

BRCA1 Gene: *Homo sapiens* (hg19), [chr17:41320245-41322344](#), reverse genomic strand

Your input sequence is 2100 bp long. It contains 344 possible guide sequences.

Shown below are their PAM sites and the expected cleavage position located -3bp 5' of the PAM site.

Click on a match for the PAM NGG below to show its 20 bp-long guide sequence. (Need help? Look at the [CRISPOR manual](#))

Colors **green**, **yellow** and **red** indicate high, medium and low specificity of the PAM's guide sequence in the genome.

[illegible]

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Predicted guide sequences for PAMs

Ranked by default from highest to lowest specificity score (Hsu et al., Nat Biot 2013). Click on a column title to rank by a score.

If you use this website, please cite our [paper in NAR 2018](#). Too much information? Look at the [CRISPOR manual](#).

Download as Excel tables: [Guides](#) / [Guides, all scores](#) / [Off-targets](#) / [Saturating mutagenesis assistant](#)

Position/ Strand 🏹	Guide Sequence + PAM + Restriction Enzymes 🏹 + Variants 🏹 <input type="checkbox"/> Only G- <input type="checkbox"/> Only GG- <input type="checkbox"/> Only A- 🏹	MIT Specificity Score 🏹	CFD Spec. score 🏹	Predicted Efficiency 🏹 <small>Show all scores</small>			Outcome		Off-targets for 0-1-2-3-4 mismatches + next to PAM 🏹	Genome Browser links to matches sorted by CFD off-target score 🏹 <input type="checkbox"/> exons only <input type="checkbox"/> chr17 only
				Doench '16	Mor.-Mateos	Doench-RuleSet3	Out-of-Frame	Lindel		
73 / fw	CTATTGCTCAGCGGTTTCCG TGG Enzymes: <i>BseDI</i> , <i>BstDSI</i> Cloning / PCR primers	96	96	60	29	32	59	74	0 - 0 - 0 - 3 - 26 0 - 0 - 0 - 0 - 0 29 off-targets	4:intron:RP11-191L9.4 4:intron:KIAA1217 4:intergenic:HMGN2P41-VN1R70P show all...
324 / fw	CTATGAGGTGACCTTTACGG AGG Enzymes: <i>TspGWI</i> Cloning / PCR primers	95	95	74	60	119	39	72	0 - 0 - 1 - 5 - 34 0 - 0 - 0 - 0 - 0 40 off-targets	2:intron:RALGAPA2 4:intergenic:RNA5SP189-CTC-278L1.1 3:exon:RP11-561G1.3 show all...
490 / fw	GTGAGCTCGCTGAGACGTTT CGG ⚠️ Inefficient Enzymes: <i>MaeII</i> , <i>Hpy188III</i> Cloning / PCR primers	95	98	32	52	-47	63	67	0 - 0 - 2 - 4 - 18 0 - 0 - 0 - 0 - 0 24 off-targets	4:intergenic:AC092835.2-PROM2 4:intron:ATP8A2 4:intergenic:GPR64-PDHA1 show all...
681 / fw	GTATTCTTATGCGAGGGGCG GGG Enzymes: <i>Ecil</i> Cloning / PCR primers	95	96	45	45	23	67	84	0 - 0 - 0 - 0 - 33 0 - 0 - 0 - 0 - 0 33 off-targets	4:intron:EYS 4:intron:CELF2 4:intron:NCALD show all...
721 / fw	TAAGGCGTTGTGAACCCCC GGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	95	98	50	73	37	62	65	0 - 0 - 0 - 1 - 27 0 - 0 - 0 - 0 - 1 28 off-targets	4:intergenic:RNU6-1051P-AC105760.3 4:exon:RN7SL629P 4:exon:RLTPR/ACD show all...
200 / rev	CCGGACGCGGTGCTACTCAC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BsaWI</i> , <i>TspDTI</i> , <i>BtsCI</i> Cloning / PCR primers	94	98	54	78	44	63	90	0 - 0 - 3 - 2 - 23 0 - 0 - 0 - 0 - 0 28 off-targets	4:intergenic:WWOX-RP11-190D6.2 4:intergenic:RP11-577N1.2-NKAIN3 4:intron:HPS5 show all...
674 / fw	CAGATGGGTATTCTTATGCG AGG Cloning / PCR primers	94	95	64	45	79	68	86	0 - 0 - 0 - 5 - 43 0 - 0 - 0 - 0 - 0 48 off-targets	3:exon:REC8 4:intergenic:RP11-567C2.1-RP11-753N8.1 4:intron:AC092661.1 show all...
676 / fw	GATGGGTATTCTTATGCGAG GGG Cloning / PCR primers	94	94	60	51	69	72	82	0 - 0 - 0 - 5 - 46 0 - 0 - 0 - 0 - 0 51 off-targets	4:intergenic:SNORD42-TTC28 4:intergenic:AC021218.2-Y_RNA 4:intergenic:AL512359.1-RP11-737F10.1 show all...
90 / fw	CCGTGGCAACAGTAAAGCGT GGG Enzymes: <i>MluCI</i> Cloning / PCR primers	93	97	61	55	84	76	87	0 - 0 - 0 - 3 - 32 0 - 0 - 0 - 0 - 0 35 off-targets	4:intergenic:VDAC1P10-KCTD3 4:exon:PLEKHG3 4:exon:WDR73 show all...
89 / fw	TCCGTGGCAACAGTAAAGCG TGG Enzymes: <i>MluCI</i> Cloning / PCR primers	92	96	62	40	105	75	91	0 - 0 - 1 - 6 - 33 0 - 0 - 0 - 1 - 1 40 off-targets	2:exon:BRCA1 4:intron:ABCC3 4:exon:RP11-353B9.1 show all...
496 / fw	TCGCTGAGACGTTTCTGGACG GGG Enzymes: <i>Hpy188III</i> , <i>BsIFI</i> Cloning / PCR primers	92	96	56	35	59	60	73	0 - 0 - 1 - 1 - 32 0 - 0 - 0 - 0 - 0 34 off-targets	4:intron:RGS12 4:intergenic:TMCO4-RNF186/RP11-91K11.2 2:exon:BRCA1 show all...
497 / fw	CGCTGAGACGTTCTGGACGG GGG Enzymes: <i>BsIFI</i> Cloning / PCR primers	92	96	64	68	44	59	76	0 - 0 - 2 - 1 - 31 0 - 0 - 0 - 0 - 1 34 off-targets	2:exon:BRCA1 2:intergenic:AL137190.1-BDKRB2/RP11-404P21.8 4:intron:SUSD4 show all...
680 / fw	GGTATTCTTATGCGAGGGGC GGG Cloning / PCR primers	92	93	37	43	-51	68	82	0 - 0 - 0 - 1 - 59 0 - 0 - 0 - 0 - 0 60 off-targets	3:intron:EPB41 4:intergenic:AC019046.1-MLTK 4:exon:IFI27L2 show all...
659 / fw	ATTTCCGAAGCTAGGCAGAT GGG Cloning / PCR primers	91	91	58	47	-26	63	85	0 - 0 - 2 - 7 - 54 0 - 0 - 0 - 0 - 0 63 off-targets	3:intergenic:RP11-552E20.1-TDRG1 4:intergenic:RP11-717H13.1-RP11-97E7.1 3:intergenic:EMP1-C12orf36 show all...
675 / fw	AGATGGGTATTCTTATGCGA GGG Cloning / PCR primers	90	91	60	41	85	69	80	0 - 0 - 0 - 12 - 73 0 - 0 - 0 - 0 - 1 85 off-targets	4:intergenic:RPSAP63-GPC3 4:intergenic:AC021218.2-Y_RNA 3:intergenic:AC092684.1-AC110086.1 show all...
722 / fw	AAGGCGTTGTGAACCCCCCG GGG	90	95	69	71	94	64	78	0 - 0 - 0 - 5 - 32 0 - 0 - 0 - 1 - 1	4:intergenic:AC013262.1-RN7SL201P 4:intron:SPPL3 3:exon:RP11-139I14.2

	Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers								37 off-targets	show all...
601 / rev	CGTCCCCCGGAGCATCCCTT GGG <u>A</u> ⚠ Inefficient Enzymes: <i>EcoO109I</i> , <i>BshFI</i> , <i>BaeGI</i> , <i>ErhI</i> , <i>NlaIV</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> Cloning / PCR primers	89	96	50	49	-70	63	81	0 - 0 - 0 - 3 - 49 0 - 0 - 0 - 1 - 1 52 off-targets	4:intergenic:WIZ-81516E3.1-RPL35P8 3:intergenic:TIAL1-RAD1P1 4:exon:BRCA1 show all...
726 / fw	CGTTGTGAACCCCCCGGGA AGG <u>T</u> Enzymes: <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	89	96	41	44	-14	67	75	0 - 0 - 0 - 3 - 42 0 - 0 - 0 - 0 - 0 45 off-targets	3:intergenic:RP11-122G18.7-FCGR2A 4:intron:PCBP3 4:intron:PCBP3 show all...
720 / fw	ATAAGGCGTTGTGAACCCCC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> Cloning / PCR primers	88	94	59	63	92	65	83	0 - 0 - 0 - 2 - 65 0 - 0 - 0 - 0 - 2 67 off-targets	4:intergenic:NPM1P42-NEO1 4:intron:LINC01122 4:intron:PCSK5 show all...
727 / fw	GTTGTGAACCCCCCGGGAA GGG <u>T</u> Enzymes: <i>BseDI</i> , <i>BsII</i> Cloning / PCR primers	88	91	47	50	-4	67	78	0 - 0 - 0 - 1 - 70 0 - 0 - 0 - 1 - 1 71 off-targets	4:intron:CNBD2 4:intron:PLOD1 4:intron:MKRN1 show all...
871 / fw	CATCAGCTGGTCGCCGGGGA TGG Enzymes: <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BtsCI</i> Cloning / PCR primers	87	92	45	65	-28	73	78	0 - 0 - 1 - 4 - 88 0 - 0 - 0 - 0 - 0 93 off-targets	4:exon:KCNJ5 4:intergenic:RN7SKP89-KCNN2 4:exon:CTD-2223O18.1 show all...
502 / fw	AGACGTTCTGGACGGGGGAC AGG <u>A</u> Enzymes: <i>BshFI</i> , <i>BsIFI</i> Cloning / PCR primers	86	94	49	63	-96	59	74	0 - 0 - 1 - 3 - 63 0 - 0 - 1 - 1 - 1 67 off-targets	4:intergenic:CDC42EP4-SDK2 4:intron:OTX1 4:intergenic:EFCC1-RP11-434H6.2 show all...
865 / fw	TAAGAACATCAGCTGGTCGC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BtsCI</i> Cloning / PCR primers	86	94	48	40	34	66	86	0 - 0 - 3 - 5 - 94 0 - 0 - 0 - 0 - 1 102 off-targets	4:intergenic:ADARB2-AS1-ADARB2 3:intron:HNRNPKP3 4:intergenic:CYP2C56P-AC092684.1 show all...
807 / fw	CGAGGAGGAATCCTCTGAT AGG Enzymes: <i>LpnPI</i> , <i>Hpy188III</i> Cloning / PCR primers	85	91	54	69	-9	49	72	0 - 0 - 0 - 8 - 57 0 - 0 - 0 - 1 - 1 65 off-targets	3:intron:LRRC28 3:exon:MYZAP/GCOM1/POLR2M 4:intergenic:DISP1-TLR5 show all...
494 / fw	GCTCGCTGAGACGTTCTGGA CGG Enzymes: <i>Hpy188III</i> , <i>BsIFI</i> Cloning / PCR primers	84	90	57	43	68	61	85	0 - 0 - 1 - 5 - 192 0 - 0 - 0 - 0 - 0 198 off-targets	4:exon:AC005307.3 4:intergenic:RP11-677I18.4-RP11-680E19.1 4:intergenic:CRIP1P3-GPR37L1 show all...
651 / fw	GAAAGTGAATTTCCGAAGCT AGG Enzymes: <i>MaeI</i> , <i>AluBI</i> , <i>BsII</i> Cloning / PCR primers	84	88	61	49	-16	74	82	0 - 0 - 1 - 16 - 127 0 - 0 - 0 - 0 - 1 144 off-targets	4:intergenic:RP11-6B19.3-RP11-6B19.2 4:intergenic:KIAA2022-ABCB7 4:intergenic:RPP40P1-RP11-298C3.2 show all...
243 / rev	GGAGACGGAGGCCATAGCGC GGG Enzymes: <i>HinP1I</i> , <i>BspFNI</i> , <i>BstC8I</i> , <i>BsII</i> Cloning / PCR primers	83	84	55	45	118	57	64	0 - 0 - 6 - 22 - 142 0 - 0 - 1 - 0 - 0 170 off-targets	3:intron:BDH1 3:intron:BDH1 3:intron:BDH1 show all...
643 / rev	AATACCATCTGCCTAGCTT CGG ⚠ Inefficient Enzymes: <i>MluCI</i> , <i>AluBI</i> , <i>Hpy188I</i> , <i>BsII</i> Cloning / PCR primers	83	93	52	29	14	72	86	0 - 0 - 1 - 8 - 87 0 - 0 - 0 - 1 - 2 96 off-targets	4:intron:LINC00871 4:exon:PERP 3:intron:ADCK1 show all...
1377 / fw	TGAGATGAGAGTGGGTCGCT GGG <u>T</u> Cloning / PCR primers	83	87	60	58	20	73	80	0 - 0 - 2 - 6 - 140 0 - 0 - 1 - 0 - 1 148 off-targets	4:intron:BRCA1 4:intergenic:RP11-552E20.1-TDRG1 4:exon:ZC3HAV1 show all...
1493 / fw	GAGAAAGCTCACCACCTTACC CGG <u>TA</u> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>NciI</i> , <i>StyD4I</i> Cloning / PCR primers	83	90	56	39	27	63	86	0 - 0 - 1 - 11 - 107 0 - 0 - 0 - 0 - 1 119 off-targets	4:intron:CPO 4:intron:ARSB 4:intron:C5orf66 show all...
495 / fw	CTCGCTGAGAGTTCTGGAG GGG Enzymes: <i>Hpy188III</i> , <i>BsIFI</i> Cloning / PCR primers	82	93	43	54	-19	64	67	0 - 0 - 1 - 12 - 74 0 - 0 - 0 - 0 - 0 87 off-targets	3:intergenic:MIR4432-AC007381.2 4:intergenic:AC026202.5-AC027119.1 4:intron:RP11-8L2.1 show all...
682 / fw	TATTCTTATGCGAGGGGCGG GGG Enzymes: <i>Ecil</i> Cloning / PCR primers	82	92	40	71	-1	64	75	0 - 0 - 0 - 6 - 110 0 - 0 - 0 - 0 - 1 116 off-targets	4:exon:IFI27L2 4:intergenic:CANX-MAML1 4:intergenic:AC073325.1-ADCY1 show all...
771 / fw	GAAGCACTAAGGATCAGGTT GGG Enzymes: <i>BaeGI</i> , <i>Bsp1286I</i> Cloning / PCR primers	82	91	47	61	47	71	76	0 - 0 - 1 - 9 - 105 0 - 0 - 0 - 1 - 1 115 off-targets	4:intergenic:RP11-501E14.1-PRDM5 4:intergenic:RP11-72I18.1-RP1-30E17.2 4:intron:CYP7B1 show all...
801 / rev	GGCACATTCAGTTCTATC AGG Enzymes: <i>Hpy188III</i> Cloning / PCR primers	82	91	41	37	-107	48	73	0 - 0 - 1 - 9 - 108 0 - 0 - 0 - 0 - 3 118 off-targets	4:intron:ANXA5 2:intron:PLCH1 4:intergenic:MIR5100-RET show all...
866 / fw	AAGAACATCAGCTGGTCGCC GGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BtsCI</i> Cloning / PCR primers	82	81	50	41	-46	71	76	0 - 0 - 1 - 7 - 277 0 - 0 - 0 - 0 - 1 285 off-targets	4:intron:KIAA1549L 4:intergenic:RASGRF2-CKMT2-AS1/RASGRF2 4:intergenic:RP11-737F10.1-SNORD112 show all...
1182 / rev	CTGGCACTTCTTCTTCGCA AGG Enzymes: <i>EcoO109I</i> , <i>BshFI</i> , <i>SsiI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> Cloning / PCR primers	82	85	45	44	11	73	84	0 - 0 - 3 - 15 - 128 0 - 0 - 0 - 1 - 1 146 off-targets	4:exon:SPTBN4 4:exon:NCDN 2:intron:BRCA1 show all...
1376 / fw	CTGAGATGAGAGTGGGTCGC TGG <u>T</u> Cloning / PCR primers	82	84	41	41	-77	73	81	0 - 0 - 3 - 16 - 178 0 - 0 - 0 - 0 - 0 3:intergenic:ZNF107-RP11-561N12.7 4:intron:COL13A1 4:intron:ACSM5 show all...	

