

LIST OF 554 SNP APPROVED BY ICAR FOR PARENTAGE VERIFICATION or DISCOVERY

*Note: SNP highlighted in yellow have been identified as problematic
and must be excluded from any use for parentage analysis.*

SNP_Name	Group	Chromosome	Position	rs	ss
ARS-BFGL-BAC-27364	Verification	1	8437530	rs110487850	ss105254853
ARS-BFGL-NGS-86662	Verification	1	40206017	rs110949105	ss86316540
ARS-USMARC-PARENT-AY761135-RS29003723	Verification	1	127426647	rs29003723	ss38341018
ARS-USMARC-PARENT-AY943841-RS17871566	Verification	1	138583183	rs17871566	ss28451907
ARS-USMARC-PARENT-DQ381153-RS29012842	Verification	1	3249057	rs29012842	ss38323940
ARS-USMARC-PARENT-DQ404149-NO-RS	Verification	1	99314925	rs42939801	ss117966457
ARS-USMARC-PARENT-DQ404150-RS29012530	Verification	1	59409838	rs29012530	ss38323621
ARS-USMARC-PARENT-DQ404151-RS29019282	Verification	1	151349514	rs29019282	ss38327170
ARS-USMARC-PARENT-DQ451555-RS29010795	Verification	1	29524658	rs29010795	ss38325080
BTB-01057979	Verification	1	114085424	rs42223561	ss63390705
BTB-01285245	Verification	1	63277846	rs42411615	ss63968561
ARS-BFGL-BAC-35552	Verification	2	12823369	rs41256483	ss105263926
ARS-BFGL-NGS-39978	Verification	2	5757355	rs110425983	ss86287493
ARS-BFGL-NGS-67146	Verification	2	118773633	rs109136926	ss86297381
ARS-USMARC-PARENT-AY776154-NO-RS	Verification	2	26997623	rs41257512	ss117966901
ARS-USMARC-PARENT-AY841151-RS29003466	Verification	2	45832887	rs29003466	ss38340727
ARS-USMARC-PARENT-DQ404152-RS29022245	Verification	2	5306838	rs29022245	ss38330740
ARS-USMARC-PARENT-DQ786757-RS29019900	Verification	2	111155237	rs29019900	ss38327796
HAPMAP46653-BTA-47447	Verification	2	41938704	rs41573026	ss61467906
HAPMAP59876-RS29018046	Verification	2	13853729	rs29018046	ss38335133
ARS-BFGL-NGS-38423	Verification	3	12709854	rs110643545	ss86285582
ARS-USMARC-PARENT-AY842472-RS29001941	Verification	3	40399136	rs29001941	ss38339339
ARS-USMARC-PARENT-AY842473-RS29001956	Verification	3	49703647	rs29001956	ss38339354
ARS-USMARC-PARENT-AY842474-RS29003226	Verification	3	51976646	rs29003226	ss38340448
ARS-USMARC-PARENT-DQ435443-RS29010802	Verification	3	58040470	rs29010802	ss38325087
ARS-USMARC-PARENT-DQ489377-RS29026932	Verification	3	98188384	rs29026932	ss38329318
ARS-USMARC-PARENT-DQ647187-RS29010510	Verification	3	21146877	rs29010510	ss38325021
ARS-USMARC-PARENT-DQ839235-RS29012691	Verification	3	116448759	rs29012691	ss38323789
ARS-BFGL-NGS-58613	Verification	4	78609385	rs42254761	ss86288950
ARS-USMARC-PARENT-AY842475-RS29002127	Verification	4	20181749	rs29002127	ss38339556
ARS-USMARC-PARENT-DQ647186-RS29014143	Verification	4	17200594	rs29014143	ss38323045
BTB-00188171	Verification	4	57787437	rs43396375	ss65312019
BTB-01478115	Verification	4	42103377	rs42595691	ss64353011
HAPMAP39425-BTA-70290	Verification	4	10737673	rs41586923	ss61489805
HAPMAP42648-BTA-71195	Verification	4	71061224	rs41653000	ss61554558
HAPMAP49452-BTA-112834	Verification	4	72987997	rs41569794	ss61473375
HAPMAP54547-RS29012198	Verification	4	110776624	rs29012198	ss38323285
ARS-BFGL-NGS-111053	Verification	5	72264603	rs110813850	ss86339707
ARS-BFGL-NGS-15506	Verification	5	88334676	rs109448272	ss86285779
ARS-USMARC-PARENT-AY844963-RS17871338	Verification	5	98102349	rs17871338	ss28451679
ARS-USMARC-PARENT-DQ468384-RS29003967	Verification	5	113137320	rs17871378	ss28451719
ARS-USMARC-PARENT-DQ470475-NO-RS	Verification	5	7651053	rs43710106	ss117967919
ARS-USMARC-PARENT-DQ500958-NO-RS	Verification	5	27825118	rs43708500	ss117967922
ARS-USMARC-PARENT-DQ647189-RS29012226	Verification	5	63273386	rs29012226	ss38323313
ARS-USMARC-PARENT-DQ846688-RS29023691	Verification	5	119261609	rs29023691	ss38336986
BTA-73768-NO-RS	Verification	5	67031023	rs41647805	ss61555892
ARS-BFGL-NGS-106015	Verification	6	61199572	rs109496638	ss86287153
ARS-BFGL-NGS-119662	Verification	6	118292328	rs108959343	ss86340083

SNP_Name	Group	Chromosome	Position	rs	ss
ARS-USMARC-PARENT-AY849381-RS29003287	Verification	6	23562312	rs29003287	ss38340521
ARS-USMARC-PARENT-DQ647190-RS29013632	Verification	6	13897068	rs29013632	ss38322528
ARS-USMARC-PARENT-DQ789028-RS29017713	Verification	6	46936182	rs29017713	ss38334020
BTB-01902778	Verification	6	114165533	rs43014084	ss64919224
HAPMAP43142-BTA-107561	Verification	6	29556343	rs41567696	ss61472156
HAPMAP51527-BTA-97415	Verification	6	44461834	rs41665299	ss61568611
ARS-BFGL-NGS-101456	Verification	7	82825197	rs43526009	ss86330195
ARS-BFGL-NGS-15731	Verification	7	96936145	rs110220596	ss86301690
ARS-BFGL-NGS-27577	Verification	7	26066004	rs110735554	ss86284992
ARS-BFGL-NGS-72471	Verification	7	103375625	rs109989231	ss86302621
ARS-USMARC-PARENT-DQ650635-RS29012174	Verification	7	55116289	rs29012174	ss38323259
ARS-USMARC-PARENT-DQ786758-RS29024430	Verification	7	18454636	rs29024430	ss38334530
