

Supplemental Material

Table S1. Clinical Characteristics of human heart samples.

Subject	Diagnosis	Age(years)	Sex	LVEF (%)	LVEDd (mm)	IVSd (mm)
1	Donor	49	Male	64	46	8
2	Donor	54	Male	68	37	9
3	Donor	32	Male	70	44	7
4	Donor	50	Female	67	45	7
5	Donor	57	Female	62	39	7
6	Donor	50	Female	N/A	N/A	N/A
1	DCM	36	Male	35	68	9
2	DCM	55	Male	24	65	10
3	DCM	48	Female	32	70	10
4	DCM	65	Male	28	80	9
5	DCM	63	Male	23	70	11
6	DCM	39	Female	26	60	9
1	HCM	30	Male	65	N/A	22
2	HCM	42	Male	55	40	27
3	HCM	56	Male	60	N/A	25
4	HCM	44	Male	58	45	20
5	HCM	50	Male	74	N/A	31
6	HCM	40	Female	58	N/A	25

LVEF=left ventricular ejection fraction; LVEDd=left ventricular end-diastolic dimension; IVSd=interventricular septal thickness at diastole; DCM, dilated cardiomyopathy; HCM, hypertrophic cardiomyopathy; N/A, not available

Figure S1. Western blot analysis of ADAM23 in human heart samples (No.5 and 6; n=2 per group) from normal donors, hypertrophic cardiomyopathy (HCM) and dilatedcardiomyopathy (DCM).

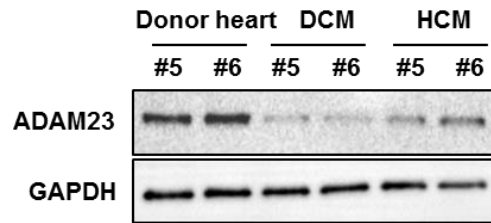
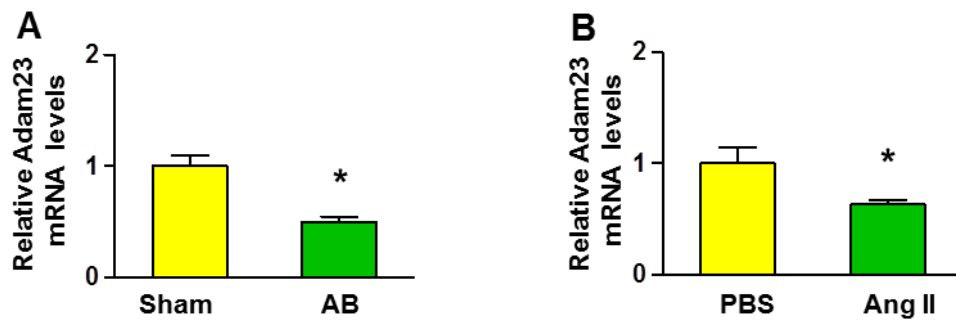
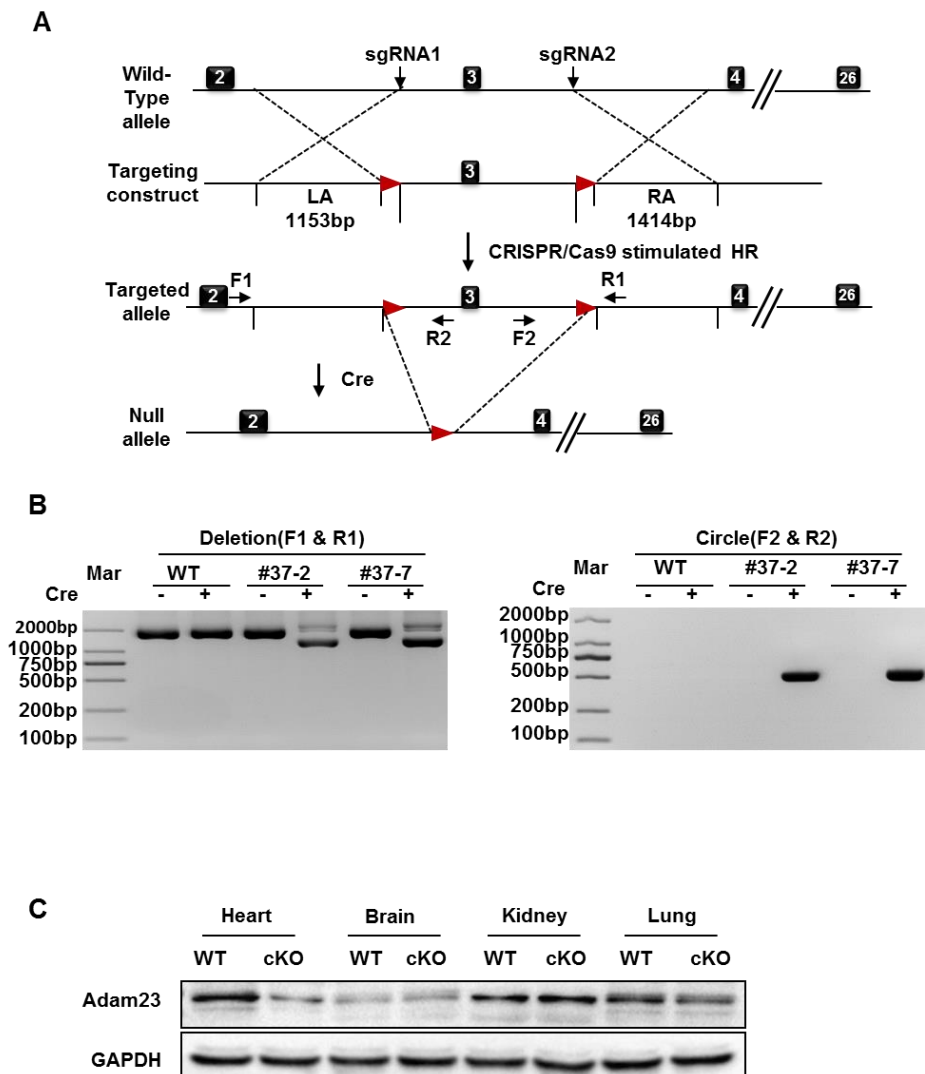