									197 off-targets	
658 / fw	AATTTCGGAAGCTAGGCAGA TGG Cloning / PCR primers	81	87	58	36	-17	69	85	0 - 0 - 0 - 17 - 81 0 - 0 - 0 - 3 - 2 98 off-targets	3:intergenic:ACTBP9-ZCCHC2 4:intergenic:GLI3-AC027269.2 4:intron:RPS6KA2 show all...
628 / fw	GATGCTCCGGGGGACGGGCG GGG ⚠ High GC content Cloning / PCR primers	80	90	31	70	-78	68	87	0 - 0 - 0 - 11 - 148 0 - 0 - 0 - 0 - 2 159 off-targets	3:intron:RP11-378E13.3 4:intergenic:TCEANC-RAB9A 4:intergenic:LINC01168-GPR123 show all...
728 / fw	TTGTGAACCCCCCGGGGAAG GGG Enzymes: BslI Cloning / PCR primers	80	86	40	54	-33	67	71	0 - 0 - 0 - 3 - 98 0 - 0 - 0 - 0 - 2 101 off-targets	4:intron:RP3-437I16.1 4:intron:TCP11L2 4:intergenic:AC073987.2-AC092568.1 show all...
1293 / fw	TGCTATTGAGAAAGCGCAAG AGG Cloning / PCR primers	80	93	58	38	-25	65	68	0 - 0 - 1 - 10 - 109 0 - 0 - 1 - 1 - 0 120 off-targets	4:intron:KIAA0319L 2:intron:BRCA1 4:intergenic:CLRN1-CLRN1/CLRN1-AS1 show all...
70 / rev	CCCACGCTTTACTGTGCCA CGG Enzymes: BseDI, BstDSI, TspGWI Cloning / PCR primers	79	91	56	30	-21	59	73	0 - 0 - 2 - 16 - 75 0 - 0 - 2 - 0 - 3 93 off-targets	4:intergenic:RP11-143I21.1-ZNF777 4:intron:NRCAM 4:intergenic:CTD-2560K21.6-LRRC4B show all...
679 / fw	GGGTATTCTTATGCGAGGGG CGG Cloning / PCR primers	79	84	48	69	7	70	81	0 - 0 - 0 - 10 - 125 0 - 0 - 0 - 0 - 0 135 off-targets	4:intron:SLC9A9 4:intergenic:RP11-93B21.1-Y_RNA 3:intron:GRXCR1 show all...
591 / fw	GGTAGAAGAGCCCCGGGAAA GGG Enzymes: BslFI, BslI Cloning / PCR primers	78	84	53	53	-27	61	73	0 - 0 - 2 - 7 - 140 0 - 0 - 0 - 0 - 1 149 off-targets	4:exon:PARP14 4:intron:PPP1R1C 4:intergenic:CDH2-ARIH2P1 show all...
618 / fw	GGGCCCCAAGGGATGCTCCGG GGG Enzymes: MspI, LpnPI, BseDI, NciI, StyD4I, BslFI, LmnI, BslI Cloning / PCR primers	78	86	44	84	62	69	66	0 - 0 - 1 - 13 - 138 0 - 0 - 0 - 0 - 0 152 off-targets	3:intron:RS1 4:intron:TTC7A 4:intron:SLC25A42 show all...
772 / fw	AAGCACTAAGGATCAGGTG GGG Enzymes: BaeGI, Bsp1286I Cloning / PCR primers	78	89	52	58	62	71	80	0 - 0 - 0 - 15 - 116 0 - 0 - 0 - 0 - 2 131 off-targets	3:intron:SPAG9 3:intron:GPR98 4:intergenic:CTNNA3-RP11-93L14.1 show all...
127 / rev	GAACACCTTGCGGCGAGCCG AGG Enzymes: NmeAIII, BseDI, Fsp4HI, BstVII, ApeKI, BslI Cloning / PCR primers	77	89	57	49	-12	57	69	0 - 0 - 2 - 13 - 80 0 - 0 - 0 - 1 - 2 95 off-targets	4:intergenic:TDRD5-AL359853.1 4:intron:ITGB7 4:intron:EPHA10 show all...
629 / fw	ATGCTCCGGGGACGGGCGG GGG ⚠ High GC content Cloning / PCR primers	77	87	29	94	-113	68	78	0 - 0 - 2 - 9 - 115 0 - 0 - 0 - 0 - 7 126 off-targets	2:intron:PTPRN2 4:intergenic:AC004870.3-TNS3 4:intergenic:LINC00243-XXbac-BPG27H4.8 show all...
1543 / rev	ACATATTGCTTCCAACCCTT TGG ⚠ Inefficient Enzymes: BstXI Cloning / PCR primers	77	86	31	34	-72	65	77	0 - 0 - 2 - 20 - 119 0 - 0 - 0 - 3 - 6 141 off-targets	3:intron:RP11-179A16.2 4:intergenic:LRP1B-AC012003.1 4:intergenic:RP11-1058G23.1-RP11-238F2.1 show all...
149 / fw	TCGGCTGCCGCCAAGGTGTT CGG ⚠ Inefficient Enzymes: PspPI, Bme18I Cloning / PCR primers	76	91	42	69	-29	50	83	0 - 0 - 2 - 11 - 58 0 - 0 - 0 - 1 - 0 71 off-targets	3:intergenic:MUC5AC-MUC5B 2:intergenic:RN7SL356P-RP11-7F17.1 4:intergenic:RPS4XP9-RSPO3 show all...
622 / fw	CCAAGGGATGCTCCGGGGGA CGG Enzymes: BseDI, BslFI, BslI Cloning / PCR primers	76	82	32	70	-68	73	71	0 - 0 - 3 - 14 - 165 0 - 0 - 0 - 2 - 1 182 off-targets	4:intergenic:HMGB3P6-PBX1 4:intron:TENM3 4:intergenic:PDE1C-AC018641.7 show all...
715 / rev	AAACTGCCCCCTTCCCCGGG GGG Enzymes: MspI, LpnPI, BmeT110I, Hpy166II, Cfr9I, BseDI, NciI, StyD4I, BslI Cloning / PCR primers	76	80	62	74	50	64	76	0 - 0 - 2 - 17 - 120 0 - 0 - 0 - 1 - 8 139 off-targets	3:intron:FLT3 4:intergenic:REXO1-CTB-31O20.6/KLF16 4:intron:FAM81A show all...
766 / fw	CGAGGGAAGCACTAAGGATC AGG Enzymes: NdeII, BspPI Cloning / PCR primers	76	82	48	59	31	61	66	0 - 0 - 1 - 11 - 191 0 - 0 - 0 - 2 - 1 203 off-targets	4:intron:PHF21A 4:intergenic:RN7SKP224-AC079807.4 4:intergenic:RP11-1072N2.4-CTD-2331D11.2 show all...
770 / fw	GGAAGCACTAAGGATCAGGT TGG Cloning / PCR primers	76	85	57	31	40	71	71	0 - 0 - 3 - 14 - 139 0 - 0 - 0 - 1 - 0 156 off-targets	4:intergenic:RP11-19F9.1-RP11-687D19.1 4:intron:UBE2Q2P2 4:intron:UBE2Q2P3 show all...
786 / rev	CTATCAGGAGGATTCTCTCT CGG ⚠ Inefficient Enzymes: MnlI, BseDI, Hpy188I Cloning / PCR primers	76	90	61	60	-83	68	61	0 - 0 - 2 - 11 - 89 0 - 0 - 0 - 1 - 1 102 off-targets	3:intergenic:MIR548AS-GPC5-IT1 3:intron:CSMD2 4:intergenic:RNU7-14P-AC006076.1 show all...
792 / fw	GGGGCACAGTGTGTCCGAGG AGG Enzymes: BseRI, BseDI, HinfI, Hpy188I, PfiI Cloning / PCR primers	76	85	64	92	18	46	76	0 - 0 - 1 - 19 - 192 0 - 0 - 0 - 2 - 0 212 off-targets	3:intron:PTH1R 4:intron:RP11-183M13.1 2:intron:JAKMIP2 show all...
1181 / rev	TGGCACTTCTTCTCCGCAA GGG	76	83	48	59	-11	75	78	0 - 0 - 1 - 10 -	4:intergenic:RP1-241P17.1-RP11-761E20.1 4:intergenic:RP11-314C16.1-RP11-354I10.1

	Enzymes: <i>EcoO109I</i> , <i>BshFI</i> , <i>SsiI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> Cloning / PCR primers							119 0 - 0 - 1 - 0 - 7 130 off-targets	4:intergenic:RP11-111A21.1-RP11-662J14.1 show all...
1266 / rev	CGCTTTCCTCAATAGCACAAA TGG <u>T</u> <u>C</u> Enzymes: <i>NdeII</i> , <i>MfiI</i> , <i>NlaIV</i> , <i>BamHI</i> , <i>BspPI</i> Cloning / PCR primers	76	88	29	34	-187	70	75 0 - 0 - 1 - 21 - 87 0 - 0 - 0 - 1 - 3 109 off-targets	4:intron:LMNA 4:intergenic:ADAMTS5-GPX1P2 3:intergenic:RP11-27P7.1-SLC2A13P1 show all...
1388 / fw	TGGGTCGCTGGGAAAGGCTA GGG <u>T</u> Enzymes: <i>MaeI</i> Cloning / PCR primers	76	82	48	68	34	65	76 0 - 0 - 3 - 9 - 159 0 - 0 - 2 - 1 - 3 171 off-targets	4:intergenic:RP11-48D4.2-hsa-mir-3149 4:intron:AC007277.3 4:intergenic:RPL9P15-RP11-439C8.1 show all...
39 / rev	GAGCAATAGCCTCTCAGAAT AGG <u>T</u> Enzymes: <i>Hpy188I</i> Cloning / PCR primers	75	90	43	58	-29	70	76 0 - 0 - 2 - 12 - 106 0 - 0 - 0 - 3 - 4 120 off-targets	4:intergenic:RANBP3L-RNA5SP181 4:intergenic:SNORD38-PEX12P1 4:intron:GRM8 show all...
220 / fw	CCGGTGAGTAGCACCGCGTC CGG <u>T</u> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BspFNI</i> , <i>Fsp4HI</i> , <i>BstVI1</i> , <i>ApeKI</i> Cloning / PCR primers	75	87	55	90	34	60	71 0 - 0 - 1 - 4 - 113 0 - 0 - 1 - 1 - 0 118 off-targets	4:intergenic:UBE2K-PDS5A 2:exon:RPLP1 4:intergenic:RP11-398J16.1-AC109925.1 show all...
244 / rev	GGGAGACGGAGGCCATAGCG CGG <u>T</u> Enzymes: <i>HinP1I</i> , <i>BspFNI</i> , <i>BstC8I</i> , <i>BsII</i> Cloning / PCR primers	75	82	59	67	80	61	76 0 - 0 - 4 - 18 - 212 0 - 0 - 0 - 0 - 2 234 off-targets	4:intron:CTC-360P9.4 3:intergenic:AC025674.1-RP11-513O17.2 4:intergenic:DRD2-TMPRSS5 show all...
321 / fw	GGACTATGAGGTGACCTTTA CGG ⚠ Inefficient Enzymes: <i>TspGWI</i> Cloning / PCR primers	75	90	39	66	-109	39	70 0 - 1 - 5 - 22 - 91 0 - 0 - 1 - 0 - 0 119 off-targets	3:intron:PLXDC1 4:intergenic:RP11-219J21.2-RP11-299D14.2 4:intergenic:RP11-491H19.1-ARID5B show all...
535 / fw	TCTCAGATAACTGGGCCCTT GGG <u>A</u> Enzymes: <i>PasI</i> , <i>EcoO109I</i> , <i>LpnPI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> , <i>BstNI</i> , <i>BstDEI</i> , <i>StyD4I</i> , <i>BspCNI</i> Cloning / PCR primers	75	82	56	47	3	65	92 0 - 0 - 5 - 14 - 122 0 - 0 - 1 - 2 - 2 141 off-targets	4:intron:OLFML2B 4:intergenic:RP11-736G13.1-CBLN2 3:intergenic:RP11-566J3.4-MEG3 show all...
623 / fw	CAAGGGATGCTCCGGGGAC GGG <u>A</u> Enzymes: <i>BsFI</i> , <i>BsII</i> Cloning / PCR primers	75	85	38	67	-81	73	74 0 - 0 - 1 - 16 - 133 0 - 0 - 1 - 0 - 0 150 off-targets	2:intergenic:RP11-432M8.20-RP11-432M8.10 3:intron:CDH4 4:exon:MYO7B show all...
716 / rev	CAAAC TGCCCCCTTCCCCGG GGG <u>T</u> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	75	82	62	68	53	66	74 0 - 0 - 1 - 17 - 150 0 - 0 - 0 - 0 - 4 168 off-targets	4:intron:OPCML-IT1 2:intron:OGDHL 3:intron:SHANK2 show all...
748 / fw	GGGCGAGTTTG TAGGTCTCG AGG <u>T</u> Enzymes: <i>TaqI</i> , <i>BmeT110I</i> , <i>Sfr274I</i> , <i>BspTNI</i> , <i>Smol</i> , <i>Hpy188III</i> , <i>BcoDI</i> Cloning / PCR primers	75	94	62	44	-2	67	80 0 - 1 - 2 - 8 - 59 0 - 0 - 1 - 0 - 0 70 off-targets	4:intron:SORL1 4:intron:COL23A1 4:intergenic:RP11-680F8.3-TJP1 show all...
1178 / fw	GCTGGTATATATGAGAAGAT GGG Enzymes: <i>EcoO109I</i> , <i>BshFI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> , <i>MbolI</i> Cloning / PCR primers	75	87	60	54	58	72	78 0 - 0 - 2 - 13 - 138 0 - 0 - 0 - 2 - 5 153 off-targets	4:intergenic:RP11-400N13.1-QRSL1P2 4:intergenic:RP4-676L2.1-RP11-486M23.1 4:intergenic:TNMD-TSPAN6 show all...
760 / fw	AGGTCTCGAGGGAAGCACTA AGG Enzymes: <i>NdeII</i> , <i>BstDEI</i> , <i>BspPI</i> Cloning / PCR primers	74	88	57	50	54	61	85 0 - 0 - 0 - 10 - 91 0 - 0 - 0 - 3 - 3 101 off-targets	4:intergenic:RP11-437J19.1-RP1-124C6.1 4:intergenic:AC002978.1-CUX2 3:intron:TNKS show all...
858 / fw	ATGTGTATAAGAACATCAGC TGG Enzymes: <i>AluBI</i> , <i>PvuII</i> , <i>MspA1I</i> Cloning / PCR primers	74	84	60	10	37	71	75 0 - 0 - 1 - 15 - 157 0 - 0 - 0 - 2 - 4 173 off-targets	4:intron:PCSK6 4:intergenic:SLC7A5-CA5A 3:intron:FPGS show all...
1155 / rev	ATCTTCTCATATATACCAGC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>Cfr10I</i> Cloning / PCR primers	74	83	59	39	17	61	80 0 - 0 - 1 - 16 - 138 0 - 0 - 0 - 1 - 3 155 off-targets	3:intergenic:AP000705.8-AP000705.6 2:intron:BRCA1 4:intergenic:RPS6P7-MEI4 show all...
1355 / rev	CAGCGACCCACTCTCATCTC AGG ... <u>T</u> ⚠ Inefficient Enzymes: <i>NdeII</i> , <i>MfiI</i> , <i>NlaIV</i> , <i>BamHI</i> , <i>Hpy188III</i> , <i>BstDEI</i> , <i>BspPI</i> , <i>BspCNI</i> Cloning / PCR primers	74	90	45	59	-11	65	88 0 - 0 - 1 - 16 - 111 0 - 0 - 0 - 2 - 1 128 off-targets	3:intergenic:COMMD9-PRR5L 3:intron:BRCA1 4:intron:DNAH8 show all...
188 / rev	CTACTACCGGATGAAGTGA GGG Enzymes: <i>BspTNI</i> , <i>BcoDI</i> Cloning / PCR primers	73	90	60	42	58	57	86 0 - 0 - 5 - 6 - 48 0 - 0 - 2 - 1 - 1 59 off-targets	4:intergenic:RP11-166D18.1-CLSTN2 4:intergenic:NEIL3-AGA 4:intron:RP11-308N19.1 show all...
309 / fw	CCTCATTCTGCAGGACTATG AGG Enzymes: <i>BstEII</i> , <i>AsuHPI</i> , <i>Tsp45I</i> , <i>MaellI</i> Cloning / PCR primers	73	84	55	46	-4	52	81 0 - 0 - 5 - 22 - 146 0 - 0 - 0 - 1 - 1 173 off-targets	2:intergenic:AC098612.1-UNC5D 4:intergenic:CTC-478M6.1-AC007795.1 4:intron:ADAD1 show all...
508 / fw	TCTGGACGGGGACAGGCCG TGG <u>A</u> Enzymes: <i>BshFI</i> , <i>BseDI</i> , <i>BstDSI</i> Cloning / PCR primers	72	85	31	69	-77	63	71 0 - 0 - 1 - 13 - 138 0 - 0 - 0 - 1 - 3 152 off-targets	4:exon:GRIFIN 4:exon:MED15/AC007050.18 2:exon:BRCA1 show all...
627 / fw	GGATGCTCCGGGGGACGGGC GGG <u>A</u> ⚠ High GC content Enzymes: <i>BsII</i> Cloning / PCR primers	72	83	32	39	-102	68	72 0 - 0 - 1 - 6 - 191 0 - 0 - 0 - 0 - 0 198 off-targets	3:intron:SLC4A5/RP11-287D1.3 4:intergenic:TP53I11-TSPAN18 4:intergenic:LSM3-RP11-536I6.2 show all...
	TACACATGGTGTCCTTCCTCA AGG								3:intergenic:RP11-486E2.1-FAM46A

