

MiniMUGA Background Analysis v2.3.1

Sample ID	B854																																						
Neogen ID	AAAU-4508																																						
Summary	<p>The genotype of this sample is of excellent quality. It is XO and outbred, and likely a mix of C57BL/6J and C57BL/6NTac and CBA/J. Clustering of unexplained markers is evidence of an additional background strain.</p> <p>Diagnostic SNPs are likely explained by the presence of the background strains</p> <ul style="list-style-type: none">Solution 1: C57BL/6J and C57BL/6NTac<ul style="list-style-type: none">C57BL/6J: 59 / 160 (36.9%)C57BL/6NTac: 14 / 27 (51.9%)Solution 2: C57BL/6J and C57BL/6NRj<ul style="list-style-type: none">C57BL/6J: 59 / 160 (36.9%)C57BL/6NRj: 14 / 27 (51.9%)Solution 3: C57BL/6JRj and C57BL/6NTac<ul style="list-style-type: none">C57BL/6JRj: 59 / 160 (36.9%)C57BL/6NTac: 14 / 27 (51.9%)Solution 4: C57BL/6JRj and C57BL/6NRj<ul style="list-style-type: none">C57BL/6JRj: 59 / 160 (36.9%)C57BL/6NRj: 14 / 27 (51.9%) <p>No genetic constructs were detected in this sample.</p>																																						
	Genotyping Quality	Excellent (33 N calls) All reported results are dependent on genotyping quality.																																					
	Chromosomal Sex	XO																																					
Inbreeding Estimate	68.2% Inbred (Percentage of the genome (autosomal and X chromosomes) that is homozygous or hemizygous for primary, secondary, and unknown backgrounds. See Genome Analysis)																																						
Constructs Detected	<table><thead><tr><th>BlastR</th><th>bpA</th><th>Cas9</th><th>chlor</th><th>eHS4</th><th>Cre</th><th>DTA</th><th>Flp</th><th>g_FP</th><th>hCMV_a</th><th>hCMV_b</th><th>hTK_pr</th><th>iCre</th><th>IRES</th><th>Luc</th><th>r_FP</th><th>rtTA</th><th>SV4o</th><th>tTA</th></tr></thead><tbody><tr><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></tbody></table>	BlastR	bpA	Cas9	chlor	eHS4	Cre	DTA	Flp	g_FP	hCMV_a	hCMV_b	hTK_pr	iCre	IRES	Luc	r_FP	rtTA	SV4o	tTA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BlastR	bpA	Cas9	chlor	eHS4	Cre	DTA	Flp	g_FP	hCMV_a	hCMV_b	hTK_pr	iCre	IRES	Luc	r_FP	rtTA	SV4o	tTA																					
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																					
Refined Ideogram	<div><div>Sample AAAU-4508 - Genetic Background</div><div><div><div>C57BL/6J and C57BL/6NTac</div><div>CBA/J</div><div>C57BL/6J and C57BL/6NTac X CBA/J</div></div><div><div>IBD</div><div>Unexplained Homozygous</div><div>Unexplained Heterozygous</div></div></div><div>Diagnostic Markers</div><div><div>C57BL/6J and C57BL/6NTac Diagnostic Allele</div><div>C57BL/6J and C57BL/6NTac Non-Diagnostic Allele</div></div></div>																																						

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	Background	Zygotity	Informative Markers	Informative Markers %	Genome %
Genome Analysis	C57BL/6J and C57BL/6NTac	N/A	1035	39.0%	39.4%
	CBA/J	Homozygous	671	25.3%	27.2%
	C57BL/6J and C57BL/6NTac X CBA/J	Heterozygous	935	35.2%	33.1%
	Unexplained	Heterozygous	13	0.5%	0.2%
	Total		2654	100.0%	99.9%
Y Chromosome	Not Applicable				
MT Genome	MT Haplogroup 6 - 100.0% Consistent Includes C57BL/6J, C57BL/6NTac, CBA/J and 165 other strains				
Backgrounds Detected (Diagnostic Alleles)	Diagnostic Alleles Observed				
	Diagnostic Class		Homozygous	Heterozygous	Potential % Observed
	C57BL/6J, C57BL/6JJicTac, C57BL/6JRj		12	27	102 38.2%
	C57BL/6J, C57BL/6JEiJ, C57BL/6JJicTac, C57BL/6JRj		4	5	21 42.9%
	C57BL/6J, C57BL/6JRj		4	5	31 29.0%
	C57BL/6NRj, C57BL/6NTac		3	5	15 53.3%
	C57BL/6NJ, C57BL/6NRj, C57BL/6NTac		2	3	10 50.0%
	B6N-Tyr<c-Brd>/BrdCrCrl, C57BL/6J, C57BL/6JEiJ, C57BL/6JJicTac, C57BL/6JRj		0	1	1 100.0%
	B6N-Tyr<c-Brd>/BrdCrCrl, C57BL/6J, C57BL/6JJicTac, C57BL/6JRj		0	1	5 20.0%
	B6N-Tyr<c-Brd>/BrdCrCrl, C57BL/6NCrl, C57BL/6NHsd, C57BL/6NJ, C57BL/6NRj, C57BL/6NTac		0	1	2 50.0%
	Minimal Strain Sets Explaining All Diagnostic Classes (Number of Markers Explained):				
	• Solution 1: C57BL/6J and C57BL/6NTac				
	• C57BL/6J: 59 / 160 (36.9%)				
	• C57BL/6NTac: 14 / 27 (51.9%)				
	• Solution 2: C57BL/6J and C57BL/6NRj				
	• C57BL/6J: 59 / 160 (36.9%)				
	• C57BL/6NRj: 14 / 27 (51.9%)				
	• Solution 3: C57BL/6JRj and C57BL/6NTac				
	• C57BL/6JRj: 59 / 160 (36.9%)				
	• C57BL/6NTac: 14 / 27 (51.9%)				
	• Solution 4: C57BL/6JRj and C57BL/6NRj				
	• C57BL/6JRj: 59 / 160 (36.9%)				
	• C57BL/6NRj: 14 / 27 (51.9%)				
	Chromosome	Start (Mb)	Stop (Mb)	Background	Zygotity
	1	30000000	46434628	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	1	46434628	53457225	CBA/J	Homozygous
	1	53457225	60621237	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	1	60621237	69700765	C57BL/6J and C57BL/6NTac	N/A
	1	69700765	168019536	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous

