

1.2_o_50% cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRIKRNEQSLQEIWYD
2a_chr8_59_58^.....R.....
2a_chr6_60_59R.....
2a_chr7_61_60X.....
2a_chr9_62_61K.....
2a_chr10_63_62
2a_chr4_64_63
2a_chr2_65_64
2a_chr5_66_65K.....
2a_chr13_67_66L.....
2a_chr17_68_67R.....
2a_chr14_69_68A.....
2a_chr12_70_69T.....
2a_chr8_71_70
2a_chr12_72_71D.....
2a_chr6_73_72D.....
2a_chrX_74_73K.....Q.....K.....Q.....R.....K.....
2a_chr7_75_74G.....
2a_chr2_76_75C.R.....N.....G.....K.....Q.....Q.....K.....
2a_chr1_77_76G.....G.....
2a_chr4_78_77K.....Q.....K.....QGK.....
2a_chr20_79_78D.W.....K.....V.....K.....
2a_chr9_80_79X.....
2a_chr2_81_80M.....
2a_chr4_82_81Y.....G.....
2a_chr4_83_82Q.....
2a_chr5_84_83K.....
2a_chr17_85_84M.....H.....
2a_chr4_86_85
2a_chr5_87_86
2a_chr14_88_87
2a_chr14_89_88G.....
2a_chr12_90_89
2a_chr14_91_90S.....E.....I.....F.....
2a_chr11_92_91
2a_chr12_93_92T.....T.....
2a_chr3_94_93I.....V.....
2a_chr10_95_94 N.....I.....
2a_chr8_96_95
2a_chrX_97_96
2a_chr9_98_97D.....E.....P.....
2a_chr4_99_98
2a_chr6_100_99*.....R..L.K.....
2a_chr6_101_100
2a_chr5_102_101T.....K.....
2a_chr3_103_102
2a_chr2_104_103
2a_chr5_105_104
2a_chrX_106_105
2a_chr4_107_106*.....K.....
2a_chr3_108_107
2a_chr11_109_108C.....D.....V.....I.....
2a_chr1_110_109
2a_chr3_111_110
2a_chr4_112_111
2a_chr10_113_112K.....L.....R.....Q.R.....
2a_chr19_114_113E.....Q.....Q.GX.....K.....C.....
2a_chrY_115_114A.....P.....N.....S.....R.....
2a_chr6_116_115K.....
2a_chr12_117_116E.....A.....D.....S.....A.....Q.....G.....E.....
2a_chr11_118_117K.....*.....A.....X.....
2a_chrX_119_118*.....A.....Q.....
2a_chr11_120_119S.....I.....P.D.....X.....
2a_chr10_121_120X.....Q.....L.I.....G.....*.....R.SI.....
2a_chrY_122_121N.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELKTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRN EQSLQE IWDY
2a_chr17_123_122^.....^.....^.....D.....^.....I.....^.....M.....^.....V.....^.....R.....^.....T.....^.....E.....
2a_chr8_124_123F.....V.....P.....*.....
2a_chr8_125_124E.....N.....KS.....K.....W.....A.....S.....D.....I.....D.....HS.....E.....S.....N.....D.....
2a_chr8_126_125I.....V.....G.....N.....
2a_chr8_127_126P.....X.....
2a_chrX_128_127D.....N.....*.....
2a_chr11_129_128K.....M.....G.....NF.....A.....S.....
2a_chr11_130_129K.....Q.....M.....G.....N.....A.....S.....K.....
2a_chr11_131_130 * .K .KEVR.H .K.L .K.DKWL .A .S .D .D .T .S .F .E ..
2a_chr7_132_131K.....V.K.....P.....K.....I.....
2a_chr8_133_132 ..Q.....KN.....W.....D.....S.....R.....
2a_chr7_134_133S.....L.....
2a_chr6_135_134K.....K.....
2a_chr2_136_135X.....I.....
2a_chrY_137_136Q.....D.....I.....S.....
2a_chr7_138_137S.....Y.....QT.....K.....
2a_chr8_139_138Q.....K.....
2a_chr6_140_139E.....
2a_chr11_141_140A.....G.....
2a_chr5_142_141A.....
2a_chrY_143_142V.....G.....
2a_chrY_144_143V.....G.....
2a_chrY_145_144V.....G.....
2a_chrY_146_145V.....G.....
2a_chr11_147_146
2a_chr6_148_147*.....M.....K.....T.....
2a_chr6_149_148ET.....T.D.....A.T.....D.....
2a_chr2_150_149R.....D.....*.....
2a_chr6_151_150V.....KM.I.....Q.K.....R.....
2a_chr3_152_151L.....I.....L.....
2a_chr5_153_152S.....F.....E.....
2a_chr2_154_153
2a_chr19_155_154S.....P.....
2a_chr5_156_155N.....I.....G.....
2a_chr5_157_156
2a_chr2_158_157E.....G.....G.AN.X.....
2a_chr20_159_158D.....P.....S.....
2a_chr11_160_159X.....H.R.....T.V.....Q.....
2a_chr1_161_160
2a_chr7_162_161K.....R.....I.....
2a_chr1_163_162K.....X.....
2a_chr1_164_163X.....D.....R.....P.....
2a_chr10_165_164
2a_chr2_166_165V.....N.....K.....E.....
2a_chr2_167_166T.....
2a_chr8_168_167X.....
2a_chr6_169_168
2a_chr5_170_169V.....D.....
2a_chr5_171_170S.....S.....E.....*.....
2a_chr11_172_171S.....*.....R.....KK.....K.....
2a_chrX_173_172
2a_chr7_174_173A.....R.....
2a_chr1_175_174G.....*.....X.....S.E.....
2a_chr13_176_175G.....T.....
2a_chr3_177_176
2a_chr7_178_177
2a_chr3_179_178
2a_chr6_180_179N.S.....K.M.....N.I.....
2a_chr8_181_180N.....I.....
2a_chr3_182_181
2a_chr6_183_182
2a_chr7_184_183Q.....D.....
2a_chr11_185_184A.....S.....L.....A.....
2a_chrY_186_185G.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRNEQSLQEIWYD

