

Figure S1. Characterization of BMSCs. (A) BMSCs presented a fibroblast-like morphology and closely spaced growth. (B) MTT assay showed BMSCs self-renewal and rapid proliferation. BMSCs potency was characterized based on their (C) Adipogenic (alizarin red stain) and (D) Osteogenic (oil red O) differentiation. BMSCs were identified through flow cytometric analysis which showed that the cells were (E) CD29 positive and (F) CD31 negative. BMSC, bone marrow mesenchymal stem cell.

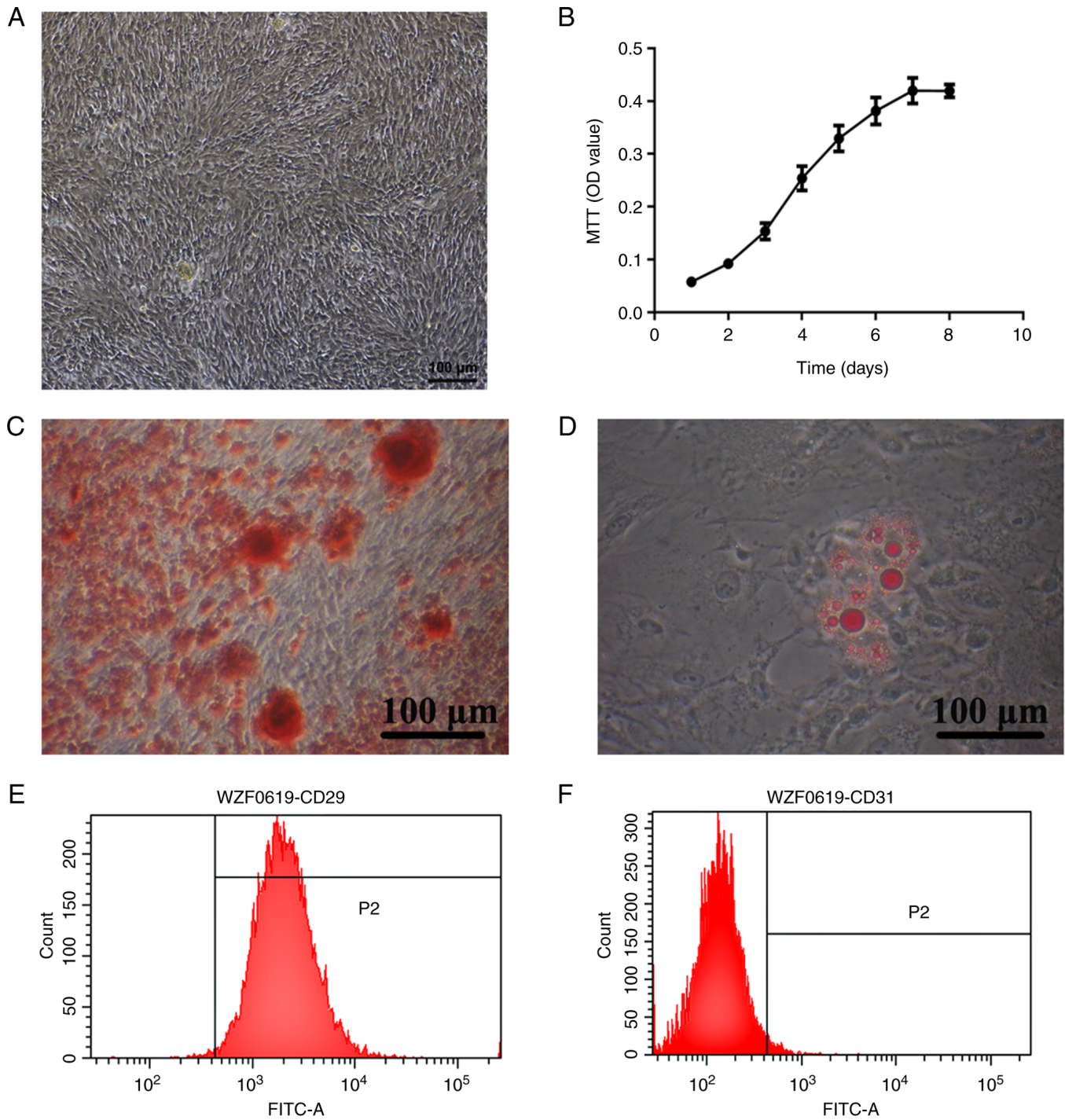


Figure S2. Histological analysis of normal femoral condyles joint used as a positive control. (A) Merged views of safranin-O staining. Higher-magnification views of (B) Safranin-O staining, (C) H&E staining, (D) Sirius red staining, (E) COL-I immunostaining and (F) COL-II immunostaining. The number for COL-I and COL-II in the positive was 6.51 and 6.23, respectively. COL-I, collagen type I; COL-II, collagen type II.

