

## Supplementary III: candidate regions & SNPs of HapMap phase II data

In this supplementary, we presented 15 candidate regions and related SNPs in Tables 1 — 23 for natural selection. To select a candidate SNP, we used four selection criteria as follows: 1) the selected SNP had high absolute xp-EHHST value of top one percentile, i.e., the absolute xp-EHHST value of the SNP was in the top one percentile of all SNPs of a chromosome in which the SNP was located, 2) the selected SNP had an allele which was likely to be newly derived by using the data from <http://hg-wen.uchicago.edu/selection/frontpage.html> of the University of Chicago (Voight et al. 2006), 3) the derived allele of the selected SNP had a high frequency which was larger than 0.5 in the tested population, 4) the derived allele of the selected SNP was likely to be highly differentiated among the three populations of CHB+JPT, CEU, and YRI, in terms of the  $F_{st}$  score of the SNP was in the top one percentile of all  $F_{st}$  scores of SNPs on a chromosome. A candidate region was selected if there was a long list of SNPs which satisfied the selection criteria.

In the 15 candidate regions, 2 are close to regions (chromosome 1, 167,445,196—167,764,984bp; chromosome 4, 41,521,093 – 41,849,931bp) reported in Sabeti et al. (2007); and 9 were not reported in Sabeti et al. (2007); we counted these 11 regions as new candidates. In the 11 new candidate regions, 2 were not reported in Zhong et al. (2010), i.e., chromosome 7, 135,458,203 – 135,496,018bp and chromosome 12, 37,243,569 – 37,336,502bp. The remaining 4 regions were overlapped with the regions or were within regions reported in Sabeti et al. (2007).

## References

Voight BF, Kudaravalli S, Wen X, Pritchard JK. (2006) A map of recent positive selection in the human genome. *PLoS Biol* 4:e72.

Table 1: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 1 of the HapMap phase II data. \* marked regions which were not reported in Table 1, Sabeti et al. (2007). **Abbreviations:** Derv — Derived, Freq — Frequency, Pop — Population, Pct — percentile. In the first column, the **Genes** provided names and positions of genes which were located in a region.

Chromosome Pop A vs Pop B	SNP Name	Position	Derv Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 1* CEU vs CHB+JPT <i>LHX8</i> (75,367-75,400kb), <i>SLC44A5</i> (75,440-75,849kb)	rs11162498	75329244	0.2167	0.8278	0.541	0.9925	-50.605	0.9995
	rs11162513	75339512	0.2167	0.8333	0.548	0.9931	-54.908	0.9995
	rs6671729	75342043	0.2167	0.8278	0.541	0.9925	-55.856	0.9995
	rs12402007	75343282	0.2000	0.8333	0.5582	0.9940	-58.253	0.9996
	rs1007512	75344267	0.2250	0.8333	0.5431	0.9927	-58.438	0.9996
	rs17096272	75355512	0.2167	0.8333	0.548	0.9931	-63.317	0.9997
	rs6663002	75360138	0.2167	0.8333	0.548	0.9931	-63.151	0.9997
	rs10493552	75364816	0.2000	0.8333	0.5582	0.9940	-65.496	0.9998
	rs1526505	75371488	0.1917	0.8333	0.5635	0.9944	-65.082	0.9998
	rs12041465	75381637	0.1833	0.8333	0.5689	0.9947	-63.927	0.9997
	rs1144297	75512920	0.3750	0.8889	0.578	0.9953	-29.518	0.9970
Chromosome 1* CHB+JPT vs YRI <i>LHX8</i> (75,367-75,400kb), <i>SLC44A5</i> (75,440-75,849kb)	rs11162498	75329244	0.8278	0.1167	0.5410	0.9925	35.56	0.9966
	rs11162513	75339512	0.8333	0.1167	0.5480	0.9931	62.533	0.9990
	rs6671729	75342043	0.8278	0.1167	0.5410	0.9925	63.013	0.9990
	rs12402007	75343282	0.8333	0.1167	0.5582	0.9940	64.195	0.9991
	rs1007512	75344267	0.8333	0.1167	0.5431	0.9927	64.084	0.9991
	rs17096272	75355512	0.8333	0.1167	0.5480	0.9931	68.183	0.9993
	rs6663002	75360138	0.8333	0.1167	0.5480	0.9931	66.911	0.9992
	rs10493552	75364816	0.8333	0.1167	0.5582	0.9940	67.754	0.9992
	rs1526505	75371488	0.8333	0.1167	0.5635	0.9944	76.491	0.9994
	rs12041465	75381637	0.8333	0.1167	0.5689	0.9947	75.436	0.9994
	rs1144297	75512920	0.8889	0.0833	0.5780	0.9953	49.291	0.9980

Table 2: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 1 of the HapMap phase II data. # marked regions which are close to candidate regions reported in Table 1, Sabeti et al. (2007). **Abbreviations:** Derv — Derived, Freq — Frequency, Pop — Population, Pct — percentile. In the first column, the **Genes** provided names and positions of genes which were located in a region.

Chromosome Pop A vs Pop B	SNP Name	Position	Derv Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 1# CEU vs CHB+JPT <i>BLZF1</i> (167,604-167,632kb), <i>SLC19A2</i> (167,700-167,722kb)	rs16828165	167445196	0.0083	0.6944	0.6295	0.9977	-17.485	0.9903
	rs12748624	167456395	0.0083	0.6944	0.6295	0.9977	-17.486	0.9903
	rs12751379	167502563	0.0083	0.7778	0.7206	0.9994	-20.753	0.9933
	rs16862081	167541896	0.0083	0.6944	0.6295	0.9977	-18.539	0.9918
	rs2066001	167550750	0.0083	0.6944	0.6460	0.9982	-20.729	0.9932
	rs3213587	167560450	0.0083	0.6944	0.6295	0.9977	-20.197	0.993
	rs3213586	167560464	0.0083	0.6944	0.6295	0.9977	-20.027	0.9929
	rs4140538	167561402	0.0083	0.6944	0.6295	0.9977	-19.854	0.9928
	rs12733001	167561423	0.0083	0.6944	0.6460	0.9982	-19.680	0.9927
	rs4140539	167561618	0.0083	0.6889	0.6235	0.9975	-19.418	0.9925
	rs3862937	167703302	0.0083	0.7000	0.6197	0.9973	-21.877	0.9939
	rs1883167	167703454	0.0083	0.7000	0.6197	0.9974	-22.026	0.9939
	rs16862217	167718808	0.0083	0.7056	0.6579	0.9985	-23.474	0.9946
	rs12022009	167735342	0.0083	0.7111	0.5291	0.9912	-19.500	0.9925
	rs9332658	167756570	0.0083	0.7000	0.6121	0.9970	-24.169	0.9949
rs9332623	167764984	0.0083	0.7000	0.6121	0.9970	-25.392	0.9954	
Chromosome 1# CHB+JPT vs YRI <i>BLZF1</i> (167,604-167,632kb), <i>SLC19A2</i> (167,700-167,722kb)	rs1080268	167443021	0.6944	0.0083	0.6460	0.9982	27.922	0.9924
	rs1080267	167443093	0.8167	0.1000	0.6791	0.9989	28.024	0.9925
	rs3753299	167443643	0.6889	0.0250	0.6235	0.9975	28.448	0.9929
	rs16828165	167445196	0.6944	0.0250	0.6295	0.9977	29.401	0.9936
	rs12748624	167456395	0.6944	0.0250	0.6295	0.9977	29.161	0.9934
	rs12751379	167502563	0.7778	0.0250	0.7206	0.9994	28.226	0.9927
	rs16862217	167718808	0.7056	0.0083	0.6579	0.9985	26.759	0.9915
	rs9332658	167756570	0.7000	0.0500	0.6121	0.9970	27.852	0.9924
	rs9332623	167764984	0.7000	0.0500	0.6121	0.9970	29.930	0.9940