ARS-USMARC-PARENT-DQ786759-RS29026696	Verification	7	94259472	rs29026696	ss38329081
ARS-USMARC-PARENT-DQ888309-RS29013741	Verification	7	8272794	rs29013741	ss38322638
ARS-USMARC-PARENT-DQ916057-RS29009979	Verification	7	81591587	rs29009979	ss38324475
HAPMAP43057-BTA-80741	Verification	7	13279972	rs41588251	ss61492499
HAPMAP60017-RS29023471	Verification	7	81668727	rs29023471	ss38336762
ARS-USMARC-PARENT-AY850194-NO-RS	Verification	8	59996431	rs41255750	ss117969490
ARS-USMARC-PARENT-DQ650636-RS29024525	Verification	8	28799249	rs29024525	ss38334625
ARS-USMARC-PARENT-DQ674265-RS29011266	Verification	8	106174871	rs29011266	ss38325554
ARS-USMARC-PARENT-DQ837644-RS29010468	Verification	8	88974063	rs29010468	ss38324977
ARS-USMARC-PARENT-DQ916058-RS29016146	Verification	8	1554706	rs29016146	ss38332645
HAPMAP55441-RS29010990	Verification	8	103137122	rs29010990	ss38325276
ARS-BFGL-NGS-14740	Verification	9	14436985	rs109548782	ss86311604
ARS-BFGL-NGS-31640	Verification	9	52430564	rs108961088	ss86289247
ARS-BFGL-NGS-93119	Verification	9	28149131	rs109133051	ss86323810
ARS-USMARC-PARENT-DQ786765-RS29009858	Verification	9	98483346	rs29009858	ss38324353
BTB-00394801	Verification	9	59383405	rs43599414	ss65518069
HAPMAP54313-RS29012632	Verification	9	83320792	rs29012632	ss38323727
ARS-BFGL-NGS-111114	Verification	10	84446642	rs43645607	ss86341013
ARS-BFGL-NGS-31807	Verification	10	61684704	rs43638065	ss86311676
ARS-BFGL-NGS-70946	Verification	10	14574453	rs109933901	ss86300858
ARS-USMARC-PARENT-DQ786761-RS29012840	Verification	10	44103665	rs29012840	ss38323938
ARS-USMARC-PARENT-DQ786762-RS29010772	Verification	10	81572252	rs29010772	ss38325057
ARS-USMARC-PARENT-DQ786766-RS29012070	Verification	10	3530271	rs29012070	ss38323155
ARS-USMARC-PARENT-DQ984825-RS29012457	Verification	10	98230479	rs29012457	ss38323545
ARS-USMARC-PARENT-DQ984827-RS29012019	Verification	10	55611885	rs29012019	ss38323104
BTB-00420215	Verification	10	44920804	rs43625528	ss65543436
ARS-BFGL-NGS-117322	Verification	11	77884744	rs109998259	ss86339948
ARS-BFGL-NGS-42283	Verification	11	95543411	rs109007372	ss86295624
ARS-BFGL-NGS-76191	Verification	11	62732451	rs110846944	ss86306783
ARS-USMARC-PARENT-AY851162-NO-RS	Verification	11	46411100	rs41255717	ss117970419
ARS-USMARC-PARENT-AY851163-RS17871661	Verification	11	103047474	rs17871661	ss28452002
ARS-USMARC-PARENT-DQ837643-RS29018818	Verification	11	66341589	rs29018818	ss38335912
ARS-USMARC-PARENT-DQ837645-RS29015870	Verification	11	24553007	rs29015870	ss38332364
BTA-11701-RS29017459	Verification	11	61989432	rs29017459	ss38333753
BTA-92021-NO-RS	Verification	11	9385008	rs41663009	ss61565762
HAPMAP40148-BTA-92999	Verification	11	36713471	rs41592395	ss61495728
ARS-BFGL-NGS-112325	Verification	12	79643103	rs110072997	ss86337040
ARS-USMARC-PARENT-DQ786763-RS29020472	Verification	12	11824653	rs29020472	ss38328160
ARS-USMARC-PARENT-DQ786764-NO-RS	Verification	12	25668974	rs109943112	ss117970659

SNP_Name	Group	Chromosome	Position	rs	ss
BTA-30857-NO-RS	Verification	12	80058952	rs41579524	ss61479561
BTB-01980499	Verification	12	61345454	rs43084864	ss64996227
ARS-BFGL-NGS-112094	Verification	13	69187742	rs109458348	ss86339335
ARS-USMARC-PARENT-AY853302-NO-RS	Verification	13	47397987	rs41257524	ss117970873
ARS-USMARC-PARENT-AY853303-NO-RS	Verification	13	75383374	rs41257490	ss117970875
ARS-USMARC-PARENT-EF026087-RS29011643	Verification	13	1982209	rs29011643	ss38325939
ARS-USMARC-PARENT-EF034081-RS29009668	Verification	13	25606469	rs29009668	ss38324161
HAPMAP43792-BTA-122725	Verification	13	83437845	rs41620645	ss61524403
ARS-BFGL-NGS-42505	Verification	14	62478242	rs109614825	ss86323142
ARS-USMARC-PARENT-DQ846690-NO-RS	Verification	14	10171919	rs43710049	ss117971671
ARS-USMARC-PARENT-DQ846691-RS29019814	Verification	14	48380429	rs29019814	ss38327708
ARS-USMARC-PARENT-DQ846692-RS29010281	Verification	14	80082923	rs29010281	ss38324786
ARS-USMARC-PARENT-DQ984826-RS29027559	Verification	14	27751888	rs29027559	ss38329949
ARS-BFGL-NGS-115514	Verification	15	38003134	rs109164374	ss86339408
ARS-BFGL-NGS-55943	Verification	15	64628706	rs110196141	ss86285855
ARS-USMARC-PARENT-DQ866817-NO-RS	Verification	15	38078775	rs43706884	ss117971908
ARS-USMARC-PARENT-DQ866818-RS29011701	Verification	15	79187295	rs29011701	ss38325997
ARS-USMARC-PARENT-EF042090-NO-RS	Verification	15	21207529	rs43708441	ss117971911
BTA-37062-NO-RS	Verification	15	51528617	rs41632769	ss61536141
BTB-01371672	Verification	15	50566485	rs42492955	ss64140877
ARS-BFGL-BAC-19454	Verification	16	13695211	rs109516152	ss105246072
ARS-BFGL-NGS-117319	Verification	16	12238539	rs42413708	ss86335720
ARS-USMARC-PARENT-DQ846693-RS29017621	Verification	16	9855276	rs29017621	ss38333927
HAPMAP40729-BTA-40319	Verification	16	19882683	rs41635414	ss61537824