2a_chrY_187_186^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....A.....

2a_chr12_188_187 X.....K.....V.....

2a_chrX_189_188 C.....N.....G.S.....Y.....K.....H.....

2a_chr8_190_189

2a_chr5_191_190D.M.....

2a_chrX_192_191R.....

2a_chr6_193_192

2a_chr2_194_193V.....N.....R.....

2a_chr18_195_194H.....*.....A.....

2a_chr5_196_195S.GN.....*

2a_chr4_197_196S.S.....T.....

2a_chr10_198_197Q.....K.....

2a_chrX_199_198 C.....D.....S.....T.Y.....

2a_chr8_200_199

2a_chr5_201_200

2a_chr9_202_201 N.....Y.....I.R.....

2a_chr4_203_202R.....G.I.....N.....

2a_chr1_204_203V.....K.....

2a_chr4_205_204S.....

2a_chr4_206_205X.....

2a_chr1_207_206D.....*

2a_chr5_208_207

2a_chr1_209_208G.....D.....Y.....R.....Q.....*

2a_chr1_210_209D.....M.Y.....R.....Q.....

2a_chr4_211_210D.....Q.....S.....T.T.....

2a_chr6_212_211

2a_chr18_213_212

2a_chr5_214_213

2a_chr16_215_214

2a_chr4_216_215V.....X.....Q.....S.....

2a_chr1_217_216

2a_chr18_218_217

2a_chr4_219_218

2a_chr11_220_219

2a_chr10_221_220

2a_chr3_222_221

2a_chr2_223_222E.....V.....K.....T.....X.G.....

2a_chr1_224_223

2a_chr10_225_224

2a_chr1_226_225

2a_chr11_227_226

2a_chr11_228_227

2a_chr12_229_228 S.....H.....K.....R.....V.....K.....N.....

