

Streptomycin (STR)

Notes and Assumptions

¹ N = 1,355.

² 5-Fold Cross-Validation is used to find the best Meta-Parameters for the Random Forest and the Neural Network Classifiers.

³ Cross-Validation Criteria is ROC-AUC.

⁴ 2 Hidden Layers are included in the Neural Network Classifier.

⁵ Marginal Effects, ROC-AUC, Sensitivity and Specificity are computed 250 times (Boostraps).

⁶ 2/3 of the Sample is Randomly Selected to Train the Classifiers in each Bootstrap.

Marginal Effects, ROC-AUC, Sensitivity and Specifity are Computed on the 1/3 of the Sample left

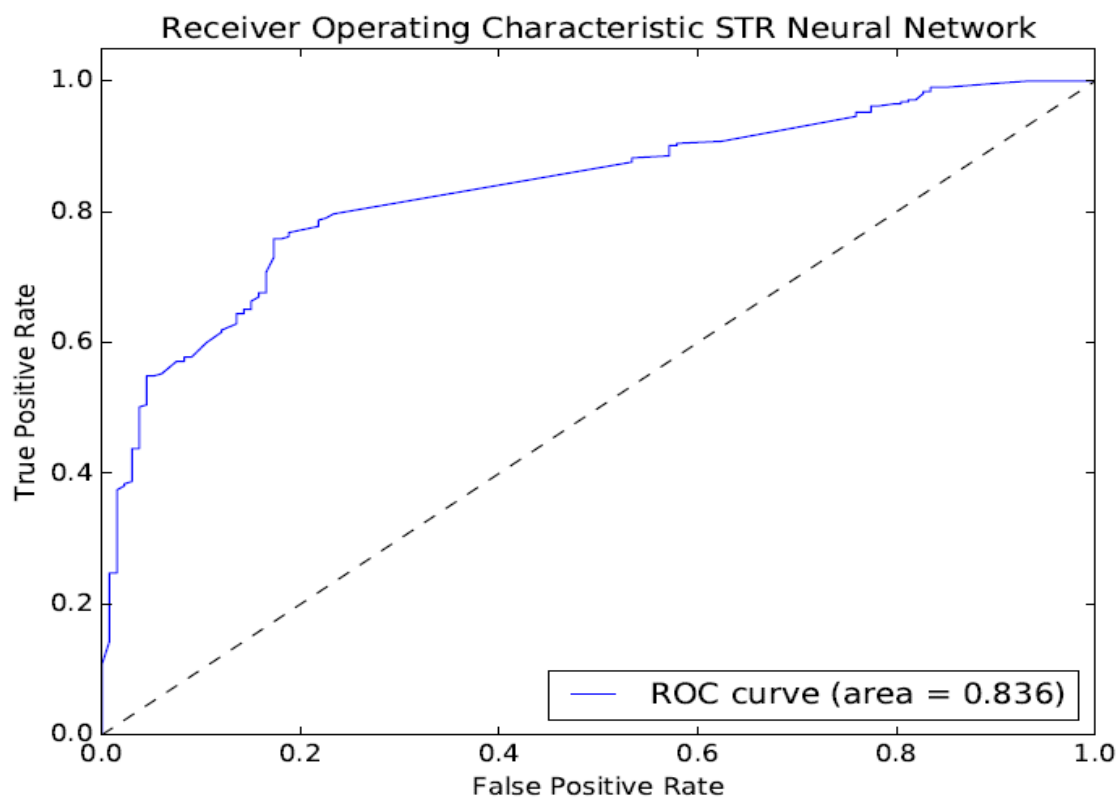
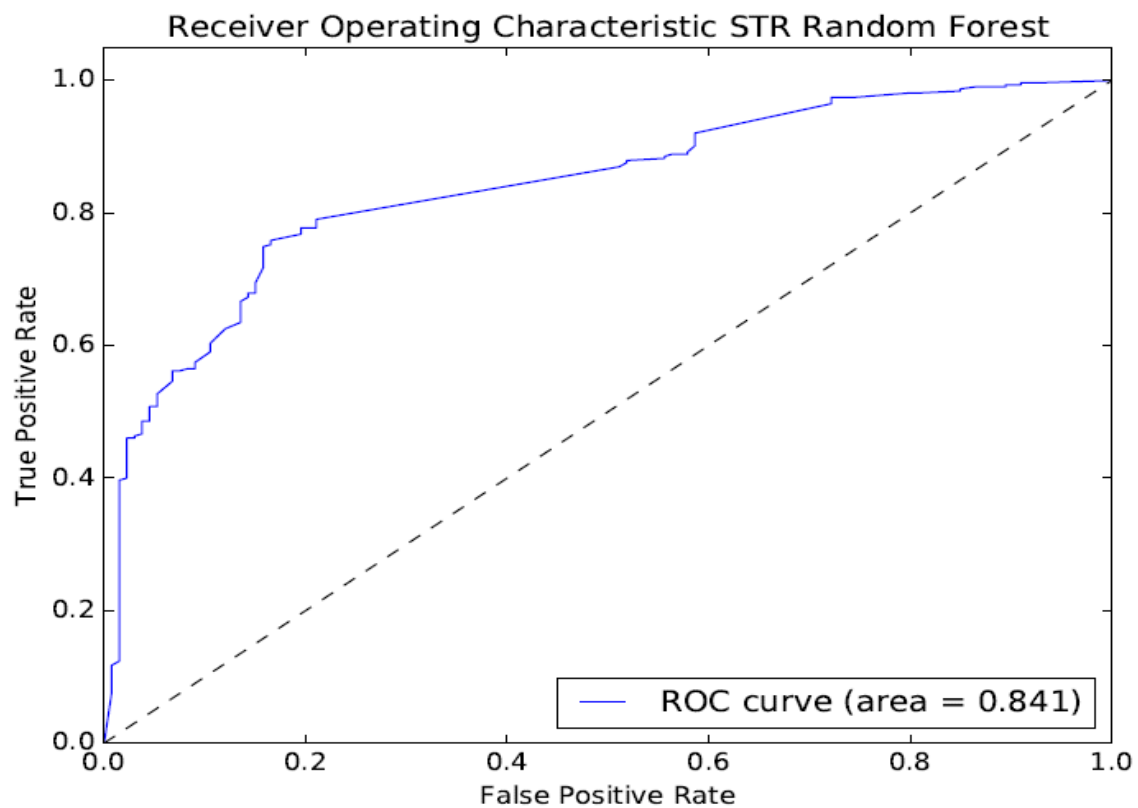
⁷ The threshold used to predict the drug resistance maximizes Sensitivity + Specificity.