Table 3: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 2 of the HapMap phase II data. **Abbreviations:** Freq — Frequency, Pop — Population, Pct — percentile.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 2 CEU vs CHB+JPT	rs9309464	72387471	0.7917	0.9944	0.8361	1.0000	-97.218	0.9990
	rs7595180	72389198	0.7833	0.9944	0.8320	1.0000	-96.110	0.9989
	rs6752122	72399186	0.7917	0.9944	0.8274	1.0000	-89.603	0.9987
	rs7558919	72402403	0.7917	0.9944	0.7671	0.9997	-84.087	0.9986
	rs6546764	72406443	0.7917	0.9944	0.7757	0.9997	-82.873	0.9986
	rs11126366	72407800	0.7917	0.9944	0.6810	0.9987	-80.245	0.9985
	rs2420444	72419965	0.7917	0.9944	0.8361	1.0000	-73.076	0.9979
	rs7594350	72425722	0.7917	0.9944	0.8361	1.0000	-70.967	0.9977
	rs7558686	72432297	0.7917	0.9944	0.7757	0.9997	-60.153	0.9962
	rs13390754	72437629	0.7917	0.9944	0.7671	0.9997	-57.495	0.9957
	rs598496	72438429	0.7917	0.9944	0.7671	0.9997	-56.245	0.9955
	rs598138	72438483	0.7917	0.9944	0.7757	0.9997	-55.678	0.9954
	rs680495	72445746	0.7917	0.9944	0.8274	1.0000	-49.342	0.9944
	rs590252	72461324	0.7917	0.9944	0.7757	0.9997	-114.702	0.9996
	rs641939	72464683	0.7917	0.9944	0.8361	1.0000	-117.191	0.9996
	rs630241	72475478	0.7917	0.9944	0.7843	0.9998	-98.100	0.9990
	rs628432	72477120	0.7917	0.9944	0.8274	1.0000	-105.042	0.9993
	rs659833	72496496	0.7917	0.9944	0.8361	1.0000	-128.694	0.9998
	rs3115351	72496883	0.7917	0.9944	0.7930	0.9998	-134.552	0.9998
	rs640610	72504445	0.7917	0.9944	0.8016	0.9999	-162.704	0.9998
	rs590345	72534217	0.6917	0.9944	0.6504	0.9978	-249.056	0.9999
	rs647242	72536445	0.7083	0.9944	0.6807	0.9986	-241.526	0.9999
	rs2203679	72542046	0.7083	0.9944	0.7234	0.9993	-40.916	0.9917
	rs653220	72561382	0.7083	0.9944	0.8010	0.9999	-43.614	0.9928
	rs6714595	72565756	0.7083	0.9944	0.8010	0.9999	-45.510	0.9934
	rs7577238	72649604	0.7083	0.9944	0.8010	0.9999	-43.291	0.9927
	rs11686713	72662046	0.7083	0.9944	0.7664	0.9996	-48.474	0.9942
	rs11677707	72732262	0.7083	0.9944	0.7837	0.9998	-57.428	0.9957
	rs6724529	72734249	0.7083	0.9944	0.7837	0.9998	-57.583	0.9958
	rs4852886	72736040	0.7083	0.9944	0.7148	0.9992	-57.699	0.9958
	rs11685114	72749123	0.7083	0.9944	0.8010	0.9999	-96.929	0.9990
	rs4852891	72798521	0.7250	0.9944	0.7983	0.9999	-97.231	0.9990
	rs7588400	72830661	0.7250	0.9944	0.7983	0.9999	-74.699	0.9981
	rs970577	72859087	0.8000	0.9389	0.5623	0.9917	-63.924	0.9969
rs1876490	72905859	0.6833	0.9333	0.7049	0.9990	-71.303	0.9977	

Table 4: Continuation of Table 3.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 2 CHB+JPT vs YRI	rs975612	72242842	0.9722	0.0333	0.7248	0.9993	46.327	0.9904
	rs194239	72250105	0.9722	0.1000	0.6591	0.9981	47.469	0.9911
	rs9309464	72387471	0.9944	0.0083	0.8361	1.0000	118.192	0.9993
	rs7595180	72389198	0.9944	0.0083	0.8320	1.0000	117.583	0.9993
	rs6752122	72399186	0.9944	0.0167	0.8274	1.0000	58.364	0.9946
	rs7558919	72402403	0.9944	0.0750	0.7671	0.9997	57.619	0.9945
	rs6546764	72406443	0.9944	0.0667	0.7757	0.9997	57.785	0.9945
	rs11126366	72407800	0.9944	0.1583	0.6810	0.9987	55.944	0.9941
	rs2420444	72419965	0.9944	0.0083	0.8361	1.0000	57.624	0.9945
	rs7594350	72425722	0.9944	0.0083	0.8361	1.0000	58.407	0.9947
	rs7558686	72432297	0.9944	0.0667	0.7757	0.9997	58.665	0.9947
	rs13390754	72437629	0.9944	0.0750	0.7671	0.9997	58.885	0.9947
	rs598496	72438429	0.9944	0.0750	0.7671	0.9997	59.133	0.9948
	rs598138	72438483	0.9944	0.0667	0.7757	0.9997	59.319	0.9948
	rs680495	72445746	0.9944	0.0167	0.8274	1.0000	58.007	0.9946
	rs590252	72461324	0.9944	0.0667	0.7757	0.9997	57.200	0.9944
	rs641939	72464683	0.9944	0.0083	0.8361	1.0000	73.033	0.9972
	rs630241	72475478	0.9944	0.0583	0.7843	0.9998	72.563	0.9970
	rs628432	72477120	0.9944	0.0167	0.8274	1.0000	73.523	0.9972
	rs659833	72496496	0.9944	0.0083	0.8361	1.0000	80.064	0.9979
	rs3115351	72496883	0.9944	0.0500	0.7930	0.9998	79.699	0.9979
	rs640610	72504445	0.9944	0.0417	0.8016	0.9999	84.456	0.9982
	rs590345	72534217	0.9944	0.1500	0.6504	0.9978	91.708	0.9987
	rs647242	72536445	0.9944	0.1250	0.6807	0.9986	92.998	0.9988
	rs2203679	72542046	0.9944	0.0833	0.7234	0.9993	92.352	0.9987
	rs653220	72561382	0.9944	0.0083	0.8010	0.9999	124.249	0.9994
	rs6714595	72565756	0.9944	0.0083	0.8010	0.9999	126.399	0.9995
	rs7577238	72649604	0.9944	0.0083	0.8010	0.9999	82.378	0.9981
	rs11686713	72662046	0.9944	0.0417	0.7664	0.9996	94.734	0.9989
	rs11677707	72732262	0.9944	0.0250	0.7837	0.9998	114.773	0.9992
	rs6724529	72734249	0.9944	0.0250	0.7837	0.9998	115.608	0.9992
	rs4852886	72736040	0.9944	0.0917	0.7148	0.9992	112.699	0.9992
	rs11685114	72749123	0.9944	0.0083	0.8010	0.9999	104.541	0.9990
	rs4852891	72798521	0.9944	0.0167	0.7983	0.9999	107.582	0.9991
	rs7588400	72830661	0.9944	0.0167	0.7983	0.9999	92.594	0.9987
	rs970577	72859087	0.9389	0.2000	0.5623	0.9917	70.206	0.9966
	rs1876490	72905859	0.9333	0.0167	0.7049	0.9990	68.467	0.9964
	rs10185826	72991499	0.9167	0.0500	0.6295	0.9972	46.884	0.9907