HAPMAP47281-BTA-40051	Verification	16	72931875	rs41582312	ss61481907
ARS-BFGL-NGS-11383	Verification	17	12891997	rs110577061	ss86325850
ARS-BFGL-NGS-118319	Verification	17	9279323	rs110473808	ss86335543
ARS-BFGL-NGS-99210	Verification	17	52740918	rs110578763	ss86329428
ARS-USMARC-569	Verification	17	30360942	rs109650557	ss117962557
ARS-USMARC-PARENT-AY858890-RS29002256	Verification	17	29936157	rs29002256	ss38339696
ARS-USMARC-PARENT-AY860426-NO-RS	Verification	17	56512519	rs41255724	ss117972311
ARS-USMARC-PARENT-DQ381152-RS29002408	Verification	17	17616950	rs29002408	ss38339879
ARS-USMARC-PARENT-DQ888310-RS29012422	Verification	17	991486	rs29012422	ss38323509
HAPMAP51227-BTA-41809	Verification	17	67216420	rs41634345	ss61538562
ARS-BFGL-NGS-118340	Verification	18	26844474	rs110706775	ss86338640
ARS-BFGL-NGS-38620	Verification	18	64382705	rs41902634	ss86313444
ARS-USMARC-PARENT-AY863214-RS17871744	Verification	18	46647177	rs17871744	ss28452085
ARS-USMARC-PARENT-AY914316-RS17871403	Verification	18	48812014	rs17871403	ss28451744
ARS-USMARC-PARENT-DQ916059-RS29009907	Verification	18	23426214	rs29009907	ss38324402
ARS-USMARC-PARENT-EF028073-RS29014953	Verification	18	1839733	rs29014953	ss38326646
HAPMAP54020-RS29023153	Verification	18	6776532	rs29023153	ss38336442
ARS-BFGL-NGS-36513	Verification	19	17236707	rs110803034	ss86327338
ARS-BFGL-NGS-57711	Verification	19	40692429	rs110925558	ss86288575
ARS-USMARC-PARENT-AY916666-NO-RS	Verification	19	44799390	rs41257460	ss117972636
ARS-USMARC-PARENT-DQ888311-RS29017313	Verification	19	8505317	rs29017313	ss38333605
ARS-USMARC-PARENT-EF026084-RS29025380	Verification	19	15345312	rs29025380	ss38331266
ARS-USMARC-PARENT-EF164803-RS29011141	Verification	19	55174260	rs29011141	ss38325429
BTB-01416427	Verification	19	52911677	rs42537334	ss64230252
HAPMAP50598-BTA-122724	Verification	19	4670556	rs41575075	ss61475502
ARS-BFGL-NGS-96125	Verification	20	58449212	rs42640153	ss86326564
ARS-USMARC-PARENT-AY919868-RS29002211	Verification	20	46066109	rs29002211	ss38339648

SNP_Name	Group	Chromosome	Position	rs	ss
ARS-USMARC-PARENT-DQ888313-NO-RS	Verification	20	17837675	rs43708490	ss117972867
HAPMAP36588-SCAFFOLD90561_9460	Verification	20	2289049	rs29023669	ss117972848
HAPMAP46550-BTA-103548	Verification	20	30928803	rs41615770	ss61513810
ARS-BFGL-NGS-111076	Verification	21	21220448	rs110551361	ss86336856
ARS-BFGL-NGS-26517	Verification	21	52139183	rs109651210	ss86291238
ARS-USMARC-PARENT-DQ995976-NO-RS	Verification	21	3088886	rs43706859	ss117973059
ARS-USMARC-PARENT-EF026085-RS29021607	Verification	21	65198296	rs29021607	ss38330092
ARS-USMARC-PARENT-EF093511-RS29012316	Verification	21	26620013	rs29012316	ss38323403
BTB-00818821	Verification	21	40408803	rs41981646	ss62736870
HAPMAP31098-BTA-136127	Verification	21	62028408	rs109479519	ss117972951
HAPMAP39461-BTA-109898	Verification	21	27927781	rs41611358	ss61517053
ARS-BFGL-NGS-24419	Verification	22	11756783	rs42002380	ss86317653
ARS-USMARC-PARENT-DQ990832-RS29015065	Verification	22	11038205	rs29015065	ss38326759
ARS-USMARC-PARENT-EF034082-RS29013532	Verification	22	56526462	rs29013532	ss38322427
ARS-USMARC-PARENT-EF093509-RS29015170	Verification	22	22573121	rs29015170	ss38326868
BTA-100621-NO-RS	Verification	22	25598780	rs41611675	ss61512369
HAPMAP43953-BTA-83292	Verification	22	54103673	rs41656801	ss61561086
UA-IFASA-6532	Verification	22	21770149	rs41640891	ss117965542
ARS-USMARC-PARENT-AY929334-NO-RS	Verification	23	7219975	rs41255852	ss117973373
ARS-USMARC-PARENT-AY937242-RS17872223	Verification	23	27306795	rs17872223	ss28452564
ARS-USMARC-PARENT-EF089234-RS29020870	Verification	23	50884052	rs29020870	ss38328561
HAPMAP35535-SCAFFOLD86180_8791	Verification	23	41700829	rs29023461	ss117973345
ARS-USMARC-PARENT-AY939849-RS17870274	Verification	24	56415794	rs17870274	ss28450615
ARS-USMARC-PARENT-DQ990833-RS29010147	Verification	24	15447771	rs29010147	ss38324647
ARS-USMARC-PARENT-DQ995977-RS29020834	Verification	24	1854953	rs29020834	ss38328525
HAPMAP34424-BES10_CONTIG566_926	Verification	24	6408329	rs43708462	ss66538092
ARS-BFGL-NGS-114006	Verification	25	20114319	rs109737083	ss86339571
ARS-USMARC-PARENT-AY941204-RS17872131	Verification	25	14683151	rs17872131	ss28452472
ARS-USMARC-PARENT-EF034083-RS29018286	Verification	25	3126438	rs29018286	ss38335376
HAPMAP41591-BTA-59790	Verification	25	27912102	rs41649671	ss117973994
ARS-BFGL-NGS-10035	Verification	26	39952154	rs110008575	ss86293049
ARS-USMARC-PARENT-DQ990834-RS29013727	Verification	26	8221270	rs29013727	ss38322624
ARS-USMARC-PARENT-EF034086-NO-RS	Verification	26	38233337	rs43708440	ss117974174
ARS-USMARC-PARENT-EF150946-RS29023666	Verification	26	13229219	rs29023666	ss38336959
ARS-BFGL-NGS-102169	Verification	27	12930436	rs110612889	ss86332885
