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### Supplementary Materials for

## CRISPR-Cas9 corrects Duchenne muscular dystrophy exon 44 deletion mutations in mice and human cells

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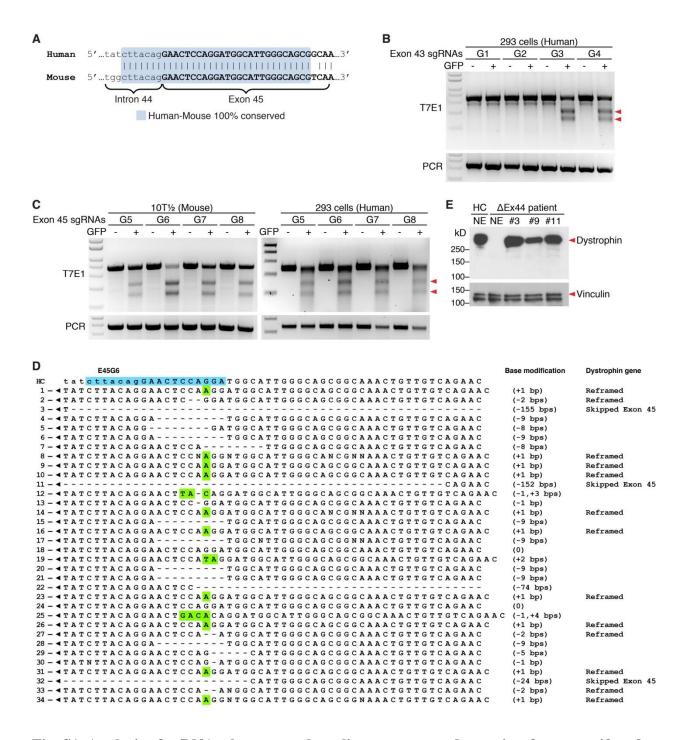
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Table S1. Primer sequences and media components.



**Fig. S1.** Analysis of sgRNAs that target the splice acceptor or donor sites for exons 43 and 45. (A) Alignment of human and mouse DNA sequence at the intron-exon junction of exon 45. The conserved region is shaded in light blue. Exon sequence is in bold upper case and intron sequence is in lower case. (B) T7E1 assay using human 293 cells transfected with plasmids that express *Sp*Cas9 and exon 43 sgRNA1 (G1), sgRNA2 (G2), sgRNA3 (G3) or sgRNA4 (G4) shows cleavage of the *DMD* locus at the intron-exon junctions of exon 43. Red arrowheads

denote cleavage products. PCR indicates the undigested PCR product. (**C**) T7E1 assay using mouse 10T<sup>1</sup>/<sub>2</sub> and human 293 cells transfected with plasmids that express *Sp*Cas9 and exon 45 sgRNA5 (G5), sgRNA6 (G6), sgRNA7 (G7) or sgRNA8 (G8) shows cleavage of the *Dmd* locus at the intron-exon junction of exon 45. Red arrowheads denote cleavage products. PCR indicates the undigested PCR product. (**D**) Sequences of the G6 edited 34 single clones. HC is the sequence of the healthy human control. G6 sequence is shaded in blue. Insertions are shaded in green. Base modification and dystrophin gene status are listed on the right. (**E**) Western blot analysis showing restoration of dystrophin expression in three corrected single iPSC clones (clones #3, #9 and #11). Clone #3 and #11 were corrected through exon 45 skipping, and clone #9 was corrected through exon 45 reframing. HC, iPSC-CM from a healthy human control. NE, non-edited. Vinculin is loading control.

t cactga acct caatga taga agttgt at tta cat at tga tga cata a a a ga at tgg gg taga ctag a aga a catga gt ctg tg gg taga catga ga a catga gt ctg tg gg taga catga ga a catga gt ctg tg gg taga catga ga a catga a catga a catga a catga ga a catga a catga ga a catgagaaggagcaagctgggttagaacaaaggtctgtcagagtcagcatgggaatgaggtgttgtaggaggcaattctgcaagcaggtggatatttagtatcttaactgtagttctgaatcaggaggaaggttgaaactcataaaactgataagacaattttattttgatctgcatgtatttta a agttg a a catatg attctc a a at attttt a a attttt a catg tttt a a a att a catt a cat attat caca agg g a g a a catatg att a catatg a catatg a cata a catatg a catgatgetaattatectaagtaattgtetagtaeteattttaateaatgtatatgtttaattttaaaggaaataataettttgttttaatta $aaaaaagaatgggtgatgtccacaaaatgtgtcctataaaccacttaccttatttcatccatgttttcaaattatag{{\tt GCGATTCGACAGAT}}$  ${\tt TCCTGAAAACTGGGAACATGCTAAATACAAATGGTATCTTAAG} {\tt gtaagactttgagatttccctttccatgctggcttcatttttcagca}$ atattttacatattttactactgtaagttcaactaaaaggatgaatggaatatataattcctgactttattgttgctcactgaacatgtta $\verb+tcatgttaaaattacaagtttctttctctcaagacaatttgtggtgatatagtaatatttctgtacatcct \verb+attgacaaaatgccttctga+$ gacagactagagg

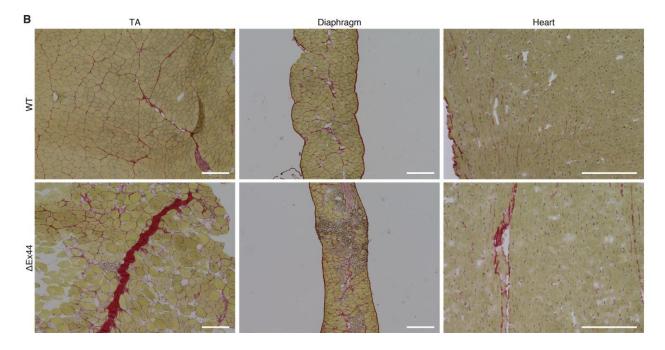


Fig. S2. Characterization of the  $\Delta$ Ex44 mouse line. (A) Genomic sequence of targeted locus of *Dmd* exon 44 and surrounding intron regions. sgRNA sequences are indicated in blue, protospacer adjacent motifs (PAMs) are indicated in red, and genotyping primers are highlighted in yellow. Exon 44 sequence is in bold upper case and intron sequence is in lower case. (B) Picrosirius red staining of TA, diaphragm, and heart of WT and  $\Delta$ Ex44 mice. Scale bar is 50 µm.

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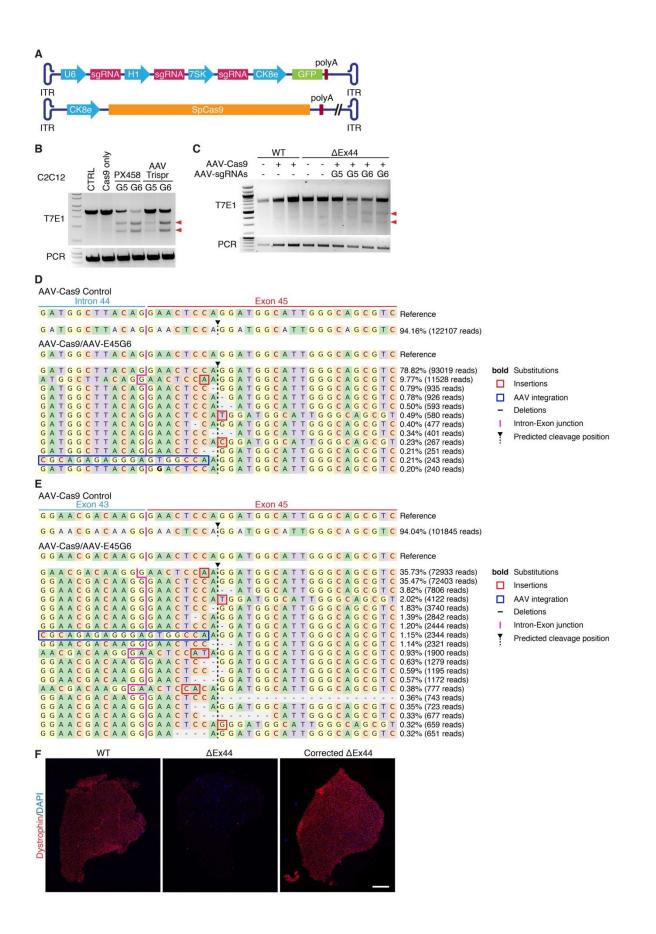
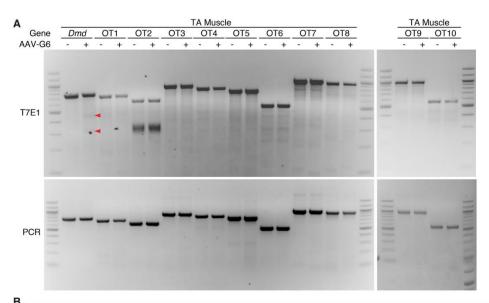
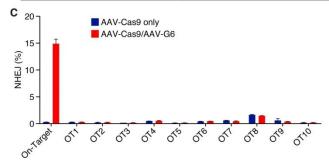


