



**Figure S2. GMT/miR-133 Convert Fibroblasts into iCMs without Cell Proliferation**

(A) Time course of  $\alpha$ MHC-GFP and cTnT expression in MEFs by GMT or GMT/miR-133 transduction from day 7 to 28.

(B) QRT-PCR for cardiac gene expression in MEFs transduced with GMT or GMT/miR-133 at day 7 ( $n = 3$ ).

(C) Relative mRNA expression of *Hcn4*, *Myl7*, and *Myl2* in MEFs, GMT-iCMs, GMT/miR133-iCMs, and postnatal hearts ( $n = 3$ ).

(D) Immunocytochemistry for  $\alpha$ MHC-GFP, *Myl7*, and DAPI in GMT- and GMT/miR-133-transduced MEFs 4 weeks after transduction.

(E) Spontaneously beating GMT/miR-133-iCMs 2 weeks after induction. The beating iCMs (arrows) correspond to Supplementary **Movie S3**.

(F) FACS analyses for EdU incorporation in mock, GMT-, and GMT/miR-133-transduced MEFs.

(G) Immunocytochemistry for cTnT in mock and GMT/miR-133-transduced MEFs 4 weeks after infection, coupled with 2 weeks of EdU incorporation. The majority of immunopositive cells were negative for EdU in GMT/miR-133-iCMs.

All data are presented as means  $\pm$  SEM. \*,  $P < 0.05$  vs. relevant control. Scale bars, 100  $\mu$ m.