Table 5: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 2 of the HapMap phase II data. \* marked regions which were not reported in Table 1, Sabeti et al. (2007). **Abbreviations:** Freq — Frequency, Pop — Population, Pct — percentile.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 2* CEU vs CHB+JPT	rs10188273	103575435	0.3917	0.9444	0.6091	0.9960	-47.887	0.9941
	rs4851660	103584221	0.4583	0.9444	0.5779	0.9931	-42.662	0.9924
	rs10189533	103585672	0.4583	0.9444	0.5856	0.9939	-44.548	0.9932
	rs10192716	103586576	0.4583	0.9444	0.5933	0.9948	-46.267	0.9938
	rs1451988	103589021	0.4583	0.9444	0.5933	0.9948	-49.190	0.9944
	rs6543223	103594301	0.4583	0.9444	0.5933	0.9948	-51.222	0.9948
	rs13396809	103595295	0.4667	0.9444	0.5919	0.9945	-53.984	0.9952
	rs7570362	103597727	0.4583	0.9444	0.5933	0.9948	-55.755	0.9954
	rs12328095	103603254	0.4583	0.9389	0.5702	0.9923	-58.333	0.9959
	rs6719978	103604933	0.4583	0.9444	0.5856	0.9939	-60.321	0.9962
	rs1584705	103606168	0.4583	0.9444	0.5779	0.9931	-60.937	0.9963
	rs11123965	103606637	0.4583	0.9444	0.5933	0.9948	-61.424	0.9964
	rs11888473	103606852	0.4583	0.9444	0.5779	0.9931	-61.791	0.9965
	Chromosome 2* CHB+JPT vs YRI	rs1514999	103484100	0.9333	0.1000	0.5993	0.9953	53.093
rs1399547		103488883	0.9333	0.1167	0.5833	0.9936	51.844	0.9928
rs7573399		103489666	0.9333	0.1167	0.5833	0.9936	51.345	0.9926
rs17336454		103490578	0.9333	0.1167	0.5833	0.9936	50.196	0.9922
rs7584767		103490795	0.9333	0.1250	0.5754	0.9927	49.079	0.9917
rs4283441		103491828	0.9333	0.1167	0.5833	0.9936	48.621	0.9915
rs10192716		103586576	0.9444	0.1250	0.5933	0.9948	65.327	0.9958
rs1451988		103589021	0.9444	0.1250	0.5933	0.9948	66.206	0.9960
rs6543223		103594301	0.9444	0.1250	0.5933	0.9948	66.707	0.9960
rs13396809		103595295	0.9444	0.1250	0.5919	0.9945	67.102	0.9961
rs7570362		103597727	0.9444	0.1250	0.5933	0.9948	79.237	0.9979
rs12328095		103603254	0.9389	0.1417	0.5702	0.9923	79.803	0.9979
rs6719978		103604933	0.9444	0.1333	0.5856	0.9939	78.725	0.9978
rs1584705		103606168	0.9444	0.1417	0.5779	0.9931	78.387	0.9978
rs11123965		103606637	0.9444	0.1250	0.5933	0.9948	78.680	0.9978
rs11888473		103606852	0.9444	0.1417	0.5779	0.9931	78.333	0.9978

Table 6: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 2 of the HapMap phase II data. **Abbreviations:** Freq — Frequency, Pop — Population, Pct — percentile. In the first column, the **Genes** provided names and positions of genes which were located in a region.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 2 CEU vs CHB+JPT	rs7573311	107158083	0.7833	0.9556	0.6474	0.9977	-53.442	0.9951
	rs10185491	107159431	0.7833	0.9556	0.6474	0.9977	-48.296	0.9942
<i>EDAR</i> (108,877-108,972kb)	rs2215482	107160678	0.7833	0.9556	0.6474	0.9977	-47.814	0.9941
	rs10184143	107161280	0.4833	0.8833	0.5843	0.9937	-42.759	0.9925
<i>LIMS1</i> (108,571-108,670kb)	rs17036137	108303137	0.0667	0.8500	0.7593	0.9996	-70.695	0.9976
	rs12476238	108306768	0.1500	0.8500	0.6538	0.9979	-67.982	0.9974
	rs973507	108316852	0.8583	0.9389	0.5795	0.9932	-47.841	0.9941
	rs13414622	108326212	0.8583	0.9111	0.5527	0.9904	-47.318	0.9940
	rs1402467	108361240	0.8083	0.8833	0.6540	0.9979	-42.779	0.9925
	rs4149432	108361757	0.8083	0.8833	0.5615	0.9915	-42.451	0.9923
	rs4149438	108368480	0.8000	0.8833	0.5568	0.9910	-40.465	0.9916
	rs10179602	108451805	0.3833	0.8722	0.6124	0.9962	-70.931	0.9977
	rs1053027	108457987	0.3833	0.8778	0.5534	0.9905	-73.547	0.9980
	rs2077472	108492518	0.3833	0.8944	0.5670	0.9921	-72.573	0.9979
	rs12613554	108527107	0.3917	0.8722	0.6190	0.9966	-73.656	0.9980
	rs12473539	108531804	0.3917	0.8722	0.5520	0.9903	-74.124	0.9981
	rs1469965	108536852	0.3917	0.8722	0.5520	0.9903	-72.399	0.9979
	rs10179040	108552213	0.3917	0.8722	0.5520	0.9903	-71.520	0.9977
	rs11123708	108562291	0.3917	0.8722	0.5520	0.9903	-69.590	0.9975
	rs10187016	108563195	0.3833	0.8778	0.5613	0.9915	-69.873	0.9976
	rs13413437	108564962	0.3917	0.8722	0.5520	0.9903	-68.465	0.9975
	rs13422997	108572896	0.3917	0.8722	0.5520	0.9903	-62.300	0.9966
	rs7565372	108587342	0.3917	0.8722	0.5520	0.9903	-62.187	0.9966
	rs6707379	108600999	0.3917	0.8722	0.5601	0.9914	-61.800	0.9965
	rs12469016	108622967	0.3917	0.8722	0.5601	0.9914	-64.854	0.9970
	rs6542785	108922506	0.1500	0.9444	0.5688	0.9922	-38.045	0.9907
	rs260698	108933191	0.1333	0.9611	0.6015	0.9954	-41.741	0.9920
	rs260699	108933877	0.1333	0.9833	0.6905	0.9988	-42.178	0.9922
	rs260702	108935390	0.1333	0.9611	0.6015	0.9954	-41.950	0.9921
	rs260686	108944605	0.1000	0.9556	0.6253	0.9970	-41.288	0.9918
	rs260690	108946170	0.1000	0.9611	0.6378	0.9974	-41.494	0.9919
	rs260692	108947751	0.1000	0.9611	0.6542	0.9979	-41.031	0.9918
	rs5021634	108948789	0.1500	0.9500	0.5974	0.9951	-39.157	0.9911
	rs10174266	108949745	0.2000	0.9556	0.5529	0.9904	-40.902	0.9917
	rs11123719	108952803	0.1583	0.8722	0.5546	0.9906	-38.305	0.9908
	rs12622467	108953929	0.1583	0.8722	0.5546	0.9906	-38.548	0.9909
	rs4676046	108954334	0.1583	0.8722	0.5546	0.9906	-38.643	0.9909
	rs17034770	108982808	0.1583	0.8778	0.6421	0.9975	-54.924	0.9953

Table 7: Continuation of 6.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 2 CHB+JPT vs YRI <i>EDAR</i> (108,877-108,972kb) <i>LIMS1</i> (108,571-108,670kb)	rs17036137	108303137	0.8500	0.0167	0.7593	0.9996	81.939	0.9981
	rs12476238	108306768	0.8500	0.0667	0.6538	0.9979	77.819	0.9978
	rs973507	108316852	0.9389	0.2167	0.5795	0.9932	70.274	0.9967
	rs13414622	108326212	0.9111	0.2083	0.5527	0.9904	67.280	0.9962
	rs1402467	108361240	0.8833	0.0583	0.6540	0.9979	52.983	0.9933
	rs4149432	108361757	0.8833	0.1417	0.5615	0.9915	52.394	0.9931
	rs4149438	108368480	0.8833	0.1417	0.5568	0.9910	50.055	0.9921
	rs10179602	108451805	0.8722	0.0250	0.6124	0.9962	100.244	0.9990
	rs1053027	108457987	0.8778	0.0917	0.5534	0.9905	93.177	0.9988
	rs2077472	108492518	0.8944	0.1000	0.5670	0.9921	87.384	0.9983
	rs12613554	108527107	0.8722	0.0167	0.6190	0.9966	89.880	0.9985
	rs12473539	108531804	0.8722	0.0833	0.5520	0.9903	89.854	0.9985
	rs1469965	108536852	0.8722	0.0833	0.5520	0.9903	75.907	0.9975
	rs10179040	108552213	0.8722	0.0833	0.5520	0.9903	75.665	0.9975
	rs11123708	108562291	0.8722	0.0833	0.5520	0.9903	74.032	0.9973
	rs10187016	108563195	0.8778	0.0833	0.5613	0.9915	73.963	0.9973
	rs13413437	108564962	0.8722	0.0833	0.5520	0.9903	71.463	0.9969
	rs13422997	108572896	0.8722	0.0833	0.5520	0.9903	120.544	0.9994
	rs7565372	108587342	0.8722	0.0833	0.5520	0.9903	128.192	0.9995
	rs6707379	108600999	0.8722	0.0750	0.5601	0.9914	130.025	0.9996
	rs12469016	108622967	0.8722	0.0750	0.5601	0.9914	227.857	0.9999
	rs6542785	108922506	0.9444	0.4667	0.5688	0.9922	49.193	0.9918
	rs260698	108933191	0.9611	0.5917	0.6015	0.9954	50.648	0.9924
	rs260699	108933877	0.9833	0.7917	0.6905	0.9988	51.773	0.9928
	rs260702	108935390	0.9611	0.5917	0.6015	0.9954	51.011	0.9925
	rs260686	108944605	0.9556	0.5333	0.6253	0.9970	50.887	0.9925
	rs260690	108946170	0.9611	0.6167	0.6378	0.9974	51.186	0.9926
	rs260692	108947751	0.9611	0.6917	0.6542	0.9979	49.798	0.9920
	rs5021634	108948789	0.9500	0.7250	0.5974	0.9951	47.769	0.9912
	rs10174266	108949745	0.9556	0.7250	0.5529	0.9904	48.133	0.9914
	rs11123719	108952803	0.8722	0.2333	0.5546	0.9906	46.438	0.9904
	rs12622467	108953929	0.8722	0.2333	0.5546	0.9906	47.091	0.9908
	rs4676046	108954334	0.8722	0.2333	0.5546	0.9906	47.239	0.9909
rs17034770	108982808	0.8778	0.1167	0.6421	0.9975	68.662	0.9964	

