	GT	TT
rs12440184	AG	AG	AG	AA	AG	AA	GG	AA	GG	AG	AG
rs4888666	TT	CC	CC	CC	CT	CT	TT	TT	TT	TT	CC
rs9929618	GG	GG	AA	AG	AG	AG	AG	AG	GG	GG	AG
rs9934131	GG	GG	AA	AG	AG	AG	AG	AG	GG	GG	AG
rs2101252	GG	GG	AA	AG	AG	AG	AG	AG	GG	GG	AG
rs2250486	CC	CC	CT	CT	CT	TT	CT	CT	TT	TT	TT
rs16965880	AG	AA	AA	AA	AA	AA	AA	AG	AA	GG	AA
rs9944528	CC	CT	CC	CC	CC	CC	CT	CC	CC	CC	CC
rs11150946	AA	AG	AA	AG	AG	GG	GG	AG	AG	AA	AA
rs11665827	AG	AA	AA	AG	AG	AA	AG	AA	AG	AA	AG
rs11882543	TT	CT	CT	TT	CC	TT	CT	CT	TT	CT	CT
rs16991180	GG	AG	GG	GG	AG	GG	AG	GG	AG	GG	AG
rs16993168	GT	GG	TT	GT	GG	TT	GG	GG	GT	TT	GG
rs136575	GG	GG	AG	AG	AG	AG	AA	GG	AG	GG	GG
SNP ID	CHX100	CHX101	CHX102	CHX103	CHX104	CHX105	CHX106	CHX107	CHX108	CHX109	CHX110
rs12143100	CT	CT	CT	CC	TT	CC	CC	CT	CC	CC	CC
rs868868	AG	AG	GG	GG	GG	GG	AA	GG	GG	AG	GG
rs10737511	CC	CC	CT	TT	CC	CC	CC	TT	CC	CC	CT
rs6427135	GG	AA	AA	AG	AG	AG	GG	AG	AG	AG	NN
rs12024761	AG	AG	AG	AG	GG	GG	GG	GG	GG	GG	AG
rs4846593	AG	AG	AG	AG	AG	GG	AG	AG	GG	AG	AG
rs4671730	AA	AG	AG	AG	AG	AA	GG	AG	AG	AG	AG
rs17618119	NN	GG	AG	AG	AG	AA	AA	AG	AG	AA	AG
rs7558213	NN	TT	CT	TT	NN	TT	TT	CT	CC	TT	TT
rs6746781	NN	CT	TT	TT	CT	TT	TT	CC	TT	TT	CT
rs12185723	CT	CT	CC	CC	CT	CC	CC	CT	CC	CC	CT
rs4850694	CC	CT	CT	CT	CT	CC	CC	CC	TT	CC	CC
rs6713102	CC	CT	CT	CT	CT	CC	CC	CC	TT	CC	CC
rs16849378	AA	AG	AG	AG	AG	AA	AA	AA	GG	AA	AA
rs7558972	GG	AG	AG	AG	AG	GG	GG	GG	AA	GG	GG
rs1242810	AG	AG	AA	AG	AA	AG	AA	AG	AG	AA	AG
rs17570449	AG	AG	AA	AA	AA	AA	AA	AA	AA	AG	AA
rs12498130	TT	CC	CT	CC	CT	TT	CT	CT	CT	TT	CT
rs1574477	GG	AG	GG	AG	GG	GG	GG	AG	AG	GG	AA
rs2220099	GT	TT	TT	GT	GT	GT	TT	TT	TT	TT	TT
rs7695197	GG	NN	NN	AG	AG	GG	GG	NN	AG	AA	NN
rs12499851	AG	GG	AA	AG	NN	AA	NN	NN	AA	AG	AG
rs2949650	TT	TT	CT	CT	CT	CT	CC	CC	CT	CC	CC
rs2100684	CT	CT	TT	CT	CC	CT	TT	CT	CC	TT	TT
rs35424097	CC	CC	CC	CT	CC	CC	CC	CC	CT	CT	CC
rs27061	AG	GG	GG	AG	AG	GG	AA	AA	AA	AG	AG
rs12516484	AG	AG	AG	AG	GG	AG	AG	AA	AG	AG	GG
rs13177990	AG	AG	AG	AG	AG	AG	AA	GG	AG	AG	GG
rs4257797	GT	GT	GG	GT	GT	GG	GG	GG	GT	GT	GG
rs7751978	TT	CT	CT	CT	CT	TT	CT	CT	CT	CT	CT
rs2508037	GG	GG	AG	AA	GG	GG	GG	GG	AG	GG	AG
rs556807	CT	CC	CT	CT	CC	CT	CC	CT	CT	CT	CC