2a_chrX_230_229

2a_chr4_231_230

2a_chrX_232_231

2a_chr18_233_232

2a_chrX_234_233

2a_chr1_235_234

2a_chr12_236_235

2a_chr4_237_236

2a_chr5_238_237

2a_chr8_239_238

2a_chr5_240_239

2a_chr4_241_240

2a_chr18_242_241

2a_chr8_243_242

2a_chr3_244_243

2a_chr4_245_244

2a_chr6_246_245

2a_chr7_247_246

2a_chr5_248_247

2a_chr2_249_248

2a_chr2_250_249

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRNEQSLQEWDY
 2a_chr6_251_250^.....X.....X.....^.....^.....^.....^.....^.....I.....
 2a_chr1_252_251
 2a_chr3_253_252K..NT.....H.....
 2a_chr1_254_253I.....
 2a_chr15_255_254
 2a_chr2_256_255N..V.....T.....
 2a_chr2_257_256I.....T.....
 2a_chr22_258_257
 2a_chr7_259_258
 2a_chr20_260_259*.....D.....K.....
 2a_chr1_261_260K.....
 2a_chr5_262_261X..K.....X.....
 2a_chr2_263_262I.....*.....
 2a_chr10_264_263FV.....I.....
 2a_chr15_265_264
 2a_chr6_266_265Y.....I.....
 2a_chr4_267_266
 2a_chr13_268_267I.....
 2a_chr4_269_268G.....G.....
 2a_chr12_270_269I.....T.....
 2a_chr4_271_270G.....
 2a_chr14_272_271Y.....Q.....Q.*.....
 2a_chr8_273_272Y..S.I.....N.....
 2a_chr4_274_273
 2a_chr12_275_274V.....D.....
 2a_chr13_276_275
 2a_chr9_277_276Q.....G.I.....
 2a_chr14_278_277P.....Q.....
 2a_chr10_279_278V.....
 2a_chr2_280_279
 2a_chr11_281_280G.....N.....
 2a_chr3_282_281N.....
 2a_chr5_283_282K.K.....
 2a_chr14_284_283M.....R..K.S.....
 2a_chr6_285_284M.....S.....E.....
 2a_chr4_286_285V.....S..S.....
 2a_chr5_287_286
 2a_chr3_288_287X.....R.....
 2a_chr6_289_288A.....T.....
 2a_chr3_290_289
 2a_chr9_291_290K.....V.....
 2a_chr16_292_291
 2a_chr9_293_292
 2a_chr18_294_293
 2a_chr1_295_294
 2a_chr2_296_295L.....
 2a_chr5_297_296V.....
 2a_chr15_298_297G.....R.....
 2a_chr15_299_298G.....R.....
 2a_chr8_300_299D.....K.....
 2a_chr4_301_300
 2a_chr13_302_301T.....G.....
 2a_chr13_303_302Y.....
 2a_chrX_304_303R.....
 2a_chr4_305_304
 2a_chrX_306_305Q.....G.....
 2a_chr4_307_306
 2a_chr12_308_307SX.....T.....
 2a_chr7_309_308
 2a_chr16_310_309E.....
 2a_chr11_311_310
 2a_chr18_312_311S.....K.....
 2a_chr8_313_312
 2a_chr2_314_313I.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELKTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRNSEQSLQEIWYD
2a_chr5_315_314^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....
2a_chr7_316_315X.....
2a_chr10_317_316
2a_chr2_318_317K.....
2a_chr9_319_318R.....Y.....
2a_chr3_320_319S.....
2a_chr5_321_320
2a_chr6_322_321K.....T.....
2a_chr13_323_322
2a_chr8_324_323
2a_chrX_325_324
2a_chr18_326_325A.....
2a_chr8_327_326S.....
2a_chr18_328_327I.....
2a_chr9_329_328I.....
2a_chr15_330_329AV.....N.....
2a_chr8_331_330E.....
2a_chr8_332_331
2a_chr20_333_332A.....W.....A.....
2a_chr11_334_333Y.....
2a_chr11_335_334G.....N.....S.....*.....
2a_chr5_336_335T.....
2a_chr18_337_336I.....
2a_chr8_338_337K.....
2a_chrX_339_338Y.....
2a_chr7_340_339V.....V.....
2a_chrX_341_340E.....Q.....
2a_chr6_342_341
2a_chr2_343_342R.....
2a_chr15_344_343T.....
2a_chr10_345_344
2a_chr15_346_345L.....I.....N.....Q.....R.....G.....G.....
2a_chr15_347_346Q.....
2a_chr4_348_347S.....
2a_chr16_349_348
2a_chr10_350_349G.....
2a_chr9_351_350G.....
2a_chr7_352_351
2a_chr4_353_352
2a_chr4_354_353I.....
2a_chr6_355_354
2a_chr11_356_355V.....
2a_chrX_357_356D.....
2a_chr3_358_357Y.....
2a_chrX_359_358T.....
2a_chr4_360_359D..T.....
2a_chr1_361_360N.....R.....
2a_chr13_362_361K.....
2a_chr5_363_362
2a_chr1_364_363
2a_chr2_365_364V.....K.....I.....
2a_chr5_366_365
2a_chr18_367_366
2a_chr8_368_367
2a_chr15_369_368*..Y.....
2a_chr8_370_369
2a_chr13_371_370
2a_chr9_372_371
2a_chr18_373_372
2a_chr8_374_373
2a_chr1_375_374V.....
2a_chr11_376_375
2a_chr9_377_376P.....N.....
2a_chr8_378_377Q.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRN EQSLQEIWYD
 2a_chr2_379_378^.....^.....^.....P.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....
 2a_chrX_380_379
 2a_chr2_381_380*.....
 2a_chr13_382_381K.....N.....
 2a_chr12_383_382T.....G.....
 2a_chr8_384_383S.....R.....
 2a_chr4_385_384*.....R.....
 2a_chr10_386_385G.....C.....
 2a_chr10_387_386M.....I.....*..
 2a_chr9_388_387A.....G.....
 2a_chr5_389_388K.....
 2a_chr1_390_389S.....
 2a_chrX_391_390
 2a_chr22_392_391*..
 2a_chr12_393_392
 2a_chr18_394_393
 2a_chr7_395_394
 2a_chr18_396_395Q.....S.....X.....
 2a_chr18_397_396
 2a_chr5_398_397P.....G.....
 2a_chr10_399_398
 2a_chrX_400_399P.....N.....V.....R.....I.....C.....
 2a_chr1_401_400T.....
 2a_chr13_402_401
 2a_chr15_403_402R.....
 2a_chr11_404_403
 2a_chr2_405_404
 2a_chr3_406_405IK.....
 2a_chr2_407_406M.....
 2a_chr8_408_407K.....G.....
 2a_chr9_409_408
 2a_chr14_410_409X.....
 2a_chr2_411_410K.....I.....
 2a_chr3_412_411I.....
 2a_chr1_413_412Q.....
 2a_chr18_414_413*..
 2a_chr1_415_414
 2a_chr1_416_415
 2a_chr3_417_416Y.....T.....K.....
 2b_50_CG_417
 2b_chrY_2_419K.....S.....T.....F.....R.....E.....
 2b_chr6_3_420D.....A.V.....*..
 2b_chr2_4_421
 2b_chr8_5_422*.....
 2b_chr4_6_423*.....M.....
 2b_chrY_7_424V.....I.....D.....V.....
 2b_chr7_8_425K.....M.....R.....
 2b_chrX_9_426K.....
 2b_chr5_10_427V.A.T.....K.....
 2b_chr2_11_428P.....
 2b_chr3_12_429D.....K.....
 2b_chrX_13_430R.....
 2b_chr7_14_431P.....C.....
 2b_chr2_15_432
 2b_chrX_16_433D.....V.....
 2b_chr4_17_434F-X.....
 2b_chr6_18_435V.....
 2b_chr3_19_436
 2b_chr5_20_437S.....V.....
 2b_chr3_21_438K.....
 2b_chr2_22_439I.....V.....
 2b_chr13_23_440*....D.....X.K.....
 2b_chr3_24_441
 2b_chr18_25_442A.....F.....K.....V.....

