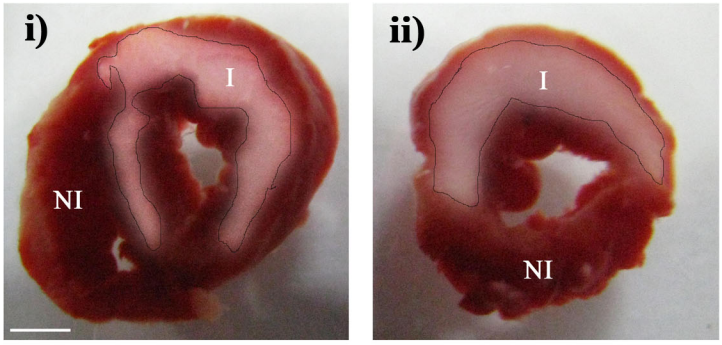
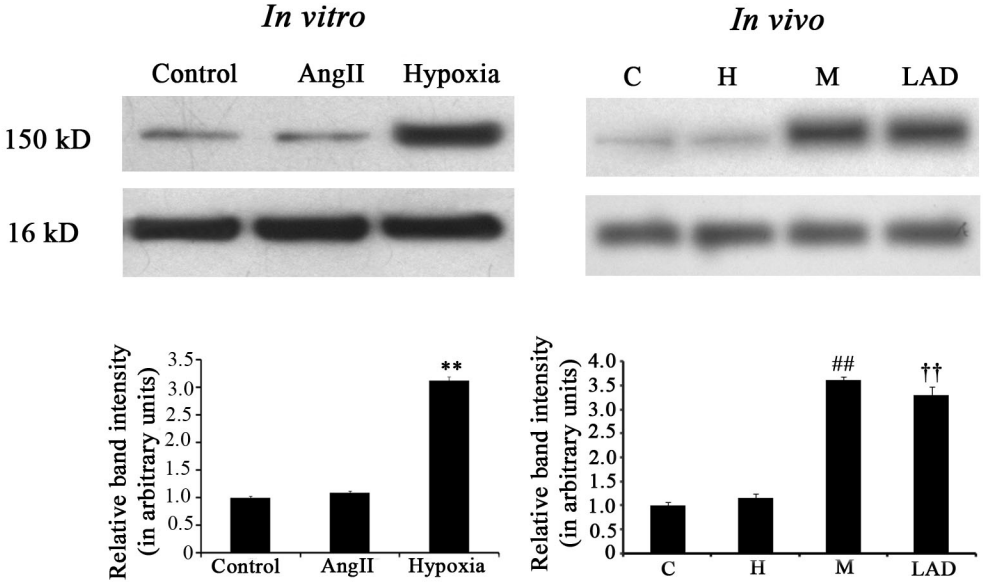
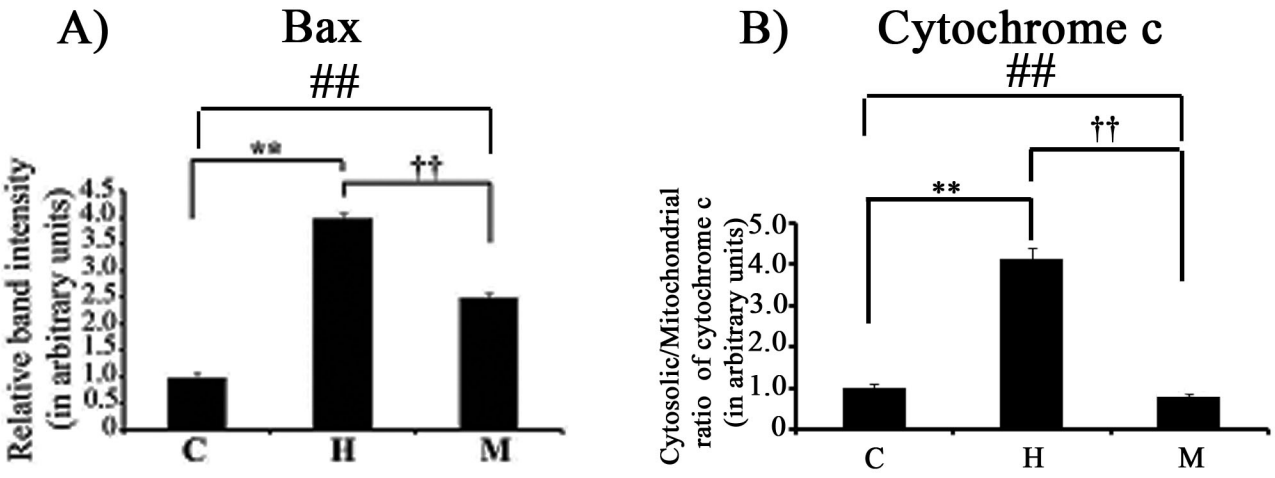


Supplementary Figure 1A: Photogrpahs of TTC stained cross sections of i) isoproterenol treated and ii) LAD ligated rat hearts showing infarct (I) and non-infarct (NI) zones. The red area is the non-infarct region that was stained with TTC and the unstained whitish patch is the infarct zone that was not stained with TTC. Scale bar = 0.3 cm.