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Diplotype Intervals	1	168019536	195471971	C57BL/6J and C57BL/6NTac	N/A
	2	3000000	139631657	C57BL/6J and C57BL/6NTac	N/A
	2	139631657	160174252	CBA/J	Homozygous
	2	160174252	175780822	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	2	175780822	182113224	CBA/J	Homozygous
	3	3000000	14328941	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	3	14328941	139297311	C57BL/6J and C57BL/6NTac	N/A
	3	139297311	160039680	CBA/J	Homozygous
	4	3000000	31293075	C57BL/6J and C57BL/6NTac	N/A
	4	31293075	35563307	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	4	35563307	41348396	Unexplained	Heterozygous
	4	41348396	120738488	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	4	120738488	152440879	CBA/J	Homozygous
	4	152440879	156508116	C57BL/6J and C57BL/6NTac	N/A
	5	3000000	19267794	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	5	19267794	29588943	CBA/J	Homozygous
	5	29588943	41755530	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	5	41755530	51299144	C57BL/6J and C57BL/6NTac	N/A
	5	51299144	116795433	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	5	116795433	124446826	CBA/J	Homozygous
	5	124446826	134172373	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	5	134172373	151834684	C57BL/6J and C57BL/6NTac	N/A
	6	3000000	149736546	C57BL/6J and C57BL/6NTac	N/A
	7	3000000	42273938	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	7	42273938	70828686	CBA/J	Homozygous
	7	70828686	103084424	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	7	103084424	119823617	C57BL/6J and C57BL/6NTac	N/A
	7	119823617	141750158	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	7	141750158	145441459	C57BL/6J and C57BL/6NTac	N/A
	8	3000000	37790271	C57BL/6J and C57BL/6NTac	N/A
	8	37790271	119835722	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	8	119835722	129401213	CBA/J	Homozygous

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	9	30000000	50015698	CBA/J	Homozygous
	9	50015698	115715944	C57BL/6J and C57BL/6NTac	N/A
	9	115715944	124595110	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	10	30000000	23654421	C57BL/6J and C57BL/6NTac	N/A
	10	23654421	42917049	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	10	42917049	100561092	CBA/J	Homozygous
	10	100561092	127271560	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	10	127271560	130694993	C57BL/6J and C57BL/6NTac	N/A
	11	30000000	32168654	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	11	32168654	58406228	C57BL/6J and C57BL/6NTac	N/A
	11	58406228	72044583	CBA/J	Homozygous
	11	72044583	79617327	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	11	79617327	90803561	C57BL/6J and C57BL/6NTac	N/A
	11	90803561	115896459	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	11	115896459	122082543	CBA/J	Homozygous
	12	30000000	27585493	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	12	27585493	33130555	CBA/J	Homozygous
	12	33130555	64411355	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	12	64411355	120129022	CBA/J	Homozygous
	13	30000000	120421639	CBA/J	Homozygous
	14	30000000	70580779	CBA/J	Homozygous
	14	70580779	93002544	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	14	93002544	97106405	C57BL/6J and C57BL/6NTac	N/A
	14	97106405	111185375	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	14	111185375	124902244	C57BL/6J and C57BL/6NTac	N/A
	15	30000000	36473640	CBA/J	Homozygous
	15	36473640	89025824	C57BL/6J and C57BL/6NTac	N/A
	15	89025824	99220995	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	15	99220995	104043685	C57BL/6J and C57BL/6NTac	N/A
	16	30000000	20813513	C57BL/6J and C57BL/6NTac	N/A
	16	20813513	29701002	CBA/J	Homozygous
	16	29701002	89037512	C57BL/6J and C57BL/6NTac	N/A

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	16	89037512	98207768	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	17	30000000	94987271	C57BL/6J and C57BL/6NTac	N/A
	18	30000000	12406382	C57BL/6J and C57BL/6NTac	N/A
	18	12406382	63069205	CBA/J	Homozygous
	18	63069205	90702639	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	19	30000000	42582533	C57BL/6J and C57BL/6NTac	N/A
	19	42582533	61431566	C57BL/6J and C57BL/6NTac and CBA/J	Heterozygous
	X	30000000	70193631	CBA/J	Hemizygous
	X	70193631	105020820	C57BL/6J and C57BL/6NTac and CBA/J	Hemizygous
	X	105020820	132528229	CBA/J	Hemizygous
	X	132528229	136441962	C57BL/6J and C57BL/6NTac and CBA/J	Hemizygous
	X	136441962	171031299	C57BL/6J and C57BL/6NTac	Hemizygous
	MT	0	0	IBD	Hemizygous