Dubash et al., http://www.jcb.org/cgi/content/full/jcb.201507018/DC1

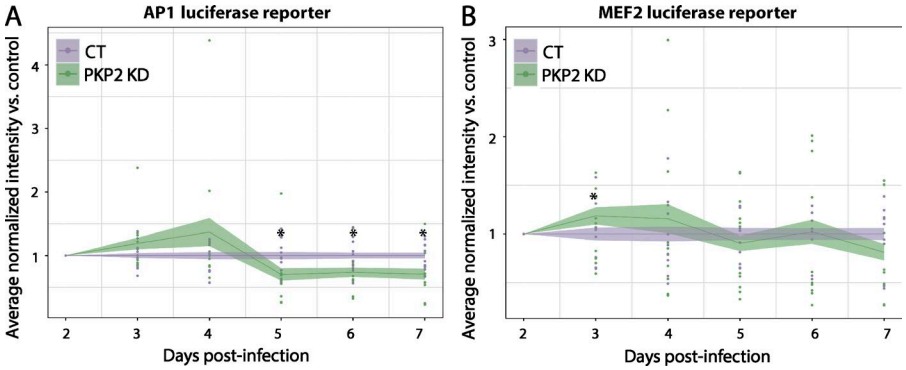

Figure S1. **PKP2 KD does not induce activation of AP1 or MEF2 transcription factors.** AP1 and MEF2 transcriptional activity was followed via luciferase reporter arrays (see Materials and methods). After control (CT) and PKP2 KD in 96-well plates, CMs were infected with luciferase reporter constructs for AP1 and MEF2, and luciferase expression was followed in the same cells by noninvasive imaging for a period of 6 d. Unlike other transcription factors tested, KD of PKP2 did not induce sustained transcriptional activation of either AP1 or MEF2. For all graphs, fold change values from three independent samples are represented with error bars indicating SD. *, $P < 0.05$.