ARS-USMARC-PARENT-EF034084-RS29016185	Verification	27	21480570	rs29016185	ss38332685
ARS-USMARC-PARENT-EF093512-RS29013546	Verification	27	15141319	rs29013546	ss38322441
ARS-USMARC-PARENT-EF141102-RS29015783	Verification	27	37513923	rs29015783	ss38332274
HAPMAP24215-BTA-163266	Verification	27	10764825	rs109704141	ss117974193
HAPMAP51908-BTA-63031	Verification	27	41049981	rs41648007	ss61550226
ARS-BFGL-NGS-76330	Verification	28	33449126	rs109978585	ss86306259
ARS-USMARC-PARENT-EF026086-RS29013660	Verification	28	35331560	rs29013660	ss38322556
ARS-USMARC-PARENT-EF034085-RS29025677	Verification	28	5913226	rs29025677	ss38331569
ARS-USMARC-PARENT-EF034087-NO-RS	Verification	28	16097749	rs110665639	ss117974397
ARS-USMARC-PARENT-EF042091-RS29014974	Verification	28	44261945	rs29014974	ss38326667
HAPMAP52240-RS29013844	Verification	28	20453054	rs29013844	ss38322744
ARS-USMARC-PARENT-AY856094-RS17871190	Verification	29	9160939	rs17871190	ss28451531
ARS-USMARC-PARENT-DQ404153-NO-RS	Verification	29	44756502	rs110843280	ss117974529
ARS-USMARC-PARENT-EF034080-RS29024749	Verification	29	28647816	rs29024749	ss38334851
UA-IFASA-5034	Verification	29	29052623	rs29024763	ss117965805
ARS-BFGL-NGS-104897	Discovery	1	112863292	rs43257282	ss86335115

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ARS-BFGL-NGS-113570	Discovery	1	9601018	rs109360740	ss86340246
ARS-BFGL-NGS-117553	Discovery	1	131326810	rs41994531	ss86341561
ARS-BFGL-NGS-118073	Discovery	1	128471733	rs43266192	ss86341223
ARS-BFGL-NGS-118398	Discovery	1	9019409	rs41584442	ss86341785
ARS-BFGL-NGS-119431	Discovery	1	78986953	rs110348226	ss86338192
ARS-BFGL-NGS-19741	Discovery	1	80548510	rs109629400	ss86316456
ARS-BFGL-NGS-32083	Discovery	1	109099488	rs42356323	ss86307480
ARS-BFGL-NGS-40229	Discovery	1	62184184	rs109327270	ss86288046
ARS-BFGL-NGS-4047	Discovery	1	84614199	rs110710269	ss86289851
ARS-BFGL-NGS-67754	Discovery	1	148816004	rs41583110	ss86297683
ARS-BFGL-NGS-76111	Discovery	1	103219606	rs110775913	ss86306448
BTA-108007-no-rs	Discovery	1	116419981	rs41664832	ss61570066
BTA-122684-NO-RS	Discovery	1	139231307	rs41619822	ss61524374
BTA-23353-NO-RS	Discovery	1	60787763	rs41628641	ss61528709
BTA-35637-NO-RS	Discovery	1	5610335	rs41580510	ss61480774
BTA-46150-NO-RS	Discovery	1	102792723	rs41639071	ss61540930
BTA-49375-NO-RS	Discovery	1	121363361	rs41578204	ss61484351
BTB-00012128	Discovery	1	28599381	rs43223035	ss65136409
BTB-00052125	Discovery	1	120479376	rs43259942	ss65176334
BTB-00061242	Discovery	1	133323967	rs43268844	ss65185443
BTB-00076466	Discovery	1	158161585	rs43282562	ss65200647
BTB-00468476	Discovery	1	46675519	rs43670957	ss65591615
BTB-01077379	Discovery	1	49279500	rs42234990	ss63448381
BTB-01086841	Discovery	1	94882093	rs42243124	ss63476669
BTB-01146838	Discovery	1	48802718	rs42303280	ss63656334
BTB-01287574	Discovery	1	133671941	rs42409034	ss63973210
BTB-01728863	Discovery	1	5179453	rs42845302	ss64746472
BTB-02006134	Discovery	1	61357379	rs43113585	ss65021416
HAPMAP38147-BTA-25404	Discovery	1	57660748	rs41574703	ss61478189
HAPMAP39375-BTA-112108	Discovery	1	78449548	rs41612214	ss61518249
HAPMAP39712-BTA-109811	Discovery	1	101583260	rs110858680	ss61517016
HAPMAP43297-BTA-57357	Discovery	1	152189521	rs41583126	ss117966440
HAPMAP44395-BTA-64864	Discovery	1	153919758	rs41648924	ss61551244
HAPMAP48717-BTA-31633	Discovery	1	59971879	rs41630790	ss61533227
HAPMAP49061-BTA-122268	Discovery	1	63742577	rs41624979	ss61524032
Hapmap49586-BTA-36632	Discovery	1	79700956	rs41582641	ss61481018
HAPMAP50048-BTA-59263	Discovery	1	27465349	rs41586446	ss61486868
HAPMAP52559-RS29015773	Discovery	1	8998063	rs29015773	ss38332264
HAPMAP57299-SS46527085	Discovery	1	145059132	rs41255628	ss46527085
ARS-BFGL-BAC-29664	Discovery	2	30635269	rs110341860	ss105257401
ARS-BFGL-BAC-30348	Discovery	2	22151093	rs110419748	ss105258160
ARS-BFGL-BAC-32404	Discovery	2	13343685	rs109320395	ss105260440
ARS-BFGL-NGS-103086	Discovery	2	2858436	rs109595377	ss86330023
ARS-BFGL-NGS-116761	Discovery	2	136483623	rs110011842	ss86339699
ARS-BFGL-NGS-118138	Discovery	2	67292723	rs42457132	ss86336697
ARS-BFGL-NGS-118876	Discovery	2	66585600	rs109264826	ss86339741
ARS-BFGL-NGS-15250	Discovery	2	89845085	rs109386162	ss86326904
ARS-BFGL-NGS-15508	Discovery	2	119595498	rs110868968	ss86328344
ARS-BFGL-NGS-33709	Discovery	2	130187033	rs109419732	ss86315136
ARS-BFGL-NGS-35963	Discovery	2	105193025	rs110551793	ss86303585
ARS-BFGL-NGS-40189	Discovery	2	89008935	rs109189655	ss86321720

SNP_Name	Group	Chromosome	Position	rs	ss
ARS-BFGL-NGS-57870	Discovery	2	37813654	rs110568121	ss86288122
ARS-BFGL-NGS-60640	Discovery	2	3242217	rs109370370	ss86291691
ARS-BFGL-NGS-67260	Discovery	2	135190642	rs109453608	ss86297852
ARS-BFGL-NGS-72192	Discovery	2	65044427	rs109205936	ss86301441