Table 8: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 3 of the HapMap phase II data.  
 \* marked regions which were not reported in Table 1, Sabeti et al. (2007).

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 3* CEU vs CHB+JPT	rs9827968	106178646	0.4250	0.8556	0.5404	0.9915	-52.959	0.9989
	rs1503079	106241722	0.4917	0.9278	0.5577	0.9933	-44.392	0.9981
	rs1566718	106244327	0.4917	0.9278	0.5497	0.9926	-44.231	0.9980
	rs1566717	106250199	0.4917	0.9278	0.5497	0.9925	-42.773	0.9977
	rs13090983	106250823	0.4917	0.9278	0.5497	0.9926	-42.386	0.9976
	rs12633740	106252196	0.4917	0.9278	0.5497	0.9926	-40.853	0.9973
	rs12637494	106256655	0.4917	0.9278	0.5497	0.9925	-41.871	0.9975
	rs10933802	106256994	0.4917	0.9278	0.5497	0.9925	-42.286	0.9976
	rs10933803	106257871	0.4917	0.9278	0.6401	0.9981	-41.857	0.9975
	rs2047806	106261500	0.5250	0.9778	0.6091	0.9965	-40.948	0.9973
	rs2134526	106262934	0.4917	0.9278	0.5497	0.9925	-40.281	0.9972
	rs6800325	106265702	0.5417	0.9778	0.6161	0.9969	-52.181	0.9988
	rs10933807	106267020	0.4917	0.9278	0.5497	0.9925	-55.088	0.9990
	rs2895296	106271452	0.4917	0.9278	0.5737	0.9946	-57.225	0.9992
	rs1503084	106274502	0.4917	0.9278	0.5737	0.9946	-39.166	0.9970
	rs10933809	106283040	0.4917	0.9278	0.5737	0.9946	-45.628	0.9982
	rs1503085	106284786	0.4917	0.9278	0.5737	0.9946	-46.426	0.9983
	rs1503075	106289543	0.4167	0.9056	0.6051	0.9963	-57.054	0.9991
	rs1503158	106297795	0.3917	0.9056	0.6110	0.9966	-77.714	0.9997
	rs12492439	106299176	0.4000	0.9056	0.6418	0.9982	-80.223	0.9998
rs870279	106305849	0.4000	0.8889	0.5793	0.9951	-81.354	0.9998	
rs12492301	106306013	0.4000	0.8889	0.5874	0.9956	-82.066	0.9998	
Chromosome 3* CHB+JPT vs YRI	rs9827968	106178646	0.8556	0.0667	0.5404	0.9915	50.357	0.9980
	rs1503079	106241722	0.9278	0.1333	0.5577	0.9933	56.034	0.9988
	rs1566718	106244327	0.9278	0.1417	0.5497	0.9926	55.847	0.9988
	rs1566717	106250199	0.9278	0.1417	0.5497	0.9925	55.929	0.9988
	rs13090983	106250823	0.9278	0.1417	0.5497	0.9926	55.512	0.9988
	rs12633740	106252196	0.9278	0.1417	0.5497	0.9926	54.933	0.9987
	rs12637494	106256655	0.9278	0.1417	0.5497	0.9925	54.603	0.9987
	rs10933802	106256994	0.9278	0.1417	0.5497	0.9925	54.082	0.9986
	rs10933803	106257871	0.9278	0.0500	0.6401	0.9981	54.704	0.9987
	rs2047806	106261500	0.9778	0.1500	0.6091	0.9965	51.260	0.9982
	rs2134526	106262934	0.9278	0.1417	0.5497	0.9925	49.904	0.9979
	rs6800325	106265702	0.9778	0.1417	0.6161	0.9969	61.490	0.9994
	rs10933807	106267020	0.9278	0.1417	0.5497	0.9925	61.051	0.9994
	rs2895296	106271452	0.9278	0.1167	0.5737	0.9946	60.956	0.9994
	rs1503084	106274502	0.9278	0.1167	0.5737	0.9946	43.465	0.9959
	rs10933809	106283040	0.9278	0.1167	0.5737	0.9946	46.421	0.9969
	rs1503085	106284786	0.9278	0.1167	0.5737	0.9946	47.005	0.9971
	rs1503075	106289543	0.9056	0.0667	0.6051	0.9963	48.138	0.9974
	rs1503158	106297795	0.9056	0.0667	0.6110	0.9966	52.199	0.9983
	rs12492439	106299176	0.9056	0.0333	0.6418	0.9982	53.006	0.9984
rs870279	106305849	0.8889	0.0750	0.5793	0.9951	50.073	0.9979	
rs12492301	106306013	0.8889	0.0667	0.5874	0.9956	50.335	0.9979	

Table 9: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 3 of the HapMap phase II data.  
 \* marked regions which were not reported in Table 1, Sabeti et al. (2007).

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 3* CEU vs CHB+JPT	rs709437	109117646	0.3583	0.9056	0.5819	0.9953	-39.085	0.9970
	rs697953	109117907	0.4917	0.9722	0.5670	0.9940	-38.852	0.9970
	rs3866221	109118340	0.3583	0.9000	0.5898	0.9957	-37.588	0.9967
	rs13086279	109123223	0.3500	0.9000	0.5927	0.9958	-34.877	0.9963
	rs9831003	109127806	0.3917	0.8667	0.5697	0.9943	-32.848	0.9960
	rs13322639	109128689	0.3917	0.8667	0.5697	0.9943	-31.047	0.9950
	rs9837335	109129497	0.3583	0.8556	0.5650	0.9938	-27.640	0.9924
	rs1370286	109132289	0.3917	0.8667	0.5780	0.9949	-26.962	0.9919
	rs6437776	109571738	0.0917	0.8556	0.6455	0.9983	-28.967	0.9934
	rs9874204	109577817	0.0917	0.8556	0.6455	0.9983	-29.031	0.9934
	rs1463426	109578788	0.0917	0.8556	0.6455	0.9983	-29.750	0.9940
Chromosome 3* CHB+JPT vs YRI	rs709437	109117646	0.9056	0.1083	0.5819	0.9953	41.630	0.9953
	rs697953	109117907	0.9722	0.1917	0.5670	0.9940	41.147	0.9952
	rs3866221	109118340	0.9000	0.0917	0.5898	0.9957	40.846	0.9951
	rs13086279	109123223	0.9000	0.0917	0.5927	0.9958	36.763	0.9933
	rs9831003	109127806	0.8667	0.0583	0.5697	0.9943	35.162	0.9927
	rs13322639	109128689	0.8667	0.0583	0.5697	0.9943	34.735	0.9925
	rs9837335	109129497	0.8556	0.0583	0.5650	0.9938	34.406	0.9924
	rs1370286	109132289	0.8667	0.0500	0.5780	0.9949	34.244	0.9923
	rs6437776	109571738	0.8556	0.1417	0.6455	0.9983	45.935	0.9968
	rs9874204	109577817	0.8556	0.1417	0.6455	0.9983	46.092	0.9968
	rs1463426	109578788	0.8556	0.1417	0.6455	0.9983	48.670	0.9976

Table 10: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 3 of the HapMap phase II data. \* marked regions which were not reported in Table 1, Sabeti et al. (2007).