822 / rev	<div> <div> </div> <div> <div>⚠ Inefficient</div> <div>Enzymes: <i>HpyAV</i>, <i>AgsI</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	72	90	46	50	-45	67	71	<div> <div>0 - 1 - 1 - 18 - 101</div> <div>0 - 0 - 0 - 2 - 3</div> <div>121 off-targets</div> </div>	<div> <div>4:exon:STRA6/RP11-60L3.1</div> <div>4:intron:BRCA1</div> <div>show all...</div> </div>
1461 / rev	<div> <div> </div> <div> <div>⚠ Inefficient</div> <div></div> <div>Cloning / PCR primers</div> </div> </div>	72	86	37	16	-98	72	72	<div> <div>0 - 0 - 4 - 23 - 200</div> <div>0 - 0 - 0 - 1 - 0</div> <div>227 off-targets</div> </div>	<div> <div>4:intergenic:SLIT2-IT1-SLIT2</div> <div>4:intergenic:RPS7P4-COX6B1P7</div> <div>4:intergenic:RP11-295D22.1-RP11-360A18.2</div> <div>show all...</div> </div>
443 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Cloning / PCR primers</div> </div> </div>	71	83	50	53	60	72	87	<div> <div>0 - 0 - 3 - 17 - 159</div> <div>0 - 0 - 0 - 1 - 2</div> <div>179 off-targets</div> </div>	<div> <div>2:intergenic:KCNCMB2-RP11-385J1.2</div> <div>4:intron:CLCN5</div> <div>4:intergenic:C1GALT1C1-RP4-655L22.4</div> <div>show all...</div> </div>
590 / fw	<div> <div> </div> <div> <div></div> <div>Enzymes: <i>BmeT110I</i>, <i>Cfr9I</i>, <i>BseDI</i>, <i>NciI</i>, <i>StyD4I</i>, <i>BsIFi</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	71	87	56	57	4	64	82	<div> <div>0 - 0 - 3 - 13 - 186</div> <div>0 - 0 - 0 - 1 - 2</div> <div>202 off-targets</div> </div>	<div> <div>4:intron:TRPM2</div> <div>4:intergenic:GPR75-ASB3-AC008064.1</div> <div>4:intergenic:AF131215.6-AF131215.9</div> <div>show all...</div> </div>
729 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	71	81	52	79	31	68	77	<div> <div>0 - 0 - 1 - 15 - 133</div> <div>0 - 0 - 0 - 1 - 3</div> <div>149 off-targets</div> </div>	<div> <div>3:intron:SULF2</div> <div>4:intergenic:RP11-756P10.4-RP11-756P10.5</div> <div>3:intergenic:AP001595.1-AP001596.6</div> <div>show all...</div> </div>
789 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>BseRI</i>, <i>BseDI</i>, <i>Hpy188I</i></div> <div>Cloning / PCR primers</div> </div> </div>	71	82	56	65	-12	68	86	<div> <div>0 - 0 - 3 - 20 - 177</div> <div>0 - 0 - 0 - 1 - 0</div> <div>200 off-targets</div> </div>	<div> <div>4:intron:HBG1</div> <div>4:intron:HBG2</div> <div>4:intergenic:CDKN2AIPNLP1-C1orf95</div> <div>show all...</div> </div>
1177 / fw	<div> <div> </div> <div> <div></div> <div>Enzymes: <i>EcoO109I</i>, <i>BshFI</i>, <i>BaeGI</i>, <i>NlaIV</i>, <i>Eco24I</i>, <i>Bsp1286I</i>, <i>Bsp120I</i>, <i>PspPI</i>, <i>MbolI</i></div> <div>Cloning / PCR primers</div> </div> </div>	71	82	49	26	-13	74	68	<div> <div>0 - 0 - 3 - 10 - 149</div> <div>0 - 0 - 0 - 0 - 8</div> <div>162 off-targets</div> </div>	<div> <div>4:intergenic:RP11-326K13.4/TRAPPC8-TRAPPC8</div> <div>4:intergenic:BTF3P7-RP3-429O6.1</div> <div>4:intergenic:FAM174A-CTC-293G12.1</div> <div>show all...</div> </div>
602 / rev	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>EcoO109I</i>, <i>BshFI</i>, <i>BaeGI</i>, <i>ErhI</i>, <i>NlaIV</i>, <i>BseDI</i>, <i>Eco24I</i>, <i>Bsp1286I</i>, <i>Bsp120I</i>, <i>PspPI</i></div> <div>Cloning / PCR primers</div> </div> </div>	70	86	38	47	-32	62	82	<div> <div>0 - 0 - 2 - 11 - 114</div> <div>0 - 0 - 0 - 0 - 1</div> <div>127 off-targets</div> </div>	<div> <div>2:exon:FOXN3P1</div> <div>4:intron:NUP35</div> <div>4:intron:COX10</div> <div>show all...</div> </div>
172 / rev	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>BshFI</i>, <i>BspFNI</i>, <i>Fsp4HI</i>, <i>TauI</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	91	74	67	31	73	80	<div> <div>0 - 1 - 6 - 14 - 60</div> <div>0 - 1 - 0 - 0 - 0</div> <div>81 off-targets</div> </div>	<div> <div>4:intergenic:RP11-224P11.1-KIAA1462</div> <div>2:exon:TTC19/RPLP1P11</div> <div>4:intergenic:SNORA75-RPS7P6</div> <div>show all...</div> </div>
446 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Cloning / PCR primers</div> </div> </div>	69	76	66	68	74	70	80	<div> <div>0 - 0 - 0 - 28 - 178</div> <div>0 - 0 - 0 - 2 - 0</div> <div>206 off-targets</div> </div>	<div> <div>4:intron:MRPL32</div> <div>4:intergenic:CLOCK/RP11-528I4.2-PDCL2</div> <div>4:intergenic:AL592205.2-DPYD</div> <div>show all...</div> </div>
509 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>BshFI</i>, <i>BseDI</i>, <i>BstDSI</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	89	41	83	-8	65	69	<div> <div>0 - 1 - 1 - 7 - 115</div> <div>0 - 0 - 0 - 1 - 2</div> <div>124 off-targets</div> </div>	<div> <div>1:exon:BRCA1</div> <div>4:intron:SOGA2</div> <div>4:intron:RAB6B</div> <div>show all...</div> </div>
614 / rev	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>MspI</i>, <i>LpnPI</i>, <i>BseDI</i>, <i>NciI</i>, <i>StyD4I</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	79	49	45	61	71	66	<div> <div>0 - 0 - 0 - 12 - 175</div> <div>0 - 0 - 0 - 0 - 3</div> <div>187 off-targets</div> </div>	<div> <div>4:intergenic:NPM1P28-RP11-78O22.1</div> <div>4:intergenic:TECRL-RP11-204H9.2</div> <div>4:intron:RP11-16D22.2</div> <div>show all...</div> </div>
617 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>MspI</i>, <i>LpnPI</i>, <i>BseDI</i>, <i>NciI</i>, <i>StyD4I</i>, <i>BsIFi</i>, <i>LmnI</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	83	51	50	-43	71	77	<div> <div>0 - 0 - 2 - 24 - 191</div> <div>0 - 0 - 0 - 0 - 2</div> <div>217 off-targets</div> </div>	<div> <div>4:intergenic:OR5BL1P-OR9Q1</div> <div>4:intron:RS1</div> <div>4:intergenic:GLIS1-RNU7-95P</div> <div>show all...</div> </div>
717 / rev	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>MspI</i>, <i>LpnPI</i>, <i>BmeT110I</i>, <i>Cfr9I</i>, <i>BseDI</i>, <i>NciI</i>, <i>StyD4I</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	83	61	46	121	65	79	<div> <div>0 - 0 - 1 - 25 - 127</div> <div>0 - 0 - 0 - 1 - 7</div> <div>153 off-targets</div> </div>	<div> <div>3:exon:CAP2</div> <div>4:intergenic:EEF1E1/EEF1E1-BLOC1S5-RP11-203H2.1</div> <div>4:intergenic:RP11-432J9.6-UNC5B</div> <div>show all...</div> </div>
829 / fw	<div> <div> </div> <div> <div></div> <div>Enzymes: <i>BsIFi</i>, <i>AgsI</i>, <i>BsII</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	83	53	51	2	63	91	<div> <div>0 - 0 - 5 - 15 - 132</div> <div>0 - 0 - 1 - 2 - 2</div> <div>152 off-targets</div> </div>	<div> <div>2:intron:BRCA1</div> <div>4:intron:MLLT10</div> <div>4:intron:YWHAEP7</div> <div>show all...</div> </div>
1203 / fw	<div> <div> </div> <div> <div>⚠ Inefficient</div> <div>Enzymes: <i>LpnPI</i>, <i>BstNI</i>, <i>StyD4I</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	85	49	47	50	63	88	<div> <div>0 - 0 - 1 - 16 - 132</div> <div>0 - 0 - 0 - 1 - 9</div> <div>149 off-targets</div> </div>	<div> <div>4:intergenic:AC104843.3-SNORA26</div> <div>4:exon:TSIX/XIST</div> <div>4:intergenic:HSP90B1/C12orf73-C12orf73</div> <div>show all...</div> </div>
1389 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>MaeI</i></div> <div>Cloning / PCR primers</div> </div> </div>	69	84	62	57	78	61	74	<div> <div>0 - 0 - 3 - 19 - 171</div> <div>0 - 0 - 3 - 1 - 5</div> <div>193 off-targets</div> </div>	<div> <div>2:intron:TMEM63C</div> <div>4:intergenic:AC069286.1-SDK1</div> <div>3:intron:BRCA1</div> <div>show all...</div> </div>
444 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Cloning / PCR primers</div> </div> </div>	68	82	52	54	39	73	84	<div> <div>0 - 0 - 3 - 23 - 180</div> <div>0 - 0 - 1 - 2 - 6</div> <div>206 off-targets</div> </div>	<div> <div>2:intergenic:RP11-390E23.6-RNU6-11P</div> <div>3:intergenic:RIT2-SYT4</div> <div>3:intergenic:MTHFD2P6-RP11-112L7.1</div> <div>show all...</div> </div>
445 / fw	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Cloning / PCR primers</div> </div> </div>	68	79	62	65	86	72	84	<div> <div>0 - 0 - 5 - 14 - 186</div> <div>0 - 0 - 0 - 0 - 5</div> <div>205 off-targets</div> </div>	<div> <div>4:intergenic:AC007528.1-MGST1</div> <div>3:intergenic:BTK-RPL36A/RPL36A-HNRNPH2</div> <div>4:intron:FAM19A1</div> <div>show all...</div> </div>
1484 / rev	<div> <div> </div> <div> <div>⚠</div> <div></div> <div>Enzymes: <i>AsuHPI</i></div> </div> </div>	68	91	60	58	46	71	84	<div> <div>0 - 1 - 2 - 3 - 74</div> <div>0 - 0 - 0 - 0 - 3</div> </div>	<div> <div>4:exon:TANC2</div> <div>4:intergenic:AF064863.1-DSCAM-IT1</div> <div>4:intron:ZFHX2</div> <div>show all...</div> </div>

	Cloning / PCR primers								80 off-targets	
442 / fw	AGCCACATCTGCAGTGTAGA GGG <u>A</u> Enzymes: <i>TspRI</i> Cloning / PCR primers	67	83	47	42	-63	73	88	0 - 0 - 4 - 23 - 170 0 - 0 - 0 - 2 - 6 197 off-targets	2:intergenic:KCNMB2-RP11-385J1.2 4:intergenic:RNU1-88P-Y_RNA 4:intron:PRKCZ show all...
867 / fw	AGAACATCAGCTGGTCGCCG GGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BtsCI</i> Cloning / PCR primers	67	89	64	48	63	70	72	0 - 0 - 0 - 15 - 333 0 - 0 - 0 - 0 - 0 348 off-targets	4:intergenic:PBX1-RP11-477H21.2 3:intron:TUBGCP2 4:intron:DOCK1 show all...
64 / fw	TCTGAGAGGCTATTGCTCAG CGG Enzymes: <i>Bsp1720I</i> , <i>MspA1I</i> , <i>BstDEI</i> , <i>BspCNI</i> Cloning / PCR primers	66	83	68	59	90	64	88	0 - 1 - 1 - 19 - 164 0 - 0 - 0 - 1 - 3 185 off-targets	4:intron:NLGN1 4:intron:ASTN2 3:intergenic:RP11-346L1.2-ZNF703 show all...
189 / rev	GCTACTCACCGGATGAAGTG AGG Enzymes: <i>BspTNI</i> , <i>BcoDI</i> Cloning / PCR primers	66	91	62	42	93	59	87	0 - 0 - 6 - 7 - 55 0 - 0 - 3 - 0 - 1 68 off-targets	3:intron:AL162759.1 2:intergenic:RN7SL356P-RP11-7F17.1 2:exon:RPLP1 show all...
534 / fw	TTCTCAGATAACTGGGCCCC TGG <u>A</u> Enzymes: <i>PasI</i> , <i>EcoO109I</i> , <i>LpnPI</i> , <i>BshFI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> , <i>BstNI</i> , <i>StyD4I</i> Cloning / PCR primers	66	82	32	28	0	65	81	0 - 0 - 0 - 29 - 165 0 - 0 - 0 - 3 - 2 194 off-targets	4:intron:RP13-539F13.3 4:intergenic:CTB-14A14.2-OR2V1 4:intergenic:RAD51B-CTD-2325P2.4 show all...
1542 / rev	CATATTGCTTCCAACCCTTT GGG <u>G</u> Inefficient Enzymes: <i>BstXI</i> Cloning / PCR primers	66	82	24	43	-130	66	77	0 - 0 - 4 - 13 - 201 0 - 0 - 2 - 1 - 9 218 off-targets	4:intron:EPHA6 4:intergenic:PLAUR-IRGC 4:intergenic:AC011286.1-RNU6-1051P show all...
584 / fw	GGGTTAAGGTAGAAGAGCCC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>NciI</i> , <i>StyD4I</i> Cloning / PCR primers	65	87	55	49	30	63	77	0 - 1 - 1 - 15 - 156 0 - 0 - 0 - 3 - 3 173 off-targets	4:intron:PTPRD 3:intron:SCMH1 4:intergenic:U8-RP11-237P21.1 show all...
798 / rev	ACATTCCAGTTCTATCAGG AGG Enzymes: <i>Hpy188III</i> , <i>HinfI</i> , <i>PfeI</i> Cloning / PCR primers	65	84	62	49	82	42	69	0 - 0 - 3 - 18 - 161 0 - 0 - 1 - 1 - 4 182 off-targets	4:intergenic:FCF1P10-SOCS5P5 4:intron:MOCOS 3:intergenic:TANC2-RP11-269G24.2 show all...
1382 / fw	TGAGAGTGGGTCGCTGGGAA AGG <u>T</u> Enzymes: <i>MaeI</i> Cloning / PCR primers	65	76	53	55	-4	69	80	0 - 0 - 2 - 24 - 228 0 - 0 - 0 - 1 - 0 254 off-targets	4:intron:AGBL1 3:intron:BRCA1 3:intergenic:snoU13-GRIK2 show all...
1623 / fw	GCAACTTCTAGAACCTTTAA AGG <u>G</u> Enzymes: <i>Tru1I</i> , <i>DraI</i> Cloning / PCR primers	65	80	9	10	-137	59	75	0 - 0 - 2 - 24 - 182 0 - 0 - 0 - 6 - 7 208 off-targets	3:intron:PDE11A 4:intron:STK39 4:intergenic:AC013262.1-RN7SL201P show all...
773 / fw	AGCACTAAGGATCAGGTTGG GGG Enzymes: <i>BaeGI</i> , <i>Bsp1286I</i> Cloning / PCR primers	64	84	70	59	41	67	82	0 - 0 - 2 - 19 - 153 0 - 0 - 0 - 4 - 21 174 off-targets	3:intergenic:RP11-223J6.1-IGKV3OR2-268 3:intergenic:AC017002.1-RP11-68E19.1 3:intergenic:AC013442.1-MIR548AD show all...
1348 / fw	GCCGGCAGGGATGTGCTTGA GGG <u>T</u> Enzymes: <i>NdeII</i> , <i>BpuEI</i> , <i>SmolI</i> , <i>BspPI</i> Cloning / PCR primers	64	87	47	54	-16	62	80	1 - 0 - 4 - 13 - 129 1 - 0 - 0 - 2 - 3 147 off-targets	4:intergenic:AKAP12-RN7SKP268 3:exon:SYTL1 4:intergenic:PKD2L1-RP11-34D15.2 show all...
1349 / fw	CCGGCAGGGATGTGCTTGAG GGG <u>T</u> Enzymes: <i>NdeII</i> , <i>BpuEI</i> , <i>SmolI</i> , <i>MfilI</i> , <i>NlaIV</i> , <i>BamHI</i> , <i>BspPI</i> Cloning / PCR primers	64	87	53	83	38	63	79	1 - 0 - 1 - 16 - 131 1 - 0 - 0 - 4 - 1 149 off-targets	3:intergenic:TPT1P9-RP11-349E4.1 3:intergenic:TYW3-RP11-93N20.1 4:intergenic:RP11-375H19.2-RP11-9L18.3 show all...
122 / rev	CCTTGGCGGCAGCCGAGGAA AGG Enzymes: <i>BseDI</i> , <i>BsII</i> Cloning / PCR primers	63	74	48	54	-66	64	69	0 - 1 - 7 - 47 - 155 0 - 0 - 1 - 0 - 1 210 off-targets	2:intergenic:C11orf58-SOX6 1:exon:RPLP1 2:intergenic:SEPT7P8-AC008753.3 show all...
696 / fw	GGGCGGGGGCGGAACCTGAG AGG High GC content Enzymes: <i>LpnPI</i> , <i>BstDEI</i> Cloning / PCR primers	63	76	48	91	13	66	78	0 - 0 - 4 - 21 - 371 0 - 0 - 1 - 1 - 0 396 off-targets	4:intron:RPTOR 2:intron:BRCA1 4:intron:BNIP3 show all...
740 / fw	CGGGGAAGGGGCAGTTTGT AGG <u>T</u> Inefficient Enzymes: <i>BspTNI</i> , <i>BcoDI</i> Cloning / PCR primers	63	75	36	58	-52	72	82	0 - 0 - 3 - 29 - 223 0 - 0 - 1 - 2 - 5 255 off-targets	2:intron:BRCA1 3:intergenic:TMEM110/TMEM110-MUSTN1-TMEM110-MUSTN1/TMEM110 3:intergenic:RP11-774I5.1-TOMM22P6 show all...
265 / rev	CAGAGTAGATGCAGCAAGC TGG Enzymes: <i>AluBI</i> , <i>BstC8I</i> Cloning / PCR primers	62	77	40	40	-23	60	81	0 - 0 - 5 - 30 - 202 0 - 0 - 0 - 6 - 7 237 off-targets	4:intergenic:RNU7-66P-AL590874.1 4:exon:HOXB9 4:intron:SMIM17 show all...
300 / fw	CTACTCTGCCCTCATTCTGC AGG Enzymes: <i>HpyCH4V</i> , <i>PstI</i> , <i>BfmlI</i> Cloning / PCR primers	62	69	49	7	-63	62	76	0 - 0 - 3 - 29 - 252 0 - 0 - 1 - 3 - 8 284 off-targets	2:intergenic:RNA5SP321-KCNMA1 3:intron:BEGAIN 4:intergenic:LINC00701-RP11-446F3.2 show all...
1369 / fw	GGGGATCCTGAGATGAGAGT GGG Cloning / PCR primers	62	79	64	67	77	69	80	0 - 0 - 5 - 28 - 241 0 - 0 - 1 - 5 - 6 274 off-targets	3:intergenic:PCBD1-RP11-432J9.3 3:intron:SMYD3 4:intron:TRO show all...
1387 / fw	GTGGGTCGCTGGGAAGGGCT AGG <u>T</u>	62	75	48	63	5	65	81	0 - 0 - 4 - 22 -	4:intergenic:JAZF1-RN7SL365P 4:intergenic:RP11-351M8.1/RP11-351M8.2-KIAA1199