Supplementary Table 2. Contd.

rs1924982	AG	AA	AG	AG	AA	AG	AA	AG	AG	AG	AA
rs549464	CT	CC	CT	CT	CC	CC	CC	CT	CT	CT	CC
rs532017	CT	CC	CT	CT	CC	CC	CC	CT	CT	CT	CC
rs16879241	CT	TT	CT	CT	TT	TT	TT	CT	CT	CT	TT
rs545472	AG	GG	AG	AG	GG	GG	GG	AG	AG	AG	GG
rs568369	AG	AA	AG	AG	AA	AA	AA	AG	AG	AG	AA
rs4235967	AG	AG	AG	GG	GG	GG	AG	AG	GG	GG	AG
rs5002649	CT	CT	CT	TT	TT	TT	CT	CT	TT	TT	CT
rs12174860	AG	AG	AG	AA	AA	AA	AG	AG	AA	AA	AG
rs12175881	CT	CT	CT	NN	CC	NN	CT	CT	CC	CC	CT
rs9344924	AG	AG	AG	AG	GG	AG	AG	AG	GG	GG	AG
rs9451209	AG	AG	AG	AA	AA	AA	AG	AG	AA	AA	AG
rs2057161	CT	CT	CT	CT	CC	CT	CT	CT	CC	CC	CT
rs1028484	CT	CT	CT	CT	CC	CT	CT	CT	CC	CC	CT
rs7757305	AG	AG	AG	AG	AA	AG	AG	AG	AA	AA	AG
rs609098	AG	AG	AG	GG	GG	GG	AG	AG	GG	GG	AG
rs6454814	AG	AG	AG	AG	AA	AG	AG	AG	AA	AA	AG
rs9389520	CT	TT	CT	CT	CC	TT	TT	CT	TT	TT	TT
rs372440	CT	CT	CC	CT	TT	CT	TT	TT	CT	CC	TT
rs2476467	CT	TT	CC	CC	TT	CT	CT	CT	CC	CC	CC
rs4710883	CT	CT	CC	CT	CT	CC	CT	CT	CC	CC	CT
rs13228455	TT	CT	CT	TT	TT	CT	CT	CC	TT	TT	TT
rs4717331	CT	CC	CT	TT	CT	CT	CT	CT	CC	TT	CT
rs17165352	CT	NN	CC	CC	CC	CC	CC	CC	CT	TT	CT
rs3807337	TT	CT	CT	NN	CC	TT	CC	CC	TT	CT	CT
rs1351499	TT	TT	CT	TT	CT	CT	CC	TT	TT	CT	NN
rs7832879	GG	GG	AG	GG	AG	AG	AA	GG	GG	AG	GG
rs6420159	AA	AA	AG	AA	AG	AG	GG	AA	AA	AG	AA
rs1982324	GG	AG	GG	AG	GG	AG	AA	AG	AG	AG	AA
rs7827503	GG	AG	GG	AG	GG	AG	AA	AG	AG	AG	AA
rs10957988	CT	CT	TT	CT	NN	NN	CC	CT	CT	NN	CC
rs601897	TT	CT	CC	CT	CT	CT	CC	CT	CC	CT	CC
rs10956197	CT	TT	CC	TT	TT	CT	TT	TT	TT	TT	TT
rs1045574	CC	CT	CT	CT	CT	CC	CT	CT	CT	CC	CC
rs1548299	AG	GG	AG	GG	GG	AG	AG	GG	AG	GG	AG
rs10814395	CT	CC	CT	CC	CC	CT	CC	CC	CT	CC	CT
rs7849638	AA	AG	AG	AG	AG	AG	AG	AG	AA	GG	AG
rs7045959	GG	AG	AG	AG	AG	AG	AG	AG	GG	AA	AG
rs1414229	CC	CT	CC	CT	NN	CC	CC	CC	CT	CT	NN
rs7039105	TT	GT	TT	GT	GT	TT	TT	GG	GT	GG	GT
rs7020669	CT	TT	CT	CC	CC	CC	CT	CT	CT	CC	CT
rs7865106	NN	AA	AG	GG	GG	GG	AG	AG	AG	GG	AG
rs7865861	AG	GG	AG	AA	AA	AA	AG	AG	AG	AA	AG
rs16910853	GG	AG	AA	AA	AG	AA	GG	AG	AA	AG	AG
rs11011420	TT	CC	CT	CT	CT	TT	CT	CT	CT	CT	CT
rs595119	GG	AG	AA	AG	AA	AA	AG	AA	GG	GG	AG
rs10762667	GG	GG	GG	GG	AG	GG	GG	AG	GG	AG	GG
rs1080496	CT	CC	CT	TT	CT	CC	CC	CC	CT	CC	CT
rs10881957	CT	TT	CT	CT	CT	TT	TT	TT	CT	TT	CT
rs2497706	AG	AG	AG	AA	AA	AA	AA	AA	AG	GG	AG
rs11819833	AA	AG	AG	AG	AA	AG	AA	AG	GG	AA	AG
rs12786429	TT	GT	GT	GT	TT	GT	TT	GT	GG	TT	GT