⁸ Models (1) include 39 mutations selected in "*genetic determinants of drug resistance in Mycobacterium Tuberculosis and their diagnostic value*".

⁹ Models (2) include all potential 197 mutations.

Streptomycin (STR): Predictive Model Performance

	ROC-AUC	Sensitivity [1]	Specificity [2]	[1] + [2]	Optimal Threshold
Original Random Forest		0.540 (0.030)	0.940 (0.020)	1.480	
Random Forest (1)	0.824 (0.015)	0.722 (0.022)	0.865 (0.023)	1.587	0.548 (0.059)
Neural Network (1)	0.843 (0.014)	0.735 (0.021)	0.868 (0.023)	1.604	0.624 (0.060)
Random Forest (2)	0.823 (0.016)	0.760 (0.030)	0.795 (0.036)	1.555	0.573 (0.086)
Neural Network (2)	0.876 (0.016)	0.809 (0.029)	0.824 (0.034)	1.633	0.606 (0.061)



Streptomycin (STR)

Marginal Effects (Standard Errors in Parentheses)

Mutations	Random Forest		Marginal Effects (Standard Errors in Parentheses)		
	Variable Importance	Random Forest (1)	Neural Network (1)	Random Forest (2)	Neural Network (2)
SNP_CN_781687_A128G_K43R_rpsL	0.153	0.398 (0.016)	0.386 (0.014)	0.412 (0.017)	0.400 (0.014)
SNP_N_1472359_A514C_rrs	0.044	0.317 (0.015)	0.309 (0.012)	0.320 (0.017)	0.321 (0.013)
SNP_CN_781822_A263C_K88T_rpsL	0.033	0.239 (0.023)	0.253 (0.014)	0.238 (0.021)	0.259 (0.016)
SNP_N_1473246_A1401G_rrs	0.075	0.169 (0.023)	0.181 (0.014)	0.183 (0.034)	0.176 (0.016)
SNP_CN_781822_A263G_K88R_rpsL	0.027	0.263 (0.014)	0.295 (0.012)	0.269 (0.014)	0.306 (0.013)
SNP_CN_4407809_C394A_D132Y_gid	0.013	0.111 (0.031)	0.110 (0.032)	0.112 (0.031)	0.097 (0.036)
SNP_CN_4408156_A47C_L16R_gid	0.030	-0.029 (0.020)	-0.015 (0.013)	-0.053 (0.021)	-0.036 (0.013)
SNP_N_1472358_C513T_rrs	0.014	0.110 (0.039)	0.230 (0.017)	0.139 (0.031)	0.260 (0.015)
SNP_CN_4407927_T276G_E92D_gid	0.032	-0.261 (0.023)	-0.245 (0.017)	-0.237 (0.023)	-0.244 (0.018)
SNP_N_1472751_A906G_rrs	0.013	0.208 (0.015)	0.246 (0.011)	0.216 (0.015)	0.266 (0.012)
SNP_CN_4407934_A269C_L90R_gid	0.015	0.180 (0.040)	0.217 (0.017)	0.186 (0.039)	0.234 (0.018)
SNP_N_1472362_C517T_rrs	0.017	0.225 (0.026)	0.237 (0.015)	0.225 (0.028)	0.251 (0.015)
SNP_N_1472753_A908C_rrs	0.008	0.180 (0.022)	0.222 (0.015)	0.175 (0.030)	0.245 (0.015)