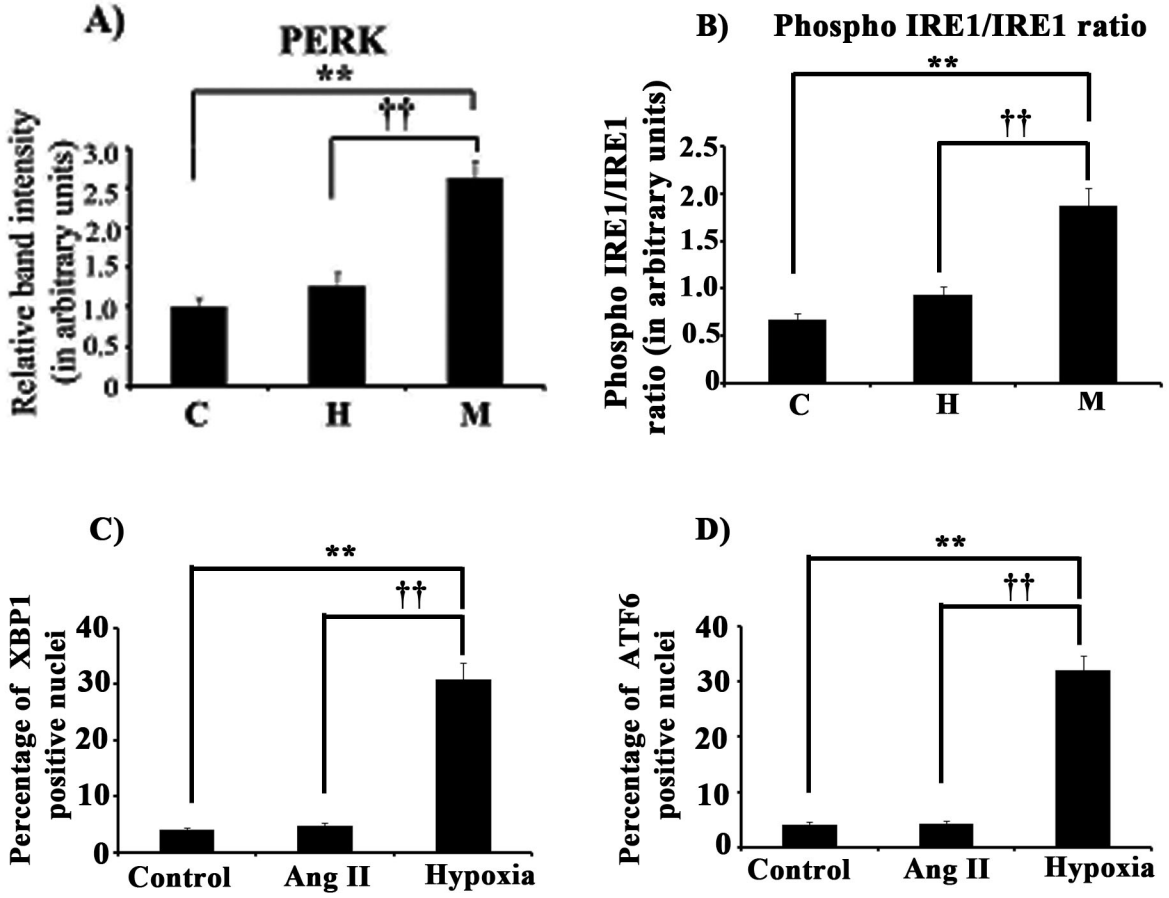
Supplementary Figure 1B: Western blot analyses showing significantly increased expression of xanthine oxidase in hypoxic cardiomyocytes *in vitro* compared to either AngII treated hypertrophic cardiomyocytes or untreated cells (control). Similar induced expression of xanthine oxidase was observed *in vivo* in both isoproterenol treated (M) and left anterior descending coronary artery ligated (LAD) MI samples compared to either control (C) or hypertrophy (H). No significant difference was observed between control and hypertrophy group. Data is representative of three independent experiments.

[**$p<0.01$ with respect to both hypoxia vs.control and hypoxia vs. AngII treatment; ##$p<0.01$ with respect to both M vs.C and M vs. H; ††$p<0.01$ with respect to both LAD vs. C and LAD vs. H]