Supplementary Table 2. Contd.

rs10768140	NN	AA	AA	GG	AA	AA	AA	AG	AG	AA	AA
rs648409	AA	AG	AG	AA	GG	AA	GG	AA	AG	AG	AA
rs4296050	AA	AG	GG	AA	AG	GG	AA	AA	AG	AG	AG
rs735295	CT	CT	CT	TT	CC	TT	CT	TT	CT	TT	TT
rs11059295	TT	CT	TT	CC	CT	TT	CT	CT	CT	CT	CC
rs9599610	AA	AG	AG	AG	AA	GG	AA	AG	AG	AG	GG
rs7145482	AG	AA	AA	GG	GG	AA	AA	AA	GG	AG	GG
rs722200	CT	CC	CT	TT	TT	CT	TT	CT	TT	TT	TT
rs964729	CT	CT	CC	CC	CC	CT	CC	CT	CC	CT	CC
rs6574531	CT	CT	TT	TT	TT	CT	TT	CT	TT	CT	TT
rs4900384	GG	GG	AG	GG	GG	GG	GG	GG	AG	GG	GG
rs11622227	GG	AG	GG	GG	GG	GG	GG	GG	AG	GG	AA
rs2125657	AG	AA	AG	AG	GG	GG	GG	GG	GG	AG	GG
rs689011	TT	TT	CT	CT	CT	TT	TT	CT	TT	TT	CT
rs16964201	CC	CT	CC	CC	CC	CC	CC	CT	CC	CC	CT
rs12914971	AG	AA	GG	AG	AA	AA	AA	AG	GG	AG	AG
rs7166281	TT	GT	GT	TT	GT	TT	TT	GG	TT	TT	TT
rs12440184	AA	GG	AA	GG	GG	GG	AG	GG	AA	AG	GG
rs4888666	CC	CT	CT	TT	CC	CT	TT	CT	TT	CT	NN
rs9929618	GG	AG	AG	AA	GG	GG	GG	GG	GG	GG	AG
rs9934131	GG	AG	AG	AA	GG	GG	GG	AG	GG	GG	AG
rs2101252	GG	AG	AG	AA	GG	GG	GG	AG	GG	GG	AG
rs2250486	CC	TT	CT	TT	CC	TT	TT	TT	CT	TT	CT
rs16965880	AG	AG	AA	AA	AG	AG	AG	AG	AG	AG	AA
rs9944528	CT	CT	CT	CC	CC	CC	CC	TT	CC	CT	CC
rs11150946	AA	AG	AA	AG	AG	AA	AG	AG	GG	AA	AA
rs11665827	AG	AA	AA	AA	AA	AG	GG	AA	AG	AA	AA
rs11882543	CC	TT	TT	TT	CT	CC	TT	CT	CT	TT	TT
rs16991180	GG	AG	AG	GG	GG	GG	GG	AG	GG	AG	AG
rs16993168	GT	GG	TT	GG	TT	GT	TT	GG	GG	TT	GG
rs136575	NN	AG	AG	GG	AG	GG	AG	AG	GG	GG	GG