SNP_CN_781822_A263T_K88M_rpsL	0.008	0.161 (0.021)	0.227 (0.014)	0.161 (0.023)	0.257 (0.013)
SNP_CN_4407832_A371G_V124A_gid	0.006	0.066 (0.011)	0.193 (0.013)	0.080 (0.014)	0.228 (0.013)
SNP_CN_4408091_G112T_P38T_gid	0.004	0.132 (0.042)	0.190 (0.020)	0.154 (0.044)	0.222 (0.019)
SNP_I_1473637_A21G_inter_rrs_rrl	0.009	0.143 (0.025)	0.207 (0.019)	0.102 (0.024)	0.213 (0.018)
SNP_CN_4408094_C109T_G37R_gid	0.022	0.118 (0.033)	0.181 (0.019)	0.129 (0.033)	0.198 (0.019)
DEL_CF_4407640_d563A_188_gid	0.008	0.161 (0.030)	0.202 (0.017)	0.162 (0.032)	0.232 (0.016)
SNP_N_1473109_T1264G_rrs	0.007	0.179 (0.030)	0.204 (0.016)	0.153 (0.033)	0.220 (0.016)
SNP_CN_4407967_A236C_L79W_gid	0.017	0.085 (0.046)	0.170 (0.019)	0.101 (0.040)	0.184 (0.019)
SNP_CN_4407967_A236G_L79S_gid	0.012	0.069 (0.055)	0.108 (0.023)	0.037 (0.044)	0.104 (0.025)
SNP_CN_4407768_C435A_L145F_gid	0.014	-0.269 (0.063)	-0.208 (0.033)	-0.235 (0.061)	-0.145 (0.033)
SNP_CN_4407995_T208G_S70R_gid	0.008	0.103 (0.049)	0.173 (0.025)	0.099 (0.050)	0.202 (0.024)
DEL_CF_4407852_d351C_117_gid	0.008	0.102 (0.044)	0.140 (0.023)	0.132 (0.040)	0.175 (0.023)
SNP_N_1473167_T1322G_rrs	0.004	0.148 (0.031)	0.189 (0.018)	0.118 (0.036)	0.209 (0.019)
DEL_CF_4408023_d180T_60_gid	0.016	0.093 (0.026)	0.150 (0.021)	0.100 (0.026)	0.182 (0.019)
DEL_CF_4408116_d87G_29_gid	0.004	0.091 (0.042)	0.155 (0.027)	0.090 (0.041)	0.193 (0.023)
SNP_CN_4408060_T143G_H48P_gid	0.002	0.103 (0.046)	0.144 (0.024)	0.100 (0.045)	0.181 (0.026)
SNP_CN_4408138_T65C_Y22C_gid	0.003	0.090 (0.038)	0.150 (0.026)	0.084 (0.036)	0.194 (0.024)
SNP_CN_4408064_G139A_R47W_gid	0.003	0.143 (0.033)	0.182 (0.017)	0.141 (0.034)	0.216 (0.018)
SNP_CN_4408148_C55G_A19P_gid	0.002	0.104 (0.041)	0.145 (0.023)	0.101 (0.040)	0.183 (0.020)
SNP_CN_4407947_G256A_L86F_gid	0.000	0.093 (0.036)	0.155 (0.021)	0.087 (0.034)	0.198 (0.022)
SNP_CN_4407916_C287A_R96L_gid	0.002	0.099 (0.057)	0.140 (0.027)	0.106 (0.055)	0.165 (0.028)
SNP_CN_4407748_A455G_L152S_gid	0.006	0.117 (0.042)	0.174 (0.022)	0.115 (0.042)	0.209 (0.020)
SNP_N_1473343_G1498T_rrs	0.031	-0.099 (0.032)	-0.049 (0.019)	-0.129 (0.034)	-0.044 (0.018)
