**Movie S1.** Video of a CPC exhibiting spontaneous contractile activity *in vitro* after 1 day in culture. The corresponding still images (bright field, GFP and merged image) are provided in Fig 2A (left).

**Movie S2.** Video of a CPC exhibiting spontaneous contractile activity *in vitro* after 1 day in culture. The corresponding still images (bright field, GFP and merged image) are provided in Fig 2A (right).