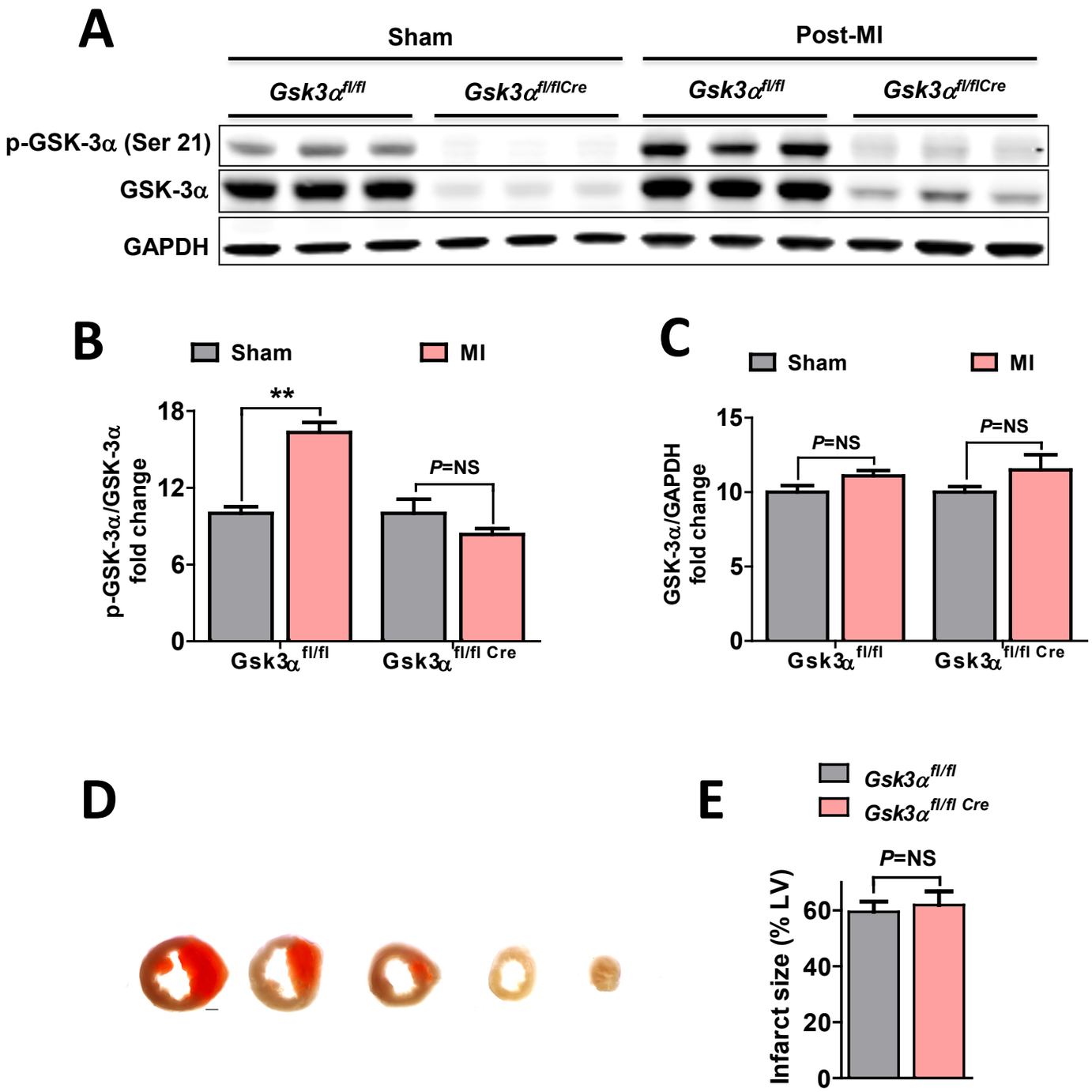
