

Supplementary Table 1. Codon usage for Cas9 variants

Amino Acid	Codon	RA (Cas9n)	BE3 (Cas9n)	SpCas9	xCas9	Human codon frequency
Ala	GCG	0.01	0.24	0.14	0.14	0.11
	GCA	0.04	0.26	0.24	0.25	0.23
	GCT	0.05	0.26	0.49	0.25	0.26
	GCC	0.9	0.24	0.14	0.36	0.4
Cys	TGT	0	0.5	1	0.5	0.45
	TGC	1	0.5	0	0.5	0.55
Asp	GAT	0.22	0.52	0.8	0.46	0.46
	GAC	0.78	0.48	0.2	0.54	0.54
Glu	GAG	0.66	0.45	0.26	0.53	0.58
	GAA	0.34	0.55	0.74	0.47	0.42
Phe	TTT	0.19	0.51	0.81	0.41	0.45
	TTC	0.81	0.49	0.19	0.59	0.55
Gly	GGG	0.04	0.24	0.12	0.22	0.25
	GGA	0.18	0.26	0.36	0.33	0.25
	GGT	0.01	0.26	0.38	0.12	0.16
	GGC	0.77	0.24	0.14	0.33	0.34
His	CAT	0.06	0.53	0.88	0.34	0.41
	CAC	0.94	0.47	0.13	0.66	0.59
Ile	ATA	0	0.33	0.1	0.08	0.16
	ATT	0.12	0.33	0.63	0.31	0.36
	ATC	0.88	0.34	0.27	0.61	0.48
Lys	AAG	0.76	0.51	0.27	0.52	0.58
	AAA	0.24	0.49	0.73	0.48	0.42
Leu	TTG	0	0.17	0.28	0.11	0.13
	TTA	0	0.18	0.34	0	0.07
	CTG	0.98	0.16	0.05	0.45	0.41
	CTA	0	0.16	0.09	0	0.07
	CTT	0	0.17	0.18	0.15	0.13
	CTC	0.02	0.16	0.06	0.28	0.2
Asn	AAT	0.19	0.5	0.8	0.41	0.46
	AAC	0.81	0.5	0.2	0.59	0.54
Pro	CCG	0.03	0.22	0.06	0.14	0.11
	CCA	0.08	0.25	0.54	0.2	0.27
	CCT	0.21	0.25	0.26	0.17	0.28
Gln	CCC	0.68	0.28	0.14	0.49	0.33
	CAG	0.96	0.5	0.27	0.77	0.75
Arg	CAA	0.04	0.5	0.73	0.23	0.25
	AGG	0.06	0.17	0.04	0.25	0.2
	AGA	0.37	0.15	0.16	0.2	0.2
	CGG	0.53	0.17	0.08	0.26	0.21
	CGA	0	0.17	0.19	0.12	0.11
	CGT	0	0.18	0.35	0	0.08
Ser	CGC	0.04	0.17	0.18	0.17	0.19
	AGT	0.01	0.15	0.34	0.15	0.15
	AGC	0.62	0.16	0.05	0.21	0.24
	TCG	0	0.16	0.07	0	0.06
	TCA	0	0.16	0.26	0.11	0.15
	TCT	0.09	0.18	0.21	0.31	0.18
Thr	TCC	0.28	0.18	0.07	0.23	0.22
	ACG	0.02	0.25	0.11	0.12	0.12
	ACA	0.14	0.25	0.37	0.29	0.28
	ACT	0.02	0.26	0.38	0.2	0.24
Val	ACC	0.83	0.25	0.14	0.39	0.36
	GTG	0.95	0.24	0.19	0.39	0.47
	GTA	0	0.24	0.21	0.09	0.11
	GTT	0	0.26	0.42	0.24	0.18
Tyr	GTC	0.05	0.26	0.18	0.27	0.24
	TAT	0.14	0.5	0.85	0.31	0.43
Met	TAC	0.86	0.5	0.15	0.69	0.57
	ATG	1	1	1	1	1
Trp	TGG	1	1	1	1	1

Supplementary Table 2. Oligonucleotides for sgRNA cloning

sgRNA Oligo	Sequence
FANCF-S1_A	CACCGGAATCCCTTCTGCAGCACC
FANCF-S1_B	AAACGGTGCTGCAGAAGGGATTCC
CTNNB1_S45_BE_A	CACCGCTCCTTCTCTGAGTGGTAA
CTNNB1_S45_BE_B	AAACTTACCACTCAGAGAAGGAGC
Apc_492_BE_A	CACCGGGTCAGGGGCTTTCAGGTG
Apc_492_BE_B	AAACCACCTGAAAGCCCCTGACCC
Apc_1405_BE_A	CACCGTTCAGAGTGAGCCATGTAG
Apc_1405_BE_B	AAACCTACATGGCTCACTCTGAAC
Apc_1529_BE_A	CACCGCAGTTCAGGAAAACGACAA
Apc_1529_BE_B	AAACTTGTGTTTTCTGAACTGC
Pik3ca_545_BE_A	CACCGGTTCACTGATTTTCAGATAG
Pik3ca_545_BE_B	AAACCTATCTGAAATCACTGAACC
p53_270C_BE_A	CACCGTTCGTGTTTTGTGCCCTGCC
p53_270C_BE_B	AAACGGGCAGGCACAAACACGAAC
CR8_OS2_A	CACCGAAGCTCAGAAGGCTTGCTG
CR8_OS2_B	AAACCAGCAAGCCTTCTGAGCTTC
Ctnnb1_S45_BE_B	CACCGCTCCTTCCCTGAGTGGCAA
Ctnnb1_S45_BE_A	AAACTTGCCACTCAGGGAAGGAGC
Kras_A	CACCGAACTTGTGGTGGTTGGAGC
Kras_B	AAACGCTCCAACCACCACAAGTTC
p53_A	CACCGACCCGTGCACCGAGACCCC
p53_B	AAACGGGGTCTCGGTGACAGGGTC