ARS-BFGL-NGS-89098	Discovery	2	13901492	rs109154008	ss86318772
BTA-114831-NO-RS	Discovery	2	39709004	rs41574370	ss61473860
BTA-19852-NO-RS	Discovery	2	42986890	rs41628437	ss61526969
BTB-00079213	Discovery	2	8476975	rs43288464	ss65203384
BTB-00082871	Discovery	2	20699862	rs43293394	ss65207039
BTB-00089384	Discovery	2	35264900	rs43300334	ss65213533
BTB-00098773	Discovery	2	52497009	rs43304762	ss65222905
BTB-01294230	Discovery	2	55038193	rs42418154	ss63986515
BTB-01753605	Discovery	2	55729126	rs42862169	ss64771163
HAPMAP33049-BTA-153946	Discovery	2	79320427	rs109475468	ss117966789
HAPMAP35220-BES9_CONTIG365_495	Discovery	2	70895063	rs43710074	ss66538228
HAPMAP35744-SCAFFOLD60587_8279	Discovery	2	111361143	rs29018369	ss117966872
HAPMAP42104-BTA-121232	Discovery	2	81159639	rs41619967	ss61523297
HAPMAP43869-BTA-49512	Discovery	2	120301651	rs41636478	ss61542755
Hapmap44202-BTA-115270	Discovery	2	62367003	rs41620314	ss61519990
HAPMAP44545-BTA-47658	Discovery	2	52339443	rs41637159	ss61541725
HAPMAP49925-BTA-24427	Discovery	2	86704498	rs41633771	ss61529263
HAPMAP51412-BTA-16926	Discovery	2	59690093	rs41621063	ss61525448
HAPMAP51598-BTA-47943	Discovery	2	65700940	rs41638281	ss61541849
HAPMAP52627-RS29014567	Discovery	2	100273809	rs29014567	ss38326256
Hapmap53350-ss46526471	Discovery	2	125653839	rs41256934	ss46526471
HAPMAP54320-RS29012920	Discovery	2	5037866	rs29012920	ss38324019
HAPMAP54766-RS29012658	Discovery	2	14451633	rs29012658	ss38323754
HAPMAP58509-RS29024139	Discovery	2	37635484	rs29024139	ss38334232
UA-IFASA-4619	Discovery	2	76309053	rs29014393	ss117963586
UA-IFASA-8833	Discovery	2	116087072	rs41643750	ss117963637
ARS-BFGL-NGS-103524	Discovery	3	85253155	rs110713161	ss86332467
ARS-BFGL-NGS-105811	Discovery	3	22706379	rs110161964	ss86306287
ARS-BFGL-NGS-111118	Discovery	3	32077291	rs108937915	ss86338009
ARS-BFGL-NGS-113910	Discovery	3	43939238	rs110690853	ss86338078
ARS-BFGL-NGS-114028	Discovery	3	105173273	rs43365742	ss86339556
ARS-BFGL-NGS-116451	Discovery	3	114252911	rs42527283	ss86340874
ARS-BFGL-NGS-117241	Discovery	3	28144691	rs109896720	ss86338373
ARS-BFGL-NGS-117870	Discovery	3	33332678	rs109182422	ss86339080
ARS-BFGL-NGS-118597	Discovery	3	103268281	rs43355872	ss86336478
ARS-BFGL-NGS-17527	Discovery	3	4279731	rs41621390	ss86286004
ARS-BFGL-NGS-20403	Discovery	3	119000177	rs43371159	ss86295607
ARS-BFGL-NGS-2215	Discovery	3	84693517	rs43355620	ss86306392
ARS-BFGL-NGS-27948	Discovery	3	10000411	rs109754043	ss86304157
ARS-BFGL-NGS-34169	Discovery	3	19309220	rs109033268	ss86285964
ARS-BFGL-NGS-34393	Discovery	3	50673505	rs109268555	ss86274328
ARS-BFGL-NGS-45686	Discovery	3	26031815	rs109578131	ss86302394
ARS-BFGL-NGS-57417	Discovery	3	43975868	rs108998940	ss86288485
ARS-BFGL-NGS-58066	Discovery	3	92986164	rs111019940	ss86287927
ARS-BFGL-NGS-99338	Discovery	3	21869985	rs110474631	ss86327855
ARS-USMARC-Parent-DQ422950-rs29012306	Discovery	3	3129167	rs29012306	ss38323393
BTA-100337-NO-RS	Discovery	3	41371572	rs109133797	ss61512219

SNP_Name	Group	Chromosome	Position	rs	ss
BTA-68995-NO-RS	Discovery	3	97793166	rs43712181	ss61553433
BTA-99693-no-rs	Discovery	3	39522643	rs41596848	ss61497421
BTB-01097609	Discovery	3	68271435	rs42253045	ss63508922
BTB-01626709	Discovery	3	113907407	rs42737927	ss64644746
HAPMAP32799-BTA-132450	Discovery	3	73549770	rs41882343	ss117967002
Hapmap39765-BTA-62582	Discovery	3	99317016	rs41646786	ss61549999
HAPMAP40508-BTA-21513	Discovery	3	73035441	rs41575437	ss61477190
HAPMAP43906-BTA-66658	Discovery	3	14273135	rs41587368	ss61488827
HAPMAP43908-BTA-67758	Discovery	3	44959256	rs41590454	ss61489117
HAPMAP46717-BTA-69803	Discovery	3	118167062	rs41586388	ss61489670
INRA-638	Discovery	3	62004226	rs110438768	ss117962838
ARS-BFGL-NGS-35219	Discovery	4	106885171	rs108960855	ss86324609
ARS-USMARC-Parent-DQ485413-no-rs	Discovery	4	94176209	rs41590225	ss140469302
BTA-82216-no-rs	Discovery	4	52308430	rs41590598	ss61492850
BTB-01902057	Discovery	4	6604523	rs43013883	ss64918503
ARS-BFGL-NGS-103280	Discovery	5	84523411	rs109268659	ss86332959
ARS-BFGL-NGS-107085	Discovery	5	28660813	rs109223185	ss86289994
ARS-BFGL-NGS-14632	Discovery	5	118501191	rs110117542	ss86329869
ARS-BFGL-NGS-21717	Discovery	5	117102295	rs109513912	ss86313314
ARS-BFGL-NGS-23432	Discovery	5	40112322	rs109724164	ss86277105
ARS-BFGL-NGS-23961	Discovery	5	25995476	rs110038808	ss86311819
ARS-BFGL-NGS-25107	Discovery	5	119408760	rs109607671	ss86319576
ARS-BFGL-NGS-30677	Discovery	5	43565856	rs110873570	ss86294546
ARS-BFGL-NGS-33745	Discovery	5	51064864	rs110258843	ss86297916
ARS-BFGL-NGS-39913	Discovery	5	85535871	rs109168591	ss86320410
ARS-BFGL-NGS-44153	Discovery	5	97430973	rs109783698	ss86307990
ARS-BFGL-NGS-45453	Discovery	5	112521878	rs109934583	ss86276041
ARS-BFGL-NGS-51490	Discovery	5	16522966	rs109483098	ss86281895