	Enzymes: <i>MaeI</i> Cloning / PCR primers								218 0 - 0 - 3 - 4 - 13 244 off-targets	4:exon:RRP7A/SERHL show all...
289 / rev	CCTCATAGTCCTGCAGAATG AGG Cloning / PCR primers	61	80	58	35	24	59	84	0 - 0 - 8 - 23 - 170 0 - 0 - 0 - 2 - 7 201 off-targets	3:intergenic:AC116035.1-TGFBR2 4:intergenic:AC092168.2-NPAS2 3:intergenic:AC079809.2-AC073236.3 show all...
18 / rev	GGAAATCAAGACACAGTCAG AGG ..T..... Enzymes: <i>Hpy188I</i> , <i>PfiFI</i> Cloning / PCR primers	60	75	70	48	40	63	75	0 - 0 - 4 - 38 - 325 0 - 0 - 0 - 2 - 2 367 off-targets	2:intergenic:RP11-443I9.1-RP11-127H13.1 4:intergenic:RN7SL700P-NAP1L4P3 4:intergenic:CHN2-CHN2/CPVL show all...
554 / rev	TCTACCTTAACCCAGAGCAG AGGT..... Enzymes: <i>HpyCH4V</i> , <i>MwoI</i> , <i>BstAPI</i> Cloning / PCR primers	60	84	66	29	134	67	76	0 - 0 - 5 - 20 - 139 0 - 0 - 2 - 4 - 8 164 off-targets	3:intergenic:MYO10-RNA5SP179 2:exon:BRCA1 3:intron:DPY19L4 show all...
596 / fw	AAGAGCCCCGGGAAAGGGAC AGG Enzymes: <i>EcoO109I</i> , <i>BshFI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> , <i>BsIFi</i> , <i>BsII</i> Cloning / PCR primers	60	70	37	74	-53	64	71	0 - 0 - 3 - 31 - 256 0 - 0 - 1 - 1 - 0 290 off-targets	2:exon:BRCA1 4:intergenic:RPS18P6-MTHFD2P1 3:intron:NOC2L show all...
703 / fw	GGCGGAACCTGAGAGGCATA AGG Cloning / PCR primers	60	88	57	49	34	65	76	0 - 1 - 2 - 18 - 114 0 - 0 - 0 - 3 - 4 135 off-targets	3:intergenic:Y_RNA-AC011841.1 4:intergenic:PDCD6IP-AC018359.1 3:intron:KIAA1328 show all...
50 / fw	TCTTGATTTCCTATTCTGAG AGGT..... Enzymes: <i>BstDEI</i> , <i>Hpy188I</i> Cloning / PCR primers	59	75	60	20	-38	83	92	0 - 1 - 6 - 26 - 249 0 - 1 - 1 - 0 - 6 282 off-targets	4:intron:RUNDC3B 4:intergenic:RP11-57H12.5-RP4-586O15.1 4:intergenic:RNU6-1325P-AC095061.1 show all...
836 / rev	AGCTGATGTTCTTATACACA TGG Enzymes: <i>NlaIII</i> , <i>DraIII</i> Cloning / PCR primers	59	83	64	17	-15	69	84	0 - 1 - 2 - 17 - 206 0 - 1 - 0 - 3 - 5 226 off-targets	4:intergenic:RP11-22D3.2-CBLN1 4:intron:ASH1L 4:intron:GRIN3A show all...
1393 / fw	CGCTGGGAAAGGCTAGGGGC AGG ..T..... Cloning / PCR primers	59	72	41	44	0	64	70	0 - 0 - 5 - 33 - 272 0 - 0 - 1 - 1 - 1 310 off-targets	4:intergenic:RP11-302J23.1-KB-1460A1.1 3:intergenic:CTD-2515H24.1-GCOM1/MYZAP/POLR2M 2:intron:MYT1 show all...
121 / rev	CTTGCGGCAGCCGAGGAAA GGGT Enzymes: <i>NlaIV</i> , <i>BsII</i> Cloning / PCR primers	58	71	43	72	-39	60	78	0 - 1 - 12 - 11 - 161 0 - 0 - 0 - 0 - 1 185 off-targets	4:intergenic:PIGPP4-TXNDC2 4:exon:LINC00682 1:exon:RPLP1 show all...
255 / rev	GCAGGCAAGCTGGGAGACGG AGG Enzymes: <i>BshFI</i> , <i>TspGWI</i> Cloning / PCR primers	58	73	57	61	74	54	65	0 - 0 - 6 - 35 - 306 0 - 0 - 0 - 1 - 1 347 off-targets	2:exon:RP11-435F13.2 4:intergenic:AC114877.3-AC114877.1 4:intron:KIF26B show all...
570 / fw	GCACCCCTCTGCTCTGGGTTA AGGT..... Enzymes: <i>Tru1I</i> Cloning / PCR primers	58	78	33	55	-45	61	71	0 - 0 - 5 - 28 - 193 0 - 0 - 1 - 1 - 3 226 off-targets	2:intron:CTNNA1 3:intron:TCF3 4:intergenic:XCR1-FLT1P1 show all...
690 / rev	CACAACGCCTTATGCCTCTC AGG ⚠ Inefficient Enzymes: <i>MnII</i> , <i>NlaIV</i> , <i>BstDEI</i> , <i>BspCNI</i> Cloning / PCR primers	58	90	40	41	-103	66	80	0 - 1 - 0 - 9 - 106 0 - 0 - 0 - 2 - 2 116 off-targets	1:intron:BRCA1 3:intron:MARK1 3:intron:CAMK2D show all...
581 / rev	GGGCCCCGTGCCCTTTCCCG GGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	57	80	57	62	95	63	74	0 - 1 - 4 - 23 - 205 0 - 1 - 1 - 0 - 0 233 off-targets	3:intergenic:U3-RP11-251M1.1 2:exon:LURAP1L 2:intergenic:RAB3A-AC068499.10 show all...
626 / fw	GGGATGCTCCGGGGACGGG CGGA..... ⚠ High GC content Enzymes: <i>BsII</i> Cloning / PCR primers	57	79	31	82	-46	69	76	0 - 0 - 3 - 17 - 236 0 - 0 - 0 - 1 - 2 256 off-targets	4:exon:TMEM132E 4:intron:C16orf91 3:exon:MYO7B show all...
719 / rev	CTACAAACTGCCCCCTTCCC CGGT..... Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>NciI</i> , <i>HpyAV</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	57	76	47	40	-39	64	84	0 - 1 - 2 - 31 - 184 0 - 0 - 0 - 10 - 7 218 off-targets	3:intergenic:SNORD27-RP11-75C9.2 4:intergenic:C14orf79-CDCA4/C14orf79 4:intergenic:RP11-883G14.1-RP11-883G14.2 show all...
874 / fw	CAGCTGGTCGCCGGGGATGG TGG Enzymes: <i>BtsCI</i> Cloning / PCR primers	57	74	49	76	-14	64	82	0 - 0 - 1 - 23 - 327 0 - 0 - 0 - 0 - 1 351 off-targets	3:intergenic:RP11-549L6.3-MXI1 3:intron:MYT1 3:intergenic:RP11-356O9.1-FOXA1 show all...
1160 / fw	ACAAAGAAATAAACACCCGGC TGG ..G..T..... Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>Cfr10I</i> Cloning / PCR primers	57	62	52	6	28	72	78	0 - 0 - 4 - 52 - 445 0 - 0 - 0 - 2 - 1 501 off-targets	More than 500 off-targets, showing 6 with score >1.0 🚩 3:intergenic:RP11-204E9.1-SOX4 3:intron:THSD4 3:intron:RIMS1 show all...
252 / fw	CCCCACACTCGCCCGCGCTA TGG Enzymes: <i>BshFI</i> , <i>MnII</i> , <i>HinP1I</i> , <i>BsII</i> Cloning / PCR primers	56	95	44	24	17	62	79	0 - 2 - 2 - 4 - 46 0 - 0 - 0 - 0 - 0 54 off-targets	4:exon:DVL3 4:intergenic:NCF2-SMG7 1:exon:AC008753.3 show all...
288 / rev	CTCATAGTCCTGCAGAATGA GGG Cloning / PCR primers	56	74	54	39	55	60	89	0 - 0 - 4 - 29 - 220 0 - 0 - 0 - 2 - 8 253 off-targets	3:intron:FNDC3A 4:intergenic:C7orf33-AC005229.7 4:intergenic:AL449083.1-RP11-404E6.1 show all...

541 / fw	ATAACTGGGCCCTGGGCTC AGG <u>A</u> Enzymes: <i>BshFI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Hpy188III</i> , <i>BstDEI</i> , <i>BspCNI</i> , <i>MwoI</i> Cloning / PCR primers	56	83	37	57	13	62	72	0 - 1 - 0 - 20 - 162 0 - 0 - 0 - 2 - 8 183 off-targets	4:intergenic:AP000345.4-AP000345.2 4:intergenic:RP11-65J3.6-RP11-65J3.3 3:intergenic:RP11-208N20.1-IL15 show all...
130 / fw	AAC T GTGGAACCCCTTTCCT CGG <u>T</u> ⚠ Inefficient Enzymes: <i>MnII</i> , <i>BseDI</i> , <i>Fsp4HI</i> , <i>ApeKI</i> , <i>BsII</i> Cloning / PCR primers	55	75	48	53	4	57	75	0 - 0 - 5 - 32 - 312 0 - 0 - 0 - 0 - 4 349 off-targets	4:intron:RP11-886D15.1 4:intergenic:NFIX-AC007787.2/NFIX 3:intergenic:RP11-669C19.1-RNU6-815P show all...
315 / rev	ATTGATCTTATCCTCCGTAA AGG <u>T</u> Enzymes: <i>BstEII</i> , <i>Tsp45I</i> , <i>MaeIII</i> Cloning / PCR primers	55	92	61	58	-22	41	70	0 - 2 - 5 - 7 - 60 0 - 0 - 0 - 0 - 0 74 off-targets	4:intron:ASCC3 1:exon:TTC19/RPLP1P11 1:exon:AC008753.3 show all...
339 / rev	TACACTGGCTGCTTTAATAA GGG <u>C</u> Cloning / PCR primers	55	81	34	40	-45	50	50	0 - 1 - 8 - 22 - 143 0 - 0 - 0 - 3 - 5 174 off-targets	4:intron:RAPGEF6/CTC-432M15.3 4:intergenic:TBCAP2-KAZN 3:intergenic:RCC2P6/AP003064.2-ASRGL1 show all...
505 / rev	CAGTTATCTGAGAAACCCCA CGG <u>T</u> Enzymes: <i>LpnPI</i> , <i>BshFI</i> , <i>BseDI</i> , <i>BstDSI</i> , <i>BceAI</i> Cloning / PCR primers	55	77	72	57	88	63	91	1 - 0 - 7 - 28 - 185 1 - 0 - 6 - 8 - 5 221 off-targets	3:intergenic:RP11-38H17.1-RP11-91P17.1 4:intron:CAMK2D 4:exon:SNORA81 show all...
749 / fw	GGGCAGTTTGTAGGTCTCGA GGG <u>T</u> Enzymes: <i>TaqI</i> , <i>BmeT110I</i> , <i>Sfr274I</i> , <i>BspTNI</i> , <i>Smol</i> , <i>Hpy188III</i> , <i>BcoDI</i> Cloning / PCR primers	55	85	67	48	38	68	85	0 - 1 - 1 - 3 - 146 0 - 0 - 1 - 0 - 7 151 off-targets	4:intergenic:Y_RNA-RP11-203B7.2 4:intergenic:GSTO3P-ATP2C1 4:intron:ACSS3 show all...
547 / rev	TAACCCAGAGCAGAGGGTGC AGG <u>T</u> Enzymes: <i>BshFI</i> , <i>MnII</i> , <i>HpyCH4V</i> , <i>BsgI</i> , <i>BstC8I</i> , <i>PciI</i> , <i>MwoI</i> , <i>BstAPI</i> Cloning / PCR primers	54	71	49	33	38	68	61	0 - 0 - 3 - 29 - 268 0 - 0 - 1 - 4 - 11 300 off-targets	4:intergenic:CTC-281M20.1-ARL2BPP6 3:exon:DNMBP 4:intron:L3MBTL4 show all...
585 / fw	GGTTAAGGTAGAAGAGCCCC GGG <u>T</u> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	54	84	58	52	104	62	79	0 - 1 - 1 - 13 - 130 0 - 0 - 0 - 0 - 4 145 off-targets	4:intergenic:RP11-545D19.1-RP11-320J16.1 1:intron:FAM168A 4:intron:PKIB show all...
616 / fw	AGGGGCCCAAGGGATGCTCC GGG <u>A</u> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BseDI</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsIFI</i> , <i>LmnI</i> Cloning / PCR primers	54	80	46	52	-18	66	73	0 - 0 - 1 - 31 - 475 0 - 0 - 0 - 2 - 1 507 off-targets	More than 500 off-targets, showing 5 with score >1.0 🚩 3:intergenic:TIAL1-RAD1P1 2:exon:TSPAN4 4:intron:CDH15 show all...
830 / fw	AAC T GGAATGTGCCTTGAAG GGG <u>T</u> Enzymes: <i>BsIFI</i> , <i>AgsI</i> , <i>BsII</i> Cloning / PCR primers	54	71	56	42	77	68	78	0 - 1 - 5 - 35 - 216 0 - 0 - 0 - 7 - 7 257 off-targets	3:intron:HSP90AA6P 4:intron:ZFHX4 4:intergenic:SHISA6-DNAH9 show all...
120 / rev	TTGGCGGCAGCCGAGGAAAG GGG <u>T</u> Enzymes: <i>NlaIV</i> , <i>BsII</i> Cloning / PCR primers	53	84	60	78	72	53	84	0 - 1 - 2 - 22 - 126 0 - 0 - 0 - 1 - 2 151 off-targets	3:exon:LINC00682 4:intron:DYNC111 1:exon:RPLP1 show all...
606 / fw	GGAAAGGGACAGGGGCCCAA GGG <u>T</u> Enzymes: <i>EcoO109I</i> , <i>BaeGI</i> , <i>ErhI</i> , <i>NlaIV</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> , <i>BtsCI</i> Cloning / PCR primers	53	68	57	79	63	63	78	0 - 1 - 3 - 38 - 302 0 - 0 - 1 - 2 - 3 344 off-targets	4:intron:PCBD1 3:intron:SEPT11 3:intergenic:EHPB1-AC007098.1/EHPB1 show all...
1187 / fw	TATGAGAAGATGGGCCCTTG CGG <u>A</u> ⚠ Inefficient Enzymes: <i>EcoO109I</i> , <i>MbolI</i> Cloning / PCR primers	53	83	66	56	46	75	76	0 - 0 - 3 - 47 - 367 0 - 0 - 0 - 3 - 1 417 off-targets	4:intron:SPATA1 3:intergenic:XXyac-YR12DB5.1-RNU6-974P 3:intron:SLC4A4 show all...
227 / rev	GCGCGGGCGAGTGTGGGGCT GGG <u>T</u> ⚠ High GC content Enzymes: <i>Fsp4HI</i> , <i>ApeKI</i> , <i>MwoI</i> Cloning / PCR primers	52	81	29	74	-42	57	73	0 - 0 - 1 - 19 - 230 0 - 0 - 0 - 1 - 7 250 off-targets	3:intergenic:GSK3B-RP11-18H7.1 3:intergenic:TRPC3-AC097533.1 4:intergenic:NEK10-AC099535.1 show all...
441 / fw	GAGCCACATCTGCAGTGTAG AGG <u>A</u> Enzymes: <i>TspRI</i> Cloning / PCR primers	52	82	57	56	48	76	83	0 - 1 - 6 - 15 - 134 0 - 1 - 0 - 2 - 2 156 off-targets	4:intron:PTPRB 1:exon:AC008753.3 2:exon:RP11-7F17.1 show all...
1491 / rev	CTACAGGGGAGTGACTGACC GGG <u>T</u> <u>A</u> <u>T</u> .. Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>NciI</i> , <i>StyD4I</i> Cloning / PCR primers	52	88	70	63	27	64	79	0 - 1 - 0 - 14 - 114 0 - 1 - 0 - 0 - 1 129 off-targets	1:intron:BRCA1 3:intergenic:RP11-30G8.1-OCA2 4:intron:PER3 show all...
340 / rev	TTACTGCTGCTTTAATA AGG <u>C</u> Enzymes: <i>Tru1I</i> Cloning / PCR primers	50	82	21	19	-54	49	74	0 - 1 - 8 - 24 - 139 0 - 0 - 1 - 3 - 3 172 off-targets	1:exon:RP11-54C4.1 2:exon:RP11-483M24.2 2:intergenic:RPSAP9-GCNT1 show all...
424 / rev	CCCCCTCTACTGTCAGATG TGG <u>A</u> Enzymes: <i>NlaIV</i> , <i>LmnI</i> , <i>MwoI</i> Cloning / PCR primers	50	78	48	43	37	54	63	0 - 1 - 2 - 30 - 200 0 - 1 - 1 - 3 - 4 233 off-targets	2:intergenic:KCNMB2-RP11-385J1.2 4:intron:CGNL1 4:intron:RP11-145G20.1 show all...
583 / rev	TTGGGCCCTGTCCCTTTCC CGG <u>T</u> ⚠ Inefficient Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BmeT110I</i> , <i>Cfr9I</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>NciI</i> , <i>StyD4I</i> , <i>BsII</i> Cloning / PCR primers	49	71	26	54	-93	60	70	0 - 0 - 9 - 31 - 237 0 - 0 - 7 - 4 - 11 277 off-targets	3:exon:LRRN2 3:intron:CA5B 2:exon:BRCA1 show all...
828 / fw	GGAAC T GGAATGTGCCTTGA AGG <u>T</u> Enzymes: <i>BsIFI</i> , <i>AgsI</i> , <i>BsII</i> Cloning / PCR primers	49	79	43	46	-26	62	84	0 - 1 - 2 - 31 - 187 0 - 0 - 0 - 1 - 3 183 off-targets	1:intron:BRCA1 4:intron:GRM7 4:exon:ANXA5 show all...