SNP ID	CHX111	CHX112	CHX113
rs12143100	CC	CT	CT
rs868868	GG	AG	GG
rs10737511	CC	CC	CC
rs6427135	GG	AG	AG
rs12024761	GG	AG	GG
rs4846593	AG	AG	AG
rs4671730	GG	GG	AG
rs17618119	AG	GG	AG
rs7558213	CT	CT	CT
rs6746781	CT	CT	TT
rs12185723	CT	CT	CT
rs4850694	CT	CT	CT
rs6713102	CT	CT	CT
rs16849378	AG	AG	AG
rs7558972	AG	AG	AG
rs1242810	AA	GG	GG
rs17570449	AA	AA	AA
rs12498130	CT	CT	CC
rs1574477	AA	AG	AG

**Supplementary Table 2.** Contd.

rs2220099	GG	GT	GG
rs7695197	NN	GG	AG
rs12499851	AG	AG	AA
rs2949650	CC	CT	CC
rs2100684	TT	CC	TT
rs35424097	CC	CC	CT
rs27061	AA	GG	GG
rs12516484	AG	AA	GG
rs13177990	GG	GG	AG
rs4257797	GG	GT	GT
rs7751978	TT	CT	CC
rs2508037	GG	AG	GG
rs556807	TT	CC	CC
rs1924982	GG	AA	AA
rs549464	TT	CC	CC
rs532017	TT	CC	CC
rs16879241	CC	TT	TT
rs545472	AA	GG	GG
rs568369	GG	AA	AA
rs4235967	AG	AA	GG
rs5002649	CT	CC	TT
rs12174860	AG	GG	AA
rs12175881	CT	TT	CC
rs9344924	AG	AA	GG
rs9451209	AG	GG	AA
rs2057161	CT	TT	CC
rs1028484	CT	TT	NN
rs7757305	AG	GG	AA
rs609098	AG	AA	GG
rs6454814	AG	GG	AA
rs9389520	CC	TT	CT
rs372440	CC	CC	CT
rs2476467	CC	CT	CC
rs4710883	CT	CC	CT
rs13228455	CT	TT	CT
rs4717331	CT	CC	CT
rs17165352	CC	NN	CT
rs3807337	CT	CT	TT
rs1351499	CC	TT	TT
rs7832879	AA	GG	GG
rs6420159	GG	AA	AA
rs1982324	GG	AG	AG
rs7827503	GG	AG	AG
rs10957988	TT	CT	CT
rs601897	TT	CC	TT
rs10956197	TT	TT	TT
rs1045574	CC	CC	CC
rs1548299	GG	GG	GG
rs10814395	CC	CC	CC
rs7849638	AG	AA	GG
rs7045959	AG	NN	AA
rs1414229	CT	CC	CT
rs7039105	TT	TT	GT