Fig. S3. Intramuscular AAV9 delivery of gene editing components rescues dystrophin expression. (A) Illustration of the AAV construct for CRISPR/Cas9 delivery. The muscle creatine kinase 8 (CK8e) regulatory cassette was used to express SpCas9 and GFP. The U6, H1, and 7SK RNA polymerase III promoters were used to express sgRNAs. ITR is inverted terminal repeats. (B) T7E1 assay shows cleavage of the Dmd locus at the intron-exon junction of exon 45 in mouse C2C12 cells with electroporation of G5 or G6 in PX458 or Trispr backbone. Red arrowheads show cleavage products of genome editing. PCR indicates the undigested PCR product. (C) T7E1 assay shows cleavage of the Dmd locus at the intron-exon junction of exon 45 in TA muscle of corrected  $\Delta$ Ex44 mice. Red arrowheads show cleavage products of genome editing. PCR indicates the undigested PCR product. (D and E) On-target (D) genomic and (E) cDNA amplicon deep sequencing of  $\Delta$ Ex44 DMD, and corrected  $\Delta$ Ex44 DMD mice after 3 weeks of AAV-Cas9 and AAV-G6 intramuscular injection  $(2.5 \times 10^{10} \text{ vg of AAV9-Cas9 and } 2.5 \text{ m})$  $\times 10^{10}$  vg of AAV-G6). Bold represents substitutions, red square is insertions, "-" is deletion. Vertical pink line indicates intron-exon junction in (**D**) and exon-exon junction in (**E**). Black arrowhead points to dotted vertical line representing the predicted cleavage site. (F) Dystrophin immunostaining of TA muscle in WT,  $\Delta$ Ex44 DMD, and corrected  $\Delta$ Ex44 DMD mice after 3 weeks of AAV-Cas9 and AAV-G6 intramuscular injection  $(2.5 \times 10^{10} \text{ vg of AAV9-Cas9 and } 2.5 \text{ m})$  $\times 10^{10}$  vg of AAV-G6). Dystrophin is shown in red. Nuclei are marked by DAPI stain in blue. 10X tile scan of the entire TA muscle. Scale bar is 500 µm.



Selected OT site	Sequence	PAM	Gene	Chromosome	Samples	Total Reads	Unmodified	NHEJ	NHEJ%	AVC	
selected OT site	Sequence	PAW	Gene	Chromosome	Δ44-AAV-Cas9 control-1	129677	129273	404	0.31%	AVC	
E45G6 Ontarget	CTTACAGGAACTCCAGGA	TGG AAG	ENSMUSG00000045103 ENSMUSG00000018168	chrX chr11	Δ44-AAV-Cas9 control-1	118099	117724	375	0.31%	0.31%	
					Δ44-AAV-Cas9 control-2 Δ44-AAV-Cas9.AAV-E45G6-1	118099	99440	18571	15.74%		
					Δ44-AAV-Cas9.AAV-E45G6-2	79958	68732	11226	14.04%		
					Δ44-AAV-Cas9 control-1	148291	147900	391	0.26%		
					Δ44-AAV-Cas9 control-2	140851	140391	460	0.33%		
E45G6 OT1					Δ44-AAV-Cas9.AAV-E45G6-1	146193	145718	475	0.32%		
					Δ44-AAV-Cas9.AAV-E45G6-2	141836	141485	351	0.25%	0.29%	
	TTGACAGGAACTCCAGGA	AAG	ENSMUSG0000087615	chr17	Δ44-AAV-Cas9 control-1	195414	195077	337	0.17%	0.21%	
E45G6 OT2					Δ44-AAV-Cas9 control-2	164408	164011	397	0.24%		
					Δ44-AAV-Cas9.AAV-E45G6-1	163644	163237	407	0.25%		
					Δ44-AAV-Cas9.AAV-E45G6-2	224318	223898	420	0.19%		
					Δ44-AAV-Cas9 control-1	118944	118753	191	0.16%	1	
E45G6 OT3	CTTCCAGGAACTCCAGCA	CAG	ENSMUSG0000024087	chr17	Δ44-AAV-Cas9 control-2	137789	137573	216	0.16%	0.16%	
					Δ44-AAV-Cas9.AAV-E45G6-1	115015	114797	218	0.19%		
					Δ44-AAV-Cas9.AAV-E45G6-2	115647	115493	154	0.13%		
					Δ44-AAV-Cas9 control-1	112923	112346	577	0.51%	1	
	CTTATAGGAATTCCAGGA	AGG	ENSMUSG0000001123	chr11	Δ44-AAV-Cas9 control-2	80286	79896	390	0.49%	0.50%	
E45G6 OT4					Δ44-AAV-Cas9.AAV-E45G6-1	72867	72514	353	0.48%		
					Δ44-AAV-Cas9.AAV-E45G6-2	102712	102102	610	0.59%	0.54	
E45G6 OT5	GTGACATGAACTCCAGGA	AAG	ENSMUSG0000097736	chr9	Δ44-AAV-Cas9 control-1	132220	132032	188	0.14%	0.15%	
					Δ44-AAV-Cas9 control-2	100491	100341	150	0.15%		
					Δ44-AAV-Cas9.AAV-E45G6-1	111366	111173	193	0.17%		
					Δ44-AAV-Cas9.AAV-E45G6-2	114976	114805	171	0.15%		
E45G6 OT6	TTTCCAGGAATTCCAGGA	AGG	ENSMUSG0000026835	chr2	Δ44-AAV-Cas9 control-1	95824	95395	429	0.45%	0.42%	
					Δ44-AAV-Cas9 control-2	103709	103292	417	0.40%		
					Δ44-AAV-Cas9.AAV-E45G6-1	112059	111548	511	0.46%		
					Δ44-AAV-Cas9.AAV-E45G6-2	128665	128037	628	0.49%		
					∆44-AAV-Cas9 control-1	131416	130646	770	0.59%		
	CTCACCGGAACTCCAGGA	GGG	ENSMUSG0000025650	chr9	Δ44-AAV-Cas9 control-2	122440	121656	784	0.64%	0.61%	
E45G6 OT7					Δ44-AAV-Cas9.AAV-E45G6-1	122052	121559	493	0.40%		
24500 017					Δ44-AAV-Cas9.AAV-E45G6-2	134661	133948	713	0.53%		
E45G6 OT8	ATGACAGAAACTCCAGGA	AAG	ENSMUSG00000056952	chr6	∆44-AAV-Cas9 control-1	87995	86485	1510	1.72%	- 1.65%	
					Δ44-AAV-Cas9 control-2	130159	128107	2052	1.58%		
					Δ44-AAV-Cas9.AAV-E45G6-1	136626	134574	2052	1.50%		
					Δ44-AAV-Cas9.AAV-E45G6-2	121227	119468	1759	1.45%		
	CTACCAGGAACTCCAGGC	TGG	ENSMUSG0000021275	chr12	Δ44-AAV-Cas9 control-1	123165	122861	304	0.25%	0.60	
					Δ44-AAV-Cas9 control-2	116857	115745	1112	0.95%		
E45G6 OT9					Δ44-AAV-Cas9.AAV-E45G6-1	135673	135192	481	0.35%		
					Δ44-AAV-Cas9.AAV-E45G6-2	134603	134030	573	0.43%		
		CAG	ENSMUSG0000034731	chr14	Δ44-AAV-Cas9 control-1	89824	89681	143	0.16%		
E LEON OF LC					Δ44-AAV-Cas9 control-2	94091	93884	207	0.22%	0.1	
E45G6 OT10	CTTTCAGAGACTCCAGGA				Δ44-AAV-Cas9.AAV-E45G6-1	80995	80807	188	0.23%		
					Δ44-AAV-Cas9.AAV-E45G6-2	100775	100570	205	0.20%	0.2	