									221 off-targets	
1552 / fw	AAGGAAAAGACCCAAAGGGT TGG <u>G</u> Enzymes: <i>BstXI</i> Cloning / PCR primers	49	72	59	58	70	74	80	0 - 1 - 12 - 43 - 342 0 - 0 - 0 - 7 - 4 398 off-targets	3:intergenic:RP11-277I20.3-UTRN 4:intergenic:RN7SKP108-RP11-433J8.2 3:intergenic:LRP1B-AC012353.1 show all...
14 / rev	ATCAAGACACAGTCAGAGGA AGG Cloning / PCR primers	48	67	56	31	64	71	71	0 - 0 - 6 - 58 - 425 0 - 0 - 1 - 9 - 9 489 off-targets	4:intergenic:CCDC124-KCNN1 4:intergenic:TOX2-JPH2 4:intergenic:INPP4B-RPL5P13 show all...
136 / rev	GGAAGGACCGAACACCTTGG CGG <u>G</u> Enzymes: <i>ErlI, BseDI, Fsp4HI, BstV1I, Taul, ApeKI</i> Cloning / PCR primers	48	88	65	76	87	47	79	1 - 2 - 5 - 9 - 71 1 - 0 - 0 - 0 - 0 88 off-targets	1:exon:RPLP1 2:exon:RP11-54C4.1 3:intergenic:RNU5E-7P-RP11-120J4.1 show all...
813 / fw	GGAATCCTCCTGATAGGAAC TGG Enzymes: <i>BseI</i> Cloning / PCR primers	48	90	44	27	-4	48	68	0 - 1 - 0 - 9 - 85 0 - 0 - 0 - 1 - 0 95 off-targets	4:intergenic:SLC6A1-HRH1 4:exon:POLR3C 1:intron:BRCA1 show all...
510 / fw	TGGACGGGGACAGGCCGTG GGG <u>A</u> Enzymes: <i>BseDI, BstDSI</i> Cloning / PCR primers	47	82	50	96	31	68	79	0 - 1 - 4 - 34 - 170 0 - 0 - 0 - 1 - 3 209 off-targets	4:intergenic:RP3-438O4.4-RP1-102K2.6 1:exon:BRCA1 4:intron:ATP2B2 show all...
718 / rev	TACAAACTGCCCCCTTCCTCC GGG <u>T</u> Enzymes: <i>MspI, LpnPI, BmeT110I, Cfr9I, BseDI, NciI, StyD4I, BslI</i> Cloning / PCR primers	47	76	44	31	33	62	76	0 - 1 - 3 - 25 - 207 0 - 0 - 0 - 6 - 13 236 off-targets	3:intergenic:IPO8P1-KCNH1 3:intron:ARAP1 4:intergenic:RP5-884C9.2-RP11-214L19.1 show all...
1294 / fw	GCTATTGAGAAAGCGCAAGA GGG .. <u>G</u> <u>T</u> Cloning / PCR primers	46	87	71	42	88	68	85	0 - 1 - 1 - 10 - 136 0 - 1 - 0 - 0 - 5 148 off-targets	4:intergenic:RP11-160C18.2-CHRNB4 4:intergenic:AC006380.3-CCDC129 1:intron:BRCA1 show all...
526 / fw	CGTGGGGTTTCTCAGATAAC TGG Enzymes: <i>EcoO109I, BshFI, BaeGI, Bmul, NlaIV, Eco24I, Bsp1286I, Bsp120I, Bse1I, PspPI</i> Cloning / PCR primers	45	91	28	34	-103	65	78	0 - 1 - 1 - 11 - 66 0 - 1 - 0 - 0 - 0 79 off-targets	1:exon:BRCA1 3:intergenic:ZBED5-AS1-RP11-179A10.1 4:intergenic:ATP6V0D2-RP11-216N21.1 show all...
530 / rev	TGCAGGCCTCCTGAGCCCAG GGG <u>A</u> Enzymes: <i>PasI, EcoO109I, LpnPI, BshFI, BaeGI, NlaIV, BseDI, Eco24I, Bsp1286I, Bsp120I, PspPI, BstNI, StyD4I</i> Cloning / PCR primers	45	61	63	72	131	69	82	0 - 0 - 15 - 54 - 370 0 - 0 - 7 - 11 - 13 439 off-targets	4:intergenic:PDCD6-AHRR 4:intron:DOPEY2 4:intron:C19orf44 show all...
615 / fw	CAGGGGCCCCAAGGGATGCTC CGG <u>A</u> Enzymes: <i>MspI, LpnPI, BseDI, NciI, StyD4I, BslFI, LmnI</i> Cloning / PCR primers	45	68	33	71	-3	66	68	0 - 0 - 6 - 53 - 348 0 - 0 - 2 - 7 - 4 407 off-targets	4:intron:MARCH10 2:intergenic:RP5-1051H14.2-RP5-933E2.1 4:intergenic:RP11-357C3.3-ARHGEF9 show all...
685 / fw	TCTTATGCGAGGGCGGGGG CGG Enzymes: <i>Ecil, NlaIV</i> Cloning / PCR primers	45	79	42	78	-90	64	69	0 - 0 - 3 - 25 - 200 0 - 0 - 2 - 4 - 13 228 off-targets	4:intron:EHD2 3:exon:SOX15 4:exon:ROM1/EML3 show all...
1334 / fw	TAGTAACAGATGCTGCCGGC AGG <u>G</u> <u>T</u> Enzymes: <i>MspI, LpnPI, BstC8I, Cfr10I, NaeI, BtsCI</i> Cloning / PCR primers	45	90	50	43	38	70	78	1 - 0 - 1 - 5 - 93 1 - 0 - 0 - 0 - 0 100 off-targets	0:intron:BRCA1 4:intergenic:AL136302.1-SNORD44 3:intron:BCAT2 show all...
1394 / fw	GCTGGGAAAGGCTAGGGGCA GGG <u>T</u> Enzymes: <i>BshFI</i> Cloning / PCR primers	45	53	56	65	12	65	70	0 - 1 - 4 - 65 - 573 0 - 0 - 1 - 4 - 9 643 off-targets	More than 500 off-targets, showing 12 with score >1.0 🚩 2:intron:USP13 3:intergenic:RP11-375I20.6-RPL39P5 1:intron:MYT1 show all...
1418 / fw	GGCCTTGATTGGTGTGGTT TGG <u>G</u> Cloning / PCR primers	45	89	39	40	-62	58	73	1 - 0 - 0 - 7 - 114 1 - 0 - 0 - 2 - 2 122 off-targets	0:intron:BRCA1 4:intergenic:C14orf144-RP11-260M19.2 4:intergenic:snoZ247-LDHAP3 show all...
1506 / rev	CCAAGAAAGAGAAAGCTACA GGG Enzymes: <i>BfmI</i> Cloning / PCR primers	45	60	60	30	14	66	88	1 - 0 - 9 - 58 - 461 1 - 0 - 3 - 12 - 10 529 off-targets	More than 500 off-targets, showing 10 with score >1.0 🚩 2:intergenic:RN7SKP254-CTD-2027G2.1 2:intron:LMNB1 3:intergenic:THSD7B-Y_RNA show all...
1507 / rev	TCCAAGAAAGAGAAAGCTAC AGG Enzymes: <i>AluBI, BfmI</i> Cloning / PCR primers	45	57	47	26	-37	62	70	1 - 0 - 5 - 60 - 385 1 - 0 - 0 - 4 - 4 451 off-targets	3:intergenic:RNU6-783P-RP11-2F20.1 3:intergenic:ABR-AC144836.1 4:intergenic:HDX/RP6-33F8.1-SETP4 show all...
13 / rev	TCAAGACACAGTCAGAGGAA GGG Cloning / PCR primers	44	60	65	55	79	73	73	0 - 0 - 10 - 56 - 422 0 - 0 - 2 - 13 - 10 488 off-targets	3:intron:CCDC104 3:intron:DDB2 4:exon:CTDSP2 show all...
531 / rev	GTGCAGGCCTCCTGAGCCCA GGG <u>A</u> Enzymes: <i>PasI, EcoO109I, LpnPI, BshFI, BaeGI, NlaIV, BseDI, Eco24I, Bsp1286I, Bsp120I, PspPI, BstNI, StyD4I</i> Cloning / PCR primers	44	70	42	65	47	65	84	0 - 0 - 10 - 66 - 313 0 - 0 - 0 - 8 - 21 389 off-targets	3:intron:ZNF398 4:intron:PARVA 4:intron:DOPEY2 show all...
582 / rev	TGGGCCCCCTGTCCCTTTCCC GGG Enzymes: <i>MspI, LpnPI, BmeT110I, Cfr9I, BseDI, Eco24I, Bsp1286I, NciI, StyD4I, BslI</i> Cloning / PCR primers	44	64	35	49	-13	62	73	0 - 0 - 9 - 48 - 385 0 - 0 - 5 - 4 - 9 442 off-targets	4:intron:CAMTA1 2:exon:LURAP1L 3:intergenic:U3-RP11-251M1.1 show all...
1335 / fw	AGTAACAGATGCTGCCGGCA GGG <u>G</u> <u>T</u> Enzymes: <i>MspI, LpnPI, BstC8I, Cfr10I, NaeI, BtsCI</i> Cloning / PCR primers	44	87	59	54	46	66	85	1 - 0 - 2 - 11 - 110 1 - 0 - 0 - 0 - 0 0:intron:BRCA1 4:intron:COMMD9 4:intergenic:AGBL4-ZNF859P show all...	

									124 off-targets	
1400 / rev	GACCAAACCAACACCAATCA AGG Enzymes: <i>BshFI</i> , <i>MnlI</i> , <i>PceI</i> Cloning / PCR primers	44	89	51	15	-14	72	90	1 - 0 - 1 - 15 - 119 1 - 0 - 1 - 2 - 0 136 off-targets	0:intron:BRCA1 4:intergenic:CALN1-TYW1B 4:intergenic:CITF22-49D8.1-LL22NC03-75H12.2 show all...
1413 / fw	AGGGAGGCCTTGATTGGTGT TGG Cloning / PCR primers	44	85	39	60	33	55	67	0 - 1 - 4 - 14 - 170 0 - 1 - 1 - 0 - 1 189 off-targets	1:intron:BRCA1 4:intergenic:AC019055.1-CISD1P1 4:intergenic:RP11-460H9.1-LINC00290 show all...
226 / rev	CGCGGGCGAGTGTGGGGCTG GGG ⚠ High GC content Enzymes: <i>Fsp4HI</i> , <i>ApeKI</i> , <i>MwoI</i> Cloning / PCR primers	43	67	38	84	-54	56	72	0 - 0 - 4 - 30 - 343 0 - 0 - 0 - 8 - 11 377 off-targets	3:intron:AP001471.1 4:intron:RP11-59J16.1 4:exon:LTBP3 show all...
527 / fw	GTGGGGTTTCTCAGATAACT GGG Enzymes: <i>EcoO109I</i> , <i>BshFI</i> , <i>BaeGI</i> , <i>Bmul</i> , <i>NlaIV</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>Bse1I</i> , <i>PspPI</i> Cloning / PCR primers	43	89	49	43	-33	66	81	1 - 1 - 0 - 14 - 99 1 - 0 - 0 - 3 - 2 115 off-targets	0:exon:BRCA1 1:intron:NR6A1 4:intergenic:SPPL3-ARF1P2 show all...
178 / fw	CGAGGAAGCTAAGGCCGCGT TGG Enzymes: <i>SsiI</i> , <i>BspFNI</i> , <i>AsuHPI</i> , <i>Fsp4HI</i> , <i>TauI</i> , <i>MwoI</i> , <i>BsII</i> Cloning / PCR primers	42	91	45	57	-7	67	79	1 - 1 - 3 - 4 - 60 1 - 0 - 0 - 0 - 0 69 off-targets	0:intergenic:AC016739.2-AC016739.1 2:exon:TTC19/RPLP1P11 2:exon:RP11-54C4.1 show all...
179 / fw	GAGGAAGCTAAGGCCGCGTT GGG ⚠ Inefficient Enzymes: <i>BspFNI</i> , <i>AsuHPI</i> , <i>BsII</i> Cloning / PCR primers	42	93	38	88	17	67	83	1 - 1 - 4 - 7 - 78 1 - 0 - 0 - 0 - 0 91 off-targets	0:intergenic:AC016739.2-AC016739.1 2:exon:TTC19/RPLP1P11 2:exon:RP11-54C4.1 show all...
377 / fw	GTGTAAATATTGAAACTTTT TGG ⚠ Not with U6/U3 ⚠ Inefficient ⚠ Low GC content Enzymes: <i>LpnPI</i> , <i>BshFI</i> , <i>BstNI</i> , <i>StyD4I</i> Cloning / PCR primers	42	67	21	29	-232	65	79	0 - 2 - 10 - 58 - 369 0 - 1 - 2 - 1 - 17 439 off-targets	3:intron:ZCCHC11 4:intron:ZNF280D 4:intergenic:RP11-354I13.2-RP11-354I13.1 show all...
402 / fw	TGCGTTGTTTGCAAAGGTCC TGG Enzymes: <i>PpuMI</i> , <i>EcoO109I</i> , <i>LpnPI</i> , <i>BshFI</i> , <i>AcoI</i> , <i>Ball</i> , <i>PspPI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>Bme18I</i> Cloning / PCR primers	42	82	42	45	-73	60	71	0 - 5 - 5 - 23 - 136 0 - 1 - 1 - 1 - 9 169 off-targets	4:intergenic:RP3-418C23.2-RP1-104O17.1 3:intron:BANP 2:intergenic:PCDH8-OLFM4 show all...
532 / rev	GGTGCAGGCCTCCTGAGCCC AGG Enzymes: <i>PasI</i> , <i>Bpu10I</i> , <i>EcoO109I</i> , <i>LpnPI</i> , <i>BshFI</i> , <i>BaeGI</i> , <i>NlaIV</i> , <i>BseDI</i> , <i>Eco24I</i> , <i>Bsp1286I</i> , <i>Bsp120I</i> , <i>PspPI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i> Cloning / PCR primers	42	65	38	44	12	65	75	0 - 0 - 4 - 50 - 387 0 - 0 - 0 - 6 - 13 441 off-targets	3:intergenic:CTD-2029E14.1-LINC01019 3:intergenic:ST18-FAM150A 4:intron:DPYD show all...
1201 / rev	CCCCTTCCCAGACATATTCC TGG ⚠ Inefficient Enzymes: <i>LpnPI</i> , <i>BstNI</i> , <i>StyD4I</i> Cloning / PCR primers	42	84	37	9	-76	71	77	1 - 0 - 3 - 27 - 192 1 - 0 - 0 - 1 - 2 223 off-targets	0:intron:BRCA1 3:intron:RGS9 3:intron:GLIPR1L2 show all...
1214 / fw	AGAAGTGCCAGGAATATGTC TGG Cloning / PCR primers	42	83	46	25	-2	62	76	0 - 1 - 4 - 23 - 190 0 - 1 - 1 - 2 - 2 218 off-targets	3:exon:GBE1 1:intron:BRCA1 4:intergenic:GLI3-AC027269.2 show all...
1215 / fw	GAAGTGCCAGGAATATGTCT GGG Cloning / PCR primers	42	81	64	38	65	61	71	0 - 1 - 1 - 34 - 191 0 - 1 - 0 - 1 - 0 227 off-targets	3:intergenic:DCAF8L1-AC078988.1 1:intron:BRCA1 4:intergenic:MAPRE3-AC013472.4 show all...
1261 / fw	GGGAGGGAGAACTTAAGAAC TGG Enzymes: <i>NdeII</i> , <i>MfilI</i> , <i>NlaIV</i> , <i>BamHI</i> , <i>Bse1I</i> , <i>BspPI</i> Cloning / PCR primers	42	82	48	54	36	71	74	1 - 0 - 5 - 19 - 266 1 - 0 - 0 - 0 - 3 291 off-targets	0:intron:BRCA1 4:intergenic:LINC00382-SPRY2 4:intergenic:ATP5F1P1-WDFY2 show all...
1347 / fw	TGCCGGCAGGGATGTGCTTG AGG ⚠ Inefficient Enzymes: <i>BpuEI</i> , <i>SmoI</i> Cloning / PCR primers	42	87	50	43	-21	63	73	1 - 0 - 0 - 6 - 151 1 - 0 - 0 - 2 - 5 158 off-targets	0:intron:BRCA1 4:exon:SYTL1 4:intergenic:PKD2L1-RP11-34D15.2 show all...
1492 / rev	GCTACAGGGGAGTGACTGAC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>NciI</i> , <i>StyD4I</i> Cloning / PCR primers	42	88	54	55	-5	62	87	0 - 1 - 1 - 19 - 120 0 - 1 - 0 - 2 - 4 141 off-targets	1:intron:BRCA1 3:intergenic:RP1-118J21.24-TRIT1 4:intron:WWOX show all...
142 / fw	CCTTTCCTCGGCTGCCGCCA AGG Enzymes: <i>SsiI</i> , <i>ErhI</i> , <i>BseDI</i> , <i>Fsp4HI</i> , <i>TauI</i> Cloning / PCR primers	41	79	42	56	-33	48	63	0 - 1 - 8 - 16 - 132 0 - 0 - 0 - 0 - 0 157 off-targets	1:exon:RPLP1 2:intergenic:RP11-435F13.2-RGS7 4:intergenic:PPP5C-CCDC8 show all...
1471 / fw	AAGAAAACAGCCAGAAGCAT TGG Cloning / PCR primers	41	67	48	42	-5	67	68	0 - 2 - 11 - 58 - 551 0 - 0 - 1 - 4 - 9 622 off-targets	More than 500 off-targets, showing 9 with score >1.0 🚩 2:intron:BRCA1 1:intron:SMARCA2 4:intron:PTGFR show all...
180 / fw	AGGAAGCTAAGGCCGCGTTG GGG Enzymes: <i>AsuHPI</i> , <i>BsII</i> Cloning / PCR primers	40	85	71	66	68	76	80	1 - 3 - 2 - 8 - 77 1 - 1 - 0 - 0 - 0 91 off-targets	0:intergenic:AC016739.2-AC016739.1 2:intergenic:RP11-395C3.1-C5orf48 2:exon:RP11-54C4.1 show all...
1434 / fw	GGTTTGCTCGTTGTTGATTT TGG ⚠ Inefficient Cloning / PCR primers	40	82	34	47	-136	58	73	1 - 0 - 0 - 19 - 196 1 - 0 - 0 - 0 - 0 216 off-targets	0:intron:BRCA1 4:intron:BRWD3 4:intergenic:RP5-921G16.1-SSU72P8 show all...
264 / rev	AGAGTAGATGCAGGCAAGCT GGG Enzymes: <i>AluBI</i> , <i>BstC8I</i>	39	86	46	53	42	59	85	0 - 1 - 7 - 17 - 171	1:intron:RIF1 3:exon:RP4-612B18.1 4:exon:RP11-54C4.1

