

Applying a Three-dimensional Uniaxial Mechanical Stimulation Bioreactor System to Induce Tenogenic Differentiation of Tendon-Derived Stem Cells

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Citation

Chen, Z., Chen, P., Ruan, R., Chen, L., Yuan, J., Wood, D., Wang, T., Zheng, M.H. Applying a Three-dimensional Uniaxial Mechanical Stimulation Bioreactor System to Induce Tenogenic Differentiation of Tendon-Derived Stem Cells. *J. Vis. Exp.* (), e61278, doi:10.3791/61278 (2020).

Date Published

August 1, 2020

DOI

10.3791/61278

URL

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Materials

Name	Company	Catalog Number	Comments
Ascorbic acid	Sigma-aldrich	PHR1008-2G	
Fetal bovine serum (FBS)	Gibco [®] by Life Technologies	1908361	
Histology processor	Leica	TP 1020	
Minimal Essential Medium (Alpha-MEM)	Gibco [®] by Life Technologies	2003802	
Mouse Tendon Derived Stem Cell			Isolated from Achilles tendons of 6- to 8-wk-old C57BL/6 mice. Then digested with type I collagenase (3 mg/ml; MilliporeSigma, Burlington, MA, USA) for 3 h and passed through a 70 mmcell strainer to yield single-cell suspensions.
Paraformaldehyde	Sigma-aldrich	441244	
Streptomycin and penicillin mixture	Gibco [®] by Life Technologies	15140122	
Three-dimensional Uniaxial Mechanical Stimulation Bioreactor System	Centre of Orthopaedic Translational Research, Medical School, University of Western Australia		Available from the corresponding author upon request. Or make it according to our design* *Wang T, Lin Z, Day RE, et al. Programmable mechanical stimulation influences tendon homeostasis in a bioreactor system. <i>Biotechnol Bioeng.</i> 2013;110(5):1495–1507. doi:10.1002/bit.24809
Trypsin	Gibco [®] by Life Technologies	1858331	