1.2_o_50%_cn
 YSEL-EDIQTKGKEVENFEKNLEECITRITNTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRIRNEQSLQEWI
 2b_chr6_26_443
 2b_chr12_27_444
 2b_chrX_28_445
 2b_chr12_29_446
 2b_chr5_30_447
 2b_chr8_31_448
 2b_chr9_32_449
 2b_chr13_33_450
 2b_chr20_34_451
 2b_chr11_35_452
 2b_chr4_36_453
 2b_chr6_37_454
 2b_chr18_38_455
 2b_chr3_39_456
 2b_chr2_40_457
 2b_chr3_41_458
 2b_chr1_42_459
 2b_chr6_43_460
 2b_chr3_44_461
 2b_chr21_45_462
 2b_chr7_46_463
 2b_chr12_47_464
 2b_chr3_48_465
 2b_chr11_49_466
 2b_chr14_50_467
 2b_chr12_51_468
 2b_chr12_52_469
 2b_chr13_53_470
 2b_chr7_54_471
 2b_chr5_55_472
 2b_chr4_56_473
 2b_chr2_57_474
 2b_chr14_58_475
 2b_chrX_59_476
 2b_chr10_60_477
 2b_chr13_61_478
 2b_chr7_62_479
 2b_chr2_63_480
 2b_chr1_64_481
 2b_chr7_65_482
 2b_chr4_66_483
 2b_chr8_67_484
 2b_chr8_68_485
 2b_chr2_69_486
 2b_chr8_70_487
 2b_chr3_71_488
 2b_chr13_72_489
 2b_chr15_73_490
 2b_chr12_74_491
 2b_chr1_75_492
 2b_chr7_76_493
 2b_chr3_77_494
 2b_chr17_78_495
 2b_chr14_79_496
 2b_chr8_80_497
 2b_chr3_81_498
 2b_chr2_82_499
 2b_chr8_83_500
 2b_chr20_84_501
 2b_chr14_85_502
 2b_chr5_86_503
 2b_chr17_87_504
 2b_chr12_88_505
 2b_chr7_89_506