Supplementary Table 3. Primers for cloning

Primer	Sequence
BE3-2X NLS (Ultramer)	AAAGCGGCAGCGAGACTCCCCCAAAGAAGAAACGGAAAGTAGGCGGCTCCCCAAGAAGAAGCGGAAGGTAGGGACCTCA GAGTCCGCCAC
T7-FLAG-NLS (Ultramer)	AACCGTCAGATCCGCTAGAGATCCTAATACGACTCACTATAGGGAGAGCCGCCACCATGGACTATAAGGACCACGACGGA GACTACAAGGATCATGATATTGATTACAAAGACGATGACGATAAGATGGCCCCAAAGAAGAAGCGGAAGGTTCGGTATCC ACGGAGTCCCAGCAGCCATGAGCTCAGAGACTGGCCCAAGT
XTEN-NLS_F	AAAGCGGCAGCGAGACTCCC
XTEN-NLS_R	GTGGCGGACTCTGAGGTCCC
T7-FLAG_F	AACCGTCAGATCCGCTAGAG
T7-FLAG_R	CACTGGGCCAGTCTCTGAGC
FSR-16	AAACCGCTGTTTCTAGGAATCCCGAGGCCCTTACCGGGTAGGGGAGGCGCT
FSR-17	AGAGTAATTAACCCCAAACAACAACGTTTTTACCCGGGAGCATGTCAAG
FSR-19	GATCAGTGTGAGGAGTGTAAAGCTGGTTTTTCGAGTGGCTCCGGTGCCCGT
FSR-20	AAACGATCGCACAGCTAGCGTTTCGAGTTAGCCCGCTCACGACACCTGTGTT
FSR-114	CTAACTCGAACGCTAGCTGTGCGATCGTTTTGCCACCATGAGCTCAGAGACT
FSR-115	AGGCCTCGGGATTCTTAGGAACAGCGGTTTTCAATGGTGATGGTGATGATG
BE3RA-PGKPuro_F	GTGACGCGGCTAACTCGAACGCTAGCCACCATGAGCTCAGAGACT
BE3RA-PGKPuro_R	CCGGTAGAGGCCTCGGGATTCCTAGTTAGACTTTCCTCTCTTCTTG
BE3RA_APOBEC_F	ACACAGGTGTCGTGACGCGGATCCTAACTCGAACGCTAGCTGTG
BE3RA_XTEN_R	ACTTCTTGTCACTTTCGGGTGTGGCGGACT
BE3RA_Cas9n_F	ACCCGAAAGTGACAAGAAGTACAGCATCGG
BE3RA_Cas9n_R	ATCCGCCTGAATCGCCTCCAGCTGAGACA
BE3RA_UGI_F	GGGAGGCGATTACGCGGATCTACTAATCTGTGCTAG
BE3RA_UGI_R	AAGTTGGTGGCGCCGCTGCCGCTAGCGACTTTCCTCTTCTTCTTG
BamHI-FLAG_F	ACGCGGGATCCGCCACCATGGACTATAAGGAC
APOBEC-RI_R	ATACCTTGACAGGAATTCAGT
3G_F	GATCCAGTTTGGTTAGTACCAGGCGATTCTAGATTCGAGTTTAC
3G_R	GGATCCAACGCAAGCTCGACT
APOBEC_F	AGTCGAGCTTGCGTTGGATCCGCCACCATGAGCTCAGAGACTG
BE3RA_XTEN_R	ACTTCTTGTCACTTTCGGGTGTGGCGGACT
APOBEC_F	AGTCGAGCTTGCGTTGGATCCGCCACCATGAGCTCAGAGACTG
BE3RA_XTEN_R	ACTTCTTGTCACTTTCGGGTGTGGCGGACT
FNLS-APOBEC_F	AGTCGAGCTTGCGTTGGATCCGCCACCATGAGCTATAAGGAC
BE3RA_XTEN_R	ACTTCTTGTCACTTTCGGGTGTGGCGGACT
cTRE_BE3_F	CCATCCACGCTCGAGTTCATCCACGAGCTCAGAGACT
cTRE_BE3_R	AGTTCTCAACGCTCGACTGCCCGTTAGACTTTCCTCTTC
pLRT2B_EFs_F	CAGCAGAGATCCACTTTGGCGCCGGCTCGAGTACACGCGTCGAGAAGCTTG
pLRT2B_WPRE_R	CCAGAGGTTGATTGTCGACTTAACGCGCTTGTACATCTAGAGGGATCCCACTGATTGCTAGCGGATCTT
APOBEC_F2	AGATCGCCTGGAGACGCCATCCACGCTCGAGCCACCATGAGCTCAGAGACTG
APOBEC_R2	GCAGGTAGTACAGGTACAGC
KJ_Cas9_F	AACACAGGTGTCGTGACGCGGGATCCGCCACCATGGATAAAAAGTATT
KJ_Cas9_R	AAGTTGGTGGCGCCGCTGCCGCTAGCTCCTGCAGCCTTGTTCATCGT
Cas9_RA5_F	TGAGGAAAACGAGGACATTC
Cas9_RA5_R	ACTCTTTGCTGAAGCCGCCT
Cas9_RA3_F	AGGCGGCTTCAGCAAAGAGT
Cas9_RA3_R	AAGTTGGTGGCGCCGCTGCCGCTAGCTTTCCTTTTCTTAGCTTGAC
EF1s_xCas9_AF	TGCCGCCAGAACACAGGTGTC
xCas9_AR	CTGCAGTTTGGTATCCTCGGCCAGGTGCAAGT
xCas9_BF	TGGCCGAGGATACCAAACCTGCAGCTGAGCAAGG
xCas9_BR	GTGCAGGCTATCGCCCTGGCC
xCas9_CF	AAGCCAGGTGTCGGCCAGG
xCas9_CR	CCCTTCTGCAGCACGCCGGCAGAGCCAGCATTC
xCas9_DF	CCTCTGCCCGCTGCTGCAGAAGGAAACGAACT
xCas9_DR	GGCTGAAGTTGGTGGCGCCGC

Supplementary Table 4. Primers for MiSeq and T7 endonuclease analysis

Primer	Sequence
FANCF-S1_miseq_F	GCCCTCTTGCCTCCACTGGTTG
FANCF-S1_miseq_R	CGCGGATGTTCCAATCAGTACGC
CTNNB1_S45_miseq_F	TCAATGGGTCATATCACAGATTCT
CTNNB1_S45_miseq_R	TCCTCTTCCTCAGGATTGCC
492_miseq_F	TCAGGTAGGAAGGCTACCCG
492_miseq_R	CTTCCCCCTTCTGCCAAGTC
1405_miseq_F1	TGTTGAGTTTTCTTCAGGAGCC
1405_miseq_R2	TGGTCTGCCCAGGACTATCT
1529_miseq_F	ACTTTGTTACACTTCGCCACAG
1529_miseq_R	TTTCAGAGTCAGGCTTTTCTACCT
Pik3ca_miseq_F	GCACCAGTTTGCTTTTTCAAAT
Pik3ca_miseq_R	CCTTCAGCCTTGAGAGCCTC
CR8_miseq_F	GTCTTCTGATTGCCCTCCCC
CR8_miseq_R	GCCTGTGTTCCTTCTGCCTA
S45_miseq_F1	ACTCTGTTTTTACAGCTGACCTGA
S45_miseq_R1	GACTGGGAAAAGCCTTGCTC
Kras_F	GCAGACTGTAGAGCAGCGTT
Kras_R	ATGTCTTTCCCCAGCACAGT
p53_F	TTTGAAGGCCCAAGTGAAG
p53_R	CCACTCACCGTGCACATAAC
Nras_F	TTTCCCGTAAACTGAGGGCG
Nras_R	GCTGGGCCTCACCTCTATGGT
Elk3_F	ACACCCAGACAATGCCAACT
Elk3_R	TGCTCTGAGAAGATGCTCCA
CTNNB1.OT1F	TGGAGGGTGGTCTGAATGTC
CTNNB1.OT1R	GTCTCGATCTCCTGACCTCG
CTNNB1.OT2F	TTGGAACCAGGAGGGACTTC
CTNNB1.OT2R	AGTGGCTCTGGTTTCAAGGT
Apc492.OT1F	GGATGCTTTCAGAAGGAGG
Apc492.OT1R	TGCCCTCAAGGTTGTTGTTG
Apc492.OT2F	CAGGCAGAGCTCTAGGAGAG
Apc492.OT2R	GGTCTCATCCCACTTGCTCT
Apc1405.OT1F	TGGGGTGGGAAATGCTACTC
Apc1405.OT1R	GTCCACGAGAAGTGCACAAA
Apc1405.OT2F	TGTGTACCAGGAAGAACACT
Apc1405.OT2R	TGCCCCAGAGACTGAAAAT
Pik3ca545.OT1F	TTTAGCTGGGTGTGTGGACT
Pik3ca545.OT1R	CAGGCAATCAGTGTATGCATTT