Figure S2. A, The Adam23 mRNA levels in the hearts of mice at 4 weeks post the sham or AB surgery (n=4 independent experiments).



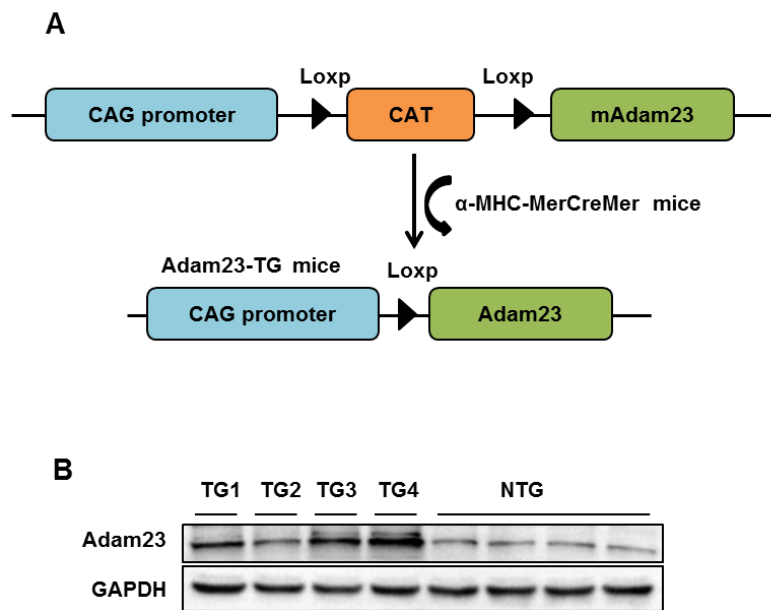
* $P < 0.05$ vs. the sham group). B, The mRNA levels of Adam23 in cardiomyocytes in response to PBS or Ang II for 24 hour. (n=3 independent experiments; * $P < 0.05$ vs. PBS group)

Figure S3. Schematic diagram of the construction of cardiac-specific conditional Adam23 (cAdam23-KO) and identification of Adam23 expression.



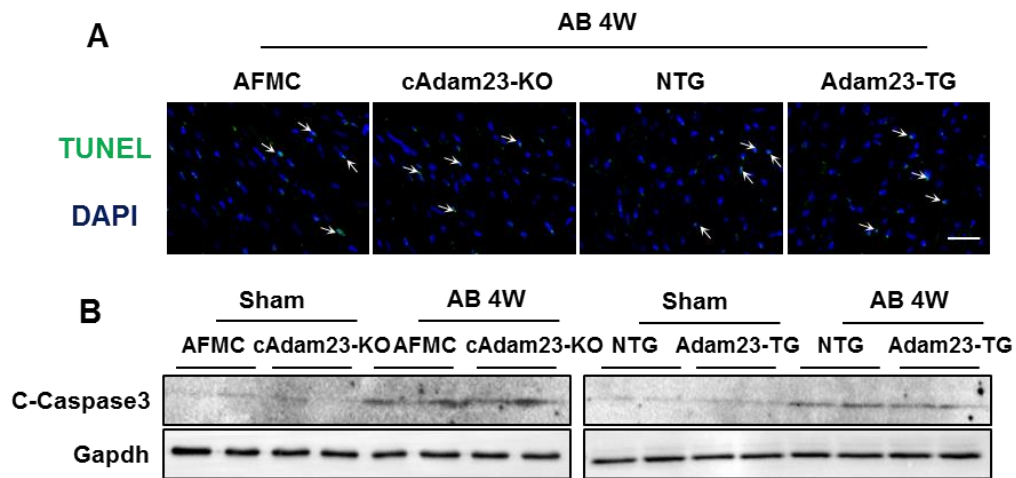
A, Schematic illustration of cAdam23-KO generation. B, Amplification of the entire region covering the floxed and homology arm using the F1/R1 primer (left) and the circle excised by Cre using the F2/R2 primer (right). C, Western blot of Adam23 expression levels in different tissues of WT and cAdam23-KO mice (n =4 per group).

Figure S4. Generation of cardiac-specific Adam23 transgenic (Adam23-TG) mice.



A, Schematic diagram for the construction of the cardiac-specific expression of the Adam23-transgenic (Adam23-TG) mice. B, Western blot analysis of Adam23 levels in the Adam23-TG mice and their NTG littermates (n=4 per group).

Figure S5. Adam23 had no effect on cardiomyocyte death during cardiac hypertrophy.



A. TUNEL assays in the heart sections of cAdam23-KO and Adam23-TG mice, compared with their respective controls (n=5 mice per group; scale bar, 20 μ m). B. Western blot analysis of cleaved caspase3 (C-Caspase3) in the hearts of cAdam23-KO and Adam23-TG mice, compared with their respective controls (n=4 mice per group). Gapdh served as a loading control.