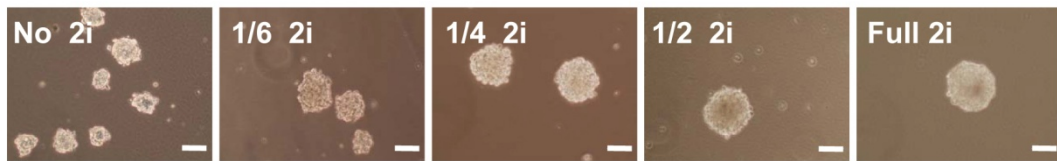
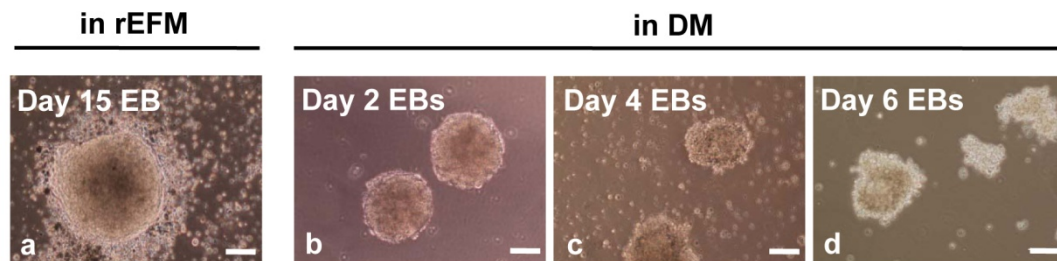


**A**



**B**



**Supplementary information, Figure S1** Identification of optimal conditions for *in vitro* differentiation protocol of rESCs.

(A) Phase contrast images show day 2 EBs formed in CM containing with and without 1/6, 1/4, 1/2 or full 2i at the original concentration (0.4  $\mu$ M PD0325901 and 3  $\mu$ M CHIR99021) supplemented with 10  $\mu$ M of Y27632. (B) Morphology of the EBs continuously cultivated in rEFM for 15 days (left panel a) or direct transferred into DM at day 2 with an additional 4 days cultivation (right 3 panels, b-d).