ARS-BFGL-NGS-53461	Discovery	5	30659497	rs110059642	ss86283356
ARS-BFGL-NGS-72413	Discovery	5	82466920	rs109023960	ss86303481
ARS-BFGL-NGS-7433	Discovery	5	44885503	rs109090162	ss86274207
ARS-BFGL-NGS-81155	Discovery	5	13271489	rs109443432	ss86311662
BTA-37834-NO-RS	Discovery	5	93187014	rs109957658	ss61481328
BTA-73797-NO-RS	Discovery	5	64190317	rs41590761	ss61490756
BTA-85566-NO-RS	Discovery	5	66040455	rs43743037	ss61562356
BTA-89424-NO-RS	Discovery	5	16666769	rs109089295	ss61564393
BTB-01495784	Discovery	5	34101843	rs42616286	ss64388054
BTB-01498887	Discovery	5	97111	rs42620770	ss64394240
HAPMAP33479-BTA-137049	Discovery	5	15224660	rs109840696	ss117967832
HAPMAP39103-BTA-111886	Discovery	5	91346899	rs41611298	ss61518129
HAPMAP40581-BTA-73771	Discovery	5	67153683	rs109701457	ss61555894
HAPMAP44400-BTA-72792	Discovery	5	15696963	rs41587982	ss61490476
HAPMAP47185-BTA-114173	Discovery	5	99044605	rs41573130	ss61473714
Hapmap50084-BTA-74042	Discovery	5	75417666	rs41650242	ss61556030
HAPMAP50837-BTA-98392	Discovery	5	46995137	rs41593990	ss61497060
HAPMAP51304-BTA-74559	Discovery	5	93718582	rs41591921	ss61490918
HAPMAP59828-RS29027014	Discovery	5	66830677	rs29027014	ss38329400
HAPMAP60420-RS29010136	Discovery	5	112045991	rs29010136	ss38324636
ARS-USMARC-Parent-AY849380-no-rs	Discovery	6	90562665	rs41255758	ss49846084
Hapmap50460-BTA-75791	Discovery	6	8478503	rs41595940	ss61491244
ARS-BFGL-NGS-102603	Discovery	7	67495781	rs110351681	ss86331087

SNP_Name	Group	Chromosome	Position	rs	ss
ARS-BFGL-NGS-109750	Discovery	7	45412030	rs110303958	ss86336681
ARS-BFGL-NGS-110438	Discovery	7	27258897	rs109370616	ss86335506
ARS-BFGL-NGS-117421	Discovery	7	4286714	rs43494965	ss86341439
ARS-BFGL-NGS-11889	Discovery	7	43292715	rs111029549	ss86320413
ARS-BFGL-NGS-2141	Discovery	7	16371434	rs110850872	ss86295109
ARS-BFGL-NGS-61492	Discovery	7	70011889	rs110210825	ss86290741
ARS-BFGL-NGS-75852	Discovery	7	71545383	rs109260182	ss86306495
BTA-09064-rs29025231	Discovery	7	112265796	rs29025231	ss38331116
BTA-104712-NO-RS	Discovery	7	57011212	rs41611784	ss61514411
BTA-113124-NO-RS	Discovery	7	73290787	rs43706044	ss61498638
BTA-20841-NO-RS	Discovery	7	92201609	rs41624194	ss61527534
BTB-00311926	Discovery	7	59651740	rs43517685	ss65435347
BTB-00312091	Discovery	7	63547825	rs43520350	ss65435512
BTB-00320041	Discovery	7	80573481	rs43526579	ss65443454
BTB-00327755	Discovery	7	76497957	rs43528937	ss65451163
BTB-00955215	Discovery	7	106043966	rs42118405	ss63104298
BTB-01130079	Discovery	7	58255324	rs42284419	ss63606117
BTB-01172317	Discovery	7	36127497	rs42326854	ss63732749
BTB-01453354	Discovery	7	77038018	rs42579108	ss64303872
BTB-01920914	Discovery	7	86936090	rs43026255	ss64937240
HAPMAP30362-BTA-79378	Discovery	7	59353807	rs41605127	ss61504352
HAPMAP33032-BTA-148803	Discovery	7	68830299	rs42277425	ss117969067
HAPMAP50109-BTA-79983	Discovery	7	81964652	rs41656547	ss61559313
HAPMAP50113-BTA-80661	Discovery	7	8860921	rs41597420	ss61492473
UA-IFASA-4904	Discovery	7	35153271	rs29015019	ss117963926
ARS-BFGL-NGS-106379	Discovery	8	113159018	rs42390350	ss86307964
ARS-BFGL-NGS-108099	Discovery	8	23116314	rs109279813	ss86317401
ARS-BFGL-NGS-108549	Discovery	8	82311830	rs110503484	ss86306174
ARS-BFGL-NGS-110811	Discovery	8	69343704	rs110481266	ss86339546
ARS-BFGL-NGS-111788	Discovery	8	101231366	rs43578821	ss86340085
ARS-BFGL-NGS-117122	Discovery	8	20608192	rs109443931	ss86340374
ARS-BFGL-NGS-16925	Discovery	8	64476783	rs110070404	ss86323536
ARS-BFGL-NGS-28141	Discovery	8	97241486	rs109555469	ss86325310
ARS-BFGL-NGS-30559	Discovery	8	51719716	rs110282071	ss86312018
ARS-BFGL-NGS-37680	Discovery	8	55778679	rs43773249	ss86315576
ARS-BFGL-NGS-44611	Discovery	8	60225941	rs110839325	ss86294603
ARS-BFGL-NGS-71395	Discovery	8	24707157	rs42216771	ss86301528
ARS-BFGL-NGS-92824	Discovery	8	111713971	rs111025793	ss86323461
BTA-101724-NO-RS	Discovery	8	93896073	rs41616289	ss61512891
BTA-80863-NO-RS	Discovery	8	22130988	rs41658821	ss61559804
BTB-00095699	Discovery	8	15534805	rs43303344	ss65219838
BTB-00285653	Discovery	8	30036807	rs43499009	ss65409130
BTB-00431734	Discovery	8	110042671	rs43640778	ss65554940
BTB-01109703	Discovery	8	26899147	rs42264490	ss63545166
BTB-01276763	Discovery	8	3798414	rs42400277	ss63951620
BTB-01944037	Discovery	8	108772548	rs43053569	ss64960232
HAPMAP24224-BTA-93350	Discovery	8	65960156	rs41606159	ss61505413
HAPMAP39690-BTA-82650	Discovery	8	104829510	rs41590921	ss61492973
HAPMAP45337-BTA-109277	Discovery	8	4955143	rs41618019	ss61516718
HAPMAP49049-BTA-119736	Discovery	8	55892688	rs41571461	ss61475068
HAPMAP49333-BTA-82773	Discovery	8	109321402	rs41609510	ss61510981

SNP_Name	Group	Chromosome	Position	rs	ss
HAPMAP57430-RS29016504	Discovery	8	1154683	rs29016504	ss38333008
HAPMAP58894-RS29013940	Discovery	8	99957737	rs29013940	ss38322841