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELKTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRIKRNEQSLQEIWYD
 2b_chr18_90_507 -----^-----^-----^-----^-----^-----^-----^-----*-----^-----*-----^-----R...
 2b_chr7_91_508A.....P.V.
 2b_chr11_92_509V..
 2b_chr2_93_510V..
 2b_chr15_94_511H..
 2b_chr15_95_512S..
 2b_chr10_96_513N.....R.....V.I..
 2b_chr9_97_514Q.....G.....*..K..
 2b_chr3_98_515T.....Y.....Q.....C..
 2b_chr17_99_516T.....N.....K..
 2b_chr19_100_517Y.....Q.....C..
 2b_chr6_101_518*.....Q.....T..
 2b_chr17_102_519Q.....N..
 2b_chr3_103_520I.....R..
 2b_chr3_104_521*.....N..
 2b_chr2_105_522N..
 2b_chrX_106_523*.....Q.....K..
 2b_chr8_107_524Q.....I..
 2b_chr12_108_525*.....Q.....T..
 2b_chr1_109_526I.....R..
 2b_chr17_110_527D.....I..
 2b_chr1_111_528Q.....I..
 2b_chrX_112_529I.....R..
 2b_chr7_113_530*.....R..
 2b_chr20_114_531*.....I..
 2b_chr6_115_532*.....I..
 2b_chr13_116_533M.....M.....QI..
 2b_chr6_117_534*.....I..
 2b_chr8_118_535K....E.....Q.....T..
 2b_chr12_119_536A.....F.....I..
 2b_chr8_120_537Q.....*.....V.....*..
 2b_chr3_121_538K.....R.....N..
 2b_chr18_122_539S.....V..
 2b_chr4_123_540*.....V.....V..
 2b_chr6_124_541*.....V.....V..
 2b_chr5_125_542*.....V.....*..
 2b_chr6_126_543*.....V.....*..
 2b_chr14_127_544K.....*.....*..
 2b_chr4_128_545*.....*..
 2b_chr10_129_546V..
 2b_chrX_130_547K..
 2b_chr20_131_548*.....V..
 2b_chr16_132_549*.....V..
 2b_chr16_133_550*.....V..
 2b_chr9_134_551P.....Q.....V.....SS..
 2b_chr1_135_552*.....I.....*X.....V.....SS..
 2b_chr2_136_553Q.....*.....A.....V..
 2b_chr5_137_554*.....A.....V..
 2b_chr12_138_555*.....V..
 2b_chr12_139_556*.....V..
 2b_chr2_140_557*.....V.....N..
 2b_chr9_141_558K..
 2b_chr2_142_559X.....G..
 2b_chr3_143_560*.....*..
 2b_chr2_144_561K.....V.....R..
 2b_chr9_145_562*.....*..
 2b_chrY_146_563G.....R.K.....N..
 2b_chrY_147_564G.....R.K.....N..
 2b_chr11_148_565N.....Q.....K...N.....D.....*..
 2b_chrY_149_566*.....V.....K.....M..
 2b_chr12_150_567*.....V.....K.....*..
 2b_chrX_151_568*.....V.....M.G.....*..
 2b_chr3_152_569Y....Y.....S.....R..
 2b_chr11_153_570F....T.....*.....*

