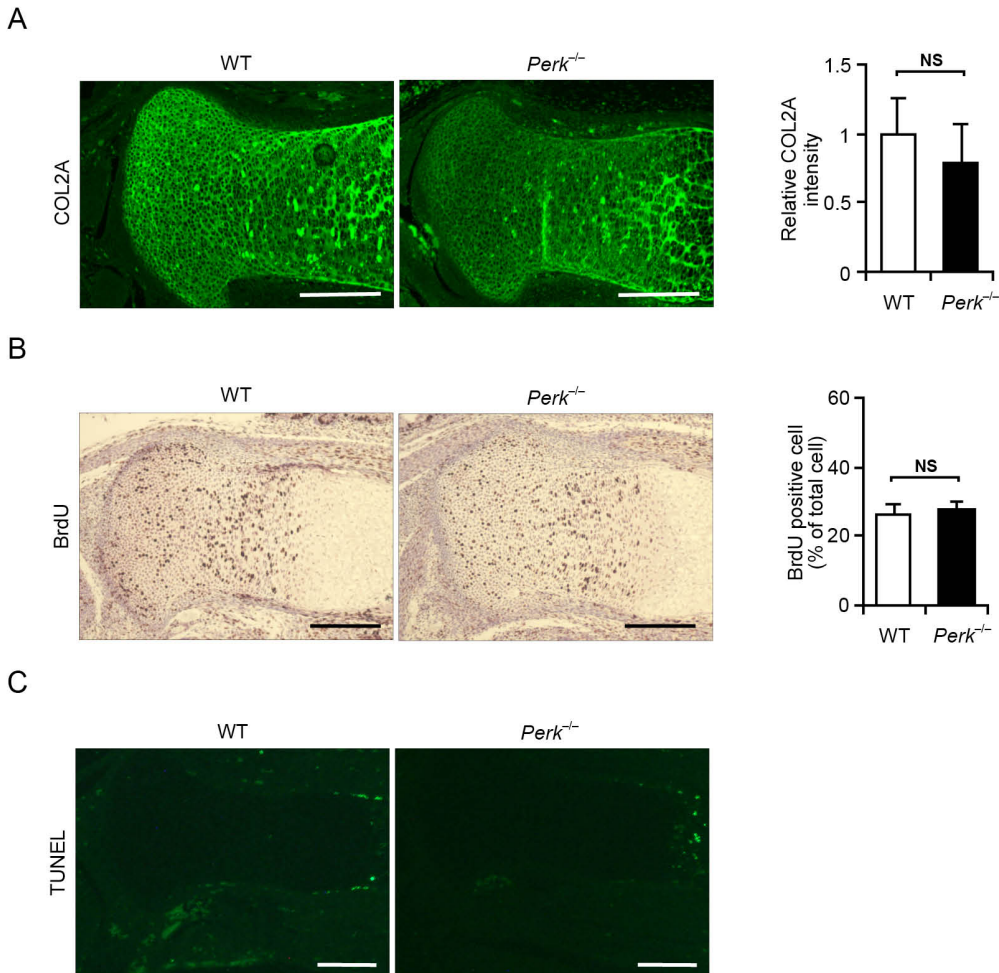


PERK-mediated translational control is required for collagen secretion in chondrocytes