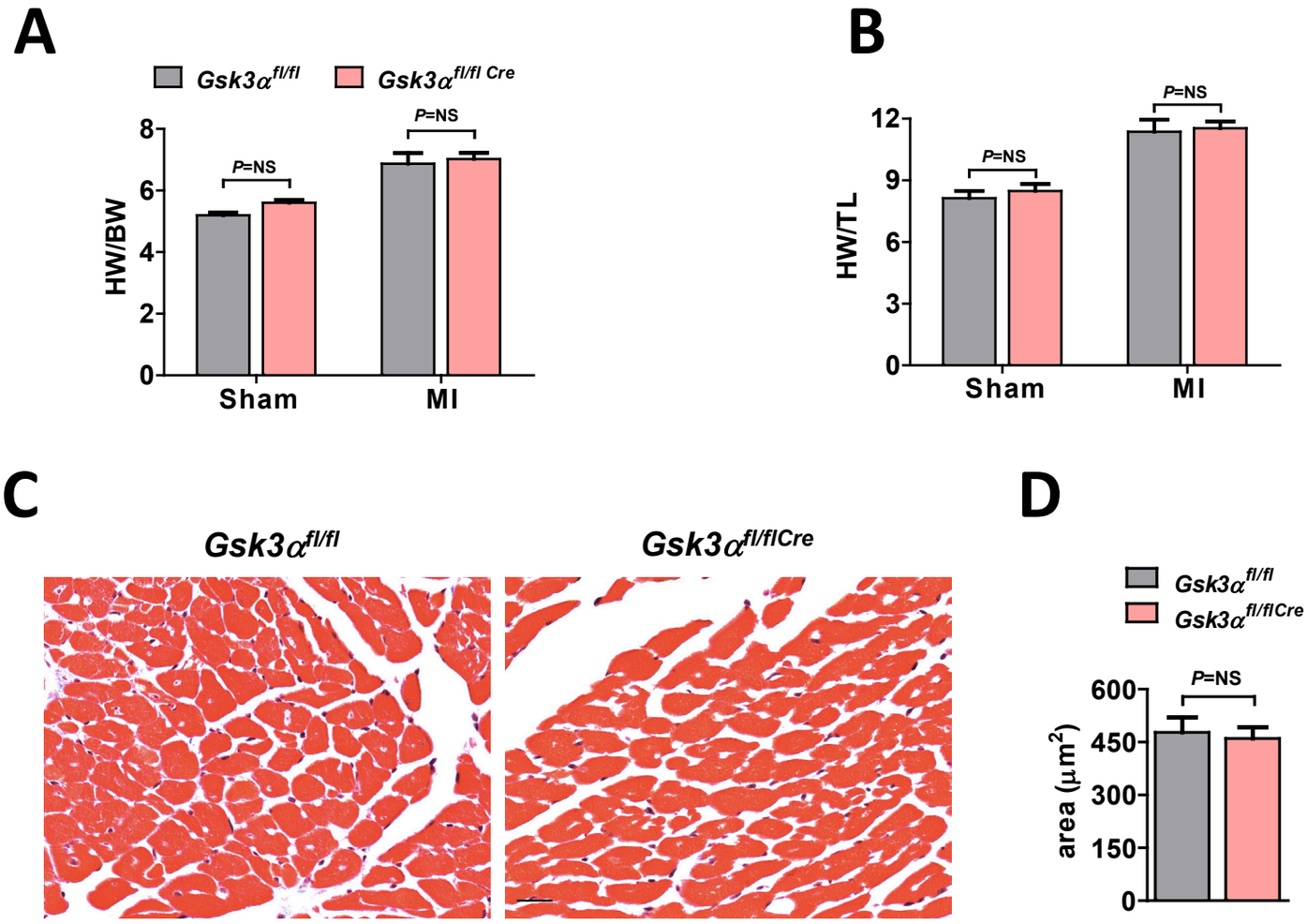
Supplemental Fig. 1