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELKTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRIRKNEQSLQEIWYD
 2b_chrX_154_571^.....E.....^.....^.....^.....S.....^.....A.....^.....^.....^.....^.....^.....^.....Q.....
 2b_chr7_155_572Y.....
 2b_chr7_156_573M.....
 2b_chr2_157_574G.....
 2b_chr3_158_575T.....
 2b_chr8_159_576E.....H.....I.....K.....
 2b_chr14_160_577P.....K.....Y.....D.....
 2b_chr7_161_578V.....I.....X.....T.....H.....Y.....
 2b_chrY_162_579
 2b_chr11_163_580R.....
 2b_chr3_164_581
 2b_chr9_165_582
 2b_chr7_166_583S.R.....V.....
 2b_chr8_167_584E.....
 2b_chr6_168_585*.....I.....Q.....V.....
 2b_chr16_169_586S.....T.....
 2b_chr4_170_587S.....I.....G.....
 2b_chr5_171_588A.....M.....R.....V.S.....
 2b_chrX_172_589*.....
 2b_chr7_173_590GG.....G.....H.....
 2b_chr14_174_591D.....I.....G.....I.....W.....X.....
 2b_chr18_175_592K.....R.....E.....K.....
 2b_chr3_176_593X.....
 2b_chrX_177_594K.....S.....S.....
 2b_chr11_178_595
 2b_chr5_179_596V.....I.....R.....
 2b_chr3_180_597I.....
 2b_chr8_181_598
 2b_chr11_182_599G.....R.....S.....
 2b_chr3_183_600Y.....T.....
 2b_chrX_184_601
 2b_chrY_185_602
 2b_chr2_186_603L.....D.....
 2b_chr7_187_604R.....
 2b_chr1_188_605T.....D.....
 2b_chr1_189_606D.....R.....
 2b_chr7_190_607R.....S.....
 2b_chr1_191_608K.....
 2b_chr20_192_609
 2b_chr11_193_610*.....D.....I.....
 2b_chrX_194_611
 2b_chr3_195_612D.....
 2b_chr4_196_613T.....V.....F.....L.....
 2b_chr13_197_614Y.....Q.....Q.....I.....
 2b_chr8_198_615E.....F.....
 2b_chr8_199_616L.L.....R.....
 2b_chr1_200_617
 2b_chr2_201_618D.....*.....V.....
 2b_chr4_202_619T.....Q.....
 2b_chr2_203_620*.....G.....
 2b_chr3_204_621Q.....
 2b_chr4_205_622K.....
 2b_chr21_206_623K.....K.....C.....
 2b_chr2_207_624P.....T.....
 2b_chr2_208_625N.....R.....
 2b_chr15_209_626D.....S.....Q.....V.....R.....K.....R.....
 2b_chr2_210_627X.....R.....
 2b_chr6_211_628I.....
 2b_chr11_212_629D.....TR.....A.....T.....*.....
 2b_chr9_213_630K.....*.....Y.....
 2b_chr4_214_631D.....SI.....
 2b_chr2_215_632X.....C.*.....D.....
 2b_chr3_216_633
 2b_chr20_217_634T.....G.N.K.....E.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRNEQSLQEIIDY
2b_chr8_218_635 ^.....V.....G.....I.....T.....G.
2b_chr15_219_636V.....G.....I.....T.....D.
2b_chr5_220_637S.....R.....E.S.....R.
2b_chr4_221_638S.....R.....E.S.....R.
2b_chr7_222_639R.....I.....T.....V.
2b_chr10_223_640P.....T.....P.....I.....I.....Q.....
2b_chr8_224_641Q.....D.....S.....
2b_chr5_225_642Q.....D.....S.....
2b_chr16_226_643P.....T.....P.....I.....I.....Q.....
2b_chr7_228_645R.....P.....I.....I.....Q.....
2b_chrX_229_646R.....P.....L.V.....
2b_chr7_230_647RD.....P.....L.V.....
2b_chr4_231_648
2b_chr9_232_649*.....Q.....
2b_chr15_233_650
2b_chr13_234_651
2b_chr5_235_652
2b_chr15_236_653S.....G.....Q.....F.....
2b_chr6_237_654K.....L.....Q.....KK.....
2b_chr3_238_655K.....K.....KK.....
2b_chr14_239_656
2b_chr7_240_657V.....R.....I.....H.....
2b_chr6_241_658S.....R.....
2b_chr2_242_659S.....
2b_chr4_243_660A.....
2b_chr7_244_661A.....
2b_chr8_245_662
2b_chr4_246_663V.....Q.....
2b_chr6_247_664K.....Q.....
2b_chrX_248_665
2b_chr4_249_666K.....
2b_chrX_250_667X.....T.....R.....V.....
2b_chr9_251_668*.....
2b_chr11_252_669*.....
2b_chr3_253_670E.....
2b_chr2_254_671H.....R.....
2b_chr14_255_672L.....S.....
2b_chr5_256_673N.....
2b_chr3_257_674D.....Y.....I.....*.....
2b_chr6_258_675
2b_chrX_259_676Y.....FS.F.....K.....
2b_chr5_260_677D.....*.....
2b_chr10_261_678Y.....
2b_chr18_262_679*.....
2b_chr20_263_680
2b_chr12_264_681Q.....
2b_chr5_265_682E.V.....S.....E.....
2b_chr4_266_683*.....
2b_chr9_267_684T.....K.N.D.....M.....
2b_chr18_268_685A.....L.....K.....
2b_chr14_269_686
2b_chr5_270_687D.....K.Y.....I.....K.....
2b_chr2_271_688Q.S.....
2b_chr20_272_689
2b_chr2_273_690V.....A.K.....D.....
2b_chr10_274_691
2b_chr3_275_692
2b_chr11_276_693
2b_chr1_277_694
2b_chr11_278_695
2b_chr8_279_696D.....T.....R.....
2b_chr16_280_697T.....S.....L.*.....N.....R.....
2b_chr4_281_698