Supplementary Table 5. geneBlocks

Name	Sequence
VQR_GB	AGGCGGCTTCAGCAAAGAGTCTATCCTGCCCAAGAGGAACAGCGATAAGCTGATCGCCAGAAAGAAGGACTGGGACC CTAAGAAGTACGGCGGCTTCGTACGCCCCACCGTGGCCTATTCTGTGCTGGTGGTGCCCAAAGTGGAAAAGGGCAA GTCCAAGAACTGAAGAGTGTGAAAGAGCTGCTGGGGATCACCATCATGGAAAGAAGCAGCTTCGAGAAGAATCCC ATCGACTTTCTGGAAGCCAAGGGCTACAAAGAAGTGAAAAAGGACCTGATCATCAAGCTGCCTAAGTACTCCCTGTT CGAGCTGGAAAACGGCCGGAAGAGAATGCTGGCCTCTGCCGGCGAACTGCAGAAGGGAAACGAACCTGGCCCTGCC CTCCAAATATGTGAACTTCCTGTACCTGGCCAGCCACTATGAGAAGCTGAAGGGCTCCCCGAGGATAATGAGCAG AAACAGCTGTTTGTGGAACAGCACAAAGCACTACCTGGACGAGATCATCGAGCAGATCAGCGAGTTCTCCAAGAGAG TGATCCTGGCCGACGCTAATCTGGACAAAGTGCTGCCGCCTACAACAAGCACCCGGGATAAGCCCATCAGAGAGCA GGCCGAGAATATCATCCACCTGTTTACCCTGACCAATCTGGGAGCCCCTGCCGCCTTCAAGTACTTTGACACCACCA TCGACCGGAAGCAGTACAGGAGCACCAAGAGGTGCTGGACGCCACCCTGATCCACCAGAGCATCACCGGCCTGT ACGAGACACGGATCGACCTGTCTCAGCTGGGAGGCGACAAGCGTCTCTGCTACTAAGAAAGCTGGTCAAGCTAA GAAAAAGAAAGCTAGCGGCAGCGGCCACCAACT
VRER_GB	AGGCGGCTTCAGCAAAGAGTCTATCCTGCCCAAGAGGAACAGCGATAAGCTGATCGCCAGAAAGAAGGACTGGGACC CTAAGAAGTACGGCGGCTTCGTACGCCCCACCGTGGCCTATTCTGTGCTGGTGGTGCCCAAAGTGGAAAAGGGCAA GTCCAAGAACTGAAGAGTGTGAAAGAGCTGCTGGGGATCACCATCATGGAAAGAAGCAGCTTCGAGAAGAATCCC ATCGACTTTCTGGAAGCCAAGGGCTACAAAGAAGTGAAAAAGGACCTGATCATCAAGCTGCCTAAGTACTCCCTGTT CGAGCTGGAAAACGGCCGGAAGAGAATGCTGGCCTCTGCCAGGAACTGCAGAAGGGAAACGAACCTGGCCCTGCC CTCCAAATATGTGAACTTCCTGTACCTGGCCAGCCACTATGAGAAGCTGAAGGGCTCCCCGAGGATAATGAGCAG AAACAGCTGTTTGTGGAACAGCACAAAGCACTACCTGGACGAGATCATCGAGCAGATCAGCGAGTTCTCCAAGAGAG TGATCCTGGCCGACGCTAATCTGGACAAAGTGCTGCCGCCTACAACAAGCACCCGGGATAAGCCCATCAGAGAGCA GGCCGAGAATATCATCCACCTGTTTACCCTGACCAATCTGGGAGCCCCTGCCGCCTTCAAGTACTTTGACACCACCA TCGACCGGAAGGAGTACAGGAGCACCAAGAGGTGCTGGACGCCACCCTGATCCACCAGAGCATCACCGGCCTGT ACGAGACACGGATCGACCTGTCTCAGCTGGGAGGCGACAAGCGTCTCTGCTACTAAGAAAGCTGGTCAAGCTAA GAAAAAGAAAGCTAGCGGCAGCGGCCACCAACT
HF1_GB	TGAGGAAAACGAGGACATTCTGGAAGATATCGTGCTGACCCTGACACTGTTTGAGGACAGAGAGATGATCGAGGAAC GGCTGAAAACCTATGCCACCTGTTTCGACGACAAAGTGATGAAGCAGCTGAAGCGGGCGGAGATACACCGGCTGGG GCGCCCTGAGCCGGAAGCTGATCAACGGCATCCGGGACAAGCAGTCCGGCAAGACAATCTGGATTTCTGAAGT CGACGGCTTCGCCAACAGAAAACCTCATGGCCCTGATCCACGACGACAGCCTGACCTTTAAAGAGGACATCCAGAAA GCCCAGGTGTCCGGCCAGGGCGATAGCCTGCACGAGCACATTGCCAATCTGGCCGGCAGCCCCGCCATTAAGAAG GGCATCCTCGACAGAGTGAAGGTGGTGGACGAGCTCGTGAAAGTGATGGGCCGGCACAAGCCCGAGAACATCGTG ATCGAAATGGCCAGAGAGAACCAGACCACCCAGAAGGGACAGAAGAACAGCCGCGAGAGAATGAAGCGGATCGAA GAGGGCATCAAAGAGCTGGGCAGCCAGATCCTGAAAGAACACCCCGTGAAAAACACCCAGCTGCAGAACGAGAAG CTGTACTCTACTACCTGCAGAATGGGCGGGATATGTACGTGGACCAGGAACTGGACATCAACCGGCTGTCCGACT ACGATGTGGACCATATCGTGCTCAGAGCTTTCTGAAGGACGACTCCTCGACAACAAGGTGCTGACCAGAAGCGA CAAGAACCGGGCAAGAGCGACAACGTGCCCTCCGAAGAGGTCTGAAGAAGATGAAGAACTACTGGCGGCAGCT GCTGAACGCCAAGCTGATTACCCAGAGAAAGTTCGACAATCTGACCAAGGCCGAGAGAGCGGCCTGAGCGAACT GGATAAGGCCGGCTTCATCAAGAGACAGCTGGTGGAAACCCGGGCCATCACAAGCACAGTGGCACAGATCCTGGA CTCCCGATGAACACTAAGTACGACGAGAATGACAAGCTGATCCGGGAAGTGAAAGTGATCACCTGAAGTCCAAG CTGGTGTCCGATTTCCGGAAGGATTTCCAGTTTTACAAAGTGCGCGAGATCAACAACCTACCACCACGCCACGACGC CTACCTGAACGCCGTCTGGGAACCGCCCTGATCAAAAAGTACCCTAAGCTGGAAAGCGAGTTCTGTACGGCGAC TACAAGGTGTACGACGTGCGGAAGATGATCGCCAAGAGCGAGCAGGAAATCGGCAAGGCTACCGCCAAGTACTTCT TCTACAGCAACATCATGAACTTTTTCAAGACCGAGATTACCCTGGCCAACGGCGAGATCCGGAAGCGGCCTCTGATC GAGACAAACGGCGAAACCGGGGAGATCGTGTGGGATAAGGGCCGGGATTTGCCACCGTGCAGAAAGTGCTGAGC ATGCCCAAGTGAATATCGTGAAAAAGACCGAGGTGCAGACAGGCGGCTTCAGCAAAGAGT

Supplementary Table 6: P-values

Values for Figure 1f (BE3 vs RA)

Sidak's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
DAY 2				
Apc.492	-50.61 to -29.75	Yes	****	<0.0001
Apc.1405	-51.84 to -30.98	Yes	****	<0.0001
Apc.1529	-45.97 to -25.11	Yes	****	<0.0001
Pik3ca.545	-26.14 to -5.277	Yes	**	0.0014
CR8.OS2-C5	-29.8 to -8.94	Yes	***	0.0001
CR8.OS2-C7	-35.07 to -14.21	Yes	****	<0.0001
DAY 6				
Apc.492	-57.54 to -33.44	Yes	****	<0.0001
Apc.1405	-63.9 to -42.34	Yes	****	<0.0001
Apc.1529	-58.6 to -37.04	Yes	****	<0.0001
Pik3ca.545	-39.77 to -18.21	Yes	****	<0.0001
CR8.OS2-C5	-42.03 to -20.47	Yes	****	<0.0001
CR8.OS2-C7	-49.8 to -28.24	Yes	****	<0.0001

Values for Figure 2d, Supplementary Figure 7a and Supplementary Figure 11 (RA vs 2X vs FNLS)

DAY 2

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Apc.492 (Day 2)				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-29.07 to -7.013	Yes	***	0.0010
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-25.16 to -3.106	Yes	**	0.0098
FNLS-P2A-Puro vs. 2X-P2A-Puro	-7.121 to 14.93	No	ns	0.6610
Apc.1405 (Day 2)				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-32.84 to -10.79	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-21.35 to 0.7074	No	ns	0.0701
FNLS-P2A-Puro vs. 2X-P2A-Puro	0.4659 to 22.52	Yes	*	0.0397
Apc.1529 (Day 2)				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-35 to -12.94	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-23.49 to -1.439	Yes	*	0.0241
FNLS-P2A-Puro vs. 2X-P2A-Puro	0.4759 to 22.53	Yes	*	0.0395
Pik3ca.545 (Day 2)				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-35.62 to -13.56	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-19.94 to 2.111	No	ns	0.1313
FNLS-P2A-Puro vs. 2X-P2A-Puro	4.646 to 26.7	Yes	**	0.0041
CR8.OS2-C5 (Day 2)				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-28.81 to -1.799	Yes	*	0.0237
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-3.216 to 23.8	No	ns	0.1625
FNLS-P2A-Puro vs. 2X-P2A-Puro	12.09 to 39.1	Yes	***	0.0002
CR8.OS2-C7 (Day 2)				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-37.95 to -10.94	Yes	***	0.0003
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-30.33 to -3.314	Yes	*	0.0122
FNLS-P2A-Puro vs. 2X-P2A-Puro	-5.881 to 21.13	No	ns	0.3578