	Cloning / PCR primers								0 - 1 - 1 - 1 - 3	show all...
									196 off-targets	
1407 / fw	AGGGGCAGGGAGGCCTTGAT TGGC..... Cloning / PCR primers	39	77	30	76	-49	75	82	0 - 2 - 7 - 45 - 365 0 - 1 - 0 - 2 - 12 419 off-targets	1:intron:BRCA1 3:intergenic:KIAA0947-CTC-471C19.1 4:exon:NFAM1 show all...
1616 / rev	AATAATACAAAATCCTTTAA AGG ⚠️ Low GC content Enzymes: Tru1I, DraI Cloning / PCR primers	39	60	20	17	-171	68	74	0 - 0 - 15 - 90 - 640 0 - 0 - 4 - 21 - 14 745 off-targets	More than 500 off-targets, showing 19 with score >1.0 🚩 2:intergenic:PCDH15-RP11-168O22.1 3:intron:RP11-154H12.3 2:intergenic:OR6C69P-OR6C72P show all...
2065 / fw	TCTAATGTGTTAAAGTTCAT TGGA..... Cloning / PCR primers	39	79	37	24	-107	71	81	1 - 0 - 7 - 20 - 185 1 - 0 - 3 - 2 - 5 213 off-targets	0:exon:BRCA1 3:intergenic:RNU6-163P-LINC00704 3:intron:C3orf55 show all...
139 / rev	CTCGGAAGGACCGAACACCT TGGC..... Enzymes: Erhl, BseDI, Fsp4HI, Taul Cloning / PCR primers	38	93	59	45	21	48	77	1 - 2 - 3 - 2 - 39 1 - 0 - 0 - 0 - 0 47 off-targets	0:intergenic:RN7SL356P-RP11-7F17.1 1:exon:RPLP1 1:intergenic:SEPT7P8-AC008753.3 show all...
1219 / fw	TGCCAGGAATATGTCTGGGA AGG Cloning / PCR primers	38	76	57	41	15	64	69	1 - 0 - 3 - 25 - 286 1 - 0 - 0 - 2 - 2 315 off-targets	0:intron:BRCA1 4:intron:MTUS2 3:intron:ASTN1 show all...
1330 / fw	TCAGTAGTAACAGATGCTGC CGGC.....T.. Enzymes: MspI, LpnPI, BstC8I, Cfr10I, NaeI, Fsp4HI, ApeKI, AlwNI Cloning / PCR primers	38	78	61	36	98	66	46	1 - 0 - 2 - 32 - 186 1 - 0 - 0 - 4 - 11 221 off-targets	0:intron:BRCA1 4:intron:CERS6 3:intergenic:FOXA2-RP4-788L20.3 show all...
1649 / rev	AATAAGGTAAATTTAAGATT TGG ⚠️ Low GC content Cloning / PCR primers	38	61	37	25	-89	61	78	0 - 1 - 6 - 73 - 447 0 - 1 - 2 - 7 - 9 527 off-targets	More than 500 off-targets, showing 6 with score >1.0 🚩 1:intron:BRCA1 2:intergenic:PTGES3P5-RP11-163F15.1 3:intergenic:RP11-705O24.1-CTD-2571E19.1 show all...
9 / rev	GACACAGTCAGAGGAAGGGC GGG Enzymes: BsiFI Cloning / PCR primers	37	58	57	48	45	71	77	0 - 0 - 5 - 65 - 469 0 - 0 - 1 - 2 - 26 539 off-targets	More than 500 off-targets, showing 26 with score >1.0 🚩 2:intron:SYT6 2:intron:SPRED1 3:exon:SBK2 show all...
564 / fw	AGGCCTGCACCCCTCTGCTCT GGGT..... ⚠️ Inefficient Enzymes: Tru1I Cloning / PCR primers	37	73	47	44	-50	71	88	0 - 1 - 5 - 43 - 334 0 - 1 - 1 - 7 - 4 383 off-targets	1:exon:BRCA1 4:intergenic:IQCK-IQCK/GPRC5B 3:exon:WDSUB1 show all...
1220 / fw	GCCAGGAATATGTCTGGGAA GGG Cloning / PCR primers	37	68	53	46	4	62	76	1 - 0 - 2 - 33 - 311 1 - 0 - 0 - 2 - 3 347 off-targets	0:intron:BRCA1 3:intergenic:SLC17A6-CTD-2140G10.1 4:intron:LCLAT1 show all...
1329 / rev	CCCCTCAAGCACATCCCTGC CGGT.. Enzymes: MspI, LpnPI, BstC8I, Cfr10I, NaeI, Fsp4HI, BstV1I, ApeKI Cloning / PCR primers	37	85	51	38	9	70	79	0 - 1 - 0 - 19 - 197 0 - 1 - 0 - 3 - 6 217 off-targets	1:intron:BRCA1 4:intron:VIPR2 3:exon:SIPA1L2 show all...
1350 / fw	CGGCAGGGATGTGCTTGAGG GGG T..... Enzymes: NdeII, BpuEI, Smol, MflI, NlaIV, BamHI, BspPI Cloning / PCR primers	37	77	61	84	74	61	71	1 - 0 - 3 - 18 - 204 1 - 0 - 0 - 3 - 5 226 off-targets	0:intron:BRCA1 4:intergenic:RP11-553K8.2-PTPRC 4:intron:LMBRD1 show all...
553 / rev	CTACCTTAACCCAGAGCAGA GGGT..... Enzymes: HpyCH4V, BsgI, MwoI, BstAPI Cloning / PCR primers	36	81	59	39	13	63	74	0 - 2 - 1 - 32 - 158 0 - 2 - 0 - 2 - 8 193 off-targets	4:intergenic:RNU6-601P-AC144449.1 4:intergenic:CTD-2012J19.1-RP11-43F13.1 4:intron:AC114783.1 show all...
258 / rev	GATGCAGGCAAGCTGGGAGA CGG Enzymes: BshFI, TspGWI Cloning / PCR primers	35	56	55	73	78	59	69	0 - 1 - 9 - 58 - 486 0 - 0 - 1 - 1 - 6 554 off-targets	More than 500 off-targets, showing 21 with score >1.0 🚩 3:intergenic:LINC01151/snoU13-LINC01151 4:intergenic:Y_RNA-RP11-306G20.1 3:intron:RAB11FIP3 show all...
1303 / fw	AAAGCGCAAGAGGGAAGTAG AGGT.....A.. Enzymes: BseRI Cloning / PCR primers	35	71	56	62	39	68	72	1 - 1 - 4 - 29 - 262 1 - 1 - 0 - 11 - 6 297 off-targets	0:intron:BRCA1 2:intergenic:MACROD2-IT1-MACROD2 3:intron:PPP2R2B show all...
1972 / rev	CATTTTAAATAAGGTAAAT TGG ...T...C..... ⚠️ Not with U6/U3 ⚠️ Low GC content Enzymes: MluCI Cloning / PCR primers	35	43	8	2	-206	80	73	0 - 0 - 21 - 154 - 941 0 - 0 - 4 - 11 - 8 1116 off-targets	More than 500 off-targets, showing 18 with score >1.0 🚩 2:intron:AP001626.1 2:intergenic:TWSG1-RP11-61L19.2 2:intergenic:snoU13-RNF138 show all...
228 / rev	AGCGCGGGCGAGTGTGGGCG TGG ⚠️ High GC content Cloning / PCR primers	34	77	17	46	-117	58	70	0 - 2 - 2 - 14 - 241 0 - 2 - 0 - 1 - 2 259 off-targets	1:intergenic:SEPT7P8-AC008753.3 2:exon:RPLP1 3:intergenic:AC016739.2-AC016739.1 show all...
354 / rev	AAAAGTTTCAATATTACAC TGG ⚠️ Low GC content Enzymes: TspRI, Fsp4HI, Bse1I, ApeKI Cloning / PCR primers	34	65	57	31	-117	68	77	0 - 2 - 11 - 58 - 430 0 - 1 - 3 - 9 - 7 501 off-targets	More than 500 off-targets, showing 18 with score >1.0 🚩 1:intron:LINC00845 3:intron:SCIN 2:exon:AC016739.2 show all...
544 / fw	ACTGGGCCCTGGGCTCAGG AGGA..... Enzymes: LpnPI, BshFI, BstC8I, Hpy188III, PceI, BstDEI, BspCNI, MwoI Cloning / PCR primers	34	55	48	65	-61	61	59	0 - 1 - 12 - 103 - 451 0 - 0 - 6 - 37 - 59 567 off-targets	More than 500 off-targets, showing 18 with score >1.0 🚩 3:intron:KDM2B 2:intergenic:RP11-574O16.1-AC010887.1 4:intergenic:snoU13-KIF9 show all...
	AGAGCCCCGGGAAAGGGACA GGG									3:exon:NOTCH2NL

597 / fw	<div>Enzymes: <i>EcoO109I</i>, <i>BshFI</i>, <i>BaeGI</i>, <i>NlaIV</i>, <i>Eco24I</i>, <i>Bsp1286I</i>, <i>Bsp120I</i>, <i>PspPI</i>, <i>BslFI</i></div> <div>Cloning / PCR primers</div>	34	69	52	37	34	63	73	0 - 1 - 7 - 38 - 322 0 - 1 - 2 - 3 - 17 368 off-targets	4:intron:VGLL4 1:exon:BRCA1 show all...
598 / fw	<div>GAGCCCCGGGAAAGGGACAG GGG</div> <div>Enzymes: <i>EcoO109I</i>, <i>BshFI</i>, <i>BaeGI</i>, <i>NlaIV</i>, <i>Eco24I</i>, <i>Bsp1286I</i>, <i>Bsp120I</i>, <i>PspPI</i>, <i>BslFI</i></div> <div>Cloning / PCR primers</div>	34	69	56	65	51	60	68	0 - 1 - 6 - 44 - 298 0 - 1 - 2 - 6 - 13 349 off-targets	1:exon:BRCA1 2:intron:MAGE D4B 2:intron:MAGE D4 show all...
1244 / fw	<div>AGGAGACAGGATTTTGTGGG AGG</div> <div>⚠ Not with U6/U3</div> <div>Cloning / PCR primers</div>	34	70	44	65	-61	71	85	1 - 0 - 5 - 44 - 431 1 - 0 - 3 - 1 - 7 481 off-targets	0:intron:BRCA1 3:intron:PLXNC1 3:intergenic:RNU6-443P-AC083760.1 show all...
1221 / fw	<div>CCAGGAATATGTCTGGGAAG GGG</div> <div>Enzymes: <i>BseRI</i></div> <div>Cloning / PCR primers</div>	33	65	56	59	40	60	67	1 - 0 - 7 - 45 - 297 1 - 0 - 1 - 1 - 8 350 off-targets	0:intron:BRCA1 2:intergenic:SNHG18-CTD-2001E22.1 3:intergenic:AC097658.1/GAB1-MIR3139 show all...
1241 / fw	<div>GGGAGGAGACAGGATTTTGT GGG</div> <div>⚠ Not with U6/U3</div> <div>⚠ Inefficient</div> <div>Cloning / PCR primers</div>	33	67	43	38	-88	72	76	1 - 0 - 6 - 46 - 493 1 - 0 - 2 - 5 - 2 546 off-targets	More than 500 off-targets, showing 13 with score >1.0 🚩 0:intron:BRCA1 2:intergenic:SNX18-AC112198.1 4:intergenic:RNU6-1200P-RP11-384F7.2 show all...
605 / fw	<div>GGGAAAGGGACAGGGGCCCA AGG</div> <div>Enzymes: <i>EcoO109I</i>, <i>BshFI</i>, <i>BaeGI</i>, <i>ErhI</i>, <i>NlaIV</i>, <i>BseDI</i>, <i>Eco24I</i>, <i>Bsp1286I</i>, <i>Bsp120I</i>, <i>PspPI</i>, <i>BtsCI</i></div> <div>Cloning / PCR primers</div>	32	56	45	69	20	62	73	0 - 1 - 10 - 104 - 651 0 - 1 - 1 - 4 - 6 766 off-targets	More than 500 off-targets, showing 6 with score >2.0 🚩 2:intron:SYT7 3:intergenic:KIAA0930-CTA-268H5.14 3:intergenic:ARL4C-AC010148.1 show all...
1224 / fw	<div>GGAATATGTCTGGGAAGGGG AGG</div> <div>Enzymes: <i>BseRI</i></div> <div>Cloning / PCR primers</div>	32	64	57	57	25	64	65	1 - 1 - 1 - 42 - 285 1 - 0 - 0 - 4 - 9 330 off-targets	0:intron:BRCA1 4:exon:MLLT11/CDC42SE1 4:intergenic:RP5-855F16.1-PHF14 show all...
1368 / fw	<div>GGGGGATCCTGAGATGAGAG TGG</div> <div>Cloning / PCR primers</div>	31	64	63	51	12	66	86	0 - 1 - 5 - 66 - 371 0 - 1 - 0 - 11 - 11 443 off-targets	1:intron:CHST7 4:intergenic:SLC25A37/FP15737-RNU4-71P 3:intergenic:RP11-266O8.1-RP11-164C12.2 show all...
232 / rev	<div>CCATAGCGGGGCGAGTGTG GGG</div> <div>Cloning / PCR primers</div>	30	91	53	73	66	60	89	0 - 3 - 1 - 3 - 38 0 - 3 - 0 - 0 - 1 45 off-targets	1:exon:AC008753.3 1:exon:RP11-54C4.1 2:exon:RPLP1 show all...
234 / rev	<div>GGCCATAGCGCGGGCGAGTG TGG</div> <div>Cloning / PCR primers</div>	30	93	42	50	-52	62	80	0 - 4 - 1 - 5 - 49 0 - 4 - 0 - 0 - 0 59 off-targets	1:exon:RP11-7F17.1 1:exon:AC008753.3 1:exon:RP11-54C4.1 show all...
382 / fw	<div>AATATTGAAACTTTTGGCC TGG</div> <div>⚠ Not with U6/U3</div> <div>⚠ Inefficient</div> <div>Enzymes: <i>LpnPI</i>, <i>BshFI</i>, <i>BstNI</i>, <i>StyD4I</i></div> <div>Cloning / PCR primers</div>	30	47	42	4	-163	78	84	0 - 0 - 9 - 83 - 605 0 - 0 - 2 - 11 - 13 697 off-targets	More than 500 off-targets, showing 11 with score >2.0 🚩 3:intergenic:CCDC144A-CCDC144A/RP11-219A15.1 3:intron:CCDC144B 3:intergenic:CTD-2145A24.3-AC107982.4 show all...
213 / rev	<div>GGGGCTGGGGCTGCCGACG CGG</div> <div>⚠ High GC content</div> <div>Enzymes: <i>BspFNI</i>, <i>HgaI</i></div> <div>Cloning / PCR primers</div>	29	72	39	93	-11	55	65	0 - 3 - 5 - 100 - 791 0 - 0 - 1 - 1 - 0 899 off-targets	More than 500 off-targets, showing 22 with score >0.5 🚩 2:intron:SEMA4C 1:intergenic:RP11-435F13.2-RGS7 1:exon:TTC19/RPLP1P11 show all...
1548 / fw	<div>GAGAAAGGAAAAGACCCAA GGG</div> <div>Enzymes: <i>BstXI</i></div> <div>Cloning / PCR primers</div>	29	52	66	84	32	67	76	0 - 3 - 21 - 107 - 766 0 - 1 - 2 - 21 - 9 897 off-targets	More than 500 off-targets, showing 18 with score >1.0 🚩 1:intron:BRCA1 3:intron:EFCAB14 3:intergenic:RP11-96C21.1-RP11-64K10.1 show all...
233 / rev	<div>GCCATAGCGCGGGCGAGTGT GGG</div> <div>Cloning / PCR primers</div>	28	93	42	46	19	60	76	0 - 4 - 1 - 5 - 23 0 - 4 - 0 - 1 - 0 33 off-targets	1:exon:RP11-7F17.1 1:exon:RPLP1 1:exon:AC008753.3 show all...
405 / rev	<div>GTGGCTCCCAATGTTGACGT TGG</div> <div>Enzymes: <i>Maell</i>, <i>LpnPI</i>, <i>BshFI</i>, <i>Hpy166II</i>, <i>HincII</i>, <i>AcoI</i>, <i>BalI</i>, <i>BstNI</i>, <i>StyD4I</i></div> <div>Cloning / PCR primers</div>	28	89	67	51	79	61	61	0 - 2 - 4 - 10 - 113 0 - 2 - 1 - 1 - 22 129 off-targets	1:exon:RPLP1 1:exon:AC016739.2 2:exon:RP11-54C4.1 show all...
419 / fw	<div>TCCTGGCCAACGTCAACATT GGG</div> <div>⚠ Inefficient</div> <div>Enzymes: <i>NlaIV</i></div> <div>Cloning / PCR primers</div>	28	91	43	44	-42	60	71	0 - 3 - 2 - 7 - 81 0 - 3 - 0 - 0 - 0 93 off-targets	1:exon:RPLP1 1:exon:AC016739.2 2:exon:RP11-120J4.1 show all...
563 / fw	<div>GAGGCTGCACCCCTCTGCTC TGG</div> <div>Enzymes: <i>Tru1I</i>, <i>MwoI</i>, <i>BstAPI</i></div> <div>Cloning / PCR primers</div>	28	79	25	32	8	74	75	0 - 2 - 3 - 47 - 230 0 - 2 - 0 - 7 - 11 282 off-targets	1:intergenic:AC090841.1-ATP2B2 4:intergenic:RP11-131N11.4-CDK1 1:exon:BRCA1 show all...
1645 / rev	<div>AGGTAAATTTAAGATTTGA AGG</div> <div>Cloning / PCR primers</div>	28	64	56	22	-44	68	74	0 - 1 - 5 - 46 - 336 0 - 1 - 1 - 6 - 19 388 off-targets	1:intron:BRCA1 2:intron:TNRC6A 4:intergenic:AC079448.1-COL28A1 show all...
115 / fw	<div>TTACAGATAAATTAAAACTG TGG</div> <div>⚠ Low GC content</div> <div>Enzymes: <i>NlaIV</i>, <i>HpyCH4III</i></div> <div>Cloning / PCR primers</div>	27	45	69	22	52	77	79	1 - 1 - 24 - 129 - 660 1 - 0 - 8 - 16 - 17 815 off-targets	More than 500 off-targets, showing 9 with score >2.0 🚩 2:intergenic:RIT2-SYT4 2:intergenic:RPL32P14-RP11-124N3.3 2:intergenic:RP11-555G19.1-AP003062.1 show all...
1240 / fw	<div>GGGGAGGAGACAGGATTTTG TGG</div> <div>⚠ Not with U6/U3</div> <div>⚠ Inefficient</div> <div>Cloning / PCR primers</div>	27	57	47	55	-98	72	80	1 - 1 - 13 - 53 - 649 1 - 0 - 3 - 5 - 12 717 off-targets	More than 500 off-targets, showing 20 with score >1.0 🚩 0:intron:BRCA1 3:intergenic:TMEM14B-MAK 2:exon:ZDHHC12 show all...
1547 / fw	<div>GGAGAAAGGAAAAGACCCAA AGG</div> <div>Cloning / PCR primers</div>	27	55	65	46	60	69	87	2 - 0 - 26 - 91 -	More than 500 off-targets, showing 19 with score >1.0 🚩 0:intron:BRCA1