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRIKRNEQSLQEIWDY
2b_chr2_282_699^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....
2b_chr7_283_700S.....V.....
2b_chr5_284_701S.....H.....S.....C
2b_chr12_285_702S.....R.....
2b_chr5_286_703N.....*..
2b_chrX_287_704Y.....
2b_chr12_288_705N.....
2b_chr11_289_706
2b_chrX_290_707D.....W.....E..
2b_chr10_291_708
2b_chr12_292_709I.....
2b_chr5_293_710*.....A..
2b_chr14_294_711K..
2b_chr9_295_712G.....E..
2b_chrY_296_713
2b_chr7_297_714
2b_chr2_298_715
2b_chr12_299_716I.....I.....Q..
2b_chr16_300_717K.....D..
2b_chr1_301_718N.....R.S..
2b_chr15_302_719Q.....T..
2b_chr7_303_720A.....F.....I..
2b_chr2_304_721M.....V.....V.....N..
2b_chr9_305_722
2b_chr9_306_723
2b_chr4_307_724D.....S.....H..
2b_chr4_308_725Y.....M.....C..
2b_chr17_309_726K..
2b_chr2_310_727I..
2b_chr15_311_728
2b_chr7_312_729X.....G..
2b_chr8_313_730G..
2b_chr15_314_731
2b_chr2_315_732*.....P..
2b_chr6_316_733*.*..
2b_chr2_317_734I..
2b_chr14_318_735D.....Y..
2b_chr1_319_736S.....*.....G..
2b_chr6_320_737Y..
2b_chr2_321_738
2b_chr4_322_739L.I.....
2b_chr1_323_740K.....D.....R.C..
2b_chr2_324_741
2b_chr2_325_742
2b_chr6_326_743
2b_chr8_327_744A.....T..
2b_chr14_328_745L.....
2b_chr1_329_746D.....T.....T.....I..
2b_chr10_330_747S.....K.....I.....N..X.KK.....R..
2b_chr6_331_748K.....
2b_chr2_332_749*.....
2b_chr16_333_750W..
2b_chr6_334_751G.....I..
2b_chr17_335_752
2b_chr5_336_753
2b_chr13_337_754Q.....T..
2b_chr12_338_755D.....*..
2b_chr4_339_756
2b_chr6_340_757
2b_chr5_341_758E.....R..
2b_chr8_342_759
2b_chr2_343_760A.....P..
2b_chr12_344_761
2b_chr8_345_762V.....K..
.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTKCLKELMELKTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKIRNEQSLQEIIDY
 2b_chr2_346_763^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....
 2b_chr1_347_764Y.....
 2b_chr11_348_765
 2b_chr15_349_766
 2b_chr10_350_767T.....Y.....K.....
 2b_chr8_351_768X.....Q.....
 2b_chrX_352_769K.....G.....C.....
 2b_chr4_353_770D.....
 2b_chr1_354_771
 2b_chr8_355_772N.....
 2b_chr5_356_773T.....
 2b_chr10_357_774G.....
 2b_chr12_358_775S.....*.....
 2b_chr3_359_776
 2b_chr3_360_777G.....
 2b_chr11_361_778
 2b_chrX_362_779K.....K.....
 2b_chr1_363_780K.....C.....I.....
 2b_chr7_364_781S.....T.....
 2b_chr4_365_782A.....A.....*.....
 2b_chr10_366_783
 2b_chr8_367_784S.....A.....V.....
 2b_chr15_368_785
 2b_chr6_369_786
 2b_chr10_370_787A.....A.....I.....
 2b_chr1_371_788
 2b_chr3_372_789
 2b_chr9_373_790*.....
 2b_chr14_374_791D.....
 2b_chr16_375_792
 2b_chr8_376_793
 2b_chrX_377_794M.....D.....
 2b_chr4_378_795D.....D.....A.....N.....T.....R.....
 2b_chr12_379_796*.....A.....T.....R.....D.....R.....
 2b_chrX_380_797
 2b_chr1_381_798*.....
 2b_chr13_382_799
 2b_chr1_383_800H.....
 2b_chrY_384_801V.....S.....
 2b_chr5_385_802
 2b_chr11_386_803E.....
 2b_chr21_387_804
 2b_chr3_388_805GX.....
 2b_chr18_389_806Q.....R.....
 2b_chr18_390_807
 2b_chr10_391_808
 2b_chr12_392_809Q.....M.....
 2b_chr5_393_810
 2b_chrX_394_811XG.....S.....R.....V.....
 2b_chr1_395_812I.....N.....
 2b_chr2_396_813
 2b_chr4_397_814D.....Y.....
 2b_chrX_398_815T.....V.....G.....
 2b_chr10_399_816
 2b_chr4_400_817Q.....
 2b_chr3_401_818
 2b_chr20_402_819*.....I.....
 2b_chr3_403_820
 2b_chr5_404_821*.....
 2b_chr10_405_822*.....
 2b_chrY_406_823E.....
 2b_chr8_407_824
 2b_chr18_408_825Q.....
 2b_chr3_409_826

