

## Online Supplement Tables

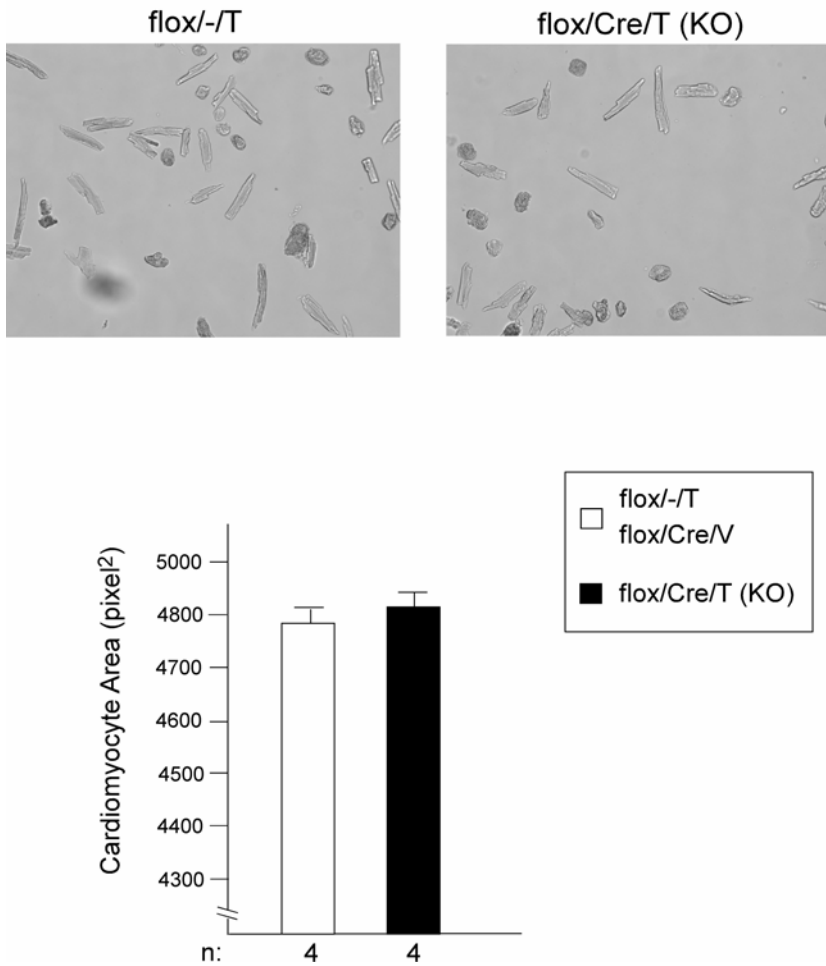
	n	HR (bpm)	LVSP (mmHg)	LVEDP (mmHg)	+dP/dt	-dP/dt
Flox/-/T +TAC	26	411 ± 24	135 ± 27	9.0 ± 5.5	6286 ± 1680	-6056 ± 1854
Flox/Cre/T +TAC (KO)	26	421 ± 30	143 ± 24	8.1 ± 4.5	7418 ± 1594	-7281 ± 2018
Flox/Cre/V + TAC	11	414 ± 20	146 ± 22	8.4 ± 2.1	7549 ± 1934	-6564 ± 1303
Flox/-/T + Sham	5	400 ± 25	97.1 ± 5.6	6.2 ± 4.3	6552 ± 608	-5899 ± 1127
Flox/Cre/T + Sham (KO)	6	400 ± 18	100 ± 8.2	8.1 ± 2	5987 ± 902	-5803 ± 1002

**Online Table I:** Heart rate and hemodynamic parameters in the various groups 3 weeks post TAC or sham TAC. HR, heart rate; LVSP, LV systolic pressure; LVEDP, LV end-diastolic pressure; +dP/dt, rate of rise of LVSP; -dP/dt, rate of fall of LVEDP.

	n	EDD (mm)	EF (%)	FS (%)
Flox/-/T Baseline	26	3.66 ± 0.35	61.0 ± 7.2	33.7 ± 11
Flox/Cre/T Baseline (KO)	26	3.68 ± 0.37	55.0 ± 8.2	28.3 ± 5.5
Flox/Cre/V Baseline	11	3.95 ± 0.40	50.0 ± 11	26.0 ± 7.2
Flox/-/T +TAC	26	3.30 ± 0.45	66.1 ± 8.3	37.0 ± 9.1
Flox/Cre/T +TAC (KO)	26	3.35 ± 0.32	63.3 ± 9.0	34.3 ± 6.5
Flox/Cre/V + TAC	11	3.30 ± 0.60	58.1 ± 14	30.0 ± 9.0

**Online Table II:** Baseline and 3 weeks post TAC echocardiographic measurements in the various groups. EDD, end-diastolic dimension; EF, ejection fraction; FS, fraction shortening.