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 3* CEU vs CHB+JPT	rs9851518	17430401	0.4917	0.9444	0.5649	0.9938	-29.492	0.9938
	rs6442682	17436735	0.4917	0.9444	0.5727	0.9946	-30.525	0.9946
	rs7625855	17445786	0.4917	0.9444	0.5727	0.9946	-31.929	0.9956
	rs1446303	17457568	0.4917	0.9444	0.5727	0.9946	-32.236	0.9957
	rs9823064	17495226	0.4917	0.9444	0.5727	0.9946	-35.023	0.9963
	rs9310520	17552380	0.4500	0.9444	0.5795	0.9951	-36.622	0.9966
	rs13320647	17564884	0.4833	0.9444	0.5738	0.9946	-35.322	0.9963
	rs9310526	17618038	0.4833	0.9444	0.5282	0.9900	-73.273	0.9996
	rs9310527	17636766	0.4417	0.9389	0.5812	0.9953	-75.229	0.9996
	rs9310528	17636936	0.4833	0.9444	0.5584	0.9933	-73.172	0.9996
	rs9839588	17642282	0.4833	0.9444	0.5584	0.9933	-69.122	0.9995
	rs11128836	17658896	0.4833	0.9444	0.5282	0.9900	-30.470	0.9946
	rs4377510	17661292	0.4833	0.9444	0.5282	0.9900	-30.093	0.9943
	rs6807020	17667819	0.4833	0.9444	0.5282	0.9900	-29.419	0.9938
	rs13096559	17669647	0.4917	0.9722	0.5670	0.9940	-28.961	0.9934
	rs11128838	17672372	0.4833	0.9444	0.5507	0.9926	-28.585	0.9931
	rs6789697	17675712	0.4917	0.9722	0.5670	0.9940	-28.093	0.9927
	rs6784025	17676062	0.4833	0.9444	0.5282	0.9900	-27.674	0.9924
rs7651998	17686131	0.4833	0.9444	0.5282	0.9900	-28.707	0.9932	
Chromosome 3* CHB+JPT vs YRI	rs9851518	17430401	0.9444	0.1500	0.5649	0.9938	41.711	0.9953
	rs6442682	17436735	0.9444	0.1417	0.5727	0.9946	41.559	0.9953
	rs7625855	17445786	0.9444	0.1417	0.5727	0.9946	42.745	0.9957
	rs1446303	17457568	0.9444	0.1417	0.5727	0.9946	43.385	0.9959
	rs9823064	17495226	0.9444	0.1417	0.5727	0.9946	51.098	0.9981
	rs9310520	17552380	0.9444	0.1417	0.5795	0.9951	49.457	0.9977
	rs13320647	17564884	0.9444	0.1417	0.5738	0.9946	48.194	0.9975
	rs9310526	17618038	0.9444	0.1917	0.5282	0.9900	37.015	0.9935
	rs9310527	17636766	0.9389	0.1333	0.5812	0.9953	37.688	0.9938
	rs9310528	17636936	0.9444	0.1583	0.5584	0.9933	37.857	0.9939
	rs9839588	17642282	0.9444	0.1583	0.5584	0.9933	36.468	0.9932
	rs11128836	17658896	0.9444	0.1917	0.5282	0.9900	33.702	0.9920
	rs4377510	17661292	0.9444	0.1917	0.5282	0.9900	33.480	0.9918
	rs6807020	17667819	0.9444	0.1917	0.5282	0.9900	32.779	0.9914
	rs13096559	17669647	0.9722	0.1917	0.5670	0.9940	32.270	0.9908
	rs11128838	17672372	0.9444	0.1667	0.5507	0.9926	32.025	0.9906

Table 11: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 4 of the HapMap phase II data. # marked regions which are close to candidate regions reported in Table 1, Sabeti et al. (2007). In the first column, the **Genes** provided names and positions of genes.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 4#	rs714226	41521093	0.9333	0.9944	0.6948	0.9988	-33.992	0.9992
CEU vs CHB+JPT	rs6840961	41522632	0.8417	0.9833	0.6237	0.9962	-33.945	0.9992
<i>CCDC4</i>	rs9991121	41523790	0.8500	0.9778	0.7251	0.9993	-31.920	0.9986
(41,808-41,850kb),	rs4623048	41528244	0.7583	0.9611	0.7677	0.9999	-31.371	0.9985
<i>TMEM33</i>	rs9998239	41529367	0.9083	0.9722	0.6728	0.9983	-31.742	0.9986
(41,632-41,653kb),	rs6839376	41544538	0.8000	0.9611	0.6990	0.9990	-30.599	0.9982
<i>WDR21B</i>	rs6447118	41550330	0.8000	0.9611	0.6990	0.9990	-30.045	0.9981
(41,679-41,680kb),	rs7356183	41554214	0.8083	0.9611	0.7035	0.9991	-29.863	0.9980
	rs7660832	41584424	0.7833	0.9611	0.5411	0.9900	-26.425	0.9972
	rs2660343	41672523	0.7333	0.9778	0.7001	0.9990	-16.789	0.9902
	rs2660335	41680446	0.7583	0.9667	0.6951	0.9989	-47.429	0.9998
	rs2581435	41685047	0.7583	0.9667	0.6951	0.9989	-46.738	0.9997
	rs4540084	41696545	0.7583	0.9667	0.6951	0.9989	-42.052	0.9997
	rs2660331	41696942	0.7583	0.9667	0.6951	0.9989	-41.933	0.9997
	rs2581455	41697890	0.7333	0.9667	0.7201	0.9993	-40.896	0.9996
	rs2660330	41698140	0.7667	0.9667	0.6989	0.9989	-34.171	0.9993
	rs1047626	41698428	0.7333	0.9667	0.7201	0.9993	-33.640	0.9991
	rs2581453	41698592	0.7583	0.9722	0.7027	0.9990	-34.030	0.9992
	rs2660329	41700744	0.7583	0.9667	0.6336	0.9969	-34.060	0.9992
	rs2660326	41701828	0.7583	0.9667	0.6336	0.9968	-33.996	0.9992
	rs2660325	41701960	0.7583	0.9667	0.6336	0.9969	-34.001	0.9992
	rs2581449	41701981	0.7583	0.9667	0.6336	0.9969	-34.004	0.9992
	rs2581448	41702151	0.7583	0.9667	0.6336	0.9969	-34.001	0.9992
	rs2660323	41702769	0.7583	0.9667	0.6336	0.9969	-33.990	0.9992
	rs9884564	41703000	0.7333	0.9722	0.7540	0.9997	-33.450	0.9990
	rs2581443	41703898	0.7583	0.9667	0.6336	0.9969	-33.564	0.9991
	rs2660319	41705641	0.7333	0.9667	0.6760	0.9985	-33.203	0.9990
	rs2581441	41706727	0.7333	0.9667	0.7467	0.9996	-33.143	0.9990
	rs2581426	41712257	0.7333	0.9667	0.7467	0.9996	-33.036	0.9990
	rs2581424	41713389	0.7583	0.9667	0.6336	0.9969	-33.004	0.9990
	rs1848180	41713701	0.7333	0.9667	0.7467	0.9996	-32.692	0.9989
	rs10805092	41714239	0.7583	0.9667	0.6336	0.9968	-32.724	0.9989
	rs2581420	41716994	0.7583	0.9667	0.6336	0.9968	-32.529	0.9989
	rs10461065	41719050	0.7583	0.9667	0.6336	0.9969	-32.398	0.9988
	rs10461059	41720699	0.7583	0.9667	0.6336	0.9968	-32.005	0.9987
	rs9998823	41720912	0.7583	0.9722	0.6415	0.9973	-31.955	0.9986
	rs4241695	41722202	0.7583	0.9667	0.6336	0.9969	-31.902	0.9986
	rs9654067	41723554	0.7583	0.9667	0.6336	0.9968	-31.794	0.9986
	rs3827588	41725973	0.7583	0.9667	0.6336	0.9968	-31.621	0.9985
	rs3827590	41726194	0.7083	0.9722	0.6228	0.9961	-32.823	0.9989
	rs3827591	41726229	0.7083	0.9667	0.6149	0.9957	-32.753	0.9989
	rs4861155	41726781	0.7333	0.9667	0.7467	0.9996	-30.908	0.9983
	rs7683204	41728350	0.7583	0.9667	0.6336	0.9968	-30.596	0.9982
	rs11725865	41731391	0.7667	0.9667	0.6460	0.9975	-24.214	0.9963