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRINTEKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRNSEQSLQEIWYD
 2b_chr10_410_827 .C.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....K.....
 2b_chr13_411_828
 2b_chr11_412_829K.....
 2b_chr3_413_830I.....
 2b_chr4_414_831
 2b_chr2_415_832
 2b_chr6_416_833
 2b_chr3_417_834X.....S.....
 2b_chr5_418_835K.....K.....
 2b_chr3_419_836H.....
 2b_chr8_420_837
 2b_chr2_421_838P.....
 2b_chr3_422_839
 2b_chr15_423_840N.....
 2b_chr5_424_841
 2b_chr1_425_842
 2b_chr4_426_843
 2b_chr10_427_844
 2b_chr5_428_845
 2b_chr11_429_846
 2b_chr19_430_847
 2b_chr8_431_848G.....
 2b_chr15_432_849XX.....
 2b_chr12_433_850
 2b_chr18_434_851
 2b_chr2_435_852
 2b_chr4_436_853I.....
 2b_chr12_437_854
 2b_chr16_438_855A.....
 2b_chr5_439_856I.....
 2b_chr9_440_857A.....
 2b_chr6_441_858
 2b_chr4_442_859
 2b_chr3_443_860
 2b_chrX_444_861
 2b_chr5_445_862
 2b_chr8_446_863
 2b_chr5_447_864
 2b_chr1_448_865
 2b_chr2_449_866
 2b_chr8_450_867
 2b_chr7_451_868
 2b_chr11_452_869L.....
 2b_chr4_453_870
 2b_chr8_454_871P.....G.....KE.....
 2b_chr8_455_872
 2b_chr8_456_873R.....Q.....V.....
 2b_chr4_457_874*.....
 2b_chr2_458_875
 2b_chr3_459_876D.....T.....F.....V.....
 2b_chr2_460_877
 2b_chr6_461_878
 2b_chr12_462_879C.....G.....
 2b_chr3_463_880
 2b_chr8_464_881P.....M.....
 2b_chr1_465_882
 2b_chr10_466_883
 2b_chr16_467_884T.....
 2b_chr4_468_885HS.....I.....Q.....K.....
 2b_chr8_469_886V.....
 2b_chr8_470_887
 2b_chr5_471_888
 2b_chr1_472_889
 2b_chr7_473_890L.....A.....

1.2_o_50%_cn YSEL-EDIQTKGKEVENFEKNLEECITRITNTKCLKELMELTKA-EL-EECRSLRS-C-QLEERVS-MEDEMNEMK-EGKFREKRKRNEQSLQEIWYD
2b_chr13_474_891^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....^.....
2b_chr18_475_892 ..
2b_chr18_476_893 ..I.....Q...G..
2b_chr6_477_894 ..V..K..
2b_chr10_478_895 ..
2b_chr15_479_896 ..P..
2b_chr9_480_897 ..
2b_chr2_481_898 ..
2b_chr21_482_899 ..
2b_chr2_483_900 ..K.....T..
2b_chr11_484_901 ..T..
2b_chr12_485_902 ..
2b_chr3_486_903 ..*..G..
2b_chrX_487_904 ..I..K..X..N..
2b_chr7_488_905 ..
2b_chr2_489_906 ..
2b_chrX_490_907 ..
2b_chr13_491_908 ..*..
2b_chr2_492_909 ..D.....T.....D..
2b_chr2_493_910 ..
2b_chr11_494_911 ..R..
2b_chr8_495_912 ..R.....V..
2b_chr14_496_913 ..V..
2b_chrX_497_914 ..S.....A..
2b_chr15_498_915 ..
2b_chr2_499_916 ..V..
2b_chr1_500_917 ..
2b_chr6_501_918 ..K..
2b_chr20_502_919 ..
2b_chr21_503_920 ..
2b_chr1_504_921 ..T..R..
2b_chr21_505_922 ..
2b_chrX_506_923 ..
2b_chr1_507_924 ..H..
2b_chr11_508_925 ..V..
2b_chr7_509_926 ..W..
2b_chr3_510_927 ..
2b_chr2_511_928 ..*X..
2b_chr15_512_929 ..
2b_chrX_513_930 ..
2b_chr1_514_931 ..
2b_chr17_515_932 ..D..
2b_chr12_516_933 D..
2b_chr14_517_934 ..E..
2b_chr7_518_935 ..K.....K..
2b_chr4_519_936 ..Y.....I..
2b_chr11_520_937 ..
2b_chr1_521_938 ..H..
2b_chr14_522_939 ..I.....R.....N..
2b_chr18_523_940 ..S.....L..
2b_chr3_524_941 ..Y..
2b_chr9_525_942 ..
2b_chr19_526_943 ..
2b_chr10_527_944 ..
2b_chr2_528_945 ..