**Fig. S4. Analysis of top 10 potential off-target sites. (A)** T7E1 analysis of the top 10 predicted off-target (OT) sites of sgRNA-G6 assayed in TA muscle 3 weeks following intramuscular injection of  $2.5 \times 10^{10}$  vg AAV9-Cas9 and  $2.5 \times 10^{10}$  vg AAV-G6. Red arrowheads denote ontarget cleavage products. No off-target cleavage products were detected. PCR indicates the undigested PCR product. (B) Amplicon genomic deep sequencing analysis on the top 10 predicted off-target sites of G6. Muscle was analyzed 3 weeks following intramuscular injection of  $2.5 \times 10^{10}$  vg AAV9-Cas9 and  $2.5 \times 10^{10}$  vg AAV-G6. Mismatches in the target sequence are highlighted in red. (C) Percentage of NHEJ in amplicon genomic deep sequencing analysis on the top 10 predicted off-target sites of G6. Blue indicates AAV-Cas9 only control, and red indicates AAV-Cas9/AAV-G6 injected TA muscle. Data are represented as mean ± SEM.

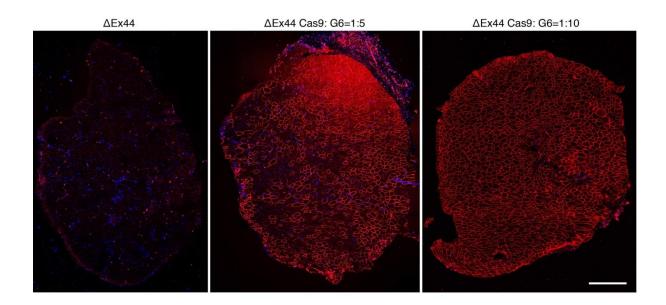


Fig. S5. Correction of  $\Delta$ Ex44 mice by systemic delivery of AAV9 expressing gene editing components. Whole TA muscle scanning of  $\Delta$ Ex44 DMD and corrected  $\Delta$ Ex44 DMD 4 weeks after systemic injection of a 1:5 ratio and 1:10 ratio of AAV-Cas9 to AAV-G6. AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Dystrophin is shown in red. Nuclei are marked by DAPI stain in blue. 10X tile scan of the entire TA muscle. Scale bar is 500 µm.

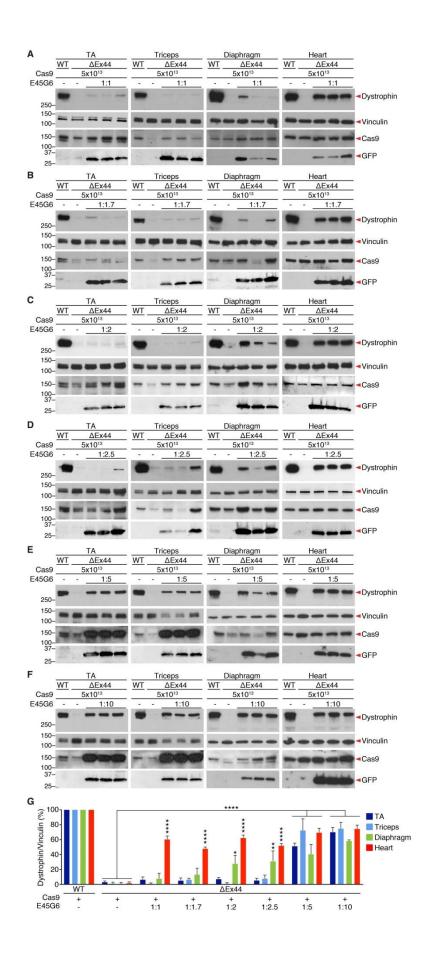
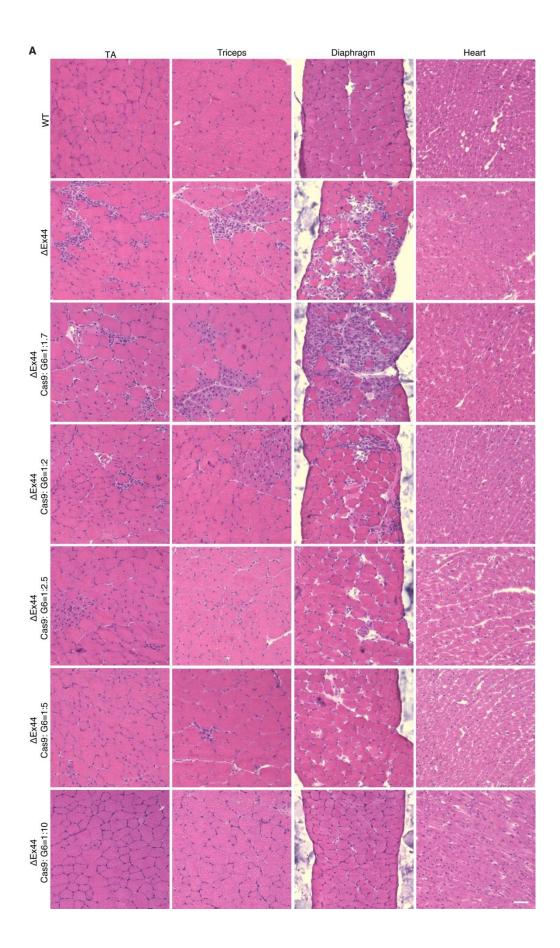
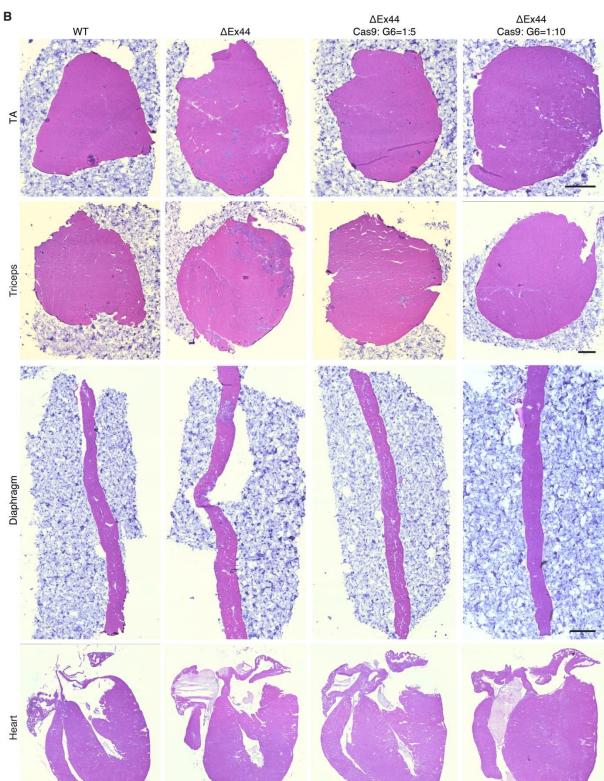


Fig. S6. Western blot analysis of corrected  $\Delta$ Ex44 mice by systemic delivery of AAV9 expressing gene editing components. (A)–(F) Western blot analysis of dystrophin, Cas9, and GFP protein expression in TA, triceps, diaphragm, and heart of  $\Delta$ Ex44 mice 4 weeks after systemic delivery of AAV-Cas9 and AAV-G6 at the indicated ratios. AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Vinculin is loading control. (n= 3). (G) Quantification of the Western blot analysis in TA, triceps, diaphragm, and heart. Relative dystrophin intensity was calibrated with vinculin internal control. Data are represented as mean ± SEM. One-way ANOVA was performed followed by Newman-Keuls post hoc test. \*P<0.005, \*\*P<0.001, \*\*\*\*P<0.0001 (n=3).