Table 12: Continuation of Table 11.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 4# CEU vs CHB+JPT <i>CCDC4</i> (41,808-41,850kb), <i>TMEM33</i> (41,632-41,653kb), <i>WDR21B</i> (41,679-41,680kb)	rs4377621	41738061	0.7083	0.9667	0.7375	0.9994	-16.903	0.9903
	rs10433708	41745215	0.7667	0.9667	0.6460	0.9976	-17.061	0.9905
	rs10938170	41750639	0.7667	0.9667	0.6460	0.9976	-17.914	0.9915
	rs3804192	41761196	0.7667	0.9667	0.6460	0.9976	-20.819	0.9940
	rs12647092	41766976	0.7083	0.9667	0.7375	0.9994	-23.536	0.9959
	rs10019356	41768229	0.7667	0.9667	0.6373	0.9972	-24.122	0.9962
	rs4438791	41769322	0.7083	0.9667	0.7375	0.9994	-24.278	0.9963
	rs7660223	41775871	0.7667	0.9667	0.6900	0.9988	-24.694	0.9966
	rs11725543	41781944	0.7667	0.9667	0.6460	0.9975	-25.194	0.9968
	rs10002107	41782303	0.7667	0.9667	0.6460	0.9975	-25.519	0.9969
	rs12511999	41786014	0.7083	0.9667	0.7375	0.9994	-25.833	0.9970
	rs6832890	41801295	0.7583	0.9667	0.7040	0.9991	-28.418	0.9978
	rs6447128	41801872	0.7500	0.9778	0.7156	0.9992	-28.920	0.9979
	rs7682049	41807491	0.6750	0.9500	0.7234	0.9993	-29.900	0.9980
	rs13756	41807998	0.6750	0.9500	0.7234	0.9993	-30.249	0.9981
	rs16854014	41812231	0.9333	0.9833	0.5479	0.9907	-33.488	0.9991
	rs2880666	41815266	0.6750	0.9500	0.7234	0.9993	-30.402	0.9982
	rs6447131	41824754	0.6750	0.9556	0.6949	0.9988	-30.607	0.9983
	rs6447132	41828823	0.6583	0.9556	0.6817	0.9986	-30.965	0.9983
	rs7664565	41829776	0.6667	0.9556	0.6838	0.9987	-31.058	0.9984
rs6848386	41841414	0.6750	0.9556	0.5900	0.9941	-35.879	0.9994	
rs6856819	41844970	0.6917	0.9556	0.5430	0.9903	-35.477	0.9994	
rs4861024	41847307	0.6917	0.9556	0.5944	0.9944	-35.493	0.9994	
rs4449446	41849931	0.6833	0.9500	0.5758	0.9931	-35.487	0.9994	
Chromosome 4# CHB+JPT vs YRI <i>CCDC4</i> (41,808-41,850kb), <i>TMEM33</i> (41,632-41,653kb), <i>WDR21B</i> (41,679-41,680kb)	rs714226	41521093	0.9944	0.2417	0.6948	0.9988	43.888	0.9987
	rs6840961	41522632	0.9833	0.2250	0.6237	0.9962	43.287	0.9986
	rs9991121	41523790	0.9778	0.1250	0.7251	0.9993	41.429	0.9984
	rs4623048	41528244	0.9611	0.0167	0.7677	0.9999	41.149	0.9983
	rs9998239	41529367	0.9722	0.2083	0.6728	0.9983	40.640	0.9982
	rs6839376	41544538	0.9611	0.1000	0.6990	0.9990	37.536	0.9979
	rs6447118	41550330	0.9611	0.1000	0.6990	0.9990	36.870	0.9978
	rs7356183	41554214	0.9611	0.1000	0.7035	0.9991	36.641	0.9977
	rs7660832	41584424	0.9611	0.2417	0.5411	0.9900	32.202	0.9970
	rs2660343	41672523	0.9778	0.0917	0.7001	0.9990	25.605	0.9954
	rs2581459	41672864	0.9667	0.1083	0.6672	0.9982	24.505	0.9949
	rs17445410	41674794	0.9778	0.0667	0.7264	0.9994	23.319	0.9942
	rs2581460	41674877	0.9667	0.0333	0.7467	0.9996	23.189	0.9941
	rs2581461	41676123	0.9667	0.0250	0.7556	0.9997	22.883	0.9939
	rs937866	41676499	0.9778	0.0250	0.7702	0.9999	22.750	0.9937

Table 13: Continuation of Table 11 and Table 12.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 4# CHB+JPT vs YRI <i>CCDC4</i> (41,808-41,850kb), <i>TMEM33</i> (41,632-41,653kb), <i>WDR21B</i> (41,679-41,680kb)	rs2660332	41679858	0.9667	0.0917	0.6951	0.9989	21.294	0.9923
	rs2660335	41680446	0.9667	0.0917	0.6951	0.9989	76.343	1.0000
	rs2581435	41685047	0.9667	0.0917	0.6951	0.9989	43.203	0.9985
	rs4540084	41696545	0.9667	0.0917	0.6951	0.9989	44.736	0.9989
	rs2660331	41696942	0.9667	0.0917	0.6951	0.9989	44.771	0.9989
	rs2581455	41697890	0.9667	0.0583	0.7201	0.9993	46.368	0.9990
	rs2660330	41698140	0.9667	0.0917	0.6989	0.9989	45.655	0.9990
	rs1047626	41698428	0.9667	0.0583	0.7201	0.9993	46.739	0.9991
	rs2581453	41698592	0.9722	0.0917	0.7027	0.9990	45.648	0.9990
	rs2660329	41700744	0.9667	0.1500	0.6336	0.9969	43.825	0.9987
	rs2660326	41701828	0.9667	0.1500	0.6336	0.9968	43.869	0.9987
	rs2660325	41701960	0.9667	0.1500	0.6336	0.9969	43.877	0.9987
	rs2581449	41701981	0.9667	0.1500	0.6336	0.9969	43.884	0.9987
	rs2581448	41702151	0.9667	0.1500	0.6336	0.9969	43.894	0.9987
	rs2660323	41702769	0.9667	0.1500	0.6336	0.9969	43.899	0.9988
	rs9884564	41703000	0.9722	0.0333	0.7540	0.9997	47.257	0.9991
	rs2581443	41703898	0.9667	0.1500	0.6336	0.9969	43.968	0.9988
	rs2660319	41705641	0.9667	0.1000	0.6760	0.9985	45.204	0.9989
	rs2581441	41706727	0.9667	0.0333	0.7467	0.9996	43.529	0.9986
	rs2581426	41712257	0.9667	0.0333	0.7467	0.9996	43.555	0.9986
	rs2581424	41713389	0.9667	0.1500	0.6336	0.9969	41.792	0.9984
	rs1848180	41713701	0.9667	0.0333	0.7467	0.9996	44.255	0.9988
	rs10805092	41714239	0.9667	0.1500	0.6336	0.9968	41.809	0.9984
	rs2581420	41716994	0.9667	0.1500	0.6336	0.9968	58.621	0.9996
	rs10461065	41719050	0.9667	0.1500	0.6336	0.9969	58.389	0.9995
	rs10461059	41720699	0.9667	0.1500	0.6336	0.9968	61.837	0.9998
rs9998823	41720912	0.9722	0.1500	0.6415	0.9973	61.750	0.9998	
rs4241695	41722202	0.9667	0.1500	0.6336	0.9969	61.646	0.9998	

