

Major Resources Table

In order to allow validation and replication of experiments, all essential research materials listed in the Methods should be included in the Major Resources Table below. Authors are encouraged to use public repositories for protocols, data, code, and other materials and provide persistent identifiers and/or links to repositories when available. Authors may add or delete rows as needed.

Animals (in vivo studies)

Species	Vendor or Source	Background Strain	Sex	Persistent ID / URL
Mus musculus castaneus	Jackson Laboratory	C57BL/6J	Male	https://www.jax.org/strain/000664
Mus musculus castaneus	Generated by CRISPR/Cas9 editing, see URL	C57BL/6J	Male	https://advances.sciencemag.org/content/5/3/eaav4324

Genetically Modified Animals

	Species	Vendor or Source	Background Strain	Other Information	Persistent ID / URL
Parent - Male	Mus musculus castaneus	Jax Laboratory	C57BL/6J	-	https://www.jax.org/strain/000664
Parent - Female	Mus musculus castaneus	Generated by CRISPR/Cas9 editing	C57BL/6J	Heterozygous for DMD Δ Ex44	

Antibodies

Target antigen	Vendor or Source	Catalog #	Working concentration	Lot # (preferred but not required)	Persistent ID / URL
Dystrophin	Sigma-Aldrich	D8168	IF: 1:800 WB: 1:1000	N/A	https://www.sigmaaldrich.com/US/en/product/sigma/d8168?context=product
Sarcomeric α -actinin	Sigma-Aldrich	A7811	1:600	N/A	https://www.sigmaaldrich.com/US/en/product/sigma/a7811?context=product
Ryanodine Receptor 2	Sigma-Aldrich	HPA020028	1:200	N/A	https://www.sigmaaldrich.com/US/en/product/sigma/hpa020028?context=product
Cardiac Troponin I	Abcam	47003	1:600	N/A	https://www.abcam.com/cardiac-troponin-i-antibody-ab47003.html
Vinculin	Sigma-Aldrich	V9131	1:1250	N/A	https://www.sigmaaldrich.com/US/en/product/sigma/v9131
Goat anti-rabbit Alexa 488	Thermo Fisher	A11008	1:600	N/A	https://www.thermofisher.com/antibody/product/Goat-anti-Rabbit-IgG-H-L-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-11008
Goat anti-mouse Alexa 488	Thermo Fisher	A11001	1:600	N/A	https://www.thermofisher.com/antibody/product/Goat-anti-Mouse-IgG-H-L-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-11001
Goat anti-mouse Alexa 647	Thermo Fisher	A21235	1:600	N/A	https://www.thermofisher.com/antibody/product/Goat-anti-Mouse-IgG-H-L-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-21235
Goat anti-mouse IgG1	Thermo Fisher	A21121	1:600	N/A	https://www.thermofisher.com/antibody/product/Goat-anti-Mouse-IgG1-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-21121

DOI [to be added]

Alexa 488					
Goat anti-mouse IgG2b Alexa 647	Thermo Fisher	A21242	1:600	N/A	https://www.thermofisher.com/antibody/product/Goat-anti-Mouse-IgG2b-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-21242
Goat anti-mouse HRP antibody	Bio-Rad	1706516	1:1000	N/A	https://www.bio-rad.com/en-us/sku/1706516-goat-anti-mouse-igg-h-l-hrp-conjugate?ID=1706516

DNA/cDNA Clones

Clone Name	Sequence	Source / Repository	Persistent ID / URL
PX458_d44	gRNA: ATCTTACAGGAACTCCAGGA	PX458 construct/Addgene/ cloned gRNA in (see sequence)	https://www.addgene.org/48138/

Cultured Cells

Name	Vendor or Source	Sex (F, M, or unknown)	Persistent ID / URL
Control iPSC	Healthy brother of Patient with DMD Δ Ex44 genotype	M	https://advances.sciencemag.org/content/5/3/eaav4324
DMD iPSC	DMD Patient with DMD Δ Ex44 genotype	M	https://advances.sciencemag.org/content/5/3/eaav4324
cDMD-RF iPSC	DMD Patient with DMD Δ Ex44 genotype corrected by reframing Ex45	M	
cDMD-ES iPSC	DMD Patient with DMD Δ Ex44 genotype corrected by skipping Ex45	M	
Adeno-X 293	Takara Bio	Unknown	

Data & Code Availability

Description	Source / Repository	Persistent ID / URL
MATLAB Code for contractile force measurements	Available upon request	https://www.cell.com/stem-cell-reports/fulltext/S2213-6711(15)00314-8?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2213671115003148%3Fshowall%3Dtrue
Codes for bulk RNA-seq analysis	Github	https://github.com/zwang0715/Atmanli_et_al_RNAseq
Seurat R package for snRNA-seq analysis	Website of laboratory	https://satijalab.org/seurat/

Other

Description	Source / Repository	Persistent ID / URL

DOI [to be added]