DAY 6

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Apc.492				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-14.68 to 1.189	No	ns	0.1077
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-12.76 to 3.109	No	ns	0.3057
FNLS-P2A-Puro vs. 2X-P2A-Puro	-6.012 to 9.852	No	ns	0.8229
Apc.1405				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-19.29 to -3.421	Yes	**	0.0038
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-10.48 to 5.382	No	ns	0.7104
FNLS-P2A-Puro vs. 2X-P2A-Puro	0.871 to 16.74	Yes	*	0.0272
Apc.1529				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-21.6 to -5.734	Yes	***	0.0006
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-12.83 to 3.036	No	ns	0.2953
FNLS-P2A-Puro vs. 2X-P2A-Puro	0.8376 to 16.7	Yes	*	0.0278
Pik3ca.545				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-26.68 to -10.81	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-14.28 to 1.586	No	ns	0.1365
FNLS-P2A-Puro vs. 2X-P2A-Puro	4.464 to 20.33	Yes	**	0.0016
CR8.OS2-C5				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-21.7 to -2.265	Yes	*	0.0131
BE3RA-P2A-Puro vs. 2X-P2A-Puro	11.67 to 31.1	Yes	****	<0.0001
FNLS-P2A-Puro vs. 2X-P2A-Puro	23.65 to 43.08	Yes	****	<0.0001
CR8.OS2-C7				
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-27.88 to -8.45	Yes	***	0.0002
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-21.68 to -2.25	Yes	*	0.0133
FNLS-P2A-Puro vs. 2X-P2A-Puro	-3.515 to 15.92	No	ns	0.2726

Values for Figure 2e (PC9 cells)

FANCF

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C6				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-77.03 to -73.09	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-73.8 to -69.86	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	1.256 to 5.204	Yes	**	0.0012
C7				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-72.71 to -68.76	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-69.98 to -66.03	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	0.753 to 4.7	Yes	**	0.0057
C8				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-73.16 to -69.21	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-69.49 to -65.54	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	1.696 to 5.644	Yes	***	0.0003
C11				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-45.22 to -41.28	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-44.02 to -40.07	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-0.7704 to 3.177	No	ns	0.2985

CTNNB1

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C4				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-76.47 to -72.8	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-53.97 to -50.3	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	20.67 to 24.33	Yes	****	<0.0001
C5				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-74.89 to -71.22	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-53.3 to -49.63	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	19.76 to 23.42	Yes	****	<0.0001
C8				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-65.06 to -61.4	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-40.08 to -36.42	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	23.15 to 26.81	Yes	****	<0.0001
C10				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-7.726 to -4.061	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-8.439 to -4.774	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-2.546 to 1.119	No	ns	0.6010

Values for Figure 2g (inducible 3T3 cells)

Apc.1405

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
TRE-BE3 (D2) vs. TRE-BE3RA (D2)	-58.2 to -21.82	Yes	****	<0.0001
TRE-BE3 (D2) vs. TRE-FNLS (D2)	-67.33 to -30.95	Yes	****	<0.0001
TRE-BE3 (D2) vs. TRE-BE3 (OFF)	-14.81 to 21.57	No	ns	0.9989
TRE-BE3 (D2) vs. TRE-BE3RA (OFF)	-18.08 to 18.3	No	ns	>0.9999
TRE-BE3 (D2) vs. TRE-FNLS (OFF)	-22.92 to 13.46	No	ns	0.9893
TRE-BE3 (D2) vs. TRE-BE3 (D6)	-21.72 to 14.66	No	ns	0.9985
TRE-BE3 (D2) vs. TRE-BE3RA (D6)	-80.58 to -44.2	Yes	****	<0.0001
TRE-BE3 (D2) vs. TRE-FNLS (D6)	-85.85 to -49.47	Yes	****	<0.0001
TRE-BE3RA (D2) vs. TRE-FNLS (D2)	-27.32 to 9.064	No	ns	0.7064
TRE-BE3RA (D2) vs. TRE-BE3 (OFF)	25.2 to 61.58	Yes	****	<0.0001
TRE-BE3RA (D2) vs. TRE-BE3RA (OFF)	21.93 to 58.31	Yes	****	<0.0001
TRE-BE3RA (D2) vs. TRE-FNLS (OFF)	17.09 to 53.47	Yes	****	<0.0001
TRE-BE3RA (D2) vs. TRE-BE3 (D6)	18.3 to 54.68	Yes	****	<0.0001
TRE-BE3RA (D2) vs. TRE-BE3RA (D6)	-40.56 to -4.183	Yes	**	0.0098
TRE-BE3RA (D2) vs. TRE-FNLS (D6)	-45.83 to -9.453	Yes	**	0.0012
TRE-FNLS (D2) vs. TRE-BE3 (OFF)	34.33 to 70.71	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3RA (OFF)	31.06 to 67.44	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-FNLS (OFF)	26.22 to 62.6	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3 (D6)	27.42 to 63.8	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3RA (D6)	-31.44 to 4.944	No	ns	0.2717
TRE-FNLS (D2) vs. TRE-FNLS (D6)	-36.71 to -0.3263	Yes	*	0.0442
TRE-BE3 (OFF) vs. TRE-BE3RA (OFF)	-21.46 to 14.92	No	ns	0.9991
TRE-BE3 (OFF) vs. TRE-FNLS (OFF)	-26.3 to 10.08	No	ns	0.8125
TRE-BE3 (OFF) vs. TRE-BE3 (D6)	-25.09 to 11.29	No	ns	0.9091
TRE-BE3 (OFF) vs. TRE-BE3RA (D6)	-83.95 to -47.57	Yes	****	<0.0001
TRE-BE3 (OFF) vs. TRE-FNLS (D6)	-89.22 to -52.84	Yes	****	<0.0001
TRE-BE3RA (OFF) vs. TRE-FNLS (OFF)	-23.03 to 13.35	No	ns	0.9877
TRE-BE3RA (OFF) vs. TRE-BE3 (D6)	-21.82 to 14.56	No	ns	0.9982
TRE-BE3RA (OFF) vs. TRE-BE3RA (D6)	-80.68 to -44.3	Yes	****	<0.0001
TRE-BE3RA (OFF) vs. TRE-FNLS (D6)	-85.95 to -49.57	Yes	****	<0.0001
TRE-FNLS (OFF) vs. TRE-BE3 (D6)	-16.99 to 19.39	No	ns	>0.9999
TRE-FNLS (OFF) vs. TRE-BE3RA (D6)	-75.85 to -39.47	Yes	****	<0.0001
TRE-FNLS (OFF) vs. TRE-FNLS (D6)	-81.12 to -44.74	Yes	****	<0.0001
TRE-BE3 (D6) vs. TRE-BE3RA (D6)	-77.05 to -40.67	Yes	****	<0.0001
TRE-BE3 (D6) vs. TRE-FNLS (D6)	-82.32 to -45.94	Yes	****	<0.0001
TRE-BE3RA (D6) vs. TRE-FNLS (D6)	-23.46 to 12.92	No	ns	0.9792