	Enzymes: <i>BstXI</i> Cloning / PCR primers								585 2 - 0 - 2 - 7 - 13 704 off-targets	3:intron:FREM2 2:exon:CTC-558O2.1 show all...
1966 / rev	AAAATAAGGTAAATTGGGCT GGG Cloning / PCR primers	27	49	45	38	-47	88	81	0 - 1 - 9 - 105 - 879 0 - 0 - 1 - 2 - 3 994 off-targets	More than 500 off-targets, showing 10 with score >2.0 🚩 2:intergenic:ZSWIM5-HPDL 3:intron:ARHGEF10L 3:intergenic:NLRP12-AC008753.6 show all...
1245 / fw	GGAGACAGGATTTTGTGGGA GGG ⚠️ Not with U6/U3 Cloning / PCR primers	26	61	50	46	-16	69	75	1 - 1 - 4 - 46 - 370 1 - 1 - 0 - 4 - 7 422 off-targets	0:intron:BRCA1 1:intron:TSPY14P 3:intron:C20orf112 show all...
1505 / rev	CAAGAAAGAGAAAGCTACAG GGG Enzymes: <i>BfmI</i> Cloning / PCR primers	26	52	60	57	84	67	74	1 - 1 - 15 - 99 - 716 1 - 0 - 0 - 11 - 11 832 off-targets	More than 500 off-targets, showing 23 with score >1.0 🚩 0:intron:BRCA1 4:intron:RP11-690J15.1 4:intergenic:RN7SL126P-VAMP8 show all...
1533 / fw	GCTTTCCTTTCTTGTGAGAA AGG Cloning / PCR primers	26	48	46	42	-83	64	88	1 - 0 - 12 - 82 - 604 1 - 0 - 3 - 10 - 16 699 off-targets	More than 500 off-targets, showing 24 with score >1.0 🚩 0:intron:BRCA1 3:intergenic:RPL21P17-RP11-204C23.1 3:intron:TNIK show all...
1967 / rev	TAAATAAGGTAAATTGGGC TGG Cloning / PCR primers	26	40	33	-7	-99	88	79	0 - 2 - 5 - 92 - 849 0 - 1 - 2 - 3 - 4 948 off-targets	More than 500 off-targets, showing 12 with score >1.0 🚩 1:intergenic:AL138963.1-SNORA31 2:intergenic:U95743.1-ERCC4 1:intron:TMEM71 show all...
10 / rev	AGACACAGTCAGAGGAAGGG CGG Enzymes: <i>BsFI</i> Cloning / PCR primers	25	41	64	48	63	70	79	0 - 1 - 16 - 116 - 830 0 - 0 - 4 - 7 - 7 963 off-targets	More than 500 off-targets, showing 28 with score >1.0 🚩 2:intergenic:RP11-575M4.1-WBSCR17 3:intergenic:Y_RNA-RP11-715C4.1 3:intron:ARFGEF1 show all...
160 / fw	CAAGGTGTTCGGTCCTTCG AGG Enzymes: <i>AluBI</i> , <i>BseDI</i> , <i>Hpy188I</i> , <i>HpyAV</i> , <i>PcsI</i> Cloning / PCR primers	24	89	62	62	57	47	81	1 - 2 - 3 - 4 - 44 1 - 2 - 1 - 0 - 0 54 off-targets	0:intergenic:RN7SL356P-RP11-7F17.1 1:exon:RPLP1 1:intergenic:SEPT7P8-AC008753.3 show all...
201 / fw	GGTGAGACCCTCACTTCATC CGG Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BsaWI</i> , <i>AsuHPI</i> Cloning / PCR primers	23	88	52	36	-55	65	62	1 - 4 - 6 - 14 - 89 1 - 4 - 4 - 1 - 2 114 off-targets	0:intergenic:SEC23A-RP11-545M17.2 1:exon:RPLP1 3:intergenic:MAP7-RP3-406A7.3 show all...
418 / fw	GTCTTGGCCAACGTCAACAT TGG Enzymes: <i>Hpy166II</i> , <i>NlaIV</i> , <i>HincII</i> Cloning / PCR primers	23	93	51	48	20	59	64	0 - 3 - 5 - 9 - 43 0 - 3 - 0 - 0 - 0 60 off-targets	1:exon:RPLP1 1:exon:AC016739.2 1:exon:RP11-54C4.1 show all...
1971 / rev	ATTTTAAATAAGGTAAATT GGG ⚠️ Not with U6/U3 ⚠️ Low GC content Enzymes: <i>MluCI</i> Cloning / PCR primers	23	45	33	29	-167	79	77	0 - 1 - 39 - 200 - 1453 0 - 0 - 1 - 7 - 11 1693 off-targets	More than 500 off-targets, showing 30 with score >1.0 🚩 1:intron:KYNU 2:intron:NCOR1P3 2:intron:ABCA13 show all...
400 / rev	TCCCAATGTTGACGTTGGCC AGG ⚠️ Inefficient Enzymes: <i>PpuMI</i> , <i>EcoO109I</i> , <i>LpnPI</i> , <i>BshFI</i> , <i>AcoI</i> , <i>Ball</i> , <i>PspPI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>Bme18I</i> Cloning / PCR primers	22	86	51	26	-76	61	73	2 - 3 - 2 - 10 - 77 2 - 1 - 0 - 0 - 2 94 off-targets	0:exon:RPLP1 0:exon:AC016739.2 1:exon:RP11-54C4.1 show all...
1397 / fw	GGGAAAGGCTAGGGGCAGGG AGG Enzymes: <i>BshFI</i> , <i>PceI</i> Cloning / PCR primers	22	33	53	67	10	66	82	0 - 1 - 28 - 152 - 1044 0 - 0 - 10 - 3 - 16 1225 off-targets	More than 500 off-targets, showing 10 with score >2.0 🚩 2:intergenic:RP11-664H7.2-RP11-876F14.2 2:intergenic:RNU1-141P-RRP15 3:intergenic:PKDCC-AC083949.1 show all...
1526 / fw	CCCTGTAGCTTTCTCTTTCT TGG ⚠️ Inefficient Cloning / PCR primers	22	62	11	29	-184	68	80	0 - 3 - 8 - 54 - 385 0 - 2 - 3 - 11 - 28 450 off-targets	1:intron:BRCA1 3:intergenic:C14orf105-SLC35F4 3:intergenic:USP2-AS1-KRT8P7 show all...
157 / rev	CAACGCGGCCTTAGCTTCCT CGG ⚠️ Inefficient Enzymes: <i>MnII</i> , <i>BseDI</i> , <i>Hpy188I</i> Cloning / PCR primers	21	51	47	57	-114	47	69	1 - 3 - 5 - 18 - 337 1 - 2 - 3 - 4 - 11 364 off-targets	0:intergenic:AC016739.2-AC016739.1 1:exon:RPLP1 1:exon:TTC19/RPLP1P11 show all...
273 / rev	AATGAGGGCAGAGTAGATGC AGG Enzymes: <i>HpyCH4V</i> , <i>BstC8I</i> Cloning / PCR primers	21	69	56	58	117	60	75	0 - 4 - 10 - 37 - 323 0 - 0 - 1 - 1 - 5 374 off-targets	4:intron:ABCB7 1:exon:RP11-7F17.1 2:intron:RIF1 show all...
380 / rev	AGGACCTTTGCAAACAAGCC AGG ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>BshFI</i> , <i>BstNI</i> , <i>StyD4I</i> Cloning / PCR primers	21	84	55	30	-72	83	86	0 - 3 - 6 - 30 - 141 0 - 3 - 4 - 5 - 2 180 off-targets	1:exon:RP4-612B18.1 1:exon:AC016739.2 1:intron:EHHADH show all...
153 / rev	GCGGCCTTAGCTTCCTCGGA AGG Enzymes: <i>TaqII</i> , <i>BseDI</i> , <i>PspPI</i> , <i>Hpy188I</i> , <i>Bme18I</i> , <i>PcsI</i> Cloning / PCR primers	20	89	60	40	4	45	69	1 - 3 - 4 - 5 - 46 1 - 2 - 3 - 1 - 1 59 off-targets	0:intergenic:AC016739.2-AC016739.1 1:exon:RP11-54C4.1 2:intergenic:RNU5E-7P-RP11-120J4.1 show all...
169 / fw	CGGTCCTTCGAGGAAGCTA AGG Enzymes: <i>BshFI</i> , <i>SsiI</i> , <i>AluBI</i> , <i>BspFNI</i> , <i>Fsp4HI</i> , <i>BstDEI</i> , <i>TauI</i> , <i>MwoI</i> Cloning / PCR primers	17	88	50	33	23	50	61	3 - 3 - 1 - 10 - 38 3 - 2 - 0 - 2 - 0 55 off-targets	0:intergenic:RN7SL356P-RP11-7F17.1 0:exon:RPLP1 0:intergenic:AC016739.2-AC016739.1 show all...
1231 / fw	GTCTGGGAAGGGGAGGAGAC AGG Enzymes: <i>BseRI</i> Cloning / PCR primers	16	43	54	53	-49	74	84	1 - 0 - 21 - 172 - 1093 1 - 0 - 1 - 13 - 31 1287 off-targets	More than 500 off-targets, showing 7 with score >2.0 🚩 0:intron:BRCA1 2:intergenic:RP11-680E19.2-GUCY1A2 3:intron:ARHGAP19-SLIT1/ARHGAP19 show all...
2022 / rev	AAAACATGTATCTTTTAAAA AGG	16	33	26	23	-216	66	81	0 - 2 - 49 -	More than 500 off-targets, showing 12 with score >2.0 🚩 3:intergenic:RP11-308N19.5-RNA5SP292

	<div>⚠️ Not with U6/U3</div> <div>⚠️ Low GC content</div> <div>Enzymes: <i>Tru1I</i>, <i>DraI</i></div> <div>Cloning / PCR primers</div>								332 - 1136	0 - 0 - 18 - 43 - 58	2:intron:AC064865.1 3:intron:TTC6 show all...
219 / rev	GAGTGTGGGGCTGGGGCTGC <i>CGG</i> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BspFNI</i> , <i>Fsp4HI</i> , <i>HgaI</i> , <i>ApeKI</i> , <i>MwoI</i>	15	41	32	76	-60	59	62	0 - 3 - 26 - 185 - 1225	0 - 0 - 3 - 24 - 46	More than 500 off-targets, showing 22 with score >2.0 🚩 2:intergenic:PRR25-LMF1 2:intergenic:AC007249.3-NOL10 2:intron:ST6GAL1 show all...
1026 / fw	GTGGCGCGCGCCAGCTACTC <i>AGG</i> Enzymes: <i>AluBI</i> , <i>Hpy188III</i> , <i>BstDEI</i> , <i>BspCNI</i> , <i>AlwNI</i>	13	44	36	62	-54	75	74	0 - 6 - 58 - 143 - 267	0 - 5 - 16 - 5 - 2	2:intergenic:AC004895.4-USP42 3:intergenic:H19-IGF2/AC132217.4/INS-IGF2 3:intergenic:ANAPC4-RP11-206P5.1 show all...
396 / fw	TTGGCCTGGCTTGTTTGCAA <i>AGG</i> Enzymes: <i>PpuMI</i> , <i>EcoO109I</i> , <i>LpnPI</i> , <i>HpyCH4V</i> , <i>PspPI</i> , <i>Bme18I</i>	10	52	47	61	-59	80	79	5 - 5 - 7 - 54 - 1669	5 - 3 - 0 - 2 - 1	More than 500 off-targets, showing 21 with score >1.0 🚩 0:exon:RP4-612B18.1 0:exon:RP11-435F13.2 0:exon:RPLP1 show all...
1961 / rev	AAGGTAAATTGGGCTGGGCGC <i>TGG</i> Cloning / PCR primers	6	17	47	57	-66	74	81	0 - 1 - 60 - 377 - 2112	0 - 0 - 15 - 65 - 145	More than 500 off-targets, showing 1 with score >10.0 🚩 1:intron:UTRN
1034 / fw	CGCCAGCTACTCAGGAGCTG <i>AGG</i> Enzymes: <i>AluBI</i> , <i>BstDEI</i> , <i>AlwNI</i>	3	13	53	39	28	62	74	0 - 9 - 247 - 679 - 1996	0 - 8 - 207 - 80 - 16	More than 500 off-targets, showing 9 with score >10.0 🚩 1:intron:CTC-419K13.1 1:intergenic:RP11-34F13.3-RP11-282M16.1 1:intron:MAP2K5 show all...
1958 / rev	GTAATAATTGGGCTGGGCGTGG <i>TGG</i> Cloning / PCR primers	1	3	51	62	25	67	50	1 - 15 - 220 - 1629 - 10006	1 - 12 - 141 - 724 - 2308	More than 500 off-targets, showing 16 with score >10.0 🚩 1:intron:MYOF 1:intron:MND1 1:intron:AC009499.1 show all...
864 / rev	CAGGCGTAAGCCACCATCCC <i>CGG</i> Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>BseDI</i> , <i>NciI</i> , <i>BcclI</i> , <i>StyD4I</i>	0	0	52	56	18	70	82	Repeat 🚩		
883 / rev	TCCCAAAGTGCTAGGAATAC <i>AGG</i>	0	0	47	39	-41	75	70	Repeat 🚩		
891 / rev	CCTTGGCCTCCCAAAGTGCT <i>AGG</i> Enzymes: <i>MaeI</i>	0	0	55	44	6	73	84	Repeat 🚩		
901 / fw	CGCCTGTATTCCTAGCACTT <i>TGG</i> ⚠️ Inefficient	0	0	42	27	-111	67	78	Repeat 🚩		
902 / fw	GCCTGTATTCCCTAGCACTTT <i>GGG</i> ⚠️ Inefficient Enzymes: <i>BshFI</i>	0	0	26	46	-144	67	78	Repeat 🚩		
905 / fw	TGTATTCCCTAGCACTTTGGG <i>AGG</i> Enzymes: <i>BshFI</i>	0	0	67	36	50	65	82	Repeat 🚩		
908 / rev	ACCTCGTGATCCATCCGCCT <i>TGG</i> ⚠️ Inefficient Enzymes: <i>BshFI</i> , <i>SsiI</i> , <i>MnlI</i> , <i>ErhI</i> , <i>BseDI</i>	0	0	45	38	-43	54	68	Repeat 🚩		
911 / fw	CCTAGCACTTTGGGAGGCCA <i>AGG</i> Enzymes: <i>BshFI</i> , <i>EciI</i> , <i>ErhI</i> , <i>BseDI</i>	0	0	51	46	-54	54	63	Repeat 🚩		
914 / fw	AGCACTTTGGGAGGCCAAGG <i>CGG</i> Enzymes: <i>EciI</i> , <i>ErhI</i> , <i>BseDI</i> , <i>BtsCI</i>	0	0	65	76	36	58	59	Repeat 🚩		
918 / fw	CTTTGGGAGGCCAAGCGGGA <i>TGG</i> Enzymes: <i>NdeII</i> , <i>EciI</i> , <i>BtsCI</i> , <i>BspPI</i>	0	0	43	59	-3	73	68	Repeat 🚩		
927 / fw	GCCAAGCGGATGGATCACG <i>AGG</i> Enzymes: <i>BssSI</i> , <i>Hpy188III</i>	0	0	65	54	85	70	75	Repeat 🚩		
932 / fw	GGCGGATGGATCACGAGTC <i>AGG</i> Enzymes: <i>Hpy188III</i>	0	0	47	68	-42	76	83	Repeat 🚩		
944 / rev	TTTCACCACGATGGTCAGGC <i>TGG</i> Enzymes: <i>BspTNI</i> , <i>BcoDI</i>	0	0	53	19	-57	67	69	Repeat 🚩		
948 / rev	GGGGTTTCACCACGATGGTC <i>AGG</i>	0	0	48	61	0	65	63	Repeat 🚩		
953 / rev	GAGACGGGGTTTCACCACGA <i>TGG</i> Enzymes: <i>SmiMI</i>	0	0	69	80	50	59	75	Repeat 🚩		
959 / fw	CGAGACCAGCCTGACCATCG <i>TGG</i> Enzymes: <i>AsuHPI</i> , <i>BcclI</i> , <i>SmiMI</i>	0	0	71	51	86	61	78	Repeat 🚩		
967 / rev	TTGTATTTTGTAGAGACG <i>GGG</i> ⚠️ Not with U6/U3	0	0	63	42	-94	73	81	Repeat 🚩		
968 / rev	TTTGTATTTTGTAGTAGAC <i>GGG</i> ⚠️ Not with U6/U3	0	0	44	40	-154	72	86	Repeat 🚩		
969 / rev	TTTTGTATTTTGTAGTAGAGA <i>CGG</i> ⚠️ Not with U6/U3 ⚠️ Low GC content	0	0	45	34	-263	70	88	Repeat 🚩		
997 / rev	CTGGCGCGCGCCACCACGCC <i>CGG</i> ⚠️ High GC content Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>NciI</i> , <i>StyD4I</i>	0	0	39	69	-69	73	72	Repeat 🚩		
998 / fw	CTAAAAATACAAAATTAGC <i>CGG</i> ⚠️ Low GC content Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>NciI</i> , <i>StyD4I</i>	0	0	49	0	-129	72	84	Repeat 🚩		
999 / fw	TAAAAATACAAAATTAGCC <i>GGG</i> ⚠️ Inefficient ⚠️ Low GC content Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>NciI</i> , <i>StyD4I</i>	0	0	59	12	-131	73	82	Repeat 🚩		

