

Supplemental Movie 1. WT1 iPSC-CMs formed beating sheets of cells when plated on gelatin.

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Click on the movie to start playback.

WT2

BTHH

BTHC

Supplemental Movie 2. Impaired contractile activity of BTHS myocardial tissue constructs. Muscular thin films were transfected with the indicated modRNAs for five days. BTHH and BTHC constructs showed impaired force generation that was improved by TAZ modRNA.

NOTE: View these videos in Adobe Acrobat Pro or Adobe Reader. You may need to click on each image to start video playback. This file is NOT viewable in Apple Preview.

WT1 + galactose

BTHH + galactose

BTHH + glucose

Supplemental Movie 3. Culture in glucose did not improve contraction of BTHS myocardial constructs. Muscular thin films assembled from WT1 or BTHH iPSC-CMs were cultured in galactose or glucose containing media for 5 days. Glucose did not improve contractile activity of BTHH iPSC-CMs.

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GFP modRNA

TAZ modRNA

PGP1-TAZ^{WT}

PGP1-TAZc.517delG

PGP1-TAZc.517ins

Supplemental Movie 4. TAZ mutation is sufficient to impair contraction of myocardial tissue constructs. Genome editing was used to introduce TAZ frameshift mutations into PGP1, a wild-type iPSC line.

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Vehicle

LA

WT1

BTHH

BTHC

Supplemental Movie 5. Linoleic acid (LA) treatment enhanced beating of BTHS myocardial tissue constructs.
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Vehicle

MitoTEMPO

WT1

BTH-H

**PGP1-
TAZ^{c.517delG}**

Supplemental Movie 6. ROS scavenger MitoTEMPO rescued contractile activity of TAZ mutant iPSC-CMs. iPSC-CMs assembled on muscular thin films were cultured in vehicle or MitoTEMPO for 5 days. Videos show improvement of beating activity by MitoTEMPO treatment compared to vehicle treatment. Please view this interactive PDF using Adobe Acrobat not Apple Preview or other PDF viewers.