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Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
TRE-BE3 (D2) vs. TRE-BE3RA (D2)	-50.76 to -13.65	Yes	***	0.0003
TRE-BE3 (D2) vs. TRE-FNLS (D2)	-60.78 to -23.67	Yes	****	<0.0001
TRE-BE3 (D2) vs. TRE-BE3 (OFF)	-19.09 to 18.03	No	ns	>0.9999
TRE-BE3 (D2) vs. TRE-BE3RA (OFF)	-19.25 to 17.87	No	ns	>0.9999
TRE-BE3 (D2) vs. TRE-FNLS (OFF)	-23.16 to 13.95	No	ns	0.9920
TRE-BE3 (D2) vs. TRE-BE3 (D6)	-20.22 to 16.89	No	ns	>0.9999
TRE-BE3 (D2) vs. TRE-BE3RA (D6)	-82.67 to -45.56	Yes	****	<0.0001
TRE-BE3 (D2) vs. TRE-FNLS (D6)	-87.33 to -50.22	Yes	****	<0.0001
TRE-BE3RA (D2) vs. TRE-FNLS (D2)	-28.58 to 8.538	No	ns	0.6270
TRE-BE3RA (D2) vs. TRE-BE3 (OFF)	13.12 to 50.23	Yes	***	0.0003
TRE-BE3RA (D2) vs. TRE-BE3RA (OFF)	12.96 to 50.07	Yes	***	0.0003
TRE-BE3RA (D2) vs. TRE-FNLS (OFF)	9.042 to 46.16	Yes	**	0.0015
TRE-BE3RA (D2) vs. TRE-BE3 (D6)	11.98 to 49.1	Yes	***	0.0005
TRE-BE3RA (D2) vs. TRE-BE3RA (D6)	-50.47 to -13.35	Yes	***	0.0003
TRE-BE3RA (D2) vs. TRE-FNLS (D6)	-55.13 to -18.01	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3 (OFF)	23.14 to 60.25	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3RA (OFF)	22.98 to 60.09	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-FNLS (OFF)	19.06 to 56.18	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3 (D6)	22 to 59.12	Yes	****	<0.0001
TRE-FNLS (D2) vs. TRE-BE3RA (D6)	-40.45 to -3.332	Yes	*	0.0141
TRE-FNLS (D2) vs. TRE-FNLS (D6)	-45.11 to -7.992	Yes	**	0.0023
TRE-BE3 (OFF) vs. TRE-BE3RA (OFF)	-18.72 to 18.4	No	ns	>0.9999
TRE-BE3 (OFF) vs. TRE-FNLS (OFF)	-22.63 to 14.48	No	ns	0.9965
TRE-BE3 (OFF) vs. TRE-BE3 (D6)	-19.69 to 17.42	No	ns	>0.9999
TRE-BE3 (OFF) vs. TRE-BE3RA (D6)	-82.14 to -45.03	Yes	****	<0.0001
TRE-BE3 (OFF) vs. TRE-FNLS (D6)	-86.8 to -49.69	Yes	****	<0.0001
TRE-BE3RA (OFF) vs. TRE-FNLS (OFF)	-22.47 to 14.64	No	ns	0.9973
TRE-BE3RA (OFF) vs. TRE-BE3 (D6)	-19.53 to 17.58	No	ns	>0.9999

TRE-BE3RA (OFF) vs. TRE-BE3RA (D6)	-81.98 to -44.87	Yes	****	<0.0001
TRE-BE3RA (OFF) vs. TRE-FNLS (D6)	-86.64 to -49.53	Yes	****	<0.0001
TRE-FNLS (OFF) vs. TRE-BE3 (D6)	-15.62 to 21.5	No	ns	0.9996
TRE-FNLS (OFF) vs. TRE-BE3RA (D6)	-78.07 to -40.95	Yes	****	<0.0001
TRE-FNLS (OFF) vs. TRE-FNLS (D6)	-82.73 to -45.61	Yes	****	<0.0001
TRE-BE3 (D6) vs. TRE-BE3RA (D6)	-81.01 to -43.89	Yes	****	<0.0001
TRE-BE3 (D6) vs. TRE-FNLS (D6)	-85.67 to -48.55	Yes	****	<0.0001
TRE-BE3RA (D6) vs. TRE-FNLS (D6)	-23.22 to 13.9	No	ns	0.9914

Values for Figure 3a

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Day 0				
BE3-PGK (DMSO) vs. BE3-PGK (X+T)	-0.6678 to 0.6678	No	ns	>0.9999
BE3-PGK (DMSO) vs. FNLS (DMSO)	-0.6678 to 0.6678	No	ns	>0.9999
BE3-PGK (DMSO) vs. FNLS (X+T)	-0.6678 to 0.6678	No	ns	>0.9999
BE3-PGK (X+T) vs. FNLS (DMSO)	-0.6678 to 0.6678	No	ns	>0.9999
BE3-PGK (X+T) vs. FNLS (X+T)	-0.6678 to 0.6678	No	ns	>0.9999
FNLS (DMSO) vs. FNLS (X+T)	-0.6678 to 0.6678	No	ns	>0.9999
Day 5				
BE3-PGK (DMSO) vs. BE3-PGK (X+T)	-0.7954 to 0.5403	No	ns	0.9543
BE3-PGK (DMSO) vs. FNLS (DMSO)	-0.6022 to 0.7335	No	ns	0.9933
BE3-PGK (DMSO) vs. FNLS (X+T)	-0.8555 to 0.4801	No	ns	0.8710
BE3-PGK (X+T) vs. FNLS (DMSO)	-0.4746 to 0.861	No	ns	0.8612
BE3-PGK (X+T) vs. FNLS (X+T)	-0.728 to 0.6077	No	ns	0.9948
FNLS (DMSO) vs. FNLS (X+T)	-0.9212 to 0.4145	No	ns	0.7346
Day 10				
BE3-PGK (DMSO) vs. BE3-PGK (X+T)	-0.8445 to 0.4912	No	ns	0.8898
BE3-PGK (DMSO) vs. FNLS (DMSO)	-0.4538 to 0.8819	No	ns	0.8210
BE3-PGK (DMSO) vs. FNLS (X+T)	-1.564 to -0.228	Yes	**	0.0051
BE3-PGK (X+T) vs. FNLS (DMSO)	-0.2771 to 1.059	No	ns	0.4012
BE3-PGK (X+T) vs. FNLS (X+T)	-1.387 to -0.05139	Yes	*	0.0309
FNLS (DMSO) vs. FNLS (X+T)	-1.778 to -0.4421	Yes	***	0.0005
Day 15				
BE3-PGK (DMSO) vs. BE3-PGK (X+T)	-0.8731 to 0.4626	No	ns	0.8385
BE3-PGK (DMSO) vs. FNLS (DMSO)	-0.4711 to 0.8645	No	ns	0.8548
BE3-PGK (DMSO) vs. FNLS (X+T)	-1.936 to -0.6001	Yes	****	<0.0001
BE3-PGK (X+T) vs. FNLS (DMSO)	-0.2659 to 1.07	No	ns	0.3763
BE3-PGK (X+T) vs. FNLS (X+T)	-1.731 to -0.3948	Yes	***	0.0008
FNLS (DMSO) vs. FNLS (X+T)	-2.132 to -0.7968	Yes	****	<0.0001

Values for Figure 3f

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
FNLS sgbCat vs. BE3 sgbCat	2.93 to 19.47	Yes	**	0.0080
FNLS sgbCat vs. FNLS sgCR8	2.65 to 21.75	Yes	*	0.0119
FNLS sgbCat vs. BE3 sgCR8	2.65 to 21.75	Yes	*	0.0119
BE3 sgbCat vs. FNLS sgCR8	-8.55 to 10.55	No	ns	0.9891
BE3 sgbCat vs. BE3 sgCR8	-8.55 to 10.55	No	ns	0.9891
FNLS sgCR8 vs. BE3 sgCR8	-10.68 to 10.68	No	ns	>0.9999