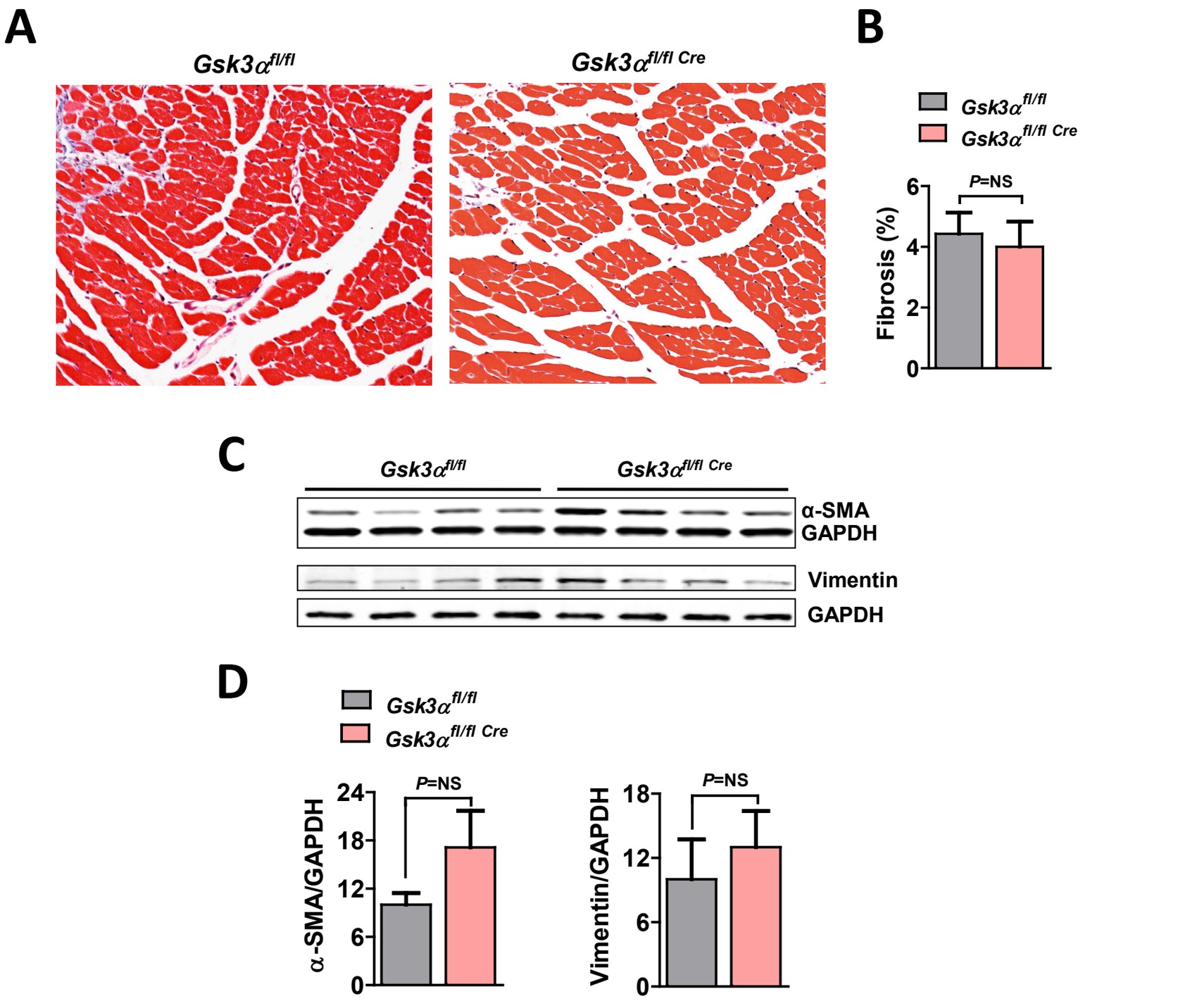
Supplemental Figure 1. GSK-3α activity and early infarct size in post-MI conditional KO hearts. (A) Immunoblot shows GSK-3α activation and expression in sham and 3 wk post-MI WT and KO hearts. Blot quantification shows increase GSK-3α phosphorylation (inhibition) (**B**) in WT post-MI and comparable GSK-3α levels (**C**) in sham vs MI. n=3 for each group. (**D**) The LAD was permanently ligated and 48 hours post ligation, hearts were harvested. Representative images of a triphenyltetrazolium chloride (TTC)-stained heart show infarct zones (white/brown areas). (**E**) Infarct size is expressed as a percentage of the total area of LV. n=5 for each group. Data are presented as mean±SEM, ** *P*<0.01

