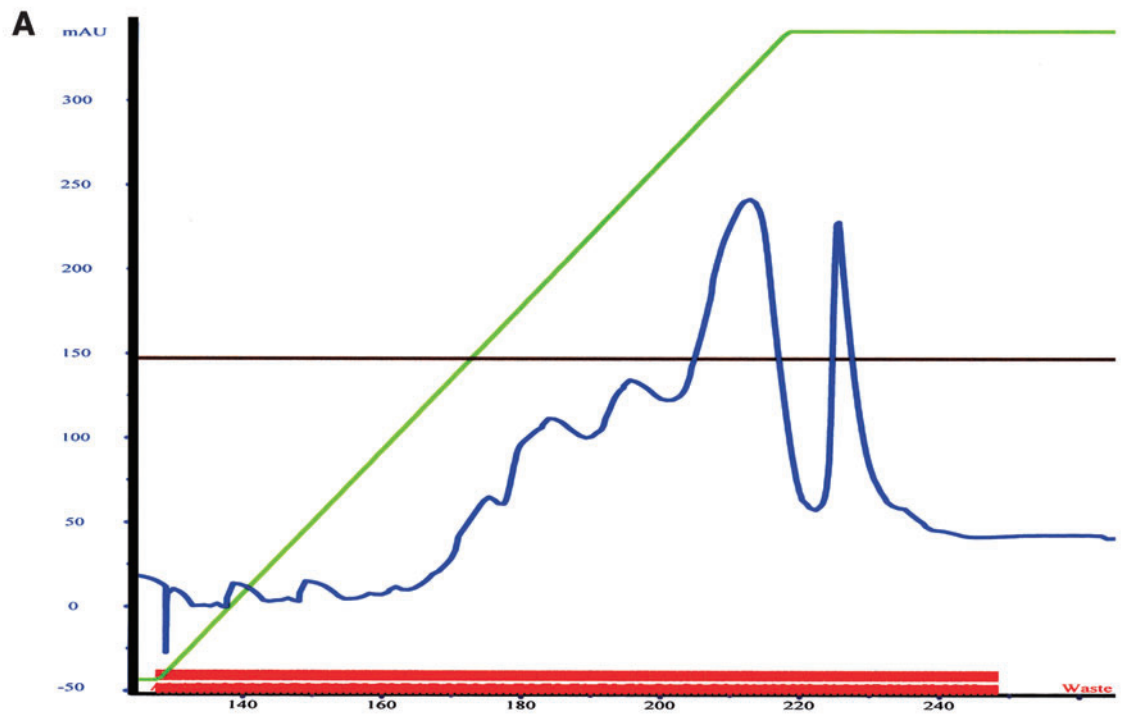
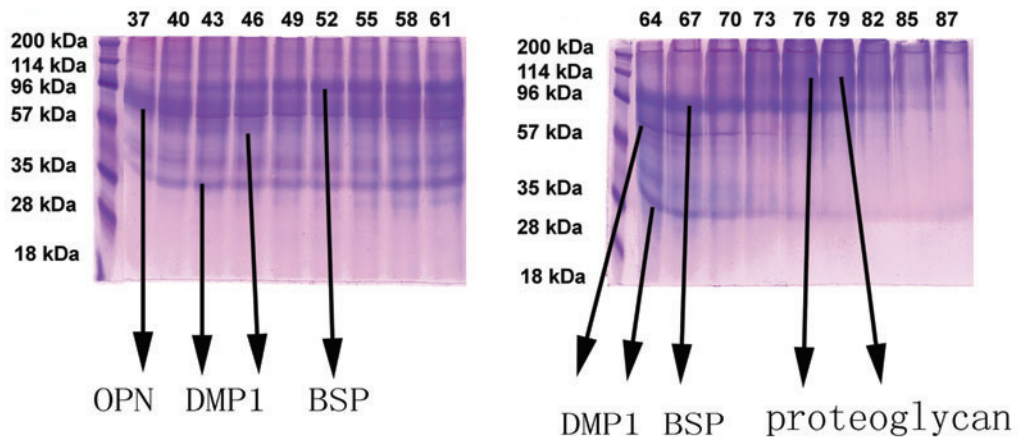


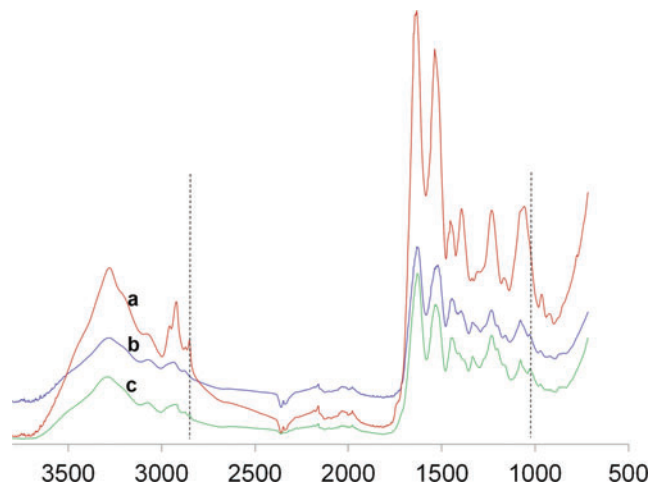
Supplementary Data



B Stains-All staining



SUPPLEMENTARY FIG. S1. (A) Chromatographic separation of noncollagenous proteins (NCPs) extracted from the long bone of rats. To identify the major acidic protein components in the bone extracts, the extracts were subjected to a Q-Sepharose ion-exchange (positive charge beads) chromatography with a gradient ranging 0.1–0.8 M NaCl in 6 M urea solution (pH 7.4). The peaks of the elution profile represent the total protein eluted from the chromatography at specific time points with relative concentration of NaCl. The Q-Sepharose column separated NCPs into 120 fractions. Each fraction contained 0.5 mL of 6 M urea solution. By using our method described in the Materials and Methods section, the NCPs from the bone matrix were mainly eluted into fractions from 37 to 87. (B) Stains-All staining was performed to evaluate the NCPs eluted from the ion-exchange chromatography. All the protein bands pointed by arrows in Stains-All staining figures were confirmed by using western immunoblotting with specific antibodies. The identity of dentin matrix protein 1 (DMP1) fragments, osteopontin (OPN), and bone sialoprotein (BSP) was confirmed by western immunoblotting analyses. Western immunoblotting data for each of these molecules are not shown here, and the method was clearly described in our previous studies (Zhang *et al.*, 2010, Oral Diseases)^{S1}.



SUPPLEMENTARY FIG. S2. Attenuated total reflectance Fourier Transform Infrared (ATR-FTIR) spectroscopy of the nanofibrous gelatin (NF-Gelatin) before and after surface modified with NCPs. (a) NCPs; (b) NF-Gelatin; (c) NF-Gelatin-NCPs. As marked with the dotted lines, the curve (c) includes the absorption peaks of both (a) and (b), indicating that NCPs have been successfully coupling onto the surfaces of the NF-Gelatin.

Supplementary Reference

- S1. Zhang, B., Sun, Y., Chen, L., Gunn, C., Guo, L., and Qin, C. Expression and distribution of SIBLING proteins in the pre-dentin/dentin and mandible of hyp mice. *Oral Dis* **16**, 453, 2010.