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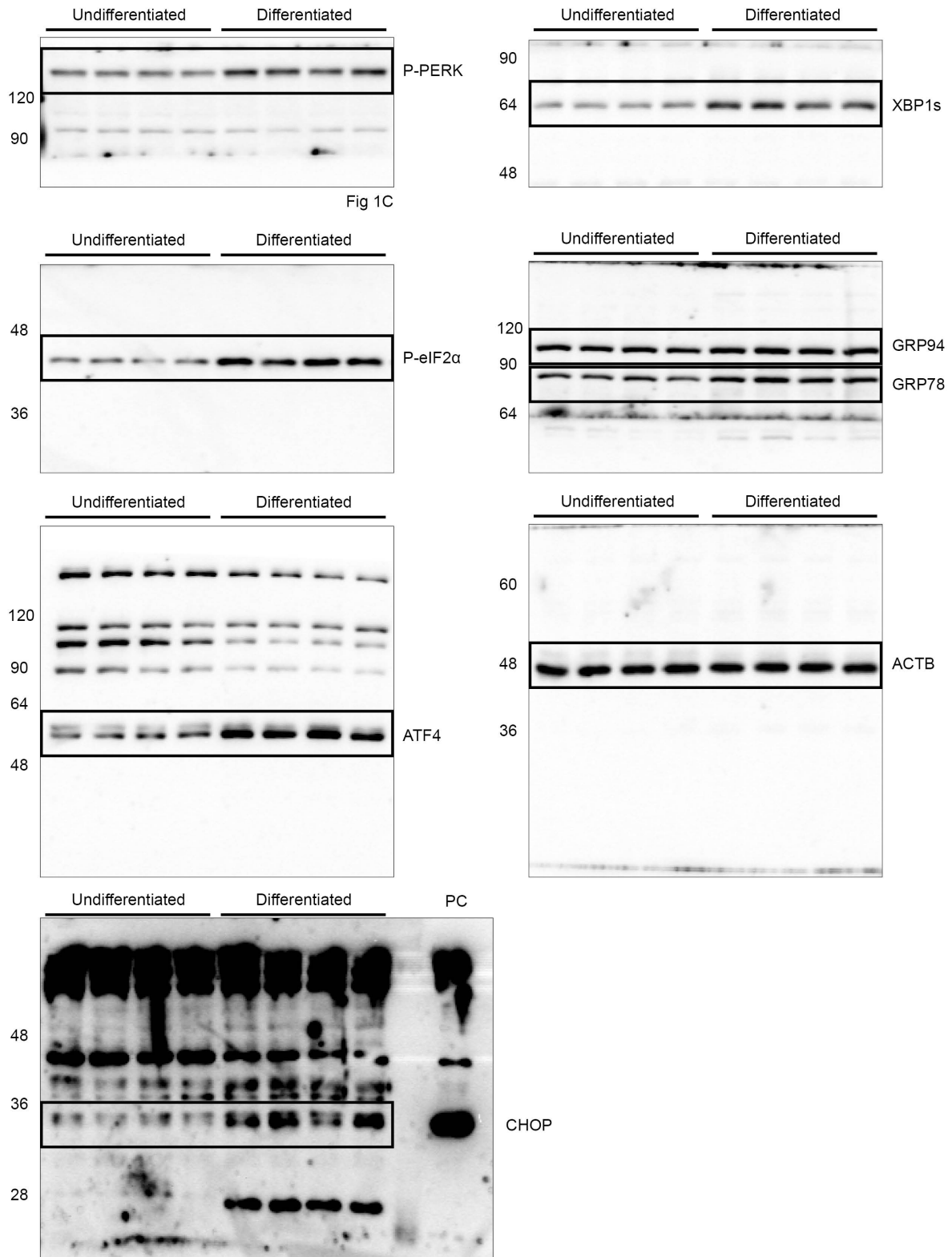


Supplemental figure 1

(A) Representative fluorescence micrographs of immunohistochemistry for COL2A1 of tibial sections from wild-type or *Perk*^{-/-} mice at 16.5 dpc. Scale bar, 200 μ m. Relative fluorescence intensity was presented as the mean fold change \pm SD versus that of wild-type mice ($n = 4$ technical replicates, NS = not significant).