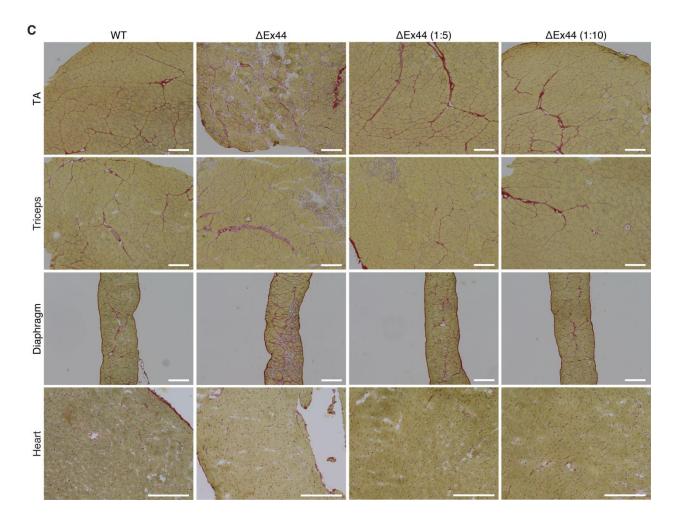
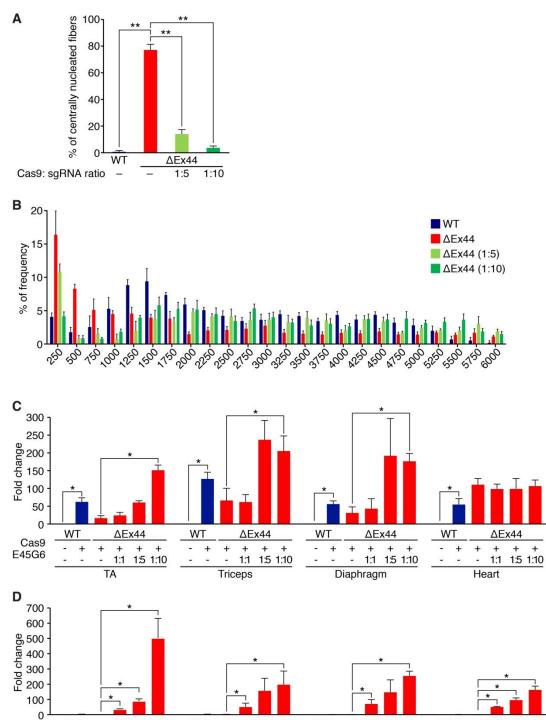


Fig. S7. Histology of  $\Delta$ Ex44 mice after systemic delivery of AAV9 expressing gene editing components. (A) H&E staining of TA, triceps, diaphragm and heart of  $\Delta$ Ex44 mice 4 weeks after systemic delivery of AAV-Cas9 and AAV-G6 at the indicated ratios. AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Scale bar is 50 µm. (B) Whole muscle scanning of TA, triceps, diaphragm and heart of corrected  $\Delta$ Ex44 DMD mice. H&E staining of WT,  $\Delta$ Ex44 DMD and corrected  $\Delta$ Ex44 DMD 4 weeks after systemic injection of a 1:5 ratio and 1:10 ratio of AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Scale bar is 50 µm, in heart is 1.5mm. (C) Picrosirius red staining of TA, triceps, diaphragm and heart of  $\Delta$ Ex44 mice 4 weeks after systemic delivery of AAV-Cas9 and AAV-G6 at the indicated ratios. AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Scale bar is 5.0 µm, in heart is 1.5mm. (C) Picrosirius red staining of TA, triceps, diaphragm and heart of  $\Delta$ Ex44 mice 4 weeks after systemic delivery of AAV-Cas9 and AAV-G6 at the indicated ratios. AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Scale bar is 5.0 µm.



ΔEx44 WT ΔEx44 ΔEx44 WT WT WT ΔEx44 Cas9 E45G6 + + + 1:1 1:5 1:10 + + + 1:1 1:5 1:10 + -+ + + + - 1:1 1:5 1:10 -+ + + 1:1 1:5 1:10 -+ -+ + -+ -+ -+ -TA Triceps Diaphragm Heart

Fig. S8. Quantification of histological improvement and qPCR analysis of corrected  $\Delta$ Ex44 **DMD mice**. (A) Percentage of centrally nucleated fibers in TA muscle of WT,  $\Delta$ Ex44 DMD control and  $\Delta$ Ex44 DMD-AAV9 treated mice 4 weeks after systemic delivery at indicated ratios. Data are represented as mean ± SEM. One-way ANOVA was performed followed by Newman-Keuls post hoc test. \*\*P<0.001 (n=3). (B) Measurement of fiber area of transverse muscle sections. Fiber size is grouped into 250  $\mu$ m<sup>2</sup> intervals, and represented as the percentage of total fibers in each group. Data are represented as mean ± SEM. One-way ANOVA was performed followed by Newman-Keuls post hoc test. (n=3). (C) qPCR analysis of Cas9 mRNA expression in TA, triceps, diaphragm, and heart of  $\Delta Ex44$  mice 4 weeks after systemic delivery of AAV-Cas9 and AAV-G6 at the indicated ratios. AAV-Cas9 was administered at  $5 \times 10^{13}$  vg/kg. Normalized to 18S ribosomal RNA. Data are represented as mean ± SEM. One-way ANOVA was performed followed by Newman-Keuls post hoc test. P<0.005. (n= 3). (D) qPCR analysis of GFP mRNA expression in TA, triceps, diaphragm, and heart of  $\Delta$ Ex44 mice 4 weeks after systemic delivery of AAV-Cas9 and AAV-G6 at the indicated ratios. AAV-Cas9 was administered at  $5 \times 10^{13}$  vg/kg. Normalized to 18S ribosomal RNA. Data are represented as mean  $\pm$  SEM. One-way ANOVA was performed followed by Newman-Keuls post hoc test. \*P<0.005. (n= 3).

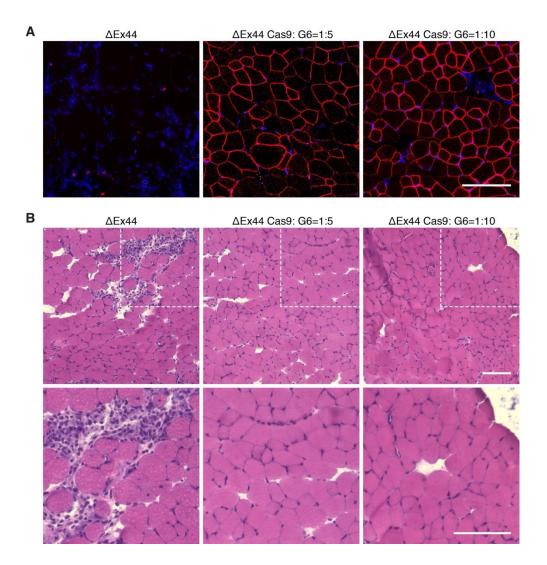


Fig. S9. Histological analysis showing dystrophin restoration in the EDL muscle of corrected  $\Delta$ Ex44 DMD mice. (A) Dystrophin immunostaining of EDL muscle in  $\Delta$ Ex44 DMD and corrected  $\Delta$ Ex44 DMD mice 4 weeks after systemic injection of a 1:5 ratio and 1:10 ratio of AAV-Cas9 to AAV-G6. AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Dystrophin is shown in red. Nuclei are marked by DAPI stain in blue. Scale bar is 100 µm. (B) H&E staining of EDL muscle in  $\Delta$ Ex44 DMD and corrected  $\Delta$ Ex44 DMD mice 4 weeks after systemic injection of a 1:5 ratio and 1:10 ratio of a 1:5 ratio and 1:10 ratio of AAV-Cas9 to AAV-Cas9 to AAV-Cas9 was administered at 5 × 10<sup>13</sup> vg/kg. Inset box indicates area of magnification shown below. Scale bar is 50 µm.