**Supplementary Table 2.** Contd.

rs7020669	CT	CT	CT
rs7865106	AG	AG	AG
rs7865861	AG	AG	AG
rs16910853	AG	AA	AG
rs11011420	CT	CC	TT
rs595119	AA	AG	AG
rs10762667	GG	GG	GG
rs1080496	CT	CT	CT
rs10881957	CT	CT	CT
rs2497706	AG	AA	AG
rs11819833	AA	AG	AG
rs12786429	TT	GT	GT
rs10768140	AG	AA	AA
rs648409	GG	GG	AA
rs4296050	AG	AA	GG
rs735295	CC	TT	CT
rs11059295	CT	CT	CT
rs9599610	AG	AA	AG
rs7145482	AG	AG	AG
rs722200	TT	CT	CT
rs964729	CT	CC	CT
rs6574531	CT	TT	CT
rs4900384	GG	AG	AG
rs11622227	GG	AG	GG
rs2125657	AG	GG	GG
rs689011	TT	TT	TT
rs16964201	CC	CC	CC
rs12914971	AA	AA	GG
rs7166281	GT	GG	GG
rs12440184	AG	AG	AG
rs4888666	TT	CC	CT
rs9929618	GG	AG	AG
rs9934131	GG	AG	AG
rs2101252	GG	AG	AG
rs2250486	TT	TT	TT
rs16965880	AG	AA	AG
rs9944528	CT	CC	TT
rs11150946	GG	AA	AG
rs11665827	AA	AG	AA
rs11882543	CT	CT	CT
rs16991180	GG	GG	GG
rs16993168	GT	GT	GT
rs136575	GG	GG	AG

**Supplementary Table 3.** Population genetic information of candidate informative SNPs in CHX population.

RS ID	ObsHET	PredHET	M.A.	MAF	Call rate	HWpval	DP
rs12143100	0.382	0.331	T	0.209	97.3	0.1858	0.4939
rs868868	0.354	0.335	A	0.212	100	0.7954	0.5006
rs10737511	0.259	0.299	T	0.183	99.1	0.2491	0.4574
rs6427135	0.6	0.496	A	0.455	97.3	0.0485	0.5559
rs12024761	0.304	0.337	A	0.214	99.1	0.4094	0.5021

Supplementary Table 3. Contd.

