Online Supplemental Material

BrdU-labelling

Newborn mice were injected with 50 µg BrdU in 0.9%NaCl per gram bodyweight intraperitoneally (Sigma) 2 or 24h before they were sacrificed. Skin was processed to cyrosections and BrdU-incorporation visualized by indirect immunofluorescence using the BrdU-detection kit I (Roche) following manufacture's instructions.

Calcein dye-coupling analysis

Assay for heterotypic coupling was carried out as described by Goldberg et al. (1995) by staining one cell type with DiI (5 µM in PBS with 0.2% glucose) and calcein AM (5 µM in PBS with 0.2% glucose) and co-cultivated with a 1000-fold excess of unstained cells. Calcein (C-3100, Molecular Probes) is able to pass through gap junctions, while DiI (C-7000, Molecular Probes) is not and acts as a permanent membrane dye to identify donor cells. The number of cells receiving calcein from each preloaded cell can then be quantified after the cells settle on the plate.

Echocardiography analysis

For echocardiographic examination, mice were anesthetized with Sevoflourane, M- and B-mode recordings of the left ventricle were obtained at the level of the papillary muscles from a parasternal window using a HDI-5000 equipped with a 15-MHz probe.