

Materials List for:

# In Vitro Model of Human Cutaneous Hypertrophic Scarring using Macromolecular Crowding

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URL: <https://www.jove.com/video/61037>

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## Materials

Name	Company	Catalog Number	Comments
0.2 µm filter	Sartorius	16534	
2-Mercaptoethanol	Sigma-Aldrich	M6250	
4',6-diamidino-2-phenylindole (DAPI)	Thermo Fisher Scientific	P36962	
Alexa Fluor 680	Thermo Fisher Scientific	A-21076	
Alexa Fluor 800	Thermo Fisher Scientific	A-11371	
alpha smooth muscle actin (αSMA) primary antibody	Abcam	ab5694	
Applied Biosystems 7500 Fast Real-Time PCR System (thermal cycler )	Thermo Fisher Scientific	4351106	
Ascorbic acid	Wako	#013-12061	
Bovine serum albumin	Sigma-Aldrich	#A2153	
Bradford protein assay	Bio-Rad	500-0006	
Collagen I primary antibody (for immunostaining)	Abcam	6308	
Collagen I primary antibody (for western blot)	Abcam	ab21286	
Collagen III primary antibody	Abcam	ab7778	
Collagen IV primary antibody	Abcam	ab6586	
Direct Red 80	Sigma-Aldrich	2610108	
Dulbecco's Modified Eagle's Medium (DMEM)	Life Technologies	11996-065	
Fetal calf serum (FCS)	Life Technologies	6000-044	
Ficoll 400	GE HealthCare	#17-0300-10	
Ficoll 70	GE HealthCare	#17-0310-10	
GAPDH primary antibody	Sigma-Aldrich	G8795	
Goat Anti-Rabbit secondary antibody	Abcam	ab97050	
Human hypertrophic scar/normal fibroblasts (hHSF/hNSF)	Cell Research Corporation	106, 107, 108	
iScript cDNA Synthesis Kit	Bio-Rad	#1708890	
MMP-1 primary antibody	Abcam	ab38929	
MMP-13 primary antibody	Abcam	ab39012	
MMP-2 primary antibody	Abcam	ab37150	

MMP-9 primary antibody	Abcam	ab38898	
NanoDrop Microvolume Spectrophotometers	Thermo Fisher Scientific	N/A	
Nitrocellulose membrane	Bio-Rad	10484060	
NuPAGE 4-12% Bis-Tris Protein Gels	Thermo Fisher Scientific	NP0321BOX	
Odyssey blocking buffer	LI-COR Biosciences	927-40000	
Odyssey Fc Imaging System	LI-COR Biosciences	N/A	
Olympus IX-81 HCS microscope (for immunostaining)	Olympus	N/A	
Penicillin/streptomycin solution (P/S)	Life Technologies	15140-122	
PrimePCR Assays	Bio-Rad		Customized primers pre-coated in 96-well plates based on requirement
Protease inhibitor cocktail (PIC)	Sigma-Aldrich	11697498001	
PVP 360	Sigma	#PVP360	
PVP 40	Sigma	#PVP40	
RIPA buffer	Merck	R0278	
RNeasy Plus Mini Kit	QIAGEN	#74134	
Sodium vanadate	Sigma-Aldrich	450022	
Sodium vanadate	Sigma-Aldrich	450243	
SpectraMax M5 Multi-Mode microplate reader	Molecular Devices	N/A	
SsoAdvanced universal SYBR green supermix	Bio-Rad	#172-5270	
Tween 20	Sigma-Aldrich	P9416	