rs4846593	0.593	0.499	G	0.482	100	0.078	0.5650
rs4671730	0.469	0.497	G	0.465	100	0.6402	0.6365
rs17618119	0.44	0.485	A	0.413	96.5	0.4179	0.6343
rs7558213	0.436	0.392	C	0.267	89.4	0.4123	0.5427
rs6746781	0.304	0.284	C	0.172	90.3	0.8016	0.4496
rs12185723	0.31	0.297	T	0.181	100	0.9629	0.4628
rs4850694	0.23	0.268	T	0.159	100	0.2335	0.4185
rs6713102	0.212	0.243	T	0.142	100	0.308	0.3878
rs16849378	0.186	0.21	G	0.119	100	0.3777	0.3444
rs7558972	0.23	0.268	A	0.159	100	0.2335	0.4185
rs1242810	0.527	0.493	G	0.442	99.1	0.631	0.6038
rs17570449	0.239	0.237	G	0.137	100	1	0.3900
rs12498130	0.42	0.486	T	0.415	99.1	0.1959	0.6411
rs1574477	0.487	0.465	A	0.367	100	0.8036	0.5961
rs2220099	0.389	0.39	G	0.265	100	1	0.5520
rs7695197	0.437	0.491	A	0.432	91.2	0.3344	0.6413
rs12499851	0.434	0.495	G	0.449	87.6	0.2857	0.6463
rs2949650	0.444	0.466	T	0.37	95.6	0.7369	0.6145
rs2100684	0.449	0.468	C	0.374	94.7	0.7802	0.6149
rs35424097	0.239	0.237	T	0.137	100	1	0.3900
rs27061	0.491	0.499	A	0.482	97.3	0.9728	0.6288
rs12516484	0.575	0.492	G	0.438	100	0.1191	0.5712
rs13177990	0.372	0.364	A	0.239	100	1	0.5282
rs4257797	0.3	0.28	T	0.168	97.3	0.7471	0.4448
rs7751978	0.518	0.474	C	0.386	97.3	0.4689	0.5896
rs2508037	0.478	0.44	A	0.327	100	0.5228	0.5758
rs556807	0.265	0.243	T	0.142	100	0.6214	0.4029
rs1924982	0.265	0.243	G	0.142	100	0.6214	0.4029
rs549464	0.257	0.237	T	0.137	100	0.6978	0.3945
rs532017	0.257	0.237	T	0.137	100	0.6978	0.3945
rs16879241	0.257	0.237	C	0.137	100	0.6978	0.3945
rs545472	0.257	0.237	A	0.137	100	0.6978	0.3945
rs568369	0.257	0.237	G	0.137	100	0.6978	0.3945
rs4235967	0.522	0.46	A	0.358	100	0.2329	0.5731
rs5002649	0.531	0.457	C	0.354	100	0.1411	0.5654
rs12174860	0.536	0.454	G	0.348	99.1	0.0944	0.5592
rs12175881	0.586	0.487	T	0.419	98.2	0.0564	0.5581
rs9344924	0.571	0.464	A	0.366	99.1	0.0255	0.5458
rs9451209	0.522	0.455	G	0.35	100	0.183	0.5679
rs2057161	0.562	0.462	T	0.362	99.1	0.0364	0.5496
rs1028484	0.562	0.466	T	0.371	99.1	0.0507	0.5544
rs7757305	0.558	0.465	G	0.367	100	0.0579	0.5560
rs609098	0.522	0.455	A	0.35	100	0.183	0.5679
rs6454814	0.554	0.464	G	0.366	99.1	0.0703	0.5580
rs9389520	0.416	0.465	C	0.367	100	0.3347	0.6212
rs372440	0.434	0.477	C	0.394	100	0.4073	0.6290
rs2476467	0.354	0.354	T	0.23	100	1	0.5203
rs4710883	0.505	0.482	T	0.405	98.2	0.8079	0.6048

Supplementary Table 3. Contd.

