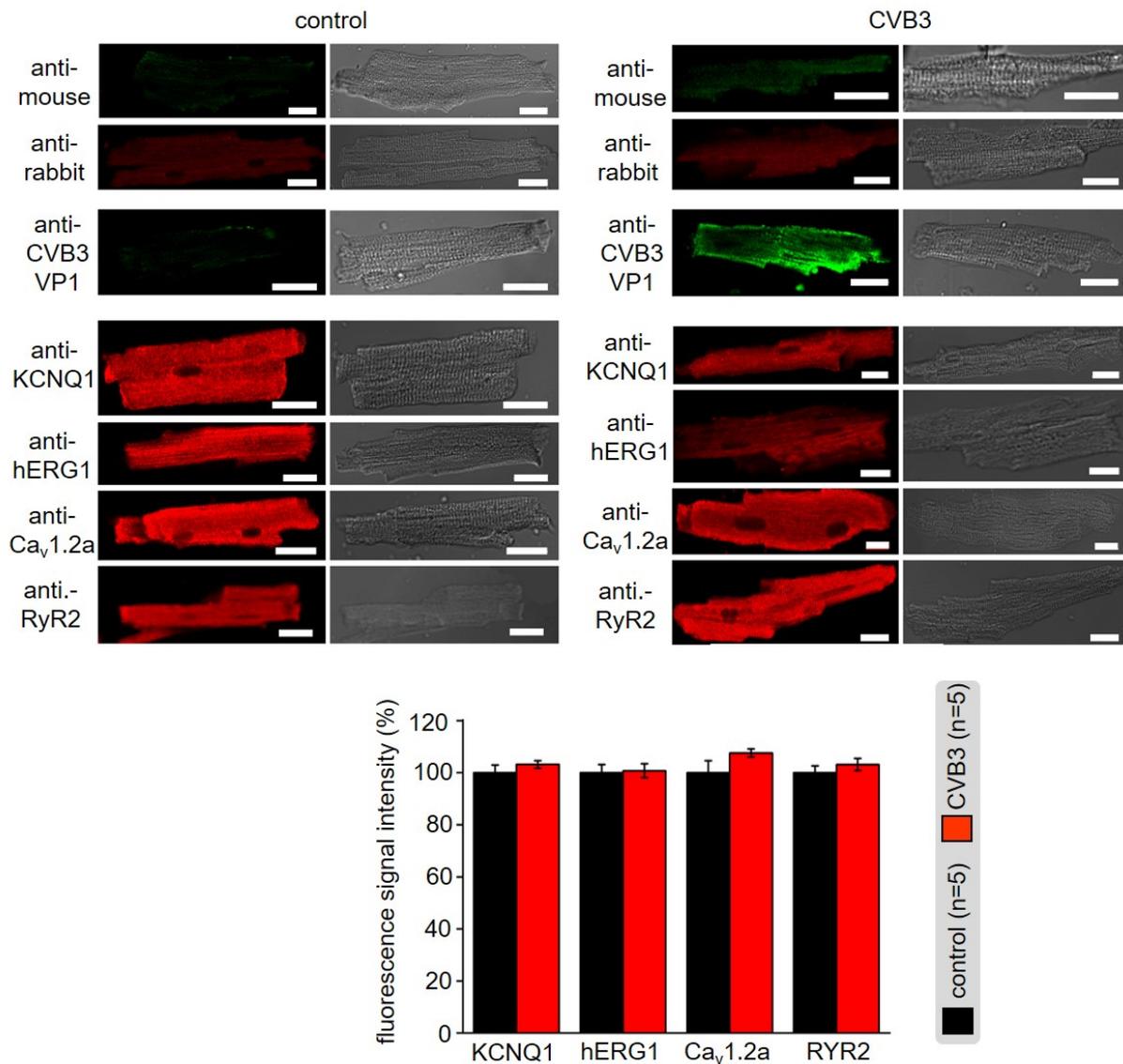


## Supplementary material

**Table S1.** Progressive dilation of murine cardiomyocytes.

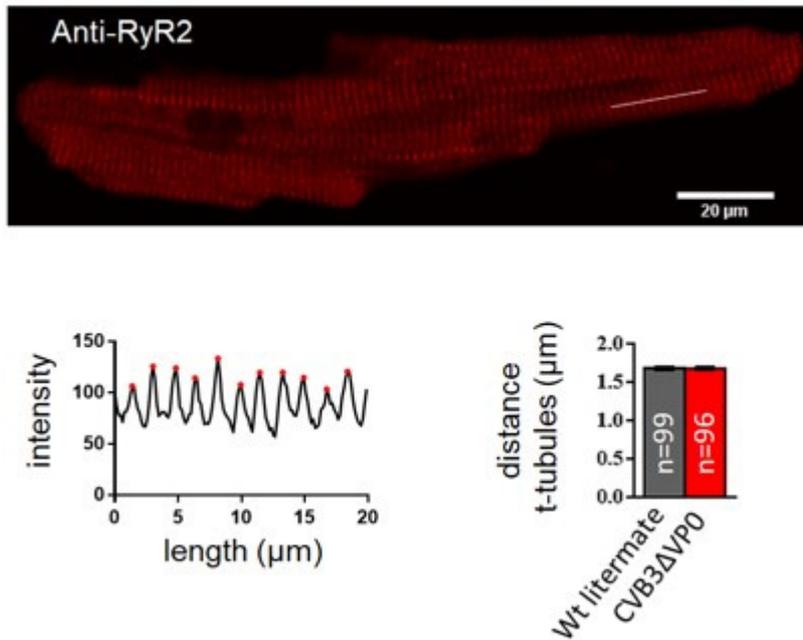
Age	25 ± 2 Weeks	30 - 45 Weeks	46 - 54 Weeks
Length (µm)	149.4 ± 2.20	157.3 ± 1.19	163.9 ± 1.47
Length (%)	100 ± 1.47	105.3 ± 0.80	109.7 ± 0.98
Area (µm <sup>2</sup> )	3709 ± 99.72	4023 ± 52.08	4482 ± 66.55
Area (%)	100 ± 2.69	108.4 ± 1.40	120.8 ± 1.79

Values are given as mean ± SEM of the respective morphological value at the indicated age (n = 239–791).

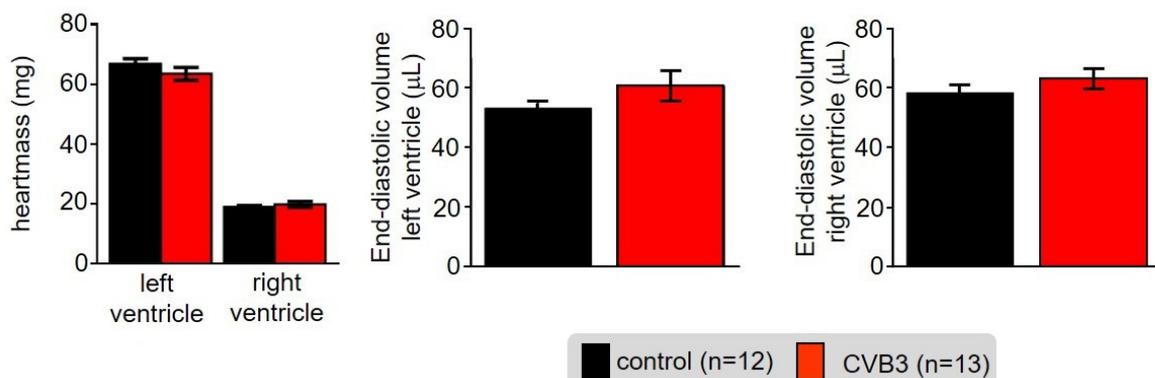


**Supplementary Figure S1:** Exemplary immunocytochemical staining of fixed cardiomyocytes isolated from wild-type littermate (left panel) and a transgenic (right panel) mouse. The control stains anti-Rabbit and anti-Mouse served as reference for the images of the respective colour channel. As further verification of the genotype, a fluorescent labeling of the viral CVB3 capsid protein VP1 was performed, which is clearly visible here in the CVB3-positive mouse cell (right). The transmitted light images show, due to the fixation method, a granulation of the cell surface similar to the control cells (scale bar 20 µm). The labelling of the ryanodine

receptor was used in later analysis to create a fluorescence profile for a distance measurement of the T-tubules in both investigated populations. Red: AlexaFluor 594; green: AlexaFluor 488. The labelling of the cardiac ion channels KCNQ1, hERG1 and Cav1.2 verifies the cardiac cell identity. Quantification of the fluorescence signal intensities of the labelled ion channels shows no differences between wt littermates and CVB $\Delta$ VP0-expressing cells



**Supplementary Figure S2:** Exemplary immunocytochemical staining of the ryanodine receptor in fixed cardiomyocytes indicate the distance of t-tubules. The labelling of the ryanodine receptors in wild-type littermate and a transgenic mouse similar as in suppl. Figure 1 was used in later analysis to create a fluorescence profile for a distance measurement of the T-tubules in both investigated populations (example lower left). The distances of the thus analysed t-tubules are virtually identical in wt littermates and transgenic mouse cardiomyocytes.



**Supplementary Figure S3:** heartmass, and end-diastolic volumes of left and right ventricles measured in control and CVB3-expressing mice. No significant changes were observed in the illustrated parameters.