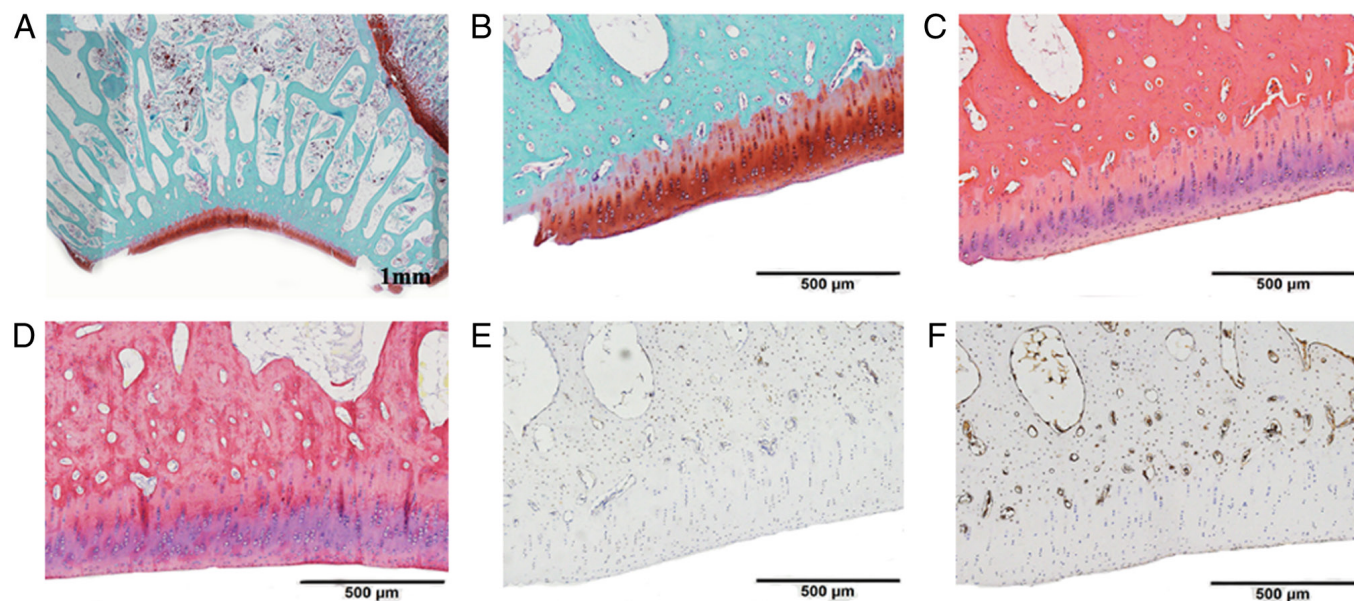


Figure S3. Comparison of the mean density of COL-I and COL-II immunostaining. There was no statistically significant difference in mean COL-I or COL-II immunostaining density between the F-PRF and L-PRF groups, but the values in both were markedly higher than those in the untreated group. \* $P < 0.05$  vs. untreated group. COL-I, collagen type I; COL-II, collagen type II; PRF, platelet-rich fibrin; L-PRF, lyophilized PRF; F-PRF, free PRF.

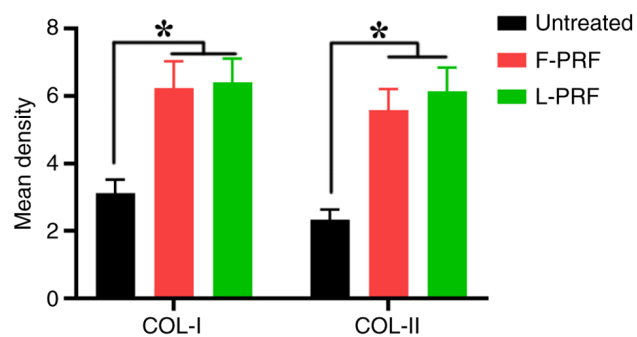


Figure S4. SEM imaging displayed the effects of PRF on the attachment of BMSCs. BMSCs showed good attachment on the surface of PRFs. BMSCs attached on the surface of (A and B) F-PRF and (C and D) L-PRF. SEM, scanning electron microscopy; BMSC, bone marrow mesenchymal stem cell; PRF, platelet-rich fibrin; L-PRF, lyophilized PRF; F-PRF, free PRF.