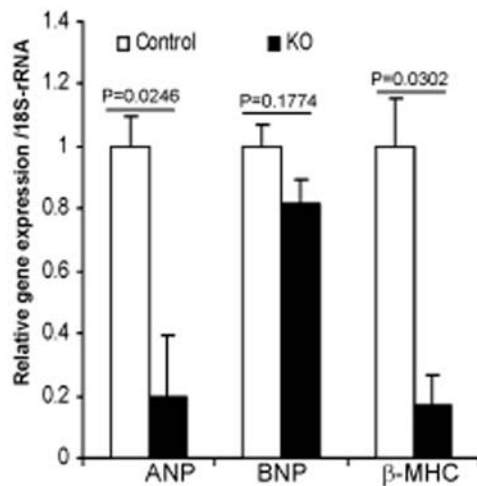
## Online Figure I



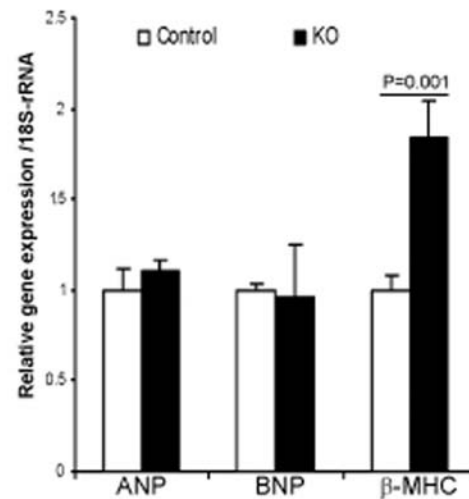
**Online Figure I. Representative images of isolated cardiomyocytes 3 weeks post TAC.** Quantification of myocyte area is shown below. Cardiomyocyte size was not significantly different between flox/-/T mice and flox/Cre/V mice; therefore, these controls were grouped together in the graph. n = 200 cardiomyocytes/mouse with 4 mice as controls and 4 conditional KO mice.

## Online Figure II

### IIA



### IIB

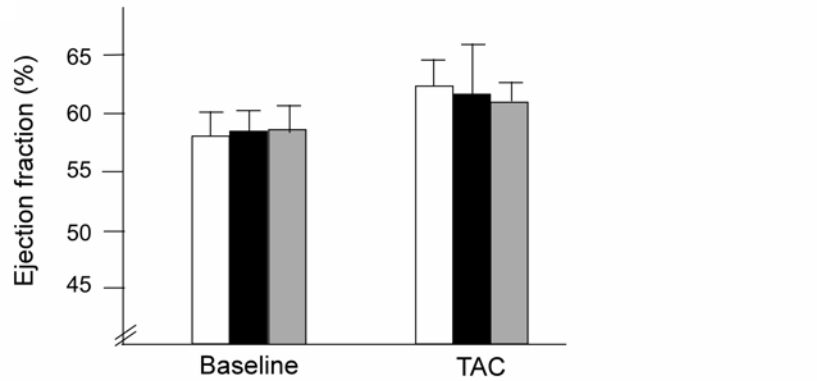


### Online Figure II. Fetal gene expression in GSK-3 $\beta$ KO mice post TAC and post MI.

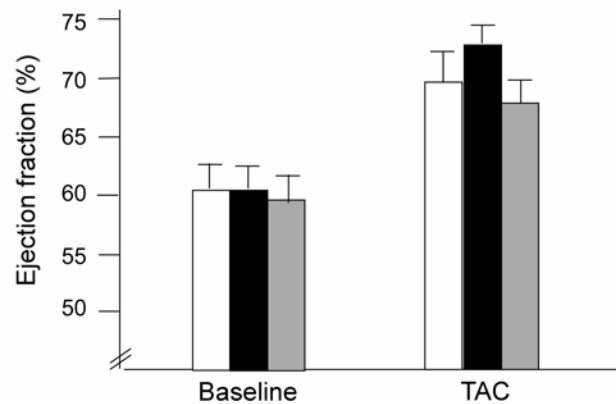
Transcripts for markers of hypertrophy in hearts from control and GSK-3 $\beta$  KO mice were detected by quantitative PCR 3 weeks post TAC (IIA) and 8 weeks post MI (IIB). Values indicate relative expression levels ( $\pm$  SEM). ANP (atrial natriuretic peptide); BNP (brain natriuretic peptide);  $\beta$ -MHC ( $\beta$ -Myosin heavy chain; Myh7). Differences in gene expression between groups were analyzed by t-test.