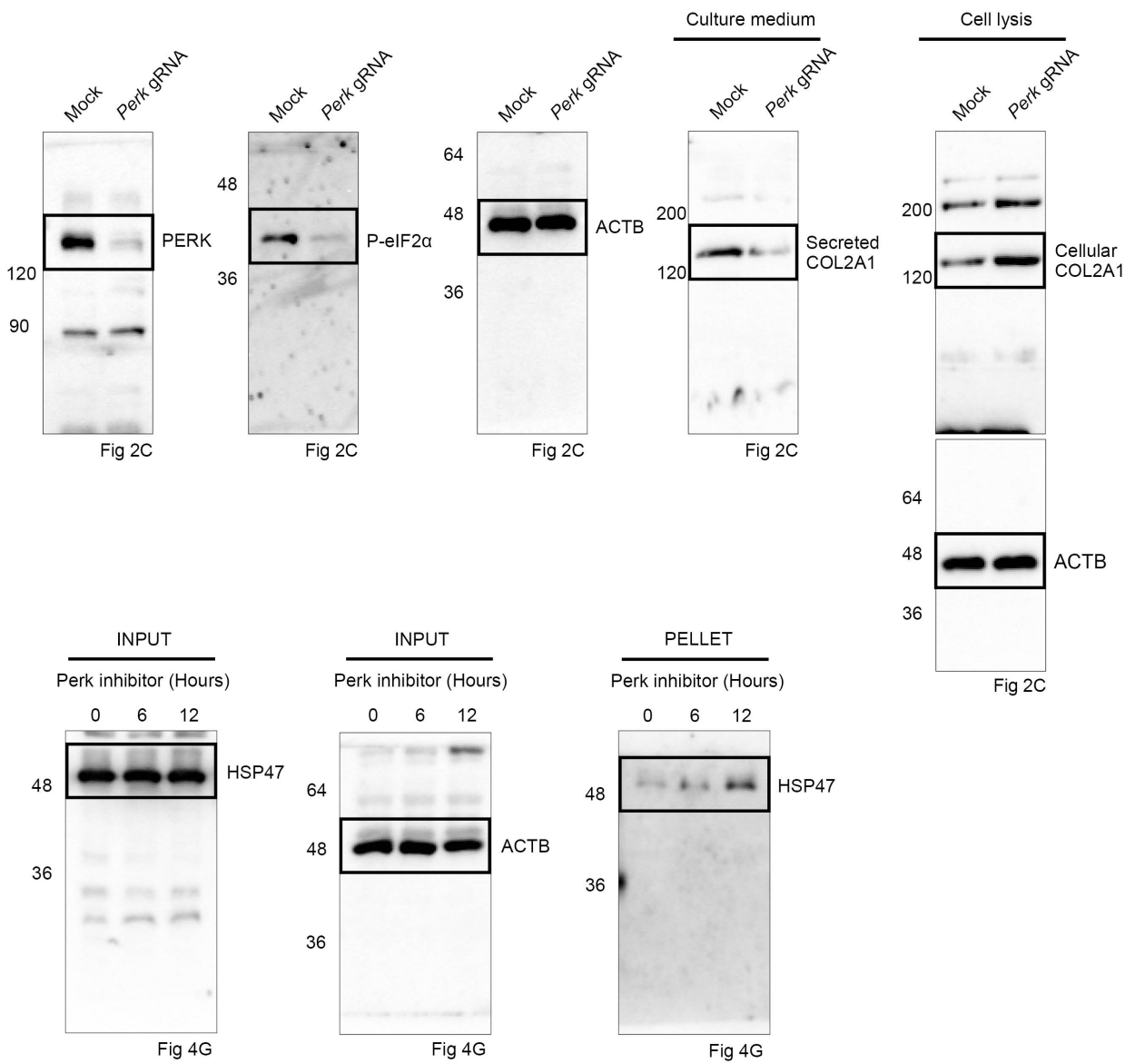
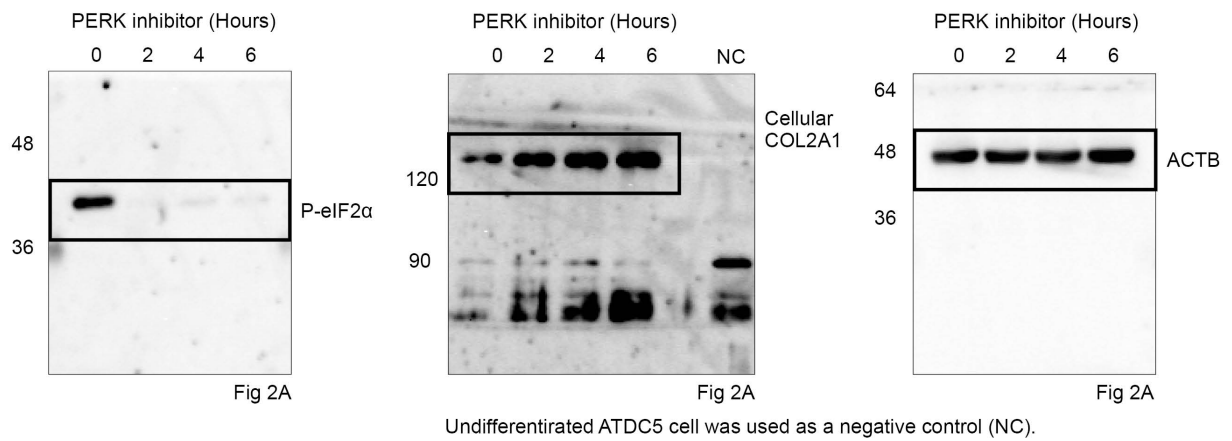
(B) Representative micrographs of immunohistochemistry for bromodeoxyuridine (BrdU) in tibial sections from wild-type or *Perk*^{-/-} mice at 16.5 dpc. The sections were counterstained using hematoxylin. Scale bar, 200 μ m. Ratio of BrdU-positive cells divided by the total number of cells was expressed as the mean \pm SD ($n = 4$ technical replicates, NS = not significant).

(C) Representative micrographs of TUNEL staining of tibial sections from wild-type or *Perk*^{-/-} mice at 16.5 dpc. Scale bar, 200 μ m.



ATDC5 cell treated with 2 μ g/ml tunicamycin was used as a positive control (PC).

Supplementary Figure 2. Uncropped images for immunoblots for Fig 1C.



Supplementary Figure 3. Uncropped images for immunoblots for Fig 2A, 2C and 4G.