### Table S1. Primer sequences and media components.

		Primer sequences for exon targeting and generation	of AEx44 DMD I	nouse model							
Purpose of the primers	ID	Timer bequenees to exert argoing and generation		Sequence (5'-3')							
	EX43-gRN#1-DMD-Top CACCENTRAAATTITATATA										
	Ex43-gRNA#1-DMD-Bot	CRUCH INFRAMA TI MARI IA AACTAN TANÀNA TI MARI IA AACTAN TANÀNA TI MARI IA									
	Ex43-gRNA#2-DMD-Top	CACCOTTITATATACAGAATATAA									
	Ex43-gRNA#2-DMD-Bot										
Primers for sgRNA targeting exon 43	Ex43-gRNA#3-DMD-Top	CACCGTATGTGTTACCTACCTTGT									
	Ex43-gRNA#3-DMD-Bot			CAAGGGTAGGTAACACATAC							
	Ex43-gRNA#4-DMD-Top	CACCGTACAAGGACCGACAAGGGT									
	Ex43-gRNA#4-DMD-Bot	AAACACCCTTOTOGGTCCTTGTAC									
	Ex45-gRNA#5-Top	CACCECCTGCCCATECCTG									
	Ex45-gRNA#5-Bot	AAACCAGGATGGCATTGGGCAGCG									
	Ex45-gRNA#6-Top	CACCGCTTACAGGAACTCCAGGA									
	Ex45-gRNA#6-Bot	ARACTCCTGRAGTCCTGTRAGC									
Primers for sgRNA targeting exon 45	Ex45-gRNA#7-Top										
		AAACAATGCCATCCTGGAGTGCCAT									
	Ex45-gRNA#7-Bot										
	Ex45-gRNA#8-Top	CRCCGCGCTGCCAATGCCATCC ARACCGATGGCATGGCATGGCACGC									
	Ex45-gRNA#8-Bot mDmd-T7E1-Ex45-F	CTARCHTARARGGTGTCTTTCTATC									
		GGCAATCCCTCATGATTTTTAGCAC									
Primers for T7E1 assay	mDmd-T7E1-Ex45-R	GCCATCUTCATGATTTTTAGCAC									
	DMD-T7E1-Ex45-F										
	DMD-T7E1-Ex45-R	AATGTTAGTGCTTTAACC									
Primers for sgRNA targeting Dmd	mDmd-In44-2-Top	CACCGGTATTCTGATCAGGAGA									
exon 44 to generate the ΔEx44 DMD	mDmd-In44-2-Bot	AAACTCCTCCTGATTCAGAACTACC									
model	mDmd-In44-6-Top	CACCGTATGTTGGAACCAGTCCAGA									
	mDmd-In44-6-Bot	AAACTCTGGACTGGATCGAACATAC									
Primers for in vitro transcription of	Exon 44_T7-In44-2-F	GAATTGTAATACGACTCACTATAGGGGTAGTCTGAATCAGGAGGA									
sgRNA	Exon 44_T7-In44-6-F	GAATTGTAATACGACTCACTATAGGGTATGTTGGAACCAGTCCAGA									
-	Exon 44_T7-Rv	AAAAGCACCGACTCGGTGCCAC									
Primers for genotyping of ΔEx44 DMD				IGAGGGGGAGACAGTAGA							
model	Geno dE44-R			AGAAGGCATTTTGTCAAT							
		Media for iPSC-CMs differenti	ation								
Media name	Volume of base media	Base media	Volume of	Supplement							
			supplement								
	500mL	RPMI-1640 (Gibco 11875-093)	5mL 33.3, 41.6, or	CDM3 Supplement:							
CDM3				- 4.224g L-ascorbic acid-2-phosphate							
				<ul> <li>10g recombinant human albumin</li> </ul>							
				- 200mL H <sub>2</sub> O							
CDM3-C	100mL	CDM3		4, 5, or 6 µM CHIR99021-HCI (12mM).							
CDM3-0	TOOTILE	CDM3	50 µL								
CDM3-WNT	100mL	CDM3	20 µL	2 uM WNT-C59 (10mM)							
SELECTIVE	500mL	RPMI-1640 -glucose (Gibco 11879-020)	10mL	B27 Supplement (Thermo Fisher Scientific 17504044 )							
BASAL	500mL	RPMI-1640 (Gibco 11875-093)	10mL	B27 Supplement (Thermo Fisher Scientific 17504044)							
		Sequence of primers to titer	AV								
Primers for titering of AAV-Trispr	CO388-GFP-F		AGAACGGCATCAAGGTGAAC								
Thinks of thening of AAV-Thap	CO389-GFP-R	GAACTCCAGCAGGACCATGT									
Primers for titering of AAV-CK8e-Cas9			GA								
Filliers for thening of AAV-CR6e-Case	CO460-spCas9-F										
	CO460-spCas9-F CO461-spCas9-R		CG	ACTCCAGCAGGACCATGT							
		Sequence of primers for on and off target genomic a	CG TT	ACTCCAGCAGGACCATGT SCTTCATCAAGAGGACAGC SACTTCCCGGATCAGCTT							
Sites		Sequence of primers for on and off target genomic a Sequence (5'->3)	CG TT	ACTCCAGCAGGACCATGT SCTTCATCAAGAGGACAGC SACTTCCCGGATCAGCTT							
	CO461-spCas9-R		CG TTT mplicon deep s Product (bps)	NETCORGERGECERTGT STTTCATCARGRACEGC ASTTTCCCGRACEGCTT equencing.							
Sites E45G6 Target	CO461-spCas9-R	Sequence (5'->3')	CG TT mplicon deep s	NCTCCAGCAGGACCATGT SCTTCATCAGGACAGCC SACTOCCGGATCAGCTT equencing. miSeq-with Adaptor							
E45G6 Target	CO461-spCas9-R ID mDmd-Ex45G6-Ontarget-DS-F1	Sequence (5'->3') CCCTGAGCTGAAGTGAGAGG	CG TT mplicon deep s Product (bps) 404	ACTCCAGCAGGACCATGT CCTTCATCAAGAGACAGC CACTTCCGGATCAGCTT sequencing. miSeq-with Adaptor TCGTCGGCAGGGTCAGATGTGTATAAGAGACAGCCCTGAGCTGAAGTGAGGAGG							
	ID mDmd-Ex45G6-Ontarget-DS-F1 mDmd-Ex45G6-Ontarget-DS-R2	Sequence (5'->3) CCCTGAGCTGAAGTGAGAGG ACCTCTTTCTCCTTTCTGCCAG	CG TTT mplicon deep s Product (bps)	NETCORGEAGGACCATGT SCTTCATCAAGAGACAGC SACTTOCCGGATCAGGTT sequencing. miSeq-with Adaptor TOGTCOGCAGCOTCAGATGTAATAAGAGACAGCCTCAGACTGAAGTGAAG							
E45G6 Target E45G6 OT1	D D mDmd-Ex45G6-Ontarget-DS-F1 mDmd-Ex45G6-Ontarget-DS-R2 E45G6OT1-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAAGTGAGAGG ACCTCTTTCTCCTTTCTGCCAG CTGCCCCAAGAAGAGCATTCTAAG	CG TT mplicon deep s Product (bps) 404 374	NETCCAGCAGGACCATGT CTTCATCAGGAGACAGCT CACTTOCOGGATCAGCTT Gequencing. miSeq-with Adaptor TCGTCGGCAGGGTCAGATGTGTATAGGAGACGCCTGAGCTGAGGGGGG GCTCGGGCGGGCTCGGAGTGTGTATAGGAGACGCCTGTTCTCCTTTCTCCCCGG TCGTCGGCCAGGGTCAGATGTGTATAAGGACAGCTGCCCCAACAAGAGCATTCTAAG							
E45G6 Target	ID mDmd-Ex4566-Ontarget-DS-F1 mDmd-Ex4566-Ontarget-DS-R2 E45G60T1-DS-R1-YLM E45G60T1-DS-R1-YLM	Sequence (5'->3) CCCTGAGCTGAAGTGAGAGG ACCTCTTCTCTTTCTGCCAG CTCCCCAAGAGAGCATTCTAAG AGCCACTGTTTAACTTGCAGTCAC	CG TT mplicon deep s Product (bps) 404	NETECRAGAGGACCATGT SECTECATCAAGAGACAGC SECTECCGGGATCAGGT  miSeq-with Adaptor TCGTCGGCAGCGTCAGATGTATAAGAGACAGCCCTGACTGA							