Supplemental Fig. 2



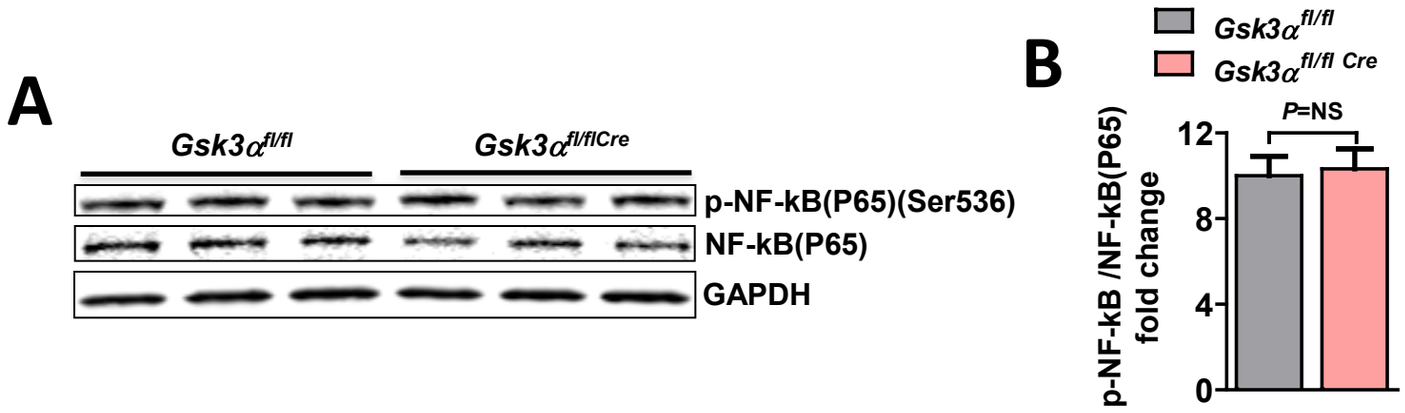
Supplemental Figure 2. Role of GSK-3α in post-MI hypertrophy. Hypertrophy was analyzed in 8wk post-MI hearts. (**A**) Heart weight to body weight and (**B**) heart weight to tibia length ratios show comparable hypertrophy in KO vs WT, n= 10-17 for MI and n=4 for sham group. (**C**) Representative images show trichrome-stained heart sections from remote myocardium (**D**) Cardiomyocyte cross sectional area in WT and KO shows comparable hypertrophy. n=5-9 for WT and KO hearts.