Table 14: Continuation of Table 11, Table 12, and Table 13.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 4# CHB+JPT vs YRI <i>CCDC4</i> (41,808-41,850kb), <i>TMEM33</i> (41,632-41,653kb), <i>WDR21B</i> (41,679-41,680kb)	rs9654067	41723554	0.9667	0.1500	0.6336	0.9968	61.402	0.9998
	rs3827588	41725973	0.9667	0.1500	0.6336	0.9968	60.941	0.9997
	rs3827590	41726194	0.9722	0.1500	0.6228	0.9961	60.765	0.9997
	rs3827591	41726229	0.9667	0.1500	0.6149	0.9957	60.572	0.9997
	rs4861155	41726781	0.9667	0.0333	0.7467	0.9996	61.698	0.9998
	rs7683204	41728350	0.9667	0.1500	0.6336	0.9968	59.844	0.9996
	rs11725865	41731391	0.9667	0.1417	0.6460	0.9975	64.889	0.9999
	rs10006383	41733603	0.9667	0.1417	0.6460	0.9976	24.969	0.9951
	rs12507609	41736854	0.9667	0.1500	0.6373	0.9972	25.243	0.9953
	rs4377621	41738061	0.9667	0.0333	0.7375	0.9994	26.478	0.9959
	rs10433708	41745215	0.9667	0.1417	0.6460	0.9976	26.422	0.9959
	rs10938170	41750639	0.9667	0.1417	0.6460	0.9976	28.098	0.9962
	rs3804192	41761196	0.9667	0.1417	0.6460	0.9976	29.419	0.9965
	rs12647092	41766976	0.9667	0.0333	0.7375	0.9994	34.658	0.9973
	rs10019356	41768229	0.9667	0.1500	0.6373	0.9972	34.329	0.9973
	rs4438791	41769322	0.9667	0.0333	0.7375	0.9994	35.882	0.9976
	rs7660223	41775871	0.9667	0.1000	0.6900	0.9988	37.575	0.9979
	rs11725543	41781944	0.9667	0.1417	0.6460	0.9975	38.116	0.9979
	rs10002107	41782303	0.9667	0.1417	0.6460	0.9975	38.612	0.9980
	rs12511999	41786014	0.9667	0.0333	0.7375	0.9994	40.573	0.9982
	rs6832890	41801295	0.9667	0.0833	0.7040	0.9991	43.069	0.9985
	rs6447128	41801872	0.9778	0.0833	0.7156	0.9992	44.338	0.9988
	rs7682049	41807491	0.9500	0.0167	0.7234	0.9993	55.109	0.9994
	rs13756	41807998	0.9500	0.0167	0.7234	0.9993	55.762	0.9994
	rs16854014	41812231	0.9833	0.3667	0.5479	0.9907	57.906	0.9995
	rs2880666	41815266	0.9500	0.0167	0.7234	0.9993	57.999	0.9995
	rs6447131	41824754	0.9556	0.0500	0.6949	0.9988	65.236	0.9999
	rs6447132	41828823	0.9556	0.0583	0.6817	0.9986	65.391	0.9999
	rs7664565	41829776	0.9556	0.0583	0.6838	0.9987	65.394	0.9999
	rs6848386	41841414	0.9556	0.1500	0.5900	0.9941	69.135	0.9999
	rs6856819	41844970	0.9556	0.2000	0.5430	0.9903	68.176	0.9999
	rs4861024	41847307	0.9556	0.1500	0.5944	0.9944	68.152	0.9999
rs4449446	41849931	0.9500	0.1583	0.5758	0.9931	66.012	0.9999	

Table 15: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CHB+JPT ( $> 0.5$ ) on chromosome 5 of the HapMap phase II data. \* marked regions which were not reported in Table 1, Sabeti et al. (2007).

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 5* CEU vs CHB+JPT	rs10037966	117382088	0.4333	0.9778	0.7548	0.9997	-23.541	0.9945
	rs10037996	117382265	0.4333	0.9778	0.6604	0.9983	-23.463	0.9944
	rs6595087	117403444	0.5167	0.9778	0.6570	0.9982	-23.301	0.9943
	rs10060421	117420110	0.4500	0.9778	0.7524	0.9996	-22.386	0.9938
	rs10075628	117420311	0.4417	0.9778	0.7536	0.9997	-22.296	0.9938
	rs2900114	117421055	0.4417	0.9778	0.6436	0.9978	-22.187	0.9936
	rs2416504	117436991	0.4000	0.9778	0.7610	0.9998	-20.492	0.9918
	rs11241446	117438830	0.4000	0.9778	0.7610	0.9998	-20.392	0.9917
	rs4489097	117467677	0.4333	0.9778	0.7548	0.9997	-20.099	0.9913
	rs4479878	117472746	0.4333	0.9778	0.7548	0.9997	-19.805	0.9909
	rs13171314	117475111	0.4333	0.9778	0.7386	0.9994	-19.739	0.9908
	rs4523039	117476132	0.4417	0.9778	0.7292	0.9993	-19.663	0.9907
	rs7724328	117515965	0.4083	0.9778	0.6812	0.9988	-28.043	0.9958
	rs4317366	117516317	0.4083	0.9778	0.7513	0.9996	-28.028	0.9957
	rs6872244	117517311	0.4083	0.9667	0.7364	0.9993	-27.270	0.9955
	rs1479207	117520698	0.4083	0.9778	0.7513	0.9996	-25.204	0.9949
	rs10079352	117522539	0.4083	0.9778	0.7513	0.9996	-25.350	0.9949
	rs4639272	117524321	0.4167	0.9778	0.6568	0.9982	-25.560	0.9950
	rs4401605	117524359	0.4167	0.9778	0.7496	0.9996	-25.601	0.9950
	rs7721999	117524545	0.4250	0.9778	0.7481	0.9996	-25.625	0.9950
	rs2900117	117525764	0.5000	0.9778	0.7231	0.9992	-26.258	0.9952
	rs734155	117531602	0.4917	0.9778	0.6125	0.9967	-27.657	0.9956
	rs13356156	117533769	0.4583	0.9778	0.7027	0.9990	-27.744	0.9956
	rs1479196	117534564	0.4583	0.9778	0.7027	0.9990	-27.779	0.9956
	rs1382721	117543368	0.5000	0.9778	0.7066	0.9990	-28.347	0.9959
	rs1382720	117547386	0.4583	0.9778	0.7107	0.9991	-28.120	0.9958
	rs6883098	117588162	0.5000	0.9778	0.5522	0.9925	-52.723	0.9998
	rs1479225	117588467	0.5000	0.9778	0.5594	0.9935	-52.738	0.9998
	rs6859099	117590938	0.4750	0.9722	0.5486	0.9922	-52.507	0.9997
	rs1871367	117599244	0.4167	0.9667	0.7347	0.9993	-43.487	0.9991
	rs7341174	117620240	0.5833	0.9667	0.5287	0.9900	-44.041	0.9991
	rs11739660	117649726	0.7333	0.9778	0.6050	0.9964	-20.987	0.9926
	rs1600306	117651679	0.6167	0.9778	0.6865	0.9989	-20.824	0.9923
	rs11949106	117684094	0.7083	0.9611	0.5726	0.9945	-28.020	0.9957
	rs7446144	117689860	0.5500	0.8667	0.6095	0.9966	-25.274	0.9949
	rs12517872	117720242	0.3667	0.8556	0.6135	0.9968	-29.512	0.9963
	rs7704260	117738963	0.5167	0.9944	0.6192	0.9971	-31.263	0.9966
	rs6595121	117743531	0.7667	0.9667	0.5849	0.9953	-34.741	0.9972
	rs6595126	117777372	0.4333	0.8556	0.5735	0.9946	-34.936	0.9972
	rs6867291	117796132	0.4417	0.8556	0.5635	0.9940	-32.671	0.9968

Table 16: Continuation of Table 15.