HAPMAP58990-RS29020862	Discovery	8	9962339	rs29020862	ss38328553
UA-IFASA-2534	Discovery	8	45804905	rs29009895	ss117963993
UA-IFASA-6154	Discovery	8	104158107	rs41590851	ss117964020
ARS-BFGL-NGS-26056	Discovery	9	3651455	rs110616633	ss86285011
ARS-BFGL-NGS-3465	Discovery	9	87606681	rs109170761	ss86314662
ARS-USMARC-Parent-DQ846689-rs29011985	Discovery	9	45729853	rs29011985	ss38323070
ARS-BFGL-NGS-35455	Discovery	10	10795992	rs110493467	ss86298634
Hapmap25493-BTA-109827	Discovery	10	4383927	rs43711263	ss61498362
ARS-BFGL-BAC-14220	Discovery	11	13914771	rs109677705	ss105240266
ARS-BFGL-NGS-10436	Discovery	11	26982927	rs109880920	ss86289220
ARS-BFGL-NGS-109752	Discovery	11	95322986	rs109391965	ss86335949
ARS-BFGL-NGS-111691	Discovery	11	44844492	rs41597473	ss86340494
ARS-BFGL-NGS-112130	Discovery	11	102548124	rs109194444	ss86335992
ARS-BFGL-NGS-114087	Discovery	11	64057850	rs110374329	ss86336971
ARS-BFGL-NGS-116589	Discovery	11	100901534	rs109391018	ss86341591
ARS-BFGL-NGS-117672	Discovery	11	31332721	rs109144352	ss86339235
ARS-BFGL-NGS-24591	Discovery	11	42330073	rs110734659	ss86314415
ARS-BFGL-NGS-28681	Discovery	11	101522062	rs109732456	ss86289852
ARS-BFGL-NGS-41117	Discovery	11	6724678	rs109850773	ss86321402
ARS-BFGL-NGS-5662	Discovery	11	83028893	rs110152455	ss86292486
ARS-BFGL-NGS-66512	Discovery	11	36983331	rs110248771	ss86297019
ARS-BFGL-NGS-68030	Discovery	11	1901787	rs43659115	ss86298860
ARS-BFGL-NGS-68850	Discovery	11	5252617	rs42274427	ss86298915
ARS-USMARC-Parent-DQ837646-rs29012894	Discovery	11	1703612	rs29012894	ss38323993
BTA-88608-no-rs	Discovery	11	24317047	rs41597697	ss61494512
BTA-99659-NO-RS	Discovery	11	30945111	rs41596833	ss61497406
BTB-00458773	Discovery	11	10753131	rs43663587	ss65581933
BTB-00474688	Discovery	11	50431031	rs43680229	ss65597810
BTB-01397485	Discovery	11	33236456	rs42520028	ss64192391
BTB-01426876	Discovery	11	34482175	rs42552262	ss64251080
HAPMAP22963-BTA-91941	Discovery	11	1806374	rs41604980	ss61505330
HAPMAP33373-BTA-148341	Discovery	11	39437937	rs110590483	ss117970339
Hapmap41140-BTA-107332	Discovery	11	78545016	rs41616688	ss61515739
HAPMAP43815-BTA-23051	Discovery	11	44583035	rs41626586	ss61528544
HAPMAP48543-BTA-98093	Discovery	11	59319163	rs41668260	ss61568981
ARS-USMARC-Parent-DQ832700-rs29012872	Discovery	12	80629629	rs29012872	ss38323971
BTA-23867-no-rs	Discovery	12	50865733	rs41630989	ss61528978
Hapmap48641-BTA-119400	Discovery	12	10996119	rs41617704	ss61522219
ARS-BFGL-BAC-11276	Discovery	13	2153905	rs110053849	ss105237002
ARS-BFGL-NGS-103379	Discovery	13	3764223	rs42580320	ss86330316
ARS-BFGL-NGS-108308	Discovery	13	28999095	rs109618623	ss86289651
ARS-BFGL-NGS-111777	Discovery	13	35029615	rs109436345	ss86340999
ARS-BFGL-NGS-112625	Discovery	13	74579327	rs109238076	ss86337827
ARS-BFGL-NGS-11585	Discovery	13	17407043	rs109418164	ss86324125
ARS-BFGL-NGS-118453	Discovery	13	74179277	rs110768475	ss86339738
ARS-BFGL-NGS-22052	Discovery	13	61559991	rs43708211	ss86340346
ARS-BFGL-NGS-28202	Discovery	13	38359460	rs110452193	ss86314069
ARS-BFGL-NGS-29144	Discovery	13	40606621	rs41689621	ss86280267
ARS-BFGL-NGS-36793	Discovery	13	80239131	rs111027602	ss86273810

SNP_Name	Group	Chromosome	Position	rs	ss
ARS-BFGL-NGS-36852	Discovery	13	37210394	rs110779743	ss86296804
ARS-BFGL-NGS-55042	Discovery	13	45510831	rs109631491	ss86285379
ARS-BFGL-NGS-81428	Discovery	13	20735468	rs110541329	ss86311680
ARS-BFGL-NGS-84327	Discovery	13	5774000	rs41681601	ss86314715
ARS-BFGL-NGS-92946	Discovery	13	16399441	rs41679621	ss86323130
BTA-102818-NO-RS	Discovery	13	83632355	rs41612098	ss61513418
BTA-92697-no-rs	Discovery	13	50910557	rs41661000	ss61566157
BTB-01124378	Discovery	13	6600008	rs42283006	ss63589116
BTB-01141508	Discovery	13	679009	rs42300745	ss63640372
BTB-01141770	Discovery	13	777430	rs42303607	ss63641158
BTB-01656080	Discovery	13	51621880	rs42771121	ss64674033
HAPMAP23870-BTA-128381	Discovery	13	43427963	rs41690422	ss117970697
HAPMAP26649-BTA-128159	Discovery	13	19734286	rs41679704	ss117970743
Hapmap39398-BTA-31996	Discovery	13	26708860	rs41632359	ss61533405
Hapmap48136-BTA-96744	Discovery	13	719908	rs41663038	ss61568240
HAPMAP50266-BTA-13664	Discovery	13	18536707	rs29018622	ss38335716
HAPMAP54459-RS29016219	Discovery	13	12436043	rs29016219	ss38332719
HAPMAP57586-RS29015232	Discovery	13	6396120	rs29015232	ss38326931
HAPMAP59420-SS46527113	Discovery	13	35533998	rs41255656	ss46527113
ARS-BFGL-NGS-103346	Discovery	14	68578968	rs110365259	ss86334026
ARS-BFGL-NGS-12610	Discovery	15	27822630	rs108991969	ss86325725
BTB-01912619	Discovery	15	20712027	rs43020250	ss64929001
Hapmap32097-BTA-150519	Discovery	15	56302387	rs109737932	ss117971819
ARS-USMARC-Parent-DQ846695-no-rs	Discovery	16	80747557	rs41825023	ss117972104
BTB-00689316	Discovery	17	71925055	rs41853796	ss62371709