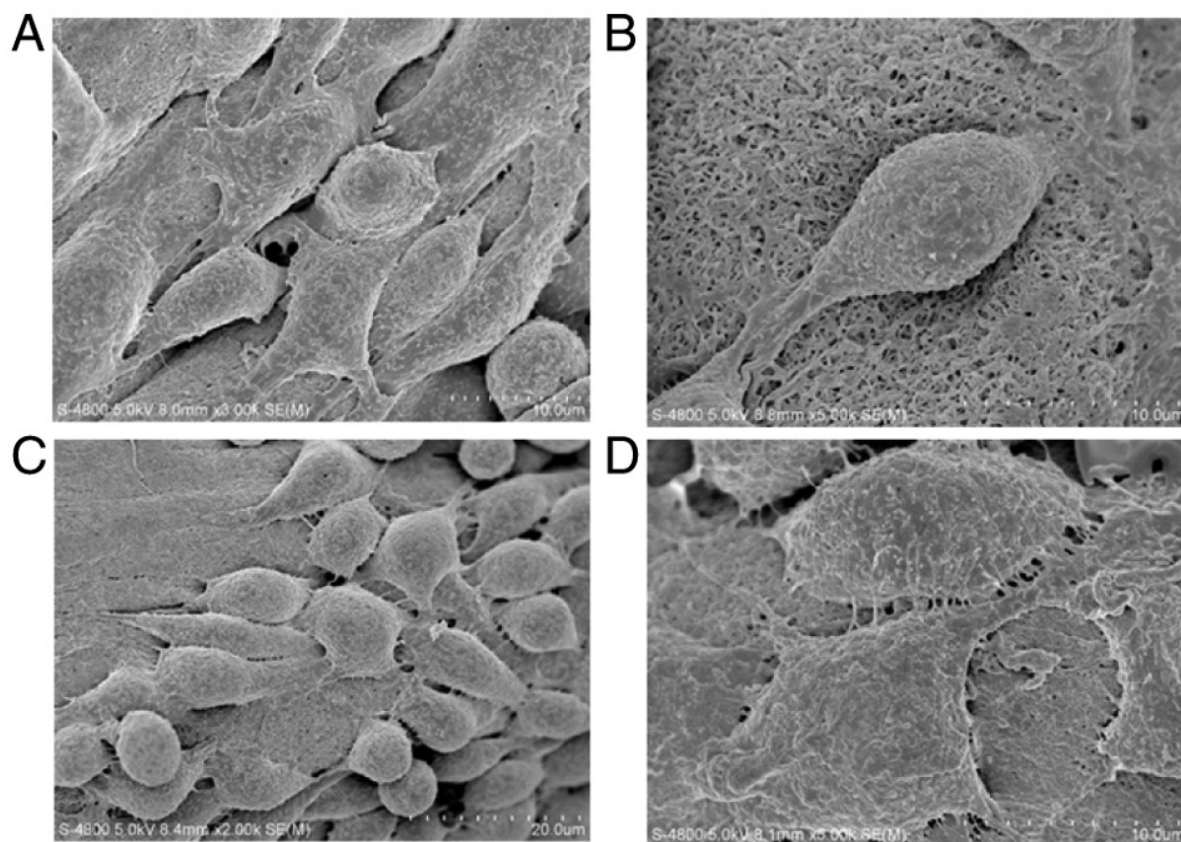


Figure S5. Effects of PRF on the proliferation of BMSCs. The proliferation of BMSCs was markedly increased by adding L-PRF or F-PRF at concentrations ranging from 0.2X PRF to 1X PRF to the culture medium. \* $P < 0.05$ . BMSC, bone marrow mesenchymal stem cell; OD, optical density; PRF, platelet-rich fibrin; L-PRF, lyophilized PRF; F-PRF, free PRF.