SNP_N_1472337_C492T_rrs	0.007	-0.064 (0.037)	-0.038 (0.025)	-0.080 (0.043)	0.002 (0.025)
SNP_CN_4407985_C218G_G73A_gid	0.014	0.156 (0.041)	0.200 (0.020)	0.163 (0.041)	0.221 (0.019)
SNP_CN_4408102_C101T_G34E_gid	0.002	0.111 (0.050)	0.150 (0.023)	0.105 (0.048)	0.193 (0.022)
SNP_CN_4408054_A149C_L50R_gid	0.022			0.065 (0.028)	0.153 (0.022)
SNP_CN_4407790_G413A_A138V_gid	0.014			0.031 (0.068)	0.046 (0.043)
INS_P_781407_i153C_promoter_rpsL	0.014			-0.182 (0.048)	-0.155 (0.044)
SNP_CN_4408125_C78G_L26F_gid	0.010			-0.118 (0.062)	-0.005 (0.034)
SNP_CN_4408003_T200C_D67G_gid	0.010			0.043 (0.055)	0.054 (0.025)
SNP_P_781395_T165C_promoter_rpsL	0.010			0.175 (0.082)	0.126 (0.011)
SNP_CN_4407973_A230C_V77G_gid	0.008			0.096 (0.044)	0.098 (0.026)
SNP_CN_4407986_C217T_G73R_gid	0.007			0.063 (0.036)	0.048 (0.033)
SNP_CN_4407993_G210T_S70R_gid	0.007			0.055 (0.024)	0.195 (0.024)
DEL_CF_4408101_d102C_34_gid	0.007			0.011 (0.038)	0.052 (0.026)
SNP_CN_4407946_A257C_L86R_gid	0.006			0.055 (0.026)	0.194 (0.025)
SNP_CN_4408061_G142A_H48Y_gid	0.006			0.090 (0.052)	0.119 (0.027)
SNP_CN_4408072_A131C_L44R_gid	0.006			0.088 (0.032)	0.198 (0.019)
SNP_CN_4407970_G233A_P78L_gid	0.005			0.023 (0.057)	0.096 (0.038)
DEL_CF_4408067_d136C_46_gid	0.005			-0.033 (0.034)	-0.107 (0.052)
SNP_CN_4408084_T119G_E40A_gid	0.005			-0.146 (0.072)	-0.192 (0.040)
SNP_CN_4407797_A406G_S136P_gid	0.005			-0.159 (0.063)	-0.200 (0.034)
SNP_CN_4407956_G247C_R83G_gid	0.005			-0.002 (0.063)	0.098 (0.035)
SNP_CN_4407946_A257G_L86P_gid	0.005			-0.069 (0.079)	-0.023 (0.050)
SNP_N_1472750_C905A_rrs	0.005			0.088 (0.057)	0.163 (0.030)
SNP_CN_4408064_G139C_R47G_gid	0.004			0.112 (0.040)	0.187 (0.022)
SNP_N_1473160_G1315A_rrs	0.004			0.104 (0.040)	0.183 (0.025)
SNP_CN_4407691_A512C_V171G_gid	0.004			0.036 (0.067)	0.088 (0.035)
SNP_CN_781821_A262C_K88Q_rpsL	0.004			0.034 (0.025)	0.151 (0.033)
SNP_CN_4407980_G223A_P75S_gid	0.004			-0.021 (0.075)	0.041 (0.037)
SNP_CN_4407758_T445G_S149R_gid	0.004			-0.105 (0.062)	-0.057 (0.041)
SNP_CN_4407694_T509C_E170G_gid	0.004			-0.109 (0.055)	-0.172 (0.036)
SNP_CZ_4408085_C118A_E40._gid	0.004			0.032 (0.022)	0.150 (0.036)