Supplemental Fig. 3



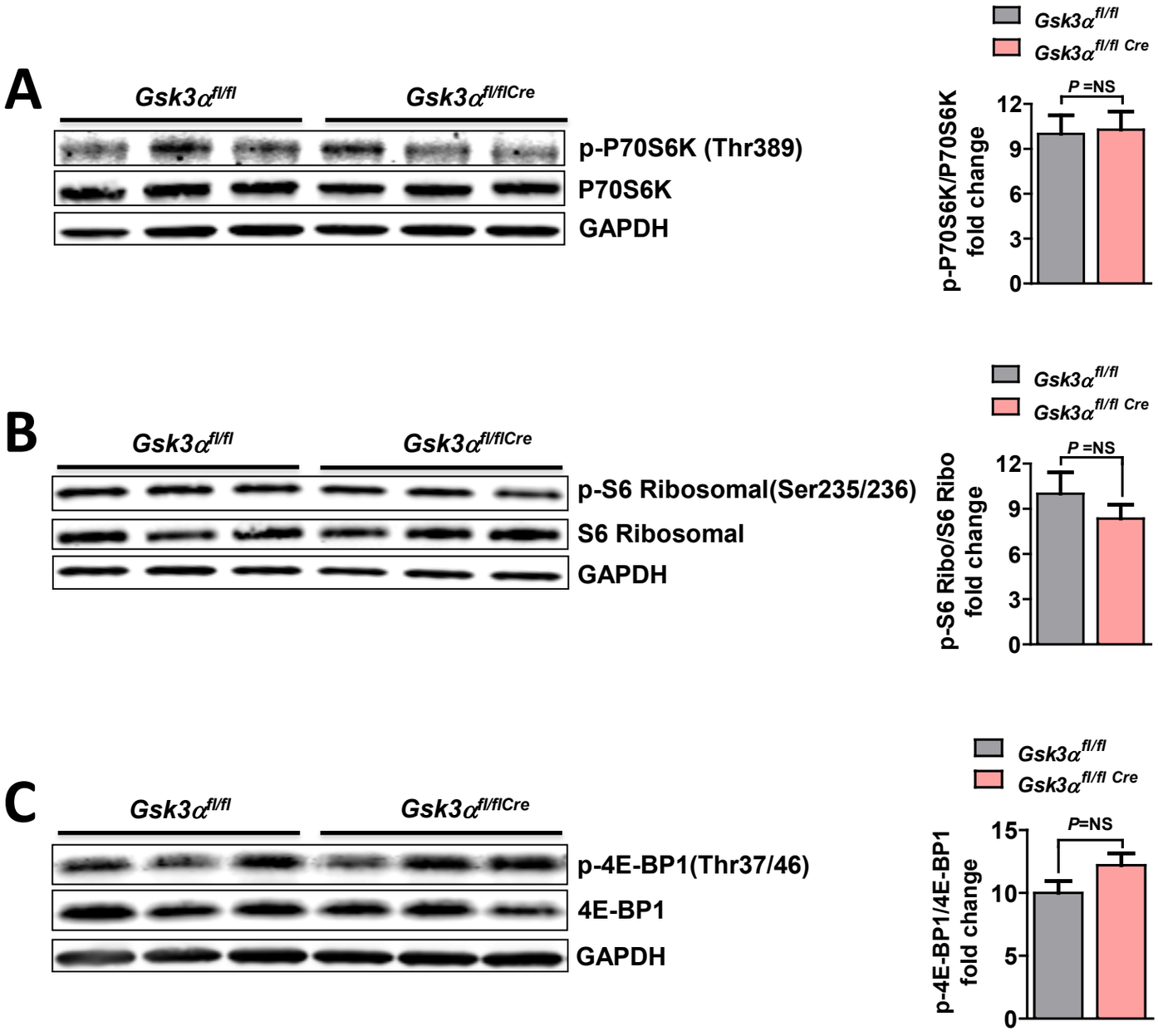
Supplemental Figure 3; Role of GSK-3α in post-MI remote fibrosis. (**A**) Representative images of Masson's trichrome-stained post-MI heart sections (8 wks). (**B**) Quantification shows comparable remote fibrosis and is presented as percent of fibrotic area measured, n=10-14 WT and KO hearts. (**C**) Immunoblotting for fibrotic markers, α-smooth muscle actin (α-SMA) and vimentin in post-MI LV lysates (3 wks). (**D**) Results show no significant changes in either markers between KO and controls, n=4-5 for WT and KO.