### Online Figure III

#### IIIA LVSP = 150-180 mmHg



#### IIIB LVSP = 120-150 mmHg



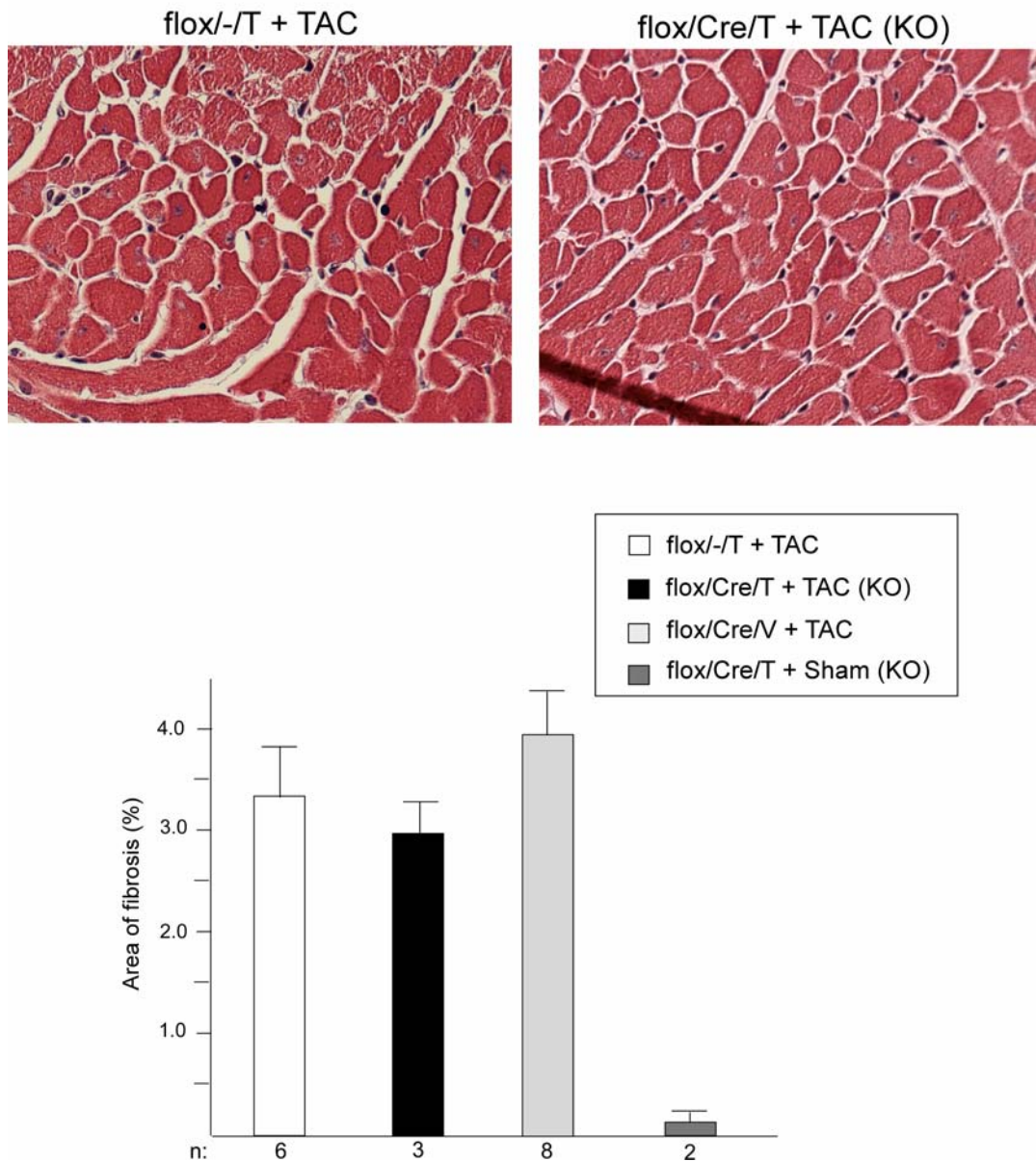
### Online Figure III. GSK-3 $\beta$ deletion does not affect cardiac function post TAC.