Values for Supplementary Figure 1a

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-P2A-Puro vs. BE3RA-P2A-Puro	-11522483 to 12994810	No	ns	>0.9999
BE3-P2A-Puro vs. RA2X-P2A-Puro	-9567260 to 14950033	No	ns	0.9931
BE3-P2A-Puro vs. FNLS-P2A-Puro	-9151143 to 15366150	No	ns	0.9841
BE3-P2A-Puro vs. BE3-PGK-Puro	-7106640 to 17410653	No	ns	0.8191
BE3-P2A-Puro vs. BE3RA-PGK-Puro	-9263357 to 15253937	No	ns	0.9871
BE3-P2A-Puro vs. Cas9-P2A-Puro	-7527070 to 16990223	No	ns	0.8719
BE3RA-P2A-Puro vs. RA2X-P2A-Puro	-10303423 to 14213870	No	ns	0.9990
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-9887307 to 14629987	No	ns	0.9968
BE3RA-P2A-Puro vs. BE3-PGK-Puro	-7842803 to 16674490	No	ns	0.9052
BE3RA-P2A-Puro vs. BE3RA-PGK-Puro	-9999520 to 14517773	No	ns	0.9976
BE3RA-P2A-Puro vs. Cas9-P2A-Puro	-8263233 to 16254060	No	ns	0.9407
RA2X-P2A-Puro vs. FNLS-P2A-Puro	-11842530 to 12674763	No	ns	>0.9999
RA2X-P2A-Puro vs. BE3-PGK-Puro	-9798027 to 14719267	No	ns	0.9960
RA2X-P2A-Puro vs. BE3RA-PGK-Puro	-11954743 to 12562550	No	ns	>0.9999
RA2X-P2A-Puro vs. Cas9-P2A-Puro	-10218457 to 14298837	No	ns	0.9987
FNLS-P2A-Puro vs. BE3-PGK-Puro	-10214143 to 14303150	No	ns	0.9987
FNLS-P2A-Puro vs. BE3RA-PGK-Puro	-12370860 to 12146433	No	ns	>0.9999
FNLS-P2A-Puro vs. Cas9-P2A-Puro	-10634573 to 13882720	No	ns	0.9997
BE3-PGK-Puro vs. BE3RA-PGK-Puro	-14415363 to 10101930	No	ns	0.9982
BE3-PGK-Puro vs. Cas9-P2A-Puro	-12679077 to 11838217	No	ns	>0.9999
BE3RA-PGK-Puro vs. Cas9-P2A-Puro	-10522360 to 13994933	No	ns	0.9996

Values for Supplementary Figure 1b

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-P2A-Puro vs. BE3RA-P2A-Puro	-3320 to 1588	No	ns	0.8811
BE3-P2A-Puro vs. RA2X-P2A-Puro	-2074 to 2835	No	ns	0.9978
BE3-P2A-Puro vs. FNLS-P2A-Puro	-3071 to 1838	No	ns	0.9735
BE3-P2A-Puro vs. BE3-PGK-Puro	-2428 to 2481	No	ns	>0.9999
BE3-P2A-Puro vs. BE3RA-PGK-Puro	-2947 to 1962	No	ns	0.9914
BE3-P2A-Puro vs. Cas9-P2A-Puro	-2895 to 2014	No	ns	0.9952
BE3RA-P2A-Puro vs. RA2X-P2A-Puro	-1208 to 3701	No	ns	0.6066
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-2205 to 2704	No	ns	0.9998
BE3RA-P2A-Puro vs. BE3-PGK-Puro	-1562 to 3347	No	ns	0.8665
BE3RA-P2A-Puro vs. BE3RA-PGK-Puro	-2081 to 2828	No	ns	0.9980
BE3RA-P2A-Puro vs. Cas9-P2A-Puro	-2029 to 2880	No	ns	0.9960
RA2X-P2A-Puro vs. FNLS-P2A-Puro	-3451 to 1458	No	ns	0.7999
RA2X-P2A-Puro vs. BE3-PGK-Puro	-2809 to 2100	No	ns	0.9986
RA2X-P2A-Puro vs. BE3RA-PGK-Puro	-3327 to 1582	No	ns	0.8775
RA2X-P2A-Puro vs. Cas9-P2A-Puro	-3276 to 1633	No	ns	0.9041
FNLS-P2A-Puro vs. BE3-PGK-Puro	-1812 to 3097	No	ns	0.9676
FNLS-P2A-Puro vs. BE3RA-PGK-Puro	-2330 to 2579	No	ns	>0.9999
FNLS-P2A-Puro vs. Cas9-P2A-Puro	-2279 to 2630	No	ns	>0.9999
BE3-PGK-Puro vs. BE3RA-PGK-Puro	-2973 to 1936	No	ns	0.9888
BE3-PGK-Puro vs. Cas9-P2A-Puro	-2921 to 1988	No	ns	0.9935
BE3RA-PGK-Puro vs. Cas9-P2A-Puro	-2403 to 2506	No	ns	>0.9999

Values for Supplementary Figure 1c

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3RA-P2A-Puro vs. RA2X-P2A-Puro	-425709 to 232376	No	ns	0.9136
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-412376 to 245709	No	ns	0.9514
BE3RA-P2A-Puro vs. BE3-PGK-Puro	-1565709 to -907624	Yes	****	<0.0001
BE3RA-P2A-Puro vs. BE3RA-PGK-Puro	-1045709 to -387624	Yes	***	0.0001
BE3RA-P2A-Puro vs. Cas9-P2A-Puro	-1779042 to -1120958	Yes	****	<0.0001
RA2X-P2A-Puro vs. FNLS-P2A-Puro	-315709 to 342376	No	ns	>0.9999
RA2X-P2A-Puro vs. BE3-PGK-Puro	-1469042 to -810958	Yes	****	<0.0001
RA2X-P2A-Puro vs. BE3RA-PGK-Puro	-949042 to -290958	Yes	***	0.0004
RA2X-P2A-Puro vs. Cas9-P2A-Puro	-1682376 to -1024291	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE3-PGK-Puro	-1482376 to -824291	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE3RA-PGK-Puro	-962376 to -304291	Yes	***	0.0003
FNLS-P2A-Puro vs. Cas9-P2A-Puro	-1695709 to -1037624	Yes	****	<0.0001
BE3-PGK-Puro vs. BE3RA-PGK-Puro	190958 to 849042	Yes	**	0.0020
BE3-PGK-Puro vs. Cas9-P2A-Puro	-542376 to 115709	No	ns	0.3141
BE3RA-PGK-Puro vs. Cas9-P2A-Puro	-1062376 to -404291	Yes	****	<0.0001

Values for Supplementary Figure 3a/3b

Sidak's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3 vs BE3RA (CTNNB1)				
C4	-16.18 to -4.183	Yes	***	0.0008
C5	-16.55 to -4.556	Yes	***	0.0006
C8	-16.04 to -4.046	Yes	***	0.0009
C10	-9.282 to 2.712	No	ns	0.4973
indels	-3.667 to 8.327	No	ns	0.7952
BE3 vs BE3RA (FANCF)				
C6	-9.42 to -3.195	Yes	***	0.0001
C7	-9.688 to -3.462	Yes	****	<0.0001
C8	-9.445 to -3.22	Yes	***	0.0001
C11	-7.388 to -1.162	Yes	**	0.0054
indels	-2.935 to 3.29	No	ns	>0.9999

Values for Supplementary Figure 3d

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C>T vs. C>A	7.61 to 16.68	Yes	****	<0.0001
C>T vs. C>G	6.472 to 15.32	Yes	****	<0.0001
C>A vs. C>G	-5.881 to 3.376	No	ns	0.7842

Values for Supplementary Figure 5b (FANCF)