E45G6 Target E45G6 OT1 E45G6 OT2	D mDmd-Ex45G6-Ontarget-DS-F1 mDmd-Ex45G6-Ontarget-DS-F2 E45G60T1-DS-F1-YLM E45G60T1-DS-F1-YLM E45G60T1-DS-F1-YLM	Sequence (5'->3) CCCTGAGCTGAAGTGAGAGG ACCTCTTTCTCCTTTCTGCCAG CCCCCAACAAGAGCATTCTAAG AGCCACTGTTAACTTGCAGTCAC CTTTCCTCCCCCCCCCC	CG TT mplicon deep s Product (bps) - 404 - 374 - 356	NETCORGEAGGACCATGT SCTTCATCAAGAGACAGC SCTTCCCCGGACCAGCT sequencing. miSeq-with Adaptor TOTTCOGGCAGCGTCAGATGTGTATAAGAGACAGCCCTCAGACTGAAGTGAGAGG GTCTCGFGGGCTCGGAGATGTGTATAAGAGACAGCCCTCTTACCTTCTCGCCAG TCGTGGGCCCGGAGATGTGTATAAGAGACAGCTCCTCCAACAGAGCATTCTAAGAGCAGGCTCGGGCCGGAGGGTCAGATGTGTATAAGAGACAGCTGCCCCAACAGAGCATTCTAAGGCCAGGCGGCGGCAGGGTCAGATGTGTATAAGAGACAGCTGTCCCCCCCACACAGGCCATCTAAGGCCAGCTGTGAGTAGGACGGCTGCGGCAGGGTCAGATGTGTATAAGAGCCAGCTTCCCCCCCC							
E45G6 Target E45G6 OT1	ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           #Ed566071-DS-F1-YLM           E4566071-DS-R1-YLM           E4566072-DS-F1-YLM           E4566072-DS-R1-YLM           E4566073-DS-R1-YLM           E4566073-DS-R1-YLM	Sequence (5'>3) CCCTGAGCTGAGRAGG ACCTGTTGCTGTGCGAG CTGCCCCAACAAGAGCATTCTAAG AGCCCCTGTTAACTTGCAGTCAAC CTTCCCTGTCACACGCCCCACAC CCTGTGTACATGTCCCCCGACAC CTCAGAGAGTCGATGGAACTCCTG	CG TT mplicon deep s Product (bps) 404 374	NETCCAGCAGGACCATGT CTTCATCAAGAGACAGGT CTTCCCCGGATCAGGTT  Getunncing.  INISeq-with Adaptor  TCGTCGGCAGGGTCAGATGTGTATAAGAGACAGCCCTGAGCTGAAGTGAGGG GTCCCGTGGGCTCGGAGTGTGTATAAGAGACAGCCCTGTACTCTCTCT							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3	D mDmd-Ex45G6-Ontarget-DS-F1 mDmd-Ex45G6-Ontarget-DS-F2 E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6072-DS-F1-YLM E45G6072-DS-F1-YLM E45G6073-DS-F1-YLM E45G6073-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAGGGG ACCTGTTGCTCTGCCGAG CTGCCCCAACAAGAGCATTGTAAG AGCCACTGTTTAACTTGCAGTCAC TCTGCTCCCCCCACCCCCAGAG TCCTGTTACATGTCCCCGACAC	CG TTV mplicon deep s Product (bps) 404 - 374 - 356 - 442	NETCCAGCAGGACCATGT SCTTCATCAAGAGCAGGT SCTTCATCAAGAGCAGGT SCTTCATCAAGAGCAGGT SCTTCGTCGGATCAGCT SCTTCGTCGGATCGTCTATAAGAGCACGGCCTGACCTGAAGTGAGGG SCTCCTGGGCGCCGGATCGTGTATAAGAGCAGCTGTTTCTCCTTCTGCGCGG SCTCCTGGGCGCGGGTGATAAGAGCAGGTGCCCCAACAGAGCCATTCTAGG SCTCCTGGGCGCGGGGTGGATAAGAGACAGGTGCCCCAACAGAGCCATTCTAGG SCTCCTGGGCGCGGGGTGGATAAGAGACAGGTGCCCCAACAGAGCCATTCTAGGGGG SCTCCTGGGGCCGGAAGTGGATAAGAGACAGGTCGCCCCAACAGAGCCATCTAAG SCTCCTGGGGCCGGAAGTGGATAAGAGACAGGTCGCCCCAACAGGCCACGTCCAACGGCCGGC							
E45G6 Target E45G6 OT1 E45G6 OT2	ID           ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           dedGe0T1-DS-F1-YLM           E45660T1-DS-F1-YLM           E45660T1-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM           E45660T3-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAGGGAGGA ACCTGTTGTCGCTGAGGAGG CTGCCCCAACAAGACCATTGTAAG AGCCACTGTTAAGTGCCAGTCAC CTGCGCCCACCCACCAGGAC TCCTGTTACATGTCCCCGACAC CTCGAGAGGTCAATGCACCTCG CTCGAGAGGTCAATTGTCACACA GGTTCTCAAAATGCCCTGTTGTGA	CG TT mplicon deep s Product (bps) - 404 - 374 - 356	ACTOCAGCAGGACCATGT CCTCCAGCAGGACCACGT ACTOCCCGAGCAGCGCCAGAGGACGACCCCGAGGGCCAGAGGGCCGAGGCGCAGAGGGCGCAGGCGCAGGCGCGGCG							
E45G6 Target E45G6 OT1 E45G6 OT2 E45G6 OT3 E45G6 OT4	ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           dEd56071-DS-F1-YLM           E4566071-DS-R1-YLM           E4566071-DS-R1-YLM           E4566073-DS-R1-YLM	Sequence (5'>3) CCCTGAGCTGAAGGAGGA ACCTGTTCTCTCTGCCGA CTGCCCCAACAAGAGCATTCTAAG ACCCACTGTTAACTTCCAGGCCCCAG CCTGCTCCCCCCCCCACAGC CCTGCTACACTGCCCCCGACAC CCCGTACGAGCCCATTCCCCG CCCTAGGGGTCAATTCTCCACA GCTTCCCAAAGCCCCTGTGGA TCCCTGGGGGGGGAAGAAAAG	CG TTV mplicon deep s Product (bps) 404 - 374 - 356 - 442	ACTCCAGCAGGACCATGT CTTCATCAGGAGACCATGT CTTCATCAGGAGACGAGT AGUNCING MISQ_WIIh Adaptor TCGTCGGCAGCGTCAGATGTGTATAGGAGAGCGGGCTGAGGTGGAGGGGCGGGGGGGG							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3	D  mDmd-Ex45G6-Ontarget-DS-F1 mDmd-Ex45G6-Ontarget-DS-F1 E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6071-DS-F1-YLM E45G6075-DS-F1-YLM	Sequence (5'>3) CCCTGAGCGAGGGAGGGG CCCTGAGCGAGGGGGGGGGG	CG TTV mplicon deep s Product (bps) 404 - 374 - 356 - 442	NETCORGEAGEATEGT SETTEATECAAGAGACAGE SACTTOCCEGATCAGETT SEQUENCING TOSTOGGCAGCGTCGAAGTGTTATAAGAGACAGECCTTAGCGTGAAGTGAGAGG GTCCGTGGGCCCGAAGTGTGTATAAGAGACAGCCCTCGAGCTGAAGTGAGAGG GTCCGTGGGCCGGAAGTGTGTATAAGAGACAGCTCCTCCTCCCCCACCAG GTCCGTGGGCCGGAAGTGGTATAAGAGACAGCTGTGTACTAGGGCTCCAGG GTCCGTGGGCCGGAAGTGGTATAAGAGACAGCTGTGTACTAGGGCACCTCCTGCCCCACCAG GTCCGTGGGCCGGAAGTGGTATAAGAGACAGCTGTGTACTAGGGCACCTGTGCCCGCGCAGC GTCCGTGGGCCGGAAGTGGTATAAGAGACAGCTCTGGGACCTGTTGCCCGCGCCGCCGCGG GTCCGTGGGCCGGAAGTGGTATAAGAGACAGCTCCTGGGGCTCATTTCTGCACCA TCGTCGGGCCGGAAGTGGTATAAGAGACAGTCCTGGGGGCCAGTTCCTGGC GTCCGTGGGCCGGAAGTGGTATAAGAGACAGTCCTGGAAGTGCTGTGA GTCCGGGGCGGCGAGATGGTATAAGAGACAGTCCTCGGAAGTGCATGGACTGCGG GTCCGGGGCGGCGAGATGGTATAAGAGACAGTCCTCGGAAGGGGTGAAAGAAGATGC							