1004 / fw	ATACAAAATTAGCCGGGCG TGG Enzymes: <i>NciI</i> , <i>StyD4I</i>	0	0	52	40	-66	61	88	Repeat 🚩	
1007 / fw	CAAAAATTAGCCGGGCGTGG TGG Enzymes: <i>HinP1I</i> , <i>BspFNI</i> , <i>BstC8I</i> , <i>BssHII</i>	0	0	61	41	-7	57	72	Repeat 🚩	
1016 / rev	TGCCTCAGTCCTGAGTAGC TGG Enzymes: <i>AluBI</i> , <i>HinP1I</i> , <i>BspFNI</i> , <i>BstC8I</i> , <i>BssHII</i> Cloning / PCR primers	0	6	41	23	-76	67	78	149 - 428 - 1293 - 2263 - 3154 149 - 110 - 119 - 114 - 269 7287 off-targets	More than 1000 off-targets, showing only top 30 🚩 0:exon:C1orf222 0:intergenic:WNT4-MIR4418 0:intergenic:FTLP18-RP4-614N24.1 show all...
1038 / fw	AGCTACTCAGGAGCTGAGGC AGG Enzymes: <i>BstDEI</i> Cloning / PCR primers	0	4	44	25	7	71	64	147 - 431 - 1303 - 2201 - 3503 147 - 57 - 12 - 13 - 20 7585 off-targets	More than 1000 off-targets, showing only top 30 🚩 0:exon:C1orf222 0:intergenic:FTLP18-RP4-614N24.1 0:intron:SERBP1 show all...
1054 / rev	CACTGCAACCTCCGCCTCCT GGG ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>MnII</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>AgsI</i> , <i>BsII</i>	0	0	40	45	-101	82	55	Repeat 🚩	
1055 / rev	TCACTGCAACCTCCGCCTCC TGG Enzymes: <i>LpnPI</i> , <i>MnII</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>BsII</i>	0	0	33	15	-43	81	70	Repeat 🚩	
1057 / fw	CAGGAGAATCGCTTGAACCC AGG Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i>	0	0	53	41	102	82	81	Repeat 🚩	
1060 / fw	GAGAATCGCTTGAACCCAGG AGG Enzymes: <i>LpnPI</i> , <i>EciI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>BsII</i>	0	0	68	75	87	61	83	Repeat 🚩	
1063 / fw	AATCGCTTGAACCCAGGAGG CGG Enzymes: <i>EciI</i> , <i>BsII</i>	0	0	58	59	91	59	48	Repeat 🚩	
1066 / fw	CGCTTGAACCCAGGAGCGG AGG Enzymes: <i>HpyCH4V</i> , <i>EciI</i> , <i>MwoI</i> , <i>BsII</i>	0	0	47	52	16	58	55	Repeat 🚩	
1079 / rev	GGAGTGCAATGGCGCGATCT CGG Enzymes: <i>NdeII</i> , <i>MwoI</i>	0	0	47	53	11	64	73	Repeat 🚩	
1090 / rev	CCACCCAGGCTGGAGTGCAA TGG Enzymes: <i>HinP1I</i> , <i>BspFNI</i> , <i>HpyCH4V</i> , <i>BseMI</i>	0	0	56	38	33	77	82	Repeat 🚩	
1100 / rev	TGTCGTTCTGCCACCCAGGC TGG Enzymes: <i>LpnPI</i> , <i>BpmI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i> , <i>BglI</i>	0	0	40	55	-66	84	81	Repeat 🚩	
1104 / rev	GGAGTGTCGTTCTGCCACCC AGG Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i> , <i>BglI</i>	0	0	49	61	84	64	77	Repeat 🚩	
1106 / fw	CGCGCCATTGCACTCCAGCC TGG ... ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i> , <i>BglI</i>	0	0	36	50	-64	65	89	Repeat 🚩	
1107 / fw	GCGCCATTGCACTCCAGCCT GGG ... ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i> , <i>BglI</i>	0	0	53	46	-31	64	80	Repeat 🚩	
1110 / fw	CCATTGCACTCCAGCCTGGG TGG Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i> , <i>BglI</i>	0	0	60	69	3	60	83	Repeat 🚩	
1125 / rev	TTCTTTGTTTGTTTTGGAGA CGG ... ⚠️ Not with U6/U3 Enzymes: <i>TspGWI</i>	0	0	43	25	-205	62	75	Repeat 🚩	
1156 / fw	ACAAACAAGAAATAAACAC CGG ... Enzymes: <i>MspI</i> , <i>LpnPI</i> , <i>Cfr10I</i>	0	0	68	32	87	60	78	Repeat 🚩	
1665 / rev	AAAATAAATAAAATAAAATA AGG ... ⚠️ Low GC content	0	0	36	12	-123	69	83	Repeat 🚩	
1693 / fw	TATTTTATTATTTTGTAGA CGG ... ⚠️ Not with U6/U3 ⚠️ Low GC content Enzymes: <i>AluBI</i> , <i>TspGWI</i>	0	0	50	15	-182	64	75	Repeat 🚩	
1712 / rev	ACGCCATTACACTCCAGCCT GGG ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i>	0	0	65	53	-19	64	81	Repeat 🚩	
1713 / rev	CACGCCATTACACTCCAGCC TGG ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i>	0	0	52	27	-15	63	87	Repeat 🚩	
1715 / fw	GAGCTTCGCTCTGTGTGCCC AGG Enzymes: <i>LpnPI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>MwoI</i>	0	0	40	32	-20	64	74	Repeat 🚩	
1719 / fw	TCGCTCTTGTGTTGCCAGGC TGG Enzymes: <i>LpnPI</i> , <i>BpmI</i> , <i>BseDI</i> , <i>BstNI</i> , <i>StyD4I</i>	0	0	32	64	-83	75	76	Repeat 🚩	
1729 / fw	TTGCCCAGGCTGGAGTGTA TGG ⚠️ Inefficient	0	0	54	63	-32	78	85	Repeat 🚩	
1739 / fw	TGGAGTGTAATGGCGTGATT TGG Enzymes: <i>Eco24I</i> , <i>Bsp1286I</i>	0	0	33	50	-107	70	80	Repeat 🚩	
1740 / fw	GGAGTGTAATGGCGTGATT GGG ⚠️ Inefficient Enzymes: <i>Eco24I</i> , <i>Bsp1286I</i>	0	0	46	43	-61	69	81	Repeat 🚩	
1747 / rev	AACCCACGAGTCAGAGGTTG CGG Enzymes: <i>AsuHPI</i>	0	0	51	67	16	68	70	Repeat 🚩	

1753 / rev	CGCTTGAACCCACGAGTCAG AGG ... <u>A</u> Enzymes: <i>PpsI</i> , <i>Hinfl</i> , <i>Hpy188I</i>	0	0	62	49	25	71	79	Repeat 🚩	
1764 / fw	TCACCGCAACCTCTGACTCG TGG ... <u>C</u> Enzymes: <i>Hinfl</i>	0	0	52	25	43	79	75	Repeat 🚩	
1765 / fw	CACCGCAACCTCTGACTCGT GGG Enzymes: <i>Hinfl</i> , <i>AgsI</i>	0	0	53	37	-35	81	85	Repeat 🚩	
1781 / rev	AGCTACTCGGGAGCTGAGGC AGG <u>A</u> Enzymes: <i>BstDEI</i> Cloning / PCR primers	0	3	39	31	-6	67	64	105 - 542 - 1703 - 2966 - 3352 105 - 155 - 58 - 24 - 130 8668 off-targets	More than 1000 off-targets, showing only top 30 🚩 0:intergenic:CLSTN1-CTNNBIP1/RP11-84A14.5 0:intergenic:Y_RNA-TARDBP 0:intergenic:PAQR7/RP1-125I3.2-PAQR7 show all...
1785 / rev	TCCCAGCTACTCGGGAGCTG AGG <u>A</u> .. Enzymes: <i>AluBI</i> , <i>BstDEI</i>	0	0	58	43	78	57	74	Repeat 🚩	
1793 / rev	GCGTGTAATCCCAGCTACTC GGG Enzymes: <i>AluBI</i> , <i>BmeT110I</i> , <i>Hpy188III</i>	0	0	47	54	-3	73	74	Repeat 🚩	
1794 / rev	TGCGTGTAATCCCAGCTACT CGG Enzymes: <i>AluBI</i> , <i>BmeT110I</i> , <i>Hpy188III</i>	0	0	48	36	-31	73	78	Repeat 🚩	
1803 / fw	TGCCTCAGCTCCCGAGTAGC TGG <u>A</u> Enzymes: <i>AluBI</i> Cloning / PCR primers	0	5	28	20	-110	62	73	110 - 554 - 1677 - 2968 - 3079 110 - 85 - 77 - 68 - 138 8388 off-targets	More than 1000 off-targets, showing only top 30 🚩 0:intergenic:Y_RNA-TARDBP 0:intergenic:PAQR7/RP1-125I3.2-PAQR7 0:intergenic:RN7SL131P-THRAP3 show all...
1804 / fw	GCCTCAGCTCCCGAGTAGCT GGG ... <u>A</u> Enzymes: <i>AluBI</i> Cloning / PCR primers	0	2	46	42	-3	62	82	113 - 553 - 1871 - 3356 - 4200 113 - 112 - 79 - 116 - 664 10093 off-targets	More than 1000 off-targets, showing only top 30 🚩 0:intergenic:CLSTN1-CTNNBIP1/RP11-84A14.5 0:intergenic:Y_RNA-TARDBP 0:intergenic:PAQR7/RP1-125I3.2-PAQR7 show all...
1821 / rev	AAAAAATGAGCCAGGCATGG TGG Enzymes: <i>NlaIII</i> , <i>HpyCH4V</i> , <i>SmiMI</i>	0	0	68	39	66	62	86	Repeat 🚩	
1824 / rev	ACAAAAAATGAGCCAGGCA TGG Enzymes: <i>NlaIII</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>SmiMI</i>	0	0	61	29	-2	76	91	Repeat 🚩	
1829 / rev	AAAATACAAAAAATGAGCC AGG ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>NlaIII</i> , <i>BstNI</i> , <i>StyD4I</i>	0	0	56	19	-44	73	81	Repeat 🚩	
1831 / fw	CACGCATGCACCACCATGCC TGG ⚠️ Inefficient Enzymes: <i>LpnPI</i> , <i>NlaIII</i> , <i>BstNI</i> , <i>StyD4I</i> , <i>SmiMI</i>	0	0	50	25	-45	74	86	Repeat 🚩	
1863 / fw	TTGTATTTTtagtagAAACG AGG <u>A</u> .. ⚠️ Not with U6/U3	0	0	64	34	-136	78	90	Repeat 🚩	
1871 / rev	CAAGACCAGCCTGACCAATA CGG <u>T</u> Enzymes: <i>TspGWI</i>	0	0	50	62	-34	69	81	Repeat 🚩	
1877 / fw	GAAACGAGGTTTCTCCGTAT TGG <u>A</u>	0	0	51	58	-71	65	80	Repeat 🚩	
1882 / fw	GAGGTTTCTCCGTATTGGTC AGG ... <u>A</u> <u>T</u> ...	0	0	49	53	12	55	65	Repeat 🚩	
1886 / fw	TTTCTCCGTATTGGTCAGGC TGG <u>T</u>	0	0	46	21	-59	50	71	Repeat 🚩	
1898 / rev	CGGGCGGATGACCTGAGGTC GGG <u>A</u> <u>T</u> ... <u>T</u> Enzymes: <i>Bse21I</i> , <i>Hpy188III</i> , <i>Eam1105I</i> , <i>BsII</i>	0	0	50	93	35	79	74	Repeat 🚩	
1899 / rev	GCGGGCGGATGACCTGAGGT CGG . <u>A</u> <u>T</u> ... <u>T</u> Enzymes: <i>Bse21I</i> , <i>Hpy188III</i> , <i>BstDEI</i> , <i>Eam1105I</i> , <i>BsII</i>	0	0	56	65	7	75	74	Repeat 🚩	
1903 / rev	CGAGGCGGGCGGATGACCTG AGG . <u>T</u> ... <u>A</u> <u>T</u> ... <u>T</u> Enzymes: <i>Bse21I</i> , <i>LpnPI</i> , <i>BstDEI</i> , <i>Eam1105I</i> , <i>BsII</i>	0	0	61	72	91	59	76	Repeat 🚩	
1907 / fw	GGTCTTGAACCTCCGACCTC AGG Enzymes: <i>Bse21I</i> , <i>MnII</i> , <i>BstDEI</i> , <i>BspCNI</i> , <i>Eam1105I</i> , <i>BsII</i>	0	0	47	40	-15	60	80	Repeat 🚩	
1914 / rev	CTTAGGAGGCCGAGGCGGG CGG <u>T</u> ... <u>A</u> <u>T</u> ... <u>T</u> .. Enzymes: <i>Ecil</i> , <i>BstC8I</i> , <i>BtsCI</i>	0	0	51	99	24	67	61	Repeat 🚩	
1917 / rev	GCACTTAGGGAGGCCGAGGC GGG <u>T</u> ... <u>A</u> <u>T</u> .. Enzymes: <i>NmeAIII</i> , <i>Ecil</i> , <i>BstC8I</i> , <i>BseDI</i>	0	0	47	52	-13	67	76	Repeat 🚩	
1918 / rev	AGCACTTAGGGAGGCCGAGG CGG <u>T</u> ... <u>A</u> <u>T</u> .. Enzymes: <i>NmeAIII</i> , <i>Ecil</i> , <i>BstC8I</i> , <i>BseDI</i>	0	0	54	70	31	67	63	Repeat 🚩	
1921 / rev	CACAGCACTTAGGGAGGCCG AGG <u>T</u> Enzymes: <i>BshFI</i> , <i>NmeAIII</i> , <i>BstC8I</i> , <i>BseDI</i>	0	0	50	51	-46	60	63	Repeat 🚩	
1924 / fw	CTCAGTCATCCGCCGCCT CGG <u>T</u> ... <u>TA</u> ... <u>T</u> .. ⚠️ Inefficient Enzymes: <i>BshFI</i> , <i>SsiI</i> , <i>MnII</i> , <i>BstC8I</i> , <i>BseDI</i> , <i>FauI</i>	0	0	50	56	-94	60	79	Repeat 🚩	
1927 / rev	TGTAATCACAGCACTTAGGG AGG Enzymes: <i>BshFI</i> , <i>NmeAIII</i> , <i>BstDEI</i>	0	0	71	34	36	67	82	Repeat 🚩	
1930 / rev	GCCTGTAATCACAGCACTTA GGG ⚠️ Inefficient Enzymes: <i>BshFI</i> , <i>BstDEI</i>	0	0	39	39	-82	71	78	Repeat 🚩	
1931 / rev	CGCCTGTAATCACAGCACTT AGG ⚠️ Inefficient Enzymes: <i>BstDEI</i>	0	0	58	25	-67	73	86	Repeat 🚩	
1949 / fw	TCCCTAAGTGCTGTGATTAC AGG	0	0	33	45	-103	70	71	Repeat 🚩	

	⚠️ Inefficient									
1980 / rev	CATTTTATCATTTTAAAATA AGGT.G..... ⚠️ Not with U6/U3 ⚠️ Low GC content	0	0	25	24	-202	65	89	Repeat 🔥	

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