IIIA/B. EF was determined by echocardiography at baseline and again at 3 weeks post TAC. Data in panel IIIA are from mice with systolic pressures between 150mmHg -180mmHg post TAC, and in panel IIIB from mice with systolic pressures between 120mmHg – 150mmHg post TAC. There was no difference in EF between the conditional KO vs. control mice either at baseline or post TAC, in either the higher or lower LVSP groups.

In IIIA, n = 3 for flox/Cre/V; n = 8 for flox/-T; n = 12 for flox/Cre/T (KO).

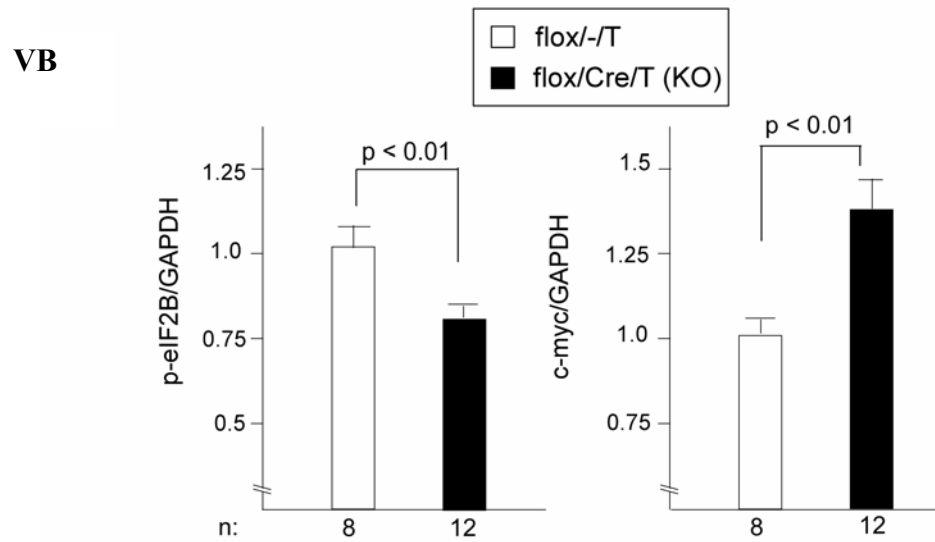
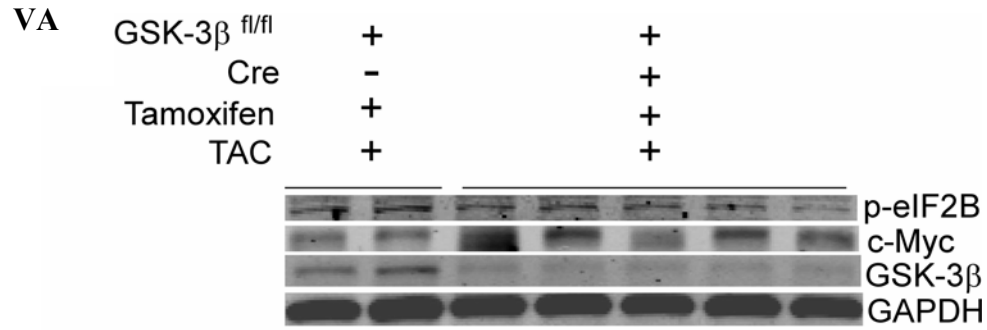
In IIIB, n = 3 for flox/Cre/V; n = 14 for flox/-T; n = 12 for flox/Cre/T (KO).

Online Figure IV



**Online Figure IV. GSK-3 $\beta$  deletion does not alter extracellular matrix remodeling post TAC.** Three weeks post TAC, LV sections from mice with systolic pressures between 150-180mmHg were stained with Masson trichrome stain. Representative images are shown. Total fibrotic area as a percent of total area was determined as described in Methods. While there was an increase in fibrosis post TAC in all groups, fibrosis was not different between the groups.

### Online Figure V



### Online Figure V. Activity of hypertrophic signaling pathways.

Immunoblot (VA) and quantification (VB) of eIF2B phosphorylation and c-myc expression 24 hours post TAC. p-eIF2B is significantly decreased and c-myc levels are significantly increased in conditional KO hearts.