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5	ID           ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-R1           Ed566071-DS-R1+YLM           E4566071-DS-R1+YLM           E4566073-DS-R1+YLM           E4566073-DS-R1+YLM           E4566073-DS-R1+YLM           E4566073-DS-R1+YLM           E4566071-DS-R1+YLM	Sequence (5'>3) CCCTGACCTGACGGAGGA ACCTGTTGCTCTTGCGCGA CTGCCCCAACAAGACCATTGTAAG AGCCACTGTTACATGCCAGTCAC TCCTGTTACATGTCCCCGACGA TCCTGTTACATGTCCCCGACAC CTGGAGAGTCCATGGACACTCCTG CTCTATGGGAGGTCAATTCTGCACA GGTTCTCAAAATGCCCTGTTGTGA TCTCCTGGAGGGGTGAAGAAAAG TGTGGGACTGGTGAGAAGATTGGA GATCCCCCCTGGAGGTTTATTAGT	CG TT mplicon deep s Product (bps) - 404 - 374 - 356 - 442 - 487	ACTOCAGCAGGATCAGATGTATAAGAGACAGTCTCGGAGGGTGAAGAAGAGG CTCOTOGGCAGGTCAGATGTATAAGAGACAGTCTCCGGAGGGGGGAAGGAA							
E45G6 Target E45G6 OT1 E45G6 OT2 E45G6 OT3 E45G6 OT4	ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           mDmd-Ex4566-Ontarget-DS-F1           E4566071-DS-F1-YLM           E4566071-DS-F1-YLM           E4566073-DS-F1-YLM           E4566073-DS-F1-YLM           E4566073-DS-F1-YLM           E4566073-DS-F1-YLM           E4566073-DS-F1-YLM           E4566073-DS-F1-YLM           E4566075-DS-F1-YLM           E4566075-DS-F1-YLM           E4566075-DS-F1-YLM           E4566075-DS-F1-YLM           E456675-DS-F1-YLM           E456675-DS-F1-YLM           E456675-DS-F1-YLM           E456675-DS-F1-YLM           E456675-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAAGGAGGA ACCTGTTCTCTCTCTCCCAG CTGCCCCAACAAGAGCATTCTAAG ACCCACTGTTAACTTCCAGTCAC CTTCCTCCTCCACAGTCAC CTTCCTCCTCCACCCCCACAG CCCGGTACATGCCCCCGACAC CTCGGTAGGGTCAATTCTGCACA GGTTCCTAAGGGGTCAAAGAAAAG TCTCCTGGAGGGGGTAAAGAAAAG TCTCCTGGAGGGGGTAAAGAAAAG TCTGCGGAGGGGGGGATTAGAT TGTGGGACTGCTAGAAAGATTGGA GGACAAAGGAGCAAACAAAAGCT	CG TT mplicon deep s Product (bps) - 404 - 374 - 356 - 442 - 487	ACTOCAGCAGGACCATGT     CTTCATCAGGAGCCATGT     MISGewith Adaptor     TGTCOGCGAGCGTCAGATGTGTATAGGAGCAGCCCTGAGCTGAG							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5 E45G6 0T6	ID           mDmd-Ex45G6-Ontarget-DS-F1           mDmd-Ex45G6-Ontarget-DS-R2           E45G6011-0S-R1-YLM           E45G6012-0S-F1-YLM           E45G6012-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6013-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R1-YLM           E45G6015-0S-R2-YLM           E45G6015-0S-R2-YLM           E45G6015-0S-R2-YLM	Sequence (5'>3) CCCTGAGCGAAGGAGGA CCCTGTTCTCTCTCTCCCCAG CTCCCCCCACAGAGGCATTCTAAG AGCCACTGTTAACTTGCAGTCAC CTTCCTCTCCCCCCCCACAG TCCTGTGCAGCGATCGATCCTGG CCCTAGGGGTCAATTCTCCACA GGTCTCCAGAGGCGATCAAAAAG TCTCCCTGGAGGGCTCAATGAAAAG TCTCCCGGCGGGGTCAATGAAAAG TCTGGGCAACGCAAACAAAAGCT TTTATGGACAGTTGAGGTCCCAGA	CG TT mplicon deep t Product (bps) 404 - 374 - 356 - 442 - 487 - 440	NETCORGCAGGACCATGT STTCATCAAGAGACGTCAATGTTAAGAGACAGTCCTGGGGGCCAGATGTGTAAGAGACAGCCGTAGATGTGTATAAGAGACAGCGTGAGATGTGTATAGAGACAGCCGTAGATGTGTATAGAGACAGCCGTGAGTGTGTATAGAGACAGCCGTGAGTGTGTGT							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5	ID           ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F1           MDMd-Ex4566-Ontarget-DS-F1           E4566071-DS-F1+YLM           E4566071-DS-F2+YLM           E4566071-DS-F2+YLM           E4566071-DS-F2-YLM           E4566071-DS-F2-YLM           E4566071-DS-F2-YLM           E4566071-DS-F2-YLM           E4566071-DS-F2-YLM           E4566071-DS-F2-YLM           E4566071-DS-F2-YLM           E4566071-DS-F1-YLM           E4566071-DS-F1-YLM           E4566071-DS-F1-YLM           E4566071-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAGGGGGGGGGGGGGGGGGGGGGGGGGGGG	CG TT mplicon deep t Product (bps) 404 - 374 - 356 - 442 - 487 - 440	NETCORGCAGCCATGT SCTTCATCAAGAGACAGC SCTTCCTCAAGAGACAGC acquencing. INSeq-with Adaptor TCGTCGGCAGCGTCAGATGTGTATAAGAGACAGCCCCTCAAGTGAAGG GCCCGTCGGCAGCGTCAGATGTGTATAAGAGACAGCTCCTCAAGTGACAGG GCCCGTCGGCAGCGTCAGATGTGTATAAGAGACAGCTGCCCCAACAGAGCCATCTAAG GCCCGTCGGCAGCGTCAGATGTGTATAAGAGACAGCTGCCCCACAGAGCCATCCTAAG GCCCGTGGGCCGGAGAGTGTATAAGAGACAGCTGCCCCACCAGAGCCACCCCTACCAG GCCCGTGGGCCCGGAGATGTGTATAAGAGACAGCTGCCCCACCAGG GCCCGTGGGCCCGGAGATGTGTATAAGAGACAGCTCCCTGTTACATGCACGC GCCCGTGGGCCCGGAGATGTGTATAAGAGACAGCTCCCTGGTACATGTCCCCGCCCCCCCGCAG GCCCGTGGGCCCGGAGATGTGTATAAGAGACAGCTCCGTGTACATGCCCCGGC GCCCGTGGGCCCGGAGATGTGTATAAGAGACAGCTCCTCTGAAATGCCCCTGTGCA GCCCGTGGGCCCGGAGATGTGTATAAGAGACAGCTCCGAGAGTCGCAGAAAGAA							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5 E45G6 0T6	ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           mDmd-Ex4566-Ontarget-DS-R1           E4566071-DS-R1-YLM           E4566071-DS-R2-YLM           E4566071-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAAGGAGGA CCCTGATCACTTECTECCCAG CTGCCCCAACAAGAGCATTCTAAG AGCCACTGTTTAACTTCCAGTCAC CTTCCTCCCCACCCCCACAG CCTGGTACATGCCCCGACAC CCCGGTACATGCCCCGACGAC CCCGGTGCGAAAGCCCCGTGGA CCCCGGGCGGGGTGAAGGAAAG CTGCGGACGGGGTGAAGGAAAG TGTGGGACGACTGCGAGGGTTAATAGT TGGGACAAGGACGACGAGCAAAGCT TTTATGGACGTTGAGTGCCAGA