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 5* CHB+JPT vs YRI	rs397317	117006587	0.9722	0.0250	0.7391	0.9996	24.665	0.9922
	rs267035	117010380	0.9722	0.0250	0.7391	0.9996	25.942	0.9929
	rs267033	117010655	0.9722	0.0250	0.7391	0.9996	24.397	0.9920
	rs267030	117011477	0.9722	0.0250	0.7391	0.9996	24.775	0.9923
	rs192378	117011538	0.9722	0.0250	0.7391	0.9996	24.910	0.9924
	rs197864	117014844	0.9722	0.0250	0.7391	0.9996	25.077	0.9924
	rs842002	117023413	0.9722	0.0250	0.7391	0.9996	23.153	0.9909
	rs842003	117023684	0.9722	0.0250	0.7391	0.9996	23.185	0.9909
	rs2416472	117033845	0.9667	0.0417	0.7233	0.9992	29.781	0.9948
	rs7714451	117037818	0.9667	0.1750	0.6463	0.9979	34.420	0.9969
	rs10037966	117382088	0.9778	0.0083	0.7548	0.9997	23.702	0.9916
	rs10037996	117382265	0.9778	0.1083	0.6604	0.9983	23.526	0.9914
	rs6595087	117403444	0.9778	0.1000	0.6570	0.9982	23.400	0.9912
	rs2416504	117436991	0.9778	0.0083	0.7610	0.9998	24.142	0.9919
	rs11241446	117438830	0.9778	0.0083	0.7610	0.9998	24.016	0.9918
	rs4489097	117467677	0.9778	0.0083	0.7548	0.9997	33.922	0.9967
	rs4479878	117472746	0.9778	0.0083	0.7548	0.9997	32.976	0.9963
	rs13171314	117475111	0.9778	0.0250	0.7386	0.9994	32.321	0.9959
	rs4523039	117476132	0.9778	0.0333	0.7292	0.9993	31.432	0.9954
	rs10042930	117478730	0.9778	0.1167	0.6495	0.9980	31.133	0.9952
	rs10037904	117478925	0.9778	0.0500	0.7107	0.9991	30.840	0.9952
	rs7724328	117515965	0.9778	0.0917	0.6812	0.9988	59.327	0.9998
	rs4317366	117516317	0.9778	0.0167	0.7513	0.9996	59.649	0.9998
	rs6872244	117517311	0.9667	0.0167	0.7364	0.9993	57.891	0.9998
	rs1479207	117520698	0.9778	0.0167	0.7513	0.9996	41.750	0.9986
	rs10079352	117522539	0.9778	0.0167	0.7513	0.9996	42.270	0.9987
	rs4639272	117524321	0.9778	0.1167	0.6568	0.9982	41.946	0.9986
	rs4401605	117524359	0.9778	0.0167	0.7496	0.9996	42.470	0.9987
	rs7721999	117524545	0.9778	0.0167	0.7481	0.9996	42.632	0.9988
	rs2900117	117525764	0.9778	0.0333	0.7231	0.9992	42.214	0.9987
	rs734155	117531602	0.9778	0.1500	0.6125	0.9967	45.877	0.9990
	rs13356156	117533769	0.9778	0.0583	0.7027	0.9990	40.494	0.9983
	rs1479196	117534564	0.9778	0.0583	0.7027	0.9990	40.258	0.9982
	rs1382721	117543368	0.9778	0.0500	0.7066	0.9990	41.721	0.9986
	rs1382720	117547386	0.9778	0.0500	0.7107	0.9991	40.779	0.9983
	rs6883098	117588162	0.9778	0.2167	0.5522	0.9925	47.296	0.9990
	rs1479225	117588467	0.9778	0.2083	0.5594	0.9935	47.365	0.9990
	rs6859099	117590938	0.9722	0.2167	0.5486	0.9922	45.930	0.9990
	rs1871367	117599244	0.9667	0.0167	0.7347	0.9993	52.081	0.9994
	rs7341174	117620240	0.9667	0.2167	0.5287	0.9900	50.863	0.9992
rs11949106	117684094	0.9611	0.1833	0.5726	0.9945	31.176	0.9953	
rs7446144	117689860	0.8667	0.0083	0.6095	0.9966	27.264	0.9937	
rs12517872	117720242	0.8556	0.0083	0.6135	0.9968	39.572	0.9980	
rs7704260	117738963	0.9944	0.1667	0.6192	0.9971	41.948	0.9986	
rs6595121	117743531	0.9667	0.2000	0.5849	0.9953	41.030	0.9984	
rs6595126	117777372	0.8556	0.0333	0.5735	0.9946	34.886	0.9970	
rs6867291	117796132	0.8556	0.0417	0.5635	0.9940	34.951	0.9970	

Table 17: Regions and SNPs which had highest xp-EHHST values, strongest differentiations, and high derived allele frequency in the tested population CEU ( $> 0.5$ ) on chromosome 7 of the HapMap phase II data. \* marked regions which were not reported in Table 1, Sabeti et al. (2007).

Chromosome Pop A vs Pop B	SNP Name	Position	Derived Allele Freq		$F_{st}$		xp-EHHST	
			$p_A$	$p_B$	Value	Pct	Value	Pct
Chromosome 7* CEU vs CHB+JPT	rs7789561	119168428	0.7667	0.9611	0.6736	0.9987	17.842	0.9945
	rs11978043	119170356	0.7667	0.9611	0.6736	0.9987	17.849	0.9945
	rs1404083	119187663	0.7667	0.9611	0.6736	0.9987	17.807	0.9944
	rs12706259	119197681	0.7667	0.9556	0.6661	0.9984	17.383	0.9939
	rs13239182	119212898	0.7667	0.9611	0.7180	0.9995	17.669	0.9942
	rs12536246	119216218	0.7667	0.9611	0.7180	0.9995	17.477	0.9940
	rs6466713	119221432	0.7667	0.9611	0.6736	0.9987	17.277	0.9937
	rs940412	119228681	0.7667	0.9611	0.6736	0.9987	20.297	0.9967
	rs1916859	119230892	0.7667	0.9611	0.6736	0.9987	20.246	0.9966
	rs10258725	119251546	0.7667	0.9611	0.6736	0.9987	14.502	0.9900
	rs1524197	119261545	0.7667	0.9611	0.6736	0.9986	14.886	0.9905
	rs1949781	119263552	0.7667	0.9611	0.6736	0.9986	14.928	0.9905
	rs1357670	119264341	0.7667	0.9611	0.6736	0.9987	15.039	0.9907
	rs6949406	119319595	0.7667	0.9611	0.6559	0.9980	15.712	0.9917
Chromosome 7* CEU vs YRI	rs7789561	119168428	0.7667	0.1083	0.6736	0.9987	17.596	0.9955
	rs11978043	119170356	0.7667	0.1083	0.6736	0.9987	17.526	0.9955
	rs1404083	119187663	0.7667	0.1083	0.6736	0.9987	42.536	0.9999
	rs12706259	119197681	0.7667	0.1083	0.6661	0.9984	42.008	0.9999
	rs13239182	119212898	0.7667	0.0667	0.7180	0.9995	39.496	0.9998
	rs12536246	119216218	0.7667	0.0667	0.7180	0.9995	37.244	0.9997
	rs6466713	119221432	0.7667	0.1083	0.6736	0.9987	16.391	0.9941
	rs940412	119228681	0.7667	0.1083	0.6736	0.9987	18.403	0.9967
	rs1916859	119230892	0.7667	0.1083	0.6736	0.9987	18.516	0.9969
	rs1524197	119261545	0.7667	0.1083	0.6736	0.9986	15.207	0.9922
	rs1949781	119263552	0.7667	0.1083	0.6736	0.9986	15.385	0.9925
	rs1357670	119264341	0.7667	0.1083	0.6736	0.9987	15.637	0.9930
	rs6949406	119319595	0.7667	0.1250	0.6559	0.9980	17.911	0.9960
	rs4644180	119334545	0.7667	0.1083	0.6736	0.9986	19.101	0.9974
	rs10266385	119345144	0.7667	0.1167	0.6648	0.9983	16.632	0.9943
rs10254361	119351441	0.7667	0.1167	0.6648	0.9983	15.903	0.9935	