RS ID	ObsHET	PredHET	M.A.	MAF	Call rate	HWpval	DP
rs13228455	0.378	0.425	C	0.306	98.2	0.3253	0.5886
rs4717331	0.513	0.5	T	0.487	100	0.9566	0.6177
rs17165352	0.375	0.339	T	0.216	92	0.4652	0.5031
rs3807337	0.411	0.497	T	0.464	99.1	0.0875	0.6551
rs1351499	0.509	0.44	C	0.327	97.3	0.165	0.5607
rs7832879	0.491	0.433	A	0.317	99.1	0.2452	0.5623
rs6420159	0.522	0.465	G	0.367	100	0.2863	0.5780
rs1982324	0.42	0.439	A	0.326	99.1	0.7517	0.5949
rs7827503	0.425	0.44	A	0.327	100	0.8255	0.5946
rs10957988	0.505	0.489	C	0.427	96.5	0.9342	0.6119
rs601897	0.378	0.394	T	0.27	98.2	0.8	0.5581
rs10956197	0.248	0.256	C	0.15	100	0.9446	0.4113
rs1045574	0.372	0.39	T	0.265	100	0.7468	0.5545
rs1548299	0.469	0.41	A	0.288	100	0.202	0.5488
rs10814395	0.482	0.423	T	0.304	99.1	0.2205	0.5563
rs7849638	0.531	0.493	G	0.442	100	0.567	0.6015
rs7045959	0.523	0.495	A	0.45	98.2	0.7306	0.6081
rs1414229	0.486	0.403	T	0.28	96.5	0.0529	0.5346
rs7039105	0.425	0.382	G	0.257	100	0.3622	0.5357
rs7020669	0.545	0.482	T	0.406	99.1	0.2604	0.5821
rs7865106	0.527	0.486	A	0.415	99.1	0.5122	0.5961
rs7865861	0.54	0.487	G	0.42	100	0.3645	0.5900
rs16910853	0.398	0.377	G	0.252	100	0.7817	0.5376
rs11011420	0.496	0.493	T	0.442	100	1	0.6206
rs595119	0.473	0.5	G	0.487	99.1	0.6754	0.6370
rs10762667	0.381	0.377	A	0.252	100	1	0.5405
rs1080496	0.487	0.431	T	0.314	100	0.2636	0.5623
rs10881957	0.477	0.391	C	0.266	96.5	0.0343	0.5262
rs2497706	0.504	0.484	G	0.412	100	0.8433	0.6071
rs11819833	0.373	0.366	G	0.241	97.3	1	0.5301
rs12786429	0.381	0.368	G	0.243	100	0.9778	0.5316
rs10768140	0.411	0.447	G	0.336	94.7	0.5119	0.6041
rs648409	0.381	0.402	G	0.279	100	0.6906	0.5654
rs4296050	0.459	0.497	A	0.464	98.2	0.508	0.6402
rs735295	0.496	0.467	C	0.372	100	0.6914	0.5943
rs11059295	0.496	0.44	C	0.327	100	0.2824	0.5676
rs9599610	0.442	0.489	G	0.425	100	0.3886	0.6375
rs7145482	0.482	0.49	G	0.429	99.1	0.983	0.6232
rs722200	0.451	0.431	C	0.314	100	0.8194	0.5767
rs964729	0.389	0.446	T	0.336	100	0.2318	0.6083
rs6574531	0.389	0.446	C	0.336	100	0.2318	0.6083
rs4900384	0.446	0.436	A	0.321	99.1	1	0.5837
rs11622227	0.36	0.377	A	0.252	98.2	0.7733	0.5428
rs2125657	0.31	0.274	A	0.164	100	0.31	0.4397
rs689011	0.319	0.28	C	0.168	100	0.2634	0.4461
rs16964201	0.248	0.23	T	0.133	100	0.778	0.3859
rs12914971	0.207	0.253	G	0.149	98.2	0.1242	0.3959
rs7166281	0.425	0.414	G	0.292	100	0.9987	0.5676
rs12440184	0.536	0.492	G	0.438	99.1	0.4856	0.5974
rs4888666	0.409	0.491	C	0.432	97.3	0.1091	0.6488
rs9929618	0.372	0.373	A	0.248	100	1	0.5372
rs9934131	0.42	0.388	A	0.263	99.1	0.5756	0.5435

**Supplementary Table 3.** Contd.

<b>RS ID</b>	<b>ObsHET</b>	<b>PredHET</b>	<b>M.A.</b>	<b>MAF</b>	<b>Call rate</b>	<b>HWpval</b>	<b>DP</b>
rs2101252	0.425	0.39	A	0.265	100	0.5152	0.5441
rs2250486	0.369	0.399	C	0.275	98.2	0.5527	0.5633
rs16965880	0.522	0.474	G	0.385	100	0.3976	0.5867
rs9944528	0.363	0.402	T	0.279	100	0.3902	0.5675
rs11150946	0.451	0.455	G	0.35	100	1	0.6005
rs11665827	0.369	0.373	G	0.248	98.2	1	0.5375
rs11882543	0.376	0.439	C	0.326	96.5	0.1838	0.6031
rs16991180	0.259	0.251	A	0.147	99.1	1	0.4096
rs16993168	0.46	0.489	T	0.425	100	0.6335	0.6312
rs136575	0.422	0.399	A	0.275	96.5	0.7636	0.5538