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Mutations	Random Forest		Marginal Effects (Standard Errors in Parentheses)		
	Variable Importance	Random Forest (1)	Neural Network (1)	Random Forest (2)	Neural Network (2)
SNP_CN_4407857_G346C_R116G_gid	0.004			0.030 (0.067)	0.076 (0.041)
SNP_CN_4407863_T340A_I114F_gid	0.003			0.057 (0.035)	0.151 (0.035)
SNP_CN_4408201_A2C_M1R_gid	0.003			0.080 (0.043)	0.182 (0.020)
SNP_N_1472084_C239A_rrs	0.003			0.019 (0.034)	0.005 (0.040)
SNP_I_1473632_G26A_inter_rrs_rrl	0.003			-0.086 (0.041)	-0.076 (0.023)
SNP_CN_4407856_C347G_R116P_gid	0.003			-0.072 (0.050)	-0.233 (0.043)
SNP_CN_4407955_C248A_R83L_gid	0.003			-0.043 (0.030)	-0.198 (0.048)
SNP_CN_4407613_C590G_R197P_gid	0.003			0.052 (0.035)	0.150 (0.032)
SNP_CN_4407935_G268T_L90I_gid	0.003			0.028 (0.009)	0.027 (0.008)
SNP_CN_4408141_C62G_R21P_gid	0.003			0.051 (0.035)	0.150 (0.032)
DEL_CF_4407846_d357G_119_gid	0.003			0.072 (0.043)	0.160 (0.025)
SNP_N_1473247_C1402T_rrs	0.003			0.027 (0.015)	0.166 (0.029)
SNP_CZ_4407731_G472A_R158_gid	0.003			-0.054 (0.067)	-0.044 (0.048)
SNP_N_1472723_G878A_rrs	0.003			0.101 (0.043)	0.183 (0.024)
INS_CF_4407833_i370G_124_gid	0.002			0.062 (0.044)	0.134 (0.036)
SNP_N_1471945_G100A_rrs	0.002			-0.082 (0.063)	-0.127 (0.044)
INS_NF_1472488_i642T_rrs	0.002			-0.155 (0.066)	-0.201 (0.031)
DEL_CF_4408088_d115G_39_gid	0.002			-0.020 (0.037)	-0.108 (0.047)
SNP_CN_4407724_A479G_L160P_gid	0.002			0.012 (0.064)	0.029 (0.051)
DEL_CF_4407624_d579CG_193_gid	0.002			0.063 (0.043)	0.135 (0.037)
SNP_N_1472425_T580C_rrs	0.002			-0.090 (0.049)	-0.121 (0.039)
SNP_I_1473396_A262G_inter_rrs_rrl	0.002			-0.012 (0.044)	0.009 (0.040)
DEL_CF_4408161_d42C_14_gid	0.002			-0.045 (0.032)	-0.065 (0.027)
SNP_CN_4407989_C214T_A72T_gid	0.002			0.064 (0.043)	0.141 (0.032)
SNP_CN_4407794_G409A_R137W_gid	0.002			0.044 (0.067)	0.094 (0.042)
SNP_CN_4407853_C350T_G117E_gid	0.002			0.021 (0.072)	0.099 (0.041)
SNP_CN_4407790_G413T_A138E_gid	0.002			-0.009 (0.071)	0.012 (0.048)
SNP_CN_4407854_C349G_G117R_gid	0.002			-0.089 (0.081)	-0.040 (0.051)
SNP_CN_4407847_G356T_A119D_gid	0.002			-0.016 (0.074)	0.016 (0.048)
SNP_N_1473062_T1217C_rrs	0.002			-0.081 (0.062)	-0.129 (0.044)
SNP_CN_4408124_C79G_A27P_gid	0.002			-0.060 (0.060)	-0.078 (0.042)