AAGGGACACCTGAAAGCCTTCTT ACTTCAAAGCCACTGCACACAG	- 440 - 413	ACTOCAGCAGGACCATGT     CTTCATCAGGACCATGT     MISQ_WITH Adaptor     TGTCGGCGCGCGCCCGATGTGTATAGGACAGCGTCGTGAGGGCGGACGGCGAGGGCGGGGCGGGGCGGGGCGGGGCGGGGCGGGGGG							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5 E45G6 0T6	ID           ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-R2           E4566071-0S-F1-YLM	Sequence (5'>3) CCCTGAGCTGAGCGAGGGG CCCTGACCTGACTGCCAGG CCCTGACCTGCCACCAG CTCCCTCTCCTTCTCCCCAG CTCCCTCTCCCCCCCCACAG CCTCCGCCTCCCACCAG CCTCGAGGGACTCCGGACCCCCCCCACAG CCTCGAGGGGCCAATTCCGCACA CCTCGAGGGGCGAAGGAAAAAAGC TCTCCTGGGAGCGGCAAGGAAAAAAGC TCTCCTGGGAGCGGCAAGGAAAAAGCT TTATGGCACGAGGGCAAACAAAAGCT TTATGGCACGCCAAACAAAAGCT CTTATGGGACGGACAGCTACAACAACCTTCT ACTCCAAAGGACCATCGTCACAC	- 440 - 413	NETCORGCAGGACCATGT SCTTCATCAGAGACGATGT SCTTCATCAGAGACGATG SCTTCATCAGAGACGGT SCTTCATCAGAGACGATGTTATAGAGACAGCCTTGTGAGAGAGG SCTCGTGGGCTCGGAGATGTGTATAGAGACAGCCGTGGAGATGTGTGATAGGAGACGCTCGTGGGCTCGGAGATGTGTATAGGAGAGGTGGCCGGAGGTCGGGAGGTCGGAGTGTGTATAGGAGACGCTGTGTACGAGGCGCGCGGGTGGGGTGGGGGCGGGGGGGG							
E45G6 Target E45G6 OT1 E45G6 OT2 E45G6 OT3 E45G6 OT4 E45G6 OT5 E45G6 OT6 E45G6 OT7	ID           ID           ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           tEdSc0T1-DS-F1+YLM           E45660T1-DS-F1+YLM           E45660T3-DS-F1+YLM	Sequence (5'>3) CCCTGAGCTGAAGGAGGA CCCTGTTCTCTCTCCCGA CCCCTGTCTCTCTCCCGA CTGCCCCCAACAAGACCATTCTAAG AGCCACTGTTTACATTGCAGCCAC CTTCCTCTCCCCCCCCCCCACAG TCCTGTTACATGTCCCCCGACAC CTCGAGAGGTCAAGGAGCACTCCTG CTCTGAGGGGTCGAAGGAGACAC GGTCTCCAAAGACCAATTGCGACAC GATCCCCGCCTGGAGGTTATTAGA TGCCCTGAGGGGTCGAGAGAAGAC TTTATGGACAGCTAGAGGCCAGA AAGGGACAGCTCAAAGACCTTCT ACTCGAACGCACTGTGCACATCA ATCCCCCTACACGTAACAGGAGCC	CG TP TP Product (bps) 404 - 374 - 356 - 442 - 487 - 440 - 413 - 398	NETCORGCAGGCCATGT           SACTTOCCOGGTCAGCT           SACTTOCCCGATCAGCT           SACTTOCCGATCAGCT           SACTTOCCGATCAGCT           SACTTOCCGATCAGCT           SACTTOCCGATCAGCT           SACTTOCCGATCAGCT           SACTTOCCGATCAGCT           SACTTOCCGATCAGCTGATCAGAGAGCAGCCCCTCAGCTGAGAGG           SACTTOCCGAGCTCAGATCTGTATAGAGACAGCCCCCCAGCAGAGCCACTCTAGG           SACTTOCTGGCCCGGAGATGTGTATAGAGAGCAGCTCCCCCAGCAGCCCCTCCAGG           SACTTOCTGGCCCGGAGATGTGTATAGAGAGCAGCTCCCCCAGCAGCCCCCCAGCAGCTCGGAGCTGAGATGTGTATAGAGAGCAGCTCCCTCAGAATGTGTACTAGGAGCCGCCCGAGAGTCCCCCGCCGGAGCTCCCGAGAGTCGTGTGAGAGCGCCCCGCCGGAGCTCCCGGAGCTCCCGGAGCTCCCGGAGCTCCCGGAGCTCCCGGAGCTCGGGGCCGGGCGGG							
E45G6 Target E45G6 OT1 E45G6 OT2 E45G6 OT3 E45G6 OT4 E45G6 OT5 E45G6 OT6 E45G6 OT7	ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F1           MEd-Ex4566-Ontarget-DS-F1           Ed566071-DS-F1-YLM           E4566071-DS-F1-YLM	Sequence (5'>3) CCCTGAGCTGAAGTGGAGG ACCTGTTGCTCTTTCTGCCG CCCGAGCAAGAGGCATTCTAAG ACCCATCTTTAACTTCCAGTCAC CTGGCGCAAGAGGCACCCCGAGCAC CTCGGTGCCAAGAGGCACCCCGAGCAC CTCGGGGGCGATGGGAGCACCCGG CCCGGGGGGCGATATTCGTGCAC GGTCTCCAAGGGGGGGAGAGGGAGGAGGGGGGGGGG	CG TP TP Product (bps) 404 - 374 - 356 - 442 - 487 - 440 - 413 - 398	ACTOCAGCAGGACCAAGAT     CONTROL C							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5 E45G6 0T6 E45G6 0T7 E45G6 0T8	ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-R1           mDmd-Ex4566-Ontarget-DS-R2           E4566071-DS-R1-YLM           E4566071-DS-R1-YLM           E4566071-DS-R1-YLM           E4566073-DS-R1-YLM	Sequence (5'>3) CCCTGAGCTGAAGGAGGAGGA CCCTGTACTTCCCTTCTCCCCAG CTCCTCTCCTTCTCCCCAG CTCCTCCTCCCCCCCAGA CCTCCTCCCCCCCCAGA CCTCAGAGAGTCGATGGAACTCCTG TCCTAGGGGTCGATTCTCCACA GGTTCTCCTGAAGGGCGAAGGAAAAG TCTCCTGGAGGGTCGATTCTGA CTCCCTGGAGGGTCGATTCTGA GGTCCTCGAAGGGCGAAAGAAAGC TTGTGGACTCCTGGAAGGTTCGA GATCCCCGCCTGGGAAACAAAGCT TTTTGGACAAGGACCAGCTGCT CTCTAGAGGACAGTCAAAGACCTTCT ACTCCAAAGGACCTTGTCACACAG CTCCAGGAGGCCAATGGAACCAACGG CCTCAAGAGCCCTTGGTCAATCA	CC TT TT Product (bps) 404 - 374 - 356 - 442 - 487 - 440 - 413 - 398 - 459	NETCORGCAGGACGATGAT SEQUENCIAS SACTTOCCCGAGACGACGAT SEQUENCIAS SACTTOCCCGAGACGATGATGATAAGGACGACGACGAGAGAGAGAG							
E45G6 Target E45G6 0T1 E45G6 0T2 E45G6 0T3 E45G6 0T4 E45G6 0T5 E45G6 0T6 E45G6 0T7 E45G6 0T8	ID           ID           ID           mDmd-Ex4566-Ontarget-DS-F1           mDmd-Ex4566-Ontarget-DS-F2           tEd56071-DS-F1+YLM           E4566071-DS-F1+YLM           E4566071-DS-F1+YLM      <	Sequence (5'>3) CCCTGAGCTGAGGAGGA CCCTGTGCTGCATCTGCGGAG CTGCCCCAACAAGACCATTGTAAG AGCCACTGTTTACTTGCAGCCAG CTGCCCCCCCCCCCCCACAG TCCTGTTGCCCTCCCCCCCCCACAG TCCTGTGGAGGGTGAAGGAACTCCTG CTCGAGAGGTCCAATTGCGACAC GGTCTCAAAAATGCCCTGTTGCAA GGTCTCGAAGGGTGAAGGAAGACA GGTCCCCGCCTGGAGGTTATTAGA TCTCCTGGAGGGGTGAAGGAAAAGC TTTTGGACAGCCAAGAGAGCCAGA AAGGGACAGCTCAAAGACCTTCT TTTATGGACAGCCTTGGAGGAGC AGGGGACCAACAGCAGATTGCAA ACCTCTACAGCTTGGACAGAGAC ATCCCCCGTAGAGATTGCATCA ACCTCTACAGCTATGGATGAGACA	CC TT TT Product (bps) 404 - 374 - 356 - 442 - 487 - 440 - 413 - 398 - 459	NETCORGEAGEGT CARATEGTATAAGAGCAGATCAAGGAGCAAAGAAAGC TCCCCGGCCCCGAATCGTATAAGAGCAGAGC							
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