

# Direct Reprogramming of Human Fibroblasts into Myoblasts to Investigate Therapies for Neuromuscular Disorders

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jove.com/video/61991

## Materials

Name	Company	Catalog Number	Comments
100 mm dish	Corning	430167	
0.25% Trypsin-EDTA, phenol red	Thermo Fisher	2500056	
10X Phosphate buffered saline (PBS)	Fisher Scientific	BP3994	
12-well plate	Corning	3513	
20X Transfer buffer	Thermo Fisher	NP00061	
20X Tris-acetate SDS running buffer	Thermo Fisher	LA0041	
3-8% Tris-Acetate gel	Thermo Fisher	EA0378BOX	
75 cm2 flask	Corning	430641U	
Antibiotic-Antimicotic 100X	Thermo Fisher	15240062	
Anti-myosin heavy chain, sarcomere antibody	Developmental Studies Hybridoma Bank	MF20 supernatant	Dilution 1:50
Antioxidant	Thermo Fisher	NP0005	
BCA Protein Assay	Thermo Fisher	23227	
Chloroform	Sigma-Aldrich	C2432	
DAPI	Thermo Fisher	D3571	Dilution 1:1000
Digitonin	Millipore Sigma	300410250MG	
Dimethyl sulfoxide	Sigma-Aldrich	D2438	
DMEM, High glucose, GlutaMAX supplement, Pyruvate	Thermo Fisher	10569044	
DNase I set (250U)	Zymo Research Corporation	E1010	
Doxycycline Hydrochloride	Fisher Scientific	BP2653-5	
Dup2 human primers	Fw_5' GCTGCTGAAGTTTGTTGG TTTCTC 3'	Rv_5' CTTTTGGCAGTTTTTGCC CTGT 3'	

Dystrophin antibody	Abcam	ab15277	Dilution 1:200
Fetal bovine serum	Thermo Fisher	16000	
Glycine	Sigma-Aldrich	G8898	
Goat anti-mouse, Alexa Fluor 488	Thermo Fisher	A11001	Dilution 1:1000
Halt Protease inhibitor cocktail 100X	Thermo Fisher	78430	
Hemocytometer	Hausser Scientific	3100	
Hygromycin B	Thermo Fisher	10687010	
IRDye 680RD goat anti-Rabbit IgG (H+L)	Li-Cor	926-68071	Dilution 1:5000
Lab-Tek II CC2 chamber slide system	Thermo Fisher	15852	
Laemmli	Bioworld	105700201	
Lipofectamine 3000 Transfection Reagent	Thermo Fisher	L3000008	
Matrigel GFR membrane matrix	Corning	354230	
Methanol	Fisher Scientific	A412P-4	
Mr. Frosty Freezing Container	Thermo Fisher	51000001	
Nitrocellulose membrane 0.45 µm	GE Healthcare Life Sciences	10600002	
Normal Goat serum control	Thermo Fisher	10000C	
Odyssey Blocking Buffer (PBS)	Li-Cor	927-40003	Blocking buffer for Western blot
Opti-MEM I Reduced Serum Medium	Thermo Fisher	11058021	
Paraformaldehyde	Sigma-Aldrich	158127	
PCR master mix	Thermo Fisher	K0172	
Phosphatase inhibitor	Thermo Fisher	A32957	
Precision Plus Protein Dual Color Standards	Bio Rad	1610374	
Puromycin	Thermo Fisher	A1113803	
Revert 700 Total Protein Stain for Western Blot Normalization	Li-Cor	926-11021	
RevertAid kit	Thermo Fisher	K1691	
RNA Clean & Concentrator-25	Zymo Research Corporation	R1018	
Scalpels	Aspen Surgical	372611	
Skeletal Muscle Cell Differentiation medium	Promocell	C23061	
Skeletal Muscle Cell Growth medium	Promocell	C23060	
Triton X-100	Acros Organics	215682500	
TRIzol reagent	Thermo Fisher	15596026	
Tween 20	Fisher Scientific	BP337500	
Ultra low temperature freezer	Thermo Scientific	7402	
UltraPure 0.5M EDTA, pH 8.0	Thermo Fisher	15575020	
Vectashield antifade mounting medium	Vector Labs	H1000	