Supplemental Fig. 4



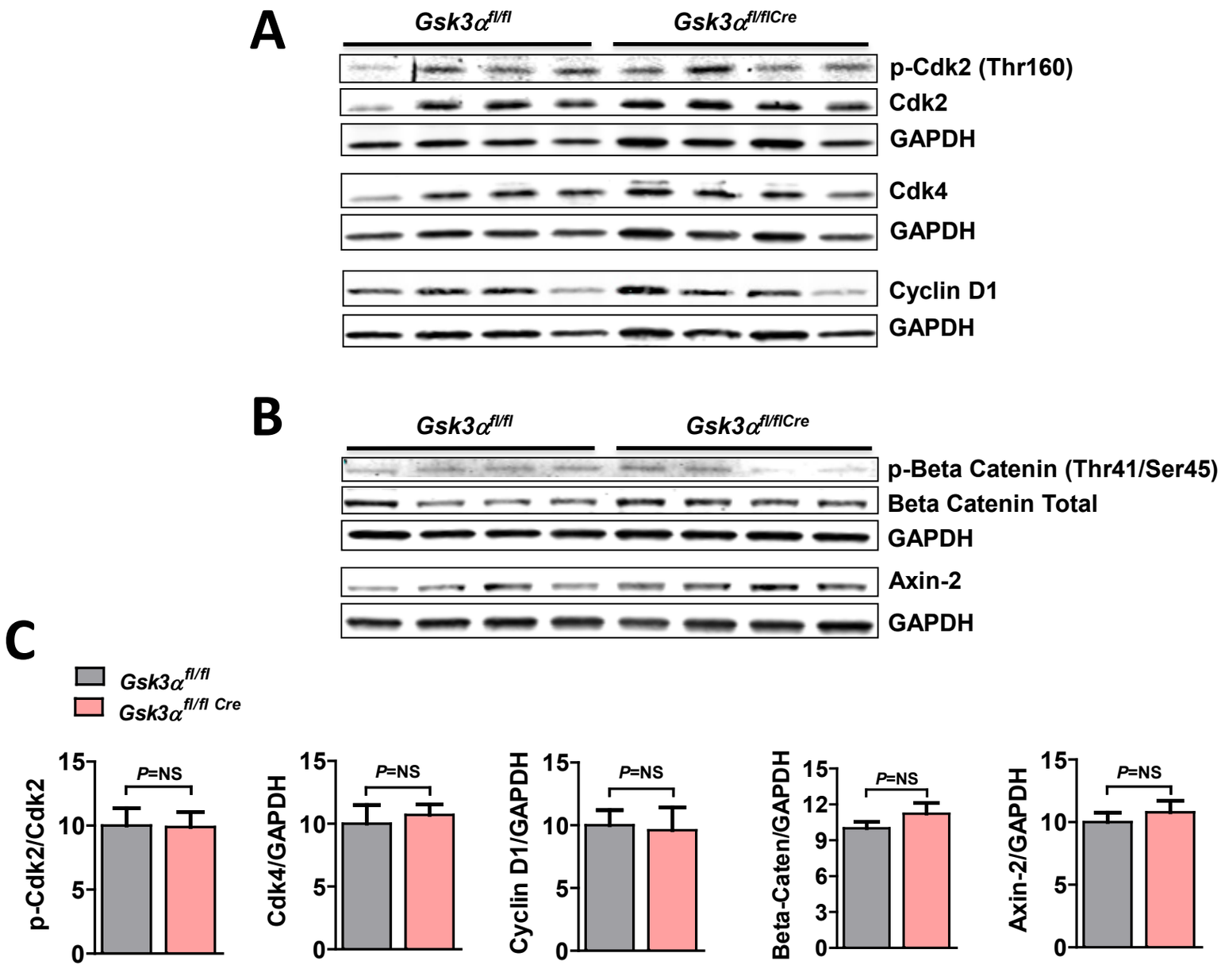
Supplemental Figure 4. GSK-3α does not regulate post-MI NF-kB signaling. (**A**) Immunoblot from post-MI WT and *Gsk3α* KO hearts for activity and expression of NF-kB (P65). (**B**) Immunoblot quantification shows comparable NF-kB activity in WT and KO post-MI hearts. n=4-5 for WT and KO.

Supplemental Fig. 5



Supplemental Figure 5. Cardiac specific conditional deletion of *Gsk3α* does not affect post-MI m-TORC1 signaling; Immunoblot of WT and *Gsk3α* KO post-MI hearts for the m-TORC1 targets, including **(A)** p70S6 kinase (**B**) S6 ribosomal protein **(C)** 4E-BP1 show comparable activation. n=4-5 for WT and KO.

Supplemental Fig. 6



Supplemental Figure 6; Cyclin dependent kinases (Cdks), Cyclin D1 and Wnt beta catenin pathways in *Gsk3α* KO heart. (**A**) Immunoblotting for Cdk2, Cdk4 and cyclin D1, (**B**) Beta catenin and Axin-2 level in 3 wk post-MI LV lysate. (**C**) There were no significant changes in these markers between KO and controls. n=4-5 for WT and KO.