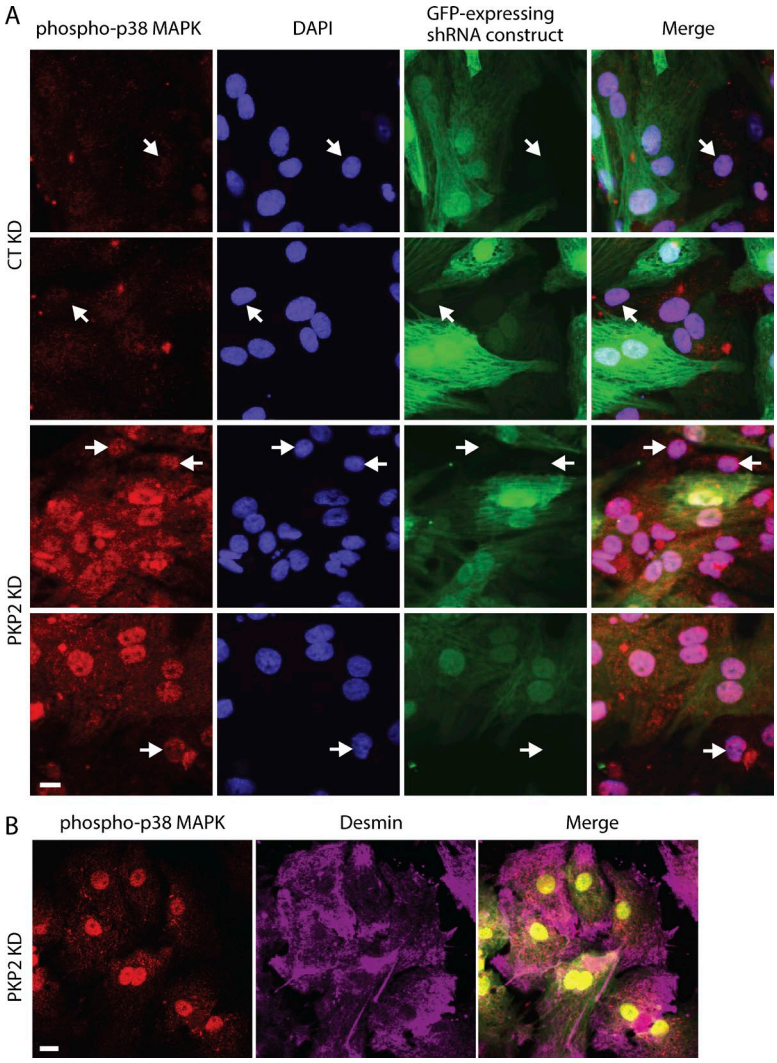

Figure S2. **Activation of p38 MAPK by PKP2 KD occurs in CMs and in a non–cell-autonomous fashion.** (A) CMs infected with either control or PKP2 shRNA constructs (coexpressing GFP) were stained for phospho–p38 MAPK. In either condition, cells not expressing the shRNA construct are indicated by arrows. In the PKP2 KD condition (but not the control), nuclear accumulation of phospho–p38 MAPK was still observed, indicating that PKP2 can activate p38 MAPK in a non–cell-autonomous fashion. Bar, 20 µm. (B) To validate that the increase in phospho–p38 MAPK seen upon PKP2 KD occurs in cardiomyocyte cells themselves, cells were costained with phospho–p38 MAPK and the cardiomyocyte marker desmin. Bar, 20 µm. These data demonstrate that the nuclear phospho–p38 MAPK staining observed occurs in desmin-positive cardiomyocyte cells.

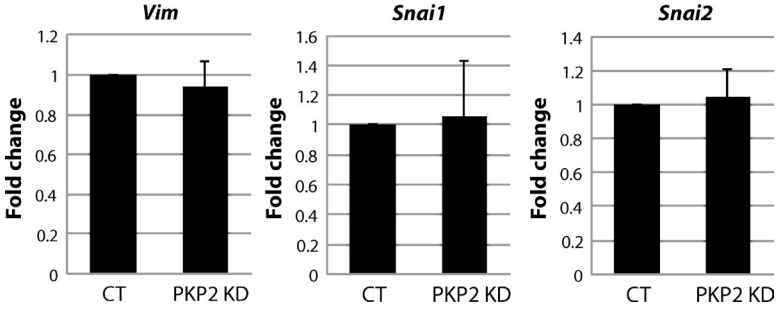

Figure S3. **PKP2 KD does not induce transition to a mesenchymal phenotype.** RNA isolated from control (CT) and PKP2 KD CMs were analyzed for mRNA levels of mesenchymal markers such as Vimentin (*Vim*), Snail-1 (*Snai1*), and Snail-2/Slug (*Snai2*). Loss of PKP2 does not induce expression of any of these mesenchymal markers, indicating that CMs do not undergo a transition to a mesenchymal phenotype upon PKP2 KD.

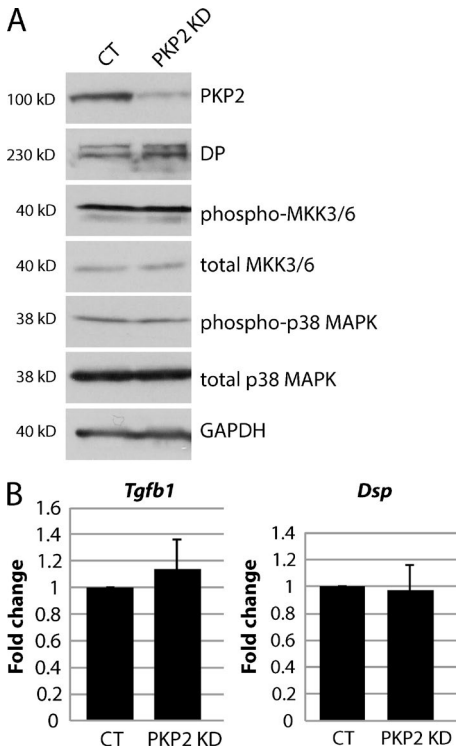

Figure S4. **Loss of PKP2 in epithelial cells does not cause loss of DP expression or an increase in TGF-β1/p38 MAPK signaling.** NHEKs were treated with either control or PKP2 KD siRNA, and samples were analyzed 72 h post-KD. (A) Control (CT) and PKP2 KD NHEKs were blotted for DP, PKP2, total and phosphorylated forms of MKK3/6 and p38 MAPK, and GAPDH (loading control). PKP2 KD in NHEKs does not cause a loss of DP protein levels or an increase in the p38 MAPK signaling cascade. (B) RNA isolated from control and PKP2 KD NHEKs were analyzed for mRNA levels of *Tgfb1* and *Dsp*, both of which are unchanged upon PKP2 KD in these cells.