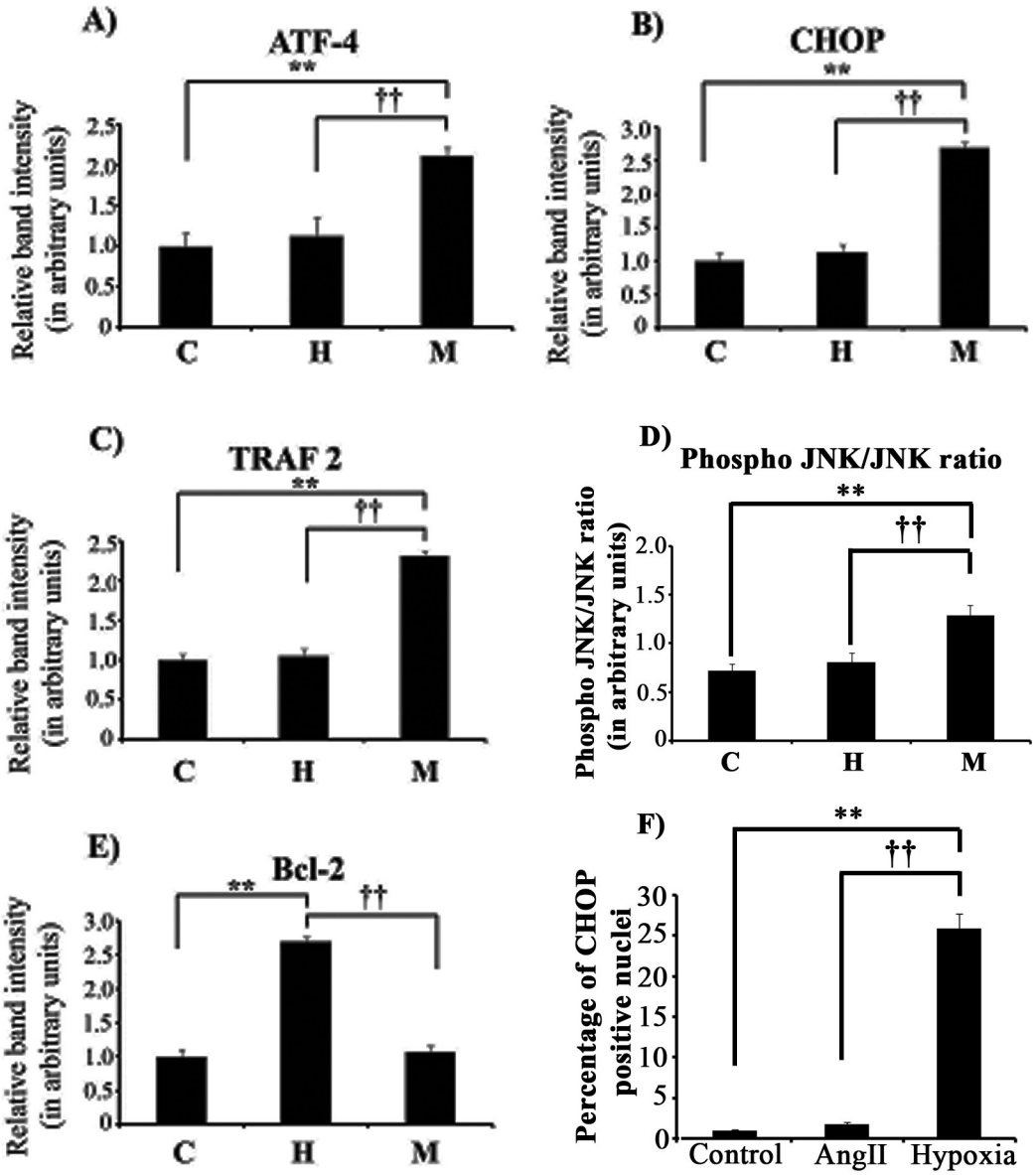


Supplementary Figure 2: Graphs showing significant increase in A) expression of Bax and B) ratio of cytosolic/Mitochondrial cytochrome c during cardiac hypertrophy (H) compared to sham control (C). Although expression of Bax increased significantly during MI compared to control, the ratio of cytosolic/mitochondrial cytochrome c decreased significantly compared to hypertrophy or control.

[**$p<0.01$ with respect to hypertrophy vs. control; ††$p<0.01$ with respect to hypertrophy vs. MI; ##$p<0.01$ with respect to MI vs. control]



Supplementary figure 3: Graphs showing relative band intensity of A) PERK and B) ratio of phospho IRE1 to IRE1 in control (C), cardiac hypertrophy (H) and MI (M) samples. The levels of PERK and the ratio of phospho IRE1 to IRE1 increased significantly ($p<0.01$) during MI compared to hypertrophy and control.
C) Graph showing percentage of XBP1 positive nuclei in control, Angiotensin II (AngII) treated and hypoxic adult cardiomyocytes. D) Graph showing percentage of ATF6 positive nuclei in control, Angiotensin II (AngII) treated and hypoxic adult cardiomyocytes.
[**$p<0.01$ with respect to control; ††$p<0.01$ with respect to hypertrophy]



Supplementary figure 4: Graphs showing relative band intensity of A) ATF4, B) CHOP, C) TRAF2, E) Bcl-2 and D) ratio of phospho JNK to JNK in control (C), cardiac hypert rophy (H) and MI (M) samples. The levels of ATF4, CHOP, TRAF2 and the ratio of phos pho JNK to JNK increased significantly ($p<0.01$) during MI compared to hypertrophy and control. Whereas, the expression of Bcl-2 was found to be significantly ($p<0.01$) downregul ated during MI compared to hypertrophy and remained unaltered compared to control.
F) Graph showing percentage of CHOP positive nuclei in control, Angiotensin II (AngII) treated and hypoxic adult cardiomyocytes.
[**$p<0.01$ with respect to control; ††$p<0.01$ with respect to hypertrophy]