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C6				
BE3 vs. BE3-2X	-12.96 to 2.505	No	ns	0.3322
BE3 vs. BE3-FNLS	-21.36 to -5.901	Yes	****	<0.0001
BE3 vs. BE3-linkFLAG	-18.19 to -2.731	Yes	**	0.0028
BE3 vs. BE4	-16.24 to 1.613	No	ns	0.1596
BE3-2X vs. BE3-FNLS	-14.72 to -2.095	Yes	**	0.0034
BE3-2X vs. BE3-linkFLAG	-11.55 to 1.075	No	ns	0.1504
BE3-2X vs. BE4	-9.819 to 5.642	No	ns	0.9425
BE3-FNLS vs. BE3-linkFLAG	-3.142 to 9.482	No	ns	0.6274
BE3-FNLS vs. BE4	-1.412 to 14.05	No	ns	0.1614
BE3-linkFLAG vs. BE4	-4.582 to 10.88	No	ns	0.7859
C7				
BE3 vs. BE3-2X	-12.27 to 3.187	No	ns	0.4756
BE3 vs. BE3-FNLS	-19.43 to -3.966	Yes	***	0.0006
BE3 vs. BE3-linkFLAG	-15.95 to -0.4879	Yes	*	0.0315
BE3 vs. BE4	-14.84 to 3.013	No	ns	0.3525
BE3-2X vs. BE3-FNLS	-13.47 to -0.8415	Yes	*	0.0183
BE3-2X vs. BE3-linkFLAG	-9.987 to 2.637	No	ns	0.4851
BE3-2X vs. BE4	-9.1 to 6.36	No	ns	0.9876
BE3-FNLS vs. BE3-linkFLAG	-2.834 to 9.79	No	ns	0.5402
BE3-FNLS vs. BE4	-1.947 to 13.51	No	ns	0.2348
BE3-linkFLAG vs. BE4	-5.425 to 10.04	No	ns	0.9195
C8				
BE3 vs. BE3-2X	-12.15 to 3.315	No	ns	0.5046
BE3 vs. BE3-FNLS	-19.41 to -3.95	Yes	***	0.0006
BE3 vs. BE3-linkFLAG	-15.93 to -0.4679	Yes	*	0.0322
BE3 vs. BE4	-14.79 to 3.066	No	ns	0.3618
BE3-2X vs. BE3-FNLS	-13.58 to -0.9532	Yes	*	0.0159
BE3-2X vs. BE3-linkFLAG	-10.1 to 2.529	No	ns	0.4554
BE3-2X vs. BE4	-9.175 to 6.285	No	ns	0.9848
BE3-FNLS vs. BE3-linkFLAG	-2.83 to 9.794	No	ns	0.5392
BE3-FNLS vs. BE4	-1.91 to 13.55	No	ns	0.2292
BE3-linkFLAG vs. BE4	-5.392 to 10.07	No	ns	0.9155
C11				
BE3 vs. BE3-2X	-16.73 to -1.265	Yes	*	0.0144
BE3 vs. BE3-FNLS	-19.2 to -3.74	Yes	***	0.0008
BE3 vs. BE3-linkFLAG	-16.93 to -1.471	Yes	*	0.0115
BE3 vs. BE4	-17.1 to 0.7563	No	ns	0.0889
BE3-2X vs. BE3-FNLS	-8.787 to 3.837	No	ns	0.8082
BE3-2X vs. BE3-linkFLAG	-6.519 to 6.105	No	ns	>0.9999
BE3-2X vs. BE4	-6.905 to 8.555	No	ns	0.9982
BE3-FNLS vs. BE3-linkFLAG	-4.044 to 8.58	No	ns	0.8527
BE3-FNLS vs. BE4	-4.43 to 11.03	No	ns	0.7554
BE3-linkFLAG vs. BE4	-6.699 to 8.762	No	ns	0.9958

Values for Supplementary Figure 5b (CTNNB1)

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C4				
BE3-2X vs. BE3-FNLS	-20.82 to -0.107	Yes	*	0.0468
BE3-2X vs. BE3-LinkFLAG	-13.81 to 8.158	No	ns	0.9030
BE3-2X vs. BE4	-16.92 to 6.994	No	ns	0.6900
BE3-FNLS vs. BE3-LinkFLAG	-3.349 to 18.62	No	ns	0.2644
BE3-FNLS vs. BE4	-6.461 to 17.46	No	ns	0.6169
BE3-LinkFLAG vs. BE4	-14.65 to 10.37	No	ns	0.9686
C5				
BE3-2X vs. BE3-FNLS	-20.15 to 0.5665	No	ns	0.0702
BE3-2X vs. BE3-LinkFLAG	-13.17 to 8.805	No	ns	0.9522
BE3-2X vs. BE4	-16.71 to 7.213	No	ns	0.7190
BE3-FNLS vs. BE3-LinkFLAG	-3.375 to 18.6	No	ns	0.2673
BE3-FNLS vs. BE4	-6.915 to 17	No	ns	0.6793
BE3-LinkFLAG vs. BE4	-15.07 to 9.942	No	ns	0.9476
C8				
BE3-2X vs. BE3-FNLS	-19.46 to 1.254	No	ns	0.1037
BE3-2X vs. BE3-LinkFLAG	-13.13 to 8.843	No	ns	0.9545
BE3-2X vs. BE4	-16.28 to 7.639	No	ns	0.7732
BE3-FNLS vs. BE3-LinkFLAG	-4.024 to 17.95	No	ns	0.3435
BE3-FNLS vs. BE4	-7.177 to 16.74	No	ns	0.7143
BE3-LinkFLAG vs. BE4	-14.69 to 10.33	No	ns	0.9669
C10				
BE3-2X vs. BE3-FNLS	-2.136 to 18.58	No	ns	0.1645
BE3-2X vs. BE3-LinkFLAG	-6.685 to 15.29	No	ns	0.7275
BE3-2X vs. BE4	-8.253 to 15.67	No	ns	0.8436
BE3-FNLS vs. BE3-LinkFLAG	-14.91 to 7.065	No	ns	0.7795
BE3-FNLS vs. BE4	-16.47 to 7.444	No	ns	0.7489
BE3-LinkFLAG vs. BE4	-13.1 to 11.91	No	ns	0.9993

Values for Supplementary Figure 5c

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
FANCF				
BE3 vs. BE3-2X	-0.5268 to 8.493e-006	No	ns	0.0500
BE3 vs. FNLS	-0.3287 to 0.1981	No	ns	0.9511
BE3 vs. linkFLAG	-0.2977 to 0.2291	No	ns	0.9955
BE3 vs. BE4	-0.3861 to 0.1771	No	ns	0.8191
BE3-2X vs. FNLS	0.05725 to 0.3388	Yes	**	0.0025
BE3-2X vs. linkFLAG	0.08832 to 0.3699	Yes	***	0.0004
BE3-2X vs. BE4	-0.01356 to 0.3313	No	ns	0.0826
FNLS vs. linkFLAG	-0.1097 to 0.1719	No	ns	0.9677
FNLS vs. BE4	-0.2116 to 0.1333	No	ns	0.9642
linkFLAG vs. BE4	-0.2427 to 0.1022	No	ns	0.7642
CTNNB1				
BE3-2X vs. FNLS	0.5218 to 0.8172	Yes	****	<0.0001
BE3-2X vs. linkFLAG	0.2102 to 0.525	Yes	****	<0.0001
BE3-2X vs. BE4	0.225 to 0.5699	Yes	****	<0.0001
FNLS vs. linkFLAG	-0.4655 to -0.1383	Yes	****	<0.0001
FNLS vs. BE4	-0.4501 to -0.09394	Yes	***	0.0010
linkFLAG vs. BE4	-0.1564 to 0.2161	No	ns	0.9901

Values for Supplementary Figure 6c

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3 ^{RA} -P2A-Puro vs. FNLS-P2A-Puro	-18.03 to 4.166	No	ns	0.2143
BE3 ^{RA} -P2A-Puro vs. 2X-P2A-Puro	-13.42 to 8.777	No	ns	0.8037
FNLS-P2A-Puro vs. 2X-P2A-Puro	-6.487 to 15.71	No	ns	0.4577

Values for Supplementary Figure 7c

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C>T vs. C>A	0.4776 to 1.156	Yes	****	<0.0001
C>T vs. C>G	0.1716 to 0.8496	Yes	**	0.0024
C>A vs. C>G	-0.6601 to 0.04808	No	ns	0.1004

Values for Supplementary Figure 8a

H23 – FANCF

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C6				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-47.86 to -36.39	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-41.12 to -28.28	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	1.008 to 13.84	Yes	*	0.0217
C7				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-34.72 to -23.25	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-31.54 to -18.71	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-2.557 to 10.27	No	ns	0.3024
C8				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-34.76 to -23.29	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-30.37 to -17.53	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-1.342 to 11.49	No	ns	0.1379
C11				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-16.51 to -5.035	Yes	***	0.0003
BE3-PGK-Puro vs. BE4Gam	-17.14 to -4.307	Yes	**	0.0011
FNLS-P2A-Puro vs. BE4Gam	-6.363 to 6.467	No	ns	0.9998

H23 – CTNNB1

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C4				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-33.36 to -29.45	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-21.76 to -17.4	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	9.643 to 14.01	Yes	****	<0.0001
C5				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-25.1 to -21.2	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-18.29 to -13.93	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	4.859 to 9.224	Yes	****	<0.0001
C8				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-25.22 to -21.32	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-15.69 to -11.32	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	7.584 to 11.95	Yes	****	<0.0001
C10				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-3.832 to 0.07192	No	ns	0.0603
BE3-PGK-Puro vs. BE4Gam	-3.009 to 1.356	No	ns	0.6108
FNLS-P2A-Puro vs. BE4Gam	-1.129 to 3.236	No	ns	0.4549

Values for Supplementary Figure 8a continued...

