

Movie S1.

Spontaneous Ca^{2+} oscillations were observed in GMT/miR-133-iCMs derived from MEFs after 4 weeks of induction, corresponding to **Figure 2D**.

Movie S2.

Spontaneously beating GMT/miR-133-iCMs derived from MEFs after 4 weeks of transduction, corresponding to **Figure 2F**.

Movie S3.

Spontaneously beating GMT/miR-133-iCMs derived from MEFs after 2 weeks of transduction, corresponding to Supplementary **Figure S2E**.

Movie S4.

Spontaneously beating GMT/si-Snai1-iCMs derived from MEFs after 4 weeks of transduction, corresponding to Supplementary **Figure S3D**.

Movie S5.

Spontaneous Ca^{2+} oscillations were observed in GMT/miR-133-iCMs derived from adult CFs after 4 weeks of induction, corresponding to **Figure 6G**.