DEL_CF_4407851_d352G_118_gid	0.002			0.097 (0.037)	0.177 (0.023)
SNP_N_1473050_A1205G_rrs	0.002			-0.049 (0.036)	-0.048 (0.025)
SNP_CN_4407932_G271C_L91V_gid	0.002			-0.071 (0.059)	-0.050 (0.048)
SNP_CN_4407940_A263G_V88A_gid	0.002			-0.058 (0.047)	-0.112 (0.040)
SNP_CN_4408159_C44G_R15P_gid	0.002			-0.009 (0.058)	0.034 (0.056)
SNP_P_781421_C139A_promoter_rpsL	0.002			0.023 (0.029)	0.035 (0.029)
SNP_P_4408315_G19A_promoter_gid	0.001			0.016 (0.010)	0.147 (0.033)
SNP_P_4408213_G121A_promoter_gid	0.001			-0.013 (0.028)	-0.085 (0.039)
SNP_CN_4407880_A323G_L108P_gid	0.001			0.006 (0.039)	-0.003 (0.040)
SNP_N_1472750_C905G_rrs	0.001			0.057 (0.050)	0.142 (0.034)
SNP_N_1472644_C799T_rrs	0.001			-0.042 (0.035)	-0.081 (0.035)
SNP_N_1472781_C936T_rrs	0.001			-0.016 (0.018)	-0.093 (0.043)
SNP_CN_4407590_C613T_A205T_gid	0.001			0.020 (0.011)	0.047 (0.019)
SNP_CN_4407905_A298C_F100V_gid	0.001			0.020 (0.008)	0.041 (0.013)
SNP_CN_4408138_T65G_Y22S_gid	0.001			0.015 (0.008)	0.113 (0.027)
INS_CI_4407803_i400CCG_134_gid	0.001			-0.054 (0.027)	-0.189 (0.038)
SNP_N_1471861_T16C_rrs	0.001			0.012 (0.009)	0.035 (0.019)
SNP_CN_4407952_G251A_P84L_gid	0.001			0.058 (0.035)	0.170 (0.027)
SNP_CN_4407802_G401C_A134G_gid	0.000			-0.004 (0.029)	0.113 (0.039)
SNP_N_1473329_G1484T_rrs	0.000			0.017 (0.007)	0.070 (0.014)
SNP_CN_4407620_A583G_Y195H_gid	0.000			0.012 (0.005)	0.056 (0.016)
SNP_CN_4407793_C410G_R137P_gid	0.000			0.041 (0.026)	0.162 (0.031)
SNP_P_781435_G125C_promoter_rpsL	0.000			-0.041 (0.054)	-0.096 (0.044)
SNP_N_1472214_C369G_rrs	0.000			0.006 (0.005)	0.029 (0.009)
INS_CF_4408101_i102C_34_gid	0.000			-0.033 (0.034)	-0.114 (0.062)
SNP_CN_4407631_C572A_C191F_gid	0.000			0.008 (0.004)	0.051 (0.017)
SNP_CN_4407730_C473A_R158L_gid	0.000			0.007 (0.005)	0.038 (0.015)
SNP_N_1472826_G981C_rrs	0.000			0.002 (0.004)	0.023 (0.010)
SNP_N_1472225_C380A_rrs	0.000			0.006 (0.005)	0.029 (0.009)
SNP_N_1472754_G909T_rrs	0.000			0.003 (0.004)	0.023 (0.010)
SNP_N_1472742_C897T_rrs	0.000			0.002 (0.004)	0.023 (0.010)
SNP_N_1472812_A967C_rrs	0.000			0.002 (0.004)	0.023 (0.010)
SNP_N_1473342_G1497T_rrs	0.000			0.016 (0.009)	0.122 (0.026)
SNP_N_1472824_T979A_rrs	0.000			0.003 (0.004)	0.023 (0.010)
SNP_N_1472803_T958A_rrs	0.000			0.002 (0.004)	0.023 (0.010)
SNP_N_1472172_T327C_rrs	0.000			0.003 (0.004)	0.023 (0.010)