DLD1 – FANCF

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C6				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-56.62 to -46.84	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-54.99 to -45.21	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-3.258 to 6.524	No	ns	0.6862
C7				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-52.99 to -43.21	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-49.87 to -40.09	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-1.769 to 8.013	No	ns	0.2676
C8				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-52.23 to -42.45	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-49.31 to -39.53	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-1.97 to 7.812	No	ns	0.3125
C11				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-39.07 to -29.29	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-35.13 to -25.35	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	-0.956 to 8.826	No	ns	0.1316

DLD1 – CTNNB1

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C4				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-22.84 to -14.19	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam-P2A-Puro	-7.667 to 0.9739	No	ns	0.1509
FNLS-P2A-Puro vs. BE4Gam-P2A-Puro	10.85 to 19.49	Yes	****	<0.0001
C5				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-21.35 to -12.71	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam-P2A-Puro	-7.584 to 1.057	No	ns	0.1644
FNLS-P2A-Puro vs. BE4Gam-P2A-Puro	9.446 to 18.09	Yes	****	<0.0001
C8				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-21.5 to -12.86	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam-P2A-Puro	-7.351 to 1.291	No	ns	0.2074
FNLS-P2A-Puro vs. BE4Gam-P2A-Puro	9.825 to 18.47	Yes	****	<0.0001
C10				
BE3-PGK-Puro vs. FNLS-P2A-Puro	-7.312 to 1.329	No	ns	0.2152
BE3-PGK-Puro vs. BE4Gam-P2A-Puro	-5.291 to 3.351	No	ns	0.8420
FNLS-P2A-Puro vs. BE4Gam-P2A-Puro	-2.299 to 6.342	No	ns	0.4829

Values for Supplementary Figure 8b (Indels)

DLD1 – FANCF

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-41.54 to -32.51	Yes	****	<0.0001
BE3-PGK-Puro vs. FNLS-P2A-Puro	-25.2 to -16.17	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-17.22 to -8.19	Yes	****	<0.0001
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	11.83 to 20.86	Yes	****	<0.0001
BE3RA-P2A-Puro vs. BE4Gam	19.8 to 28.84	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	3.459 to 12.49	Yes	**	0.0021

DLD1 – CTNNB1

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-8.174 to -4.011	Yes	****	<0.0001
BE3-PGK-Puro vs. FNLS-P2A-Puro	-6.308 to -2.145	Yes	***	0.0008
BE3-PGK-Puro vs. BE4Gam	-2.158 to 2.005	No	ns	0.9994
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-0.2155 to 3.947	No	ns	0.0798
BE3RA-P2A-Puro vs. BE4Gam	3.935 to 8.098	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	2.069 to 6.232	Yes	***	0.0010

PC9 – FANCF

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-PGK-Puro vs. FNLS-P2A-Puro	-9.517 to -7.977	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-5.017 to -3.477	Yes	****	<0.0001
FNLS-P2A-Puro vs. BE4Gam	3.73 to 5.27	Yes	****	<0.0001

PC9 – CTNNB1

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-PGK-Puro vs. FNLS-P2A-Puro	-5.579 to -4.034	Yes	****	<0.0001
BE3-PGK-Puro vs. BE4Gam	-1.929 to -0.3845	Yes	**	0.0088
FNLS-P2A-Puro vs. BE4Gam	2.878 to 4.422	Yes	****	<0.0001

H23 - FANCF

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-PGK-Puro vs. FNLS-P2A-Puro	-33.48 to -20.97	Yes	****	<0.0001

H23 - CTNNB1

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
BE3-PGK-Puro vs. FNLS-P2A-Puro	-48.65 to -32.17	Yes	****	<0.0001

Values for Supplementary Figure 11c (FANCF: RA vs 2X)

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C6				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-36.57 to -33.3	Yes	****	<0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-42.01 to -38.75	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-7.079 to -3.817	Yes	****	<0.0001
C7				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-31.83 to -28.57	Yes	****	<0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-37.51 to -34.25	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-7.309 to -4.046	Yes	****	<0.0001
C8				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-30.15 to -26.89	Yes	****	<0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-36.72 to -33.46	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-8.197 to -4.934	Yes	****	<0.0001
C11				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-16.88 to -13.62	Yes	****	<0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-33.68 to -30.41	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-18.42 to -15.16	Yes	****	<0.0001

Values for Supplementary Figure 11d (CTNNB1: RA vs 2X)

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C4				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-20.36 to -7.943	Yes	****	<0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-24.73 to -12.32	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-10.58 to 1.832	No	ns	0.2044
C5				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-18.79 to -6.38	Yes	***	0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-24.37 to -11.96	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-11.79 to 0.6258	No	ns	0.0837
C8				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-18.87 to -6.455	Yes	****	<0.0001
BE3-PGK-Puro vs. 2X-P2A-Puro	-24.83 to -12.41	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-12.16 to 0.2498	No	ns	0.0617
C10				
BE3-PGK-Puro vs. BE3RA-P2A-Puro	-8.23 to 4.183	No	ns	0.6980
BE3-PGK-Puro vs. 2X-P2A-Puro	-23.43 to -11.02	Yes	****	<0.0001
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-21.41 to -8.992	Yes	****	<0.0001

Values for Supplementary Figure 11e (Ctnnb1: RA vs 2X vs FNLS)

Tukey's multiple comparisons test	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
C4>T				
BE3RA-P2A-Puro vs. 2X-P2A-Puro	0.6187 to 4.948	Yes	**	0.0091
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-16.43 to -12.1	Yes	****	<0.0001
2X-P2A-Puro vs. FNLS-P2A-Puro	-19.21 to -14.88	Yes	****	<0.0001
C5>T				
BE3RA-P2A-Puro vs. 2X-P2A-Puro	1.579 to 5.908	Yes	***	0.0004
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-16.83 to -12.51	Yes	****	<0.0001
2X-P2A-Puro vs. FNLS-P2A-Puro	-20.58 to -16.25	Yes	****	<0.0001
C8>T				
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-10.27 to -5.942	Yes	****	<0.0001
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-13.53 to -9.205	Yes	****	<0.0001
2X-P2A-Puro vs. FNLS-P2A-Puro	-5.428 to -1.099	Yes	**	0.0021
C9>T				
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-25.35 to -21.02	Yes	****	<0.0001
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-3.081 to 1.248	No	ns	0.5599
2X-P2A-Puro vs. FNLS-P2A-Puro	20.11 to 24.43	Yes	****	<0.0001
C10>T				
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-19.22 to -14.89	Yes	****	<0.0001
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-2.465 to 1.865	No	ns	0.9388
2X-P2A-Puro vs. FNLS-P2A-Puro	14.59 to 18.92	Yes	****	<0.0001
indels				
BE3RA-P2A-Puro vs. 2X-P2A-Puro	-2.281 to 2.048	No	ns	0.9905
BE3RA-P2A-Puro vs. FNLS-P2A-Puro	-1.855 to 2.475	No	ns	0.9348
2X-P2A-Puro vs. FNLS-P2A-Puro	-1.738 to 2.591	No	ns	0.8803