BTB-01715543	Discovery	17	45185286	rs42825187	ss64733230
ARS-BFGL-NGS-37708	Discovery	18	49928003	rs41885368	ss86298769
Hapmap47949-BTA-43407	Discovery	18	44524702	rs41581677	ss61482794
ARS-BFGL-NGS-103691	Discovery	19	53473744	rs109895974	ss86330883
ARS-BFGL-NGS-1097	Discovery	19	34836416	rs110474375	ss86274483
ARS-BFGL-NGS-112392	Discovery	19	56341205	rs41925019	ss86338991
ARS-BFGL-NGS-114067	Discovery	19	46117735	rs110706642	ss86339580
ARS-BFGL-NGS-12595	Discovery	19	55101341	rs109076010	ss86292850
ARS-BFGL-NGS-16504	Discovery	19	55967853	rs110727417	ss86305593
ARS-BFGL-NGS-28504	Discovery	19	44403315	rs109751693	ss86285474
ARS-BFGL-NGS-32769	Discovery	19	22346456	rs110865656	ss86300067
ARS-BFGL-NGS-32846	Discovery	19	63560230	rs109282926	ss86335598
ARS-BFGL-NGS-33000	Discovery	19	10542886	rs110046289	ss86296211
ARS-BFGL-NGS-42338	Discovery	19	17326249	rs110407219	ss86295481
ARS-BFGL-NGS-45547	Discovery	19	62478817	rs42429829	ss86306230
ARS-BFGL-NGS-6269	Discovery	19	29411883	rs110000667	ss86295403
ARS-BFGL-NGS-64451	Discovery	19	60407194	rs110466604	ss86294159
ARS-BFGL-NGS-73980	Discovery	19	51419352	rs110514489	ss86304368
ARS-USMARC-Parent-DQ888312-rs29015945	Discovery	19	36437188	rs29015945	ss38332442
BTA-118486-NO-RS	Discovery	19	21716537	rs41572555	ss61474763
BTB-00736933	Discovery	19	8280552	rs41895988	ss62513857
HAPMAP26973-BTA-147422	Discovery	19	12340926	rs110392985	ss117972526
Hapmap39390-BTA-22146	Discovery	19	4509536	rs41630136	ss61528095
HAPMAP40170-BTA-20573	Discovery	19	19175183	rs41623352	ss117972620
HAPMAP42556-BTA-45815	Discovery	19	51445450	rs41636899	ss61540754
HAPMAP46758-BTA-108921	Discovery	19	26182297	rs41571534	ss61472509

SNP_Name	Group	Chromosome	Position	rs	ss
HAPMAP57648-RS29022376	Discovery	19	22709090	rs29022376	ss38330872
HAPMAP58587-SS46526997	Discovery	19	24972085	rs41255542	ss46526997
UA-IFASA-7987	Discovery	19	18799689	rs41640012	ss117965319
UA-IFASA-8658	Discovery	19	47415500	rs41665355	ss117965384
ARS-USMARC-Parent-DQ990835-rs29012811	Discovery	20	36570529	rs29012811	ss38323909
BTB-00041743	Discovery	20	46735404	rs43252624	ss65165964
BTB-01565998	Discovery	20	37915840	rs42680109	ss64530672
Hapmap32669-BTA-50759	Discovery	20	50999239	rs41606327	ss61502418
Hapmap40826-BTA-87264	Discovery	20	496304	rs41594336	ss61494128
ARS-BFGL-NGS-104603	Discovery	21	2918184	rs110316813	ss86335025
ARS-BFGL-NGS-109907	Discovery	21	12539191	rs110229647	ss86337107
ARS-BFGL-NGS-114538	Discovery	21	70521657	rs109726203	ss86339325
ARS-BFGL-NGS-115346	Discovery	21	67515244	rs109826517	ss86339596
ARS-BFGL-NGS-115598	Discovery	21	62709685	rs110842067	ss86340340
ARS-BFGL-NGS-117619	Discovery	21	31035761	rs110351726	ss86338139
ARS-BFGL-NGS-13360	Discovery	21	30118274	rs42267294	ss86340145
ARS-BFGL-NGS-16249	Discovery	21	10944434	rs109396729	ss86298800
ARS-BFGL-NGS-19437	Discovery	21	47400719	rs110023442	ss86302854
ARS-BFGL-NGS-22685	Discovery	21	46877052	rs110574752	ss86306574
ARS-BFGL-NGS-23813	Discovery	21	42540260	rs109453755	ss86326298
ARS-BFGL-NGS-25959	Discovery	21	64354251	rs109290113	ss86298390
ARS-BFGL-NGS-2644	Discovery	21	70608408	rs110204931	ss86308993
ARS-BFGL-NGS-37484	Discovery	21	68683196	rs110976149	ss86325665
ARS-BFGL-NGS-44686	Discovery	21	9190518	rs110105912	ss86311678
ARS-BFGL-NGS-8229	Discovery	21	22156279	rs41970500	ss86321762
BTB-00806621	Discovery	21	18912588	rs43725759	ss62700450
BTB-01303828	Discovery	21	37143433	rs42428520	ss64005684
BTB-01375460	Discovery	21	51325226	rs42499708	ss64148441
HAPMAP26512-BTA-52638	Discovery	21	55483469	rs41608374	ss61502567
Hapmap35472-SCAFFOLD35342_21388	Discovery	21	66107076	rs29017723	ss117973024
HAPMAP38899-BTA-52139	Discovery	21	36492508	rs41641697	ss61544199
HAPMAP52072-RS29018920	Discovery	21	2333804	rs29018920	ss38336017
HAPMAP53212-RS29015272	Discovery	21	25704052	rs29015272	ss38326971
HAPMAP57137-RS29011525	Discovery	21	18454966	rs29011525	ss38325820
ARS-BFGL-NGS-119059	Discovery	22	58748602	rs110019581	ss86338680
ARS-BFGL-NGS-31568	Discovery	23	51795496	rs109579577	ss86316172
Hapmap23842-BTA-56935	Discovery	23	47219946	rs41600226	ss61502810
ARS-BFGL-NGS-2592	Discovery	24	12775555	rs109874767	ss86335484
ARS-BFGL-NGS-85334	Discovery	24	54964769	rs109014300	ss86315535
ARS-BFGL-NGS-16739	Discovery	25	20723432	rs109106222	ss86304574
ARS-USMARC-Parent-AY942198-rs29003010	Discovery	25	40851475	rs29003010	ss38340199
ARS-BFGL-NGS-35579	Discovery	26	26058953	rs110035524	ss86320766
ARS-BFGL-NGS-43058	Discovery	26	37466186	rs110952163	ss86300608
Hapmap42117-BTA-15977	Discovery	27	44629833	rs41624790	ss61524962
Hapmap43150-BTA-110538	Discovery	28	6732947	rs41614882	ss61517404
ARS-BFGL-NGS-56314	Discovery	29	4944723	rs109781094	ss86287263
ARS-BFGL-NGS-90760	Discovery	29	40153672	rs110854486	ss86321148