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SNP_N_1472887_G1042C_rrs	0.000			0.002 (0.004)	0.023 (0.010)
SNP_N_1472557_G712A_rrs	0.000			0.008 (0.005)	0.060 (0.026)
SNP_N_1472153_G308A_rrs	0.000			0.002 (0.004)	0.023 (0.010)
INS_I_1471827_i19AGA_inter_murA_rrs	0.000			0.013 (0.007)	0.036 (0.016)
SNP_N_1472549_G704A_rrs	0.000			-0.001 (0.005)	-0.035 (0.018)
SNP_N_1472147_G302A_rrs	0.000			0.003 (0.004)	0.023 (0.010)
SNP_N_1472530_G685A_rrs	0.000			0.000 (0.005)	-0.035 (0.018)
SNP_N_1472138_C293T_rrs	0.000			-0.001 (0.006)	0.022 (0.010)
SNP_N_1472537_C692T_rrs	0.000			-0.001 (0.005)	-0.035 (0.018)
SNP_N_1472534_G689T_rrs	0.000			0.005 (0.003)	0.056 (0.026)
SNP_N_1473247_C1402A_rrs	0.000			0.004 (0.003)	0.021 (0.009)
SNP_N_1472793_A948T_rrs	0.000			0.002 (0.004)	0.023 (0.010)
SNP_N_1471967_G122A_rrs	0.000			0.004 (0.003)	0.021 (0.009)
SNP_N_1471970_G125A_rrs	0.000			0.004 (0.003)	0.021 (0.009)
SNP_N_1472338_A493G_rrs	0.000			0.003 (0.002)	0.016 (0.010)
SNP_N_1472135_C290T_rrs	0.000			-0.004 (0.007)	-0.037 (0.018)
SNP_N_1472344_C499T_rrs	0.000			0.005 (0.003)	0.021 (0.009)
SNP_N_1473292_G1447T_rrs	0.000			0.004 (0.003)	0.021 (0.009)
INS_NF_1472313_i467A_rrs	0.000			0.003 (0.002)	0.016 (0.010)
SNP_N_1471972_T127C_rrs	0.000			0.004 (0.003)	0.021 (0.009)
SNP_N_1473283_T1438C_rrs	0.000			0.003 (0.002)	0.016 (0.010)
SNP_N_1472525_C680A_rrs	0.000			-0.007 (0.009)	-0.039 (0.019)
SNP_N_1472828_T983C_rrs	0.000			0.003 (0.002)	0.016 (0.010)
SNP_N_1471980_G135C_rrs	0.000			0.003 (0.002)	0.016 (0.010)
DEL_NF_1473286_d1440C_rrs	0.000			0.003 (0.002)	0.016 (0.010)
SNP_N_1472328_G483C_rrs	0.000			0.003 (0.003)	0.016 (0.010)
SNP_N_1472895_C1050T_rrs	0.000			0.003 (0.002)	0.016 (0.010)
INS_NI_1472881_i1035ACCTGCACA_rrs	0.000			0.002 (0.001)	0.057 (0.022)
SNP_N_1472405_C560T_rrs	0.000			0.040 (0.025)	0.127 (0.029)
SNP_N_1472598_A753T_rrs	0.000			0.003 (0.003)	0.054 (0.026)
SNP_N_1473276_A1431G_rrs	0.000			0.001 (0.001)	0.005 (0.004)
INS_NF_1472987_i1141A_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1473294_A1449G_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1473259_C1414T_rrs	0.000			0.001 (0.001)	0.005 (0.004)
INS_NI_1472130_i284TCC_rrs	0.000			0.001 (0.001)	0.056 (0.022)
SNP_N_1473290_C1445T_rrs	0.000			0.001 (0.001)	0.005 (0.004)
DEL_NF_1472990_d1144A_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1472675_T830C_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1472973_A1128T_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1472996_T1151C_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1472673_T828G_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_N_1472770_C925T_rrs	0.000			0.000 (0.000)	0.002 (0.004)
SNP_N_1472677_C832A_rrs	0.000			0.001 (0.001)	0.005 (0.004)
SNP_CN_4407802_G401T_A134E_gid	0.000			0.084 (0.044)	0.190 (0.024)
SNP_CN_4407793_C410A_R137L_gid	0.000			0.053 (0.035)	0.152 (0.033)
SNP_CN_4408069_C134G_W45S_gid	0.000			-0.115 (0.055)	-0.177 (0.035)
SNP_N_1473104_C1259T_rrs	0.000			0.000 (0.000)	0.000 (0.000)
SNP_N_1472251_G406A_rrs	0.000			-0.017 (0.012)	-0.096 (0.030)
SNP_N_1473053_T1208G_rrs	0.000			0.060 (0.045)	0.133 (0.035)
SNP_CN_4408063_C140A_R47L_gid	0.000			0.006 (0.005)	0.011 (0.008)
SNP_N_1472660_T815C_rrs	0.000			0.000 (0.000)	0.000 (0.000)
SNP_N_1472259_C414A_rrs	0.000			-0.017 (0.012)	-0.096 (0.030)
SNP_N_1473252_T1407C_rrs	0.000			0.003 (0.002)	0.024 (0.015)
SNP_N_1473136_A1291T_rrs	0.000			0.002 (0.001)	0.008 (0.006)
SNP_CN_4407995_T208C_S70G_gid	0.000			0.033 (0.025)	0.151 (0.035)
SNP_N_1472325_G480C_rrs	0.000			0.000 (0.000)	0.000 (0.000)
SNP_CN_4407756_G447C_S149R_gid	0.000			0.057 (0.045)	0.133 (0.038)
SNP_N_1471868_T23G_rrs	0.000			0.088 (0.041)	0.177 (0.027)
SNP_CN_4407880_A323C_L108R_gid	0.000			0.057 (0.045)	0.128 (0.042)
SNP_CZ_4408069_C134T_W45._gid	0.000			0.060 (0.045)	0.137 (0.034)
DEL_CF_4408162_d41G_14_gid	0.000			0.099 (0.046)	0.183 (0.027)
SNP_N_1472655_G810T_rrs	0.000			0.000 (0.000)	0.000 (0.000)
SNP_CN_4407704_C499A_A167S_gid	0.000			-0.040 (0.030)	-0.122 (0.039)