

Figure S1. Topical application of *Pg* in the subgingival area. A total of 10 μ l PBS or live *Pg* was topically applied onto the lingual side of the maxillary second molar into the subgingival area. *Pg*, *Porphyromonas gingivalis*.

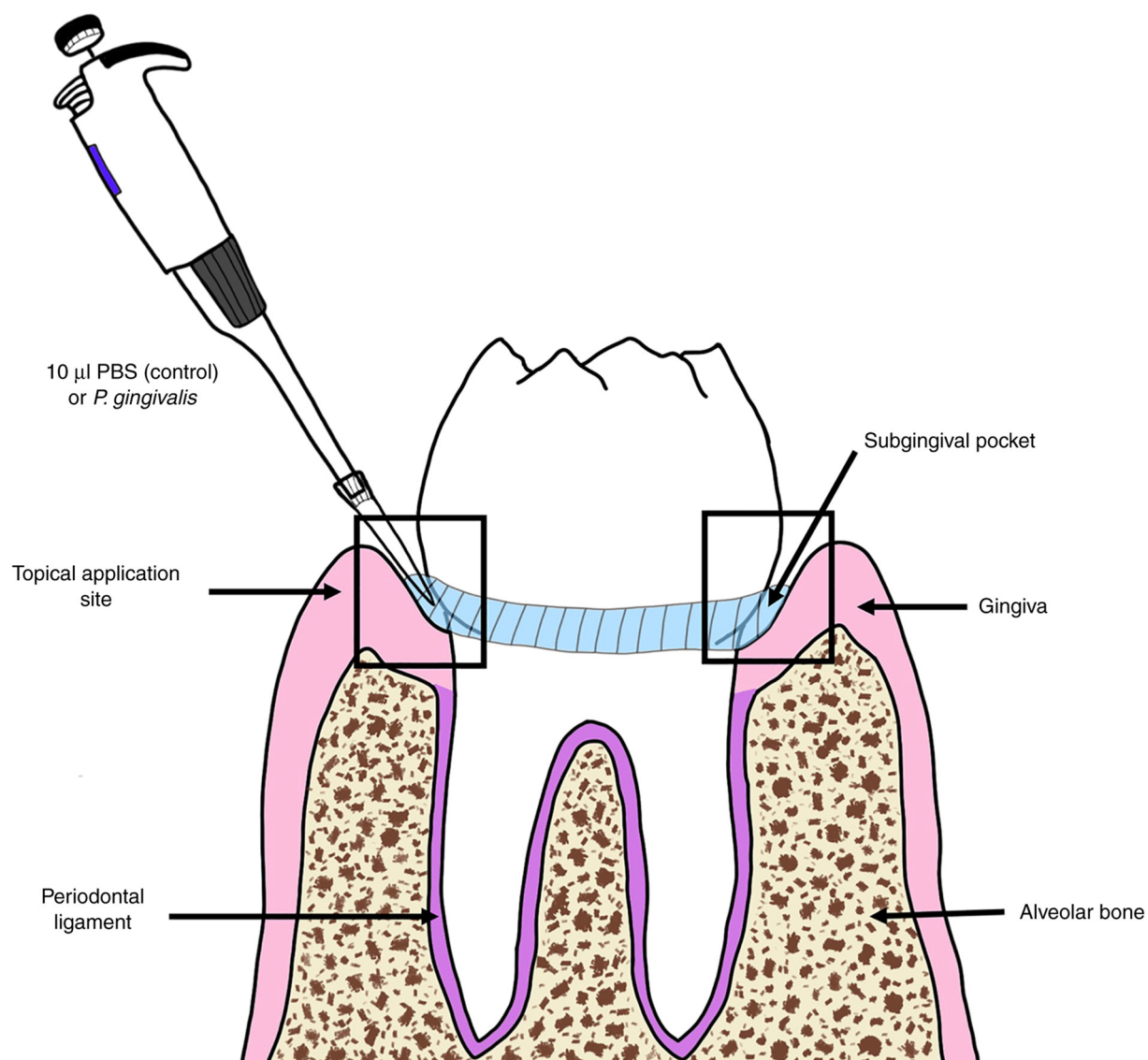


Figure S2. Topical *Pg* application directly into the gingival pocket induces systemic inflammation. Topical *Pg* application directly into the gingival pocket enhanced the serum levels of TNF- α , IL-13, IL-1 β , IL-17, KC and IFN- γ from mouse sera at 4 and 8 weeks after the final PBS or *Pg* inoculation, as shown in Fig. 4; however, the serum levels of IL-1 α , IL-2, IL-3, IL-4, IL-5, IL-6, IL-9, IL-10, IL-12, M-CSF, GM-CSF, VEGF, MCP-1 or RANTES were not altered by *Pg* inoculation when examined at (A) 4 weeks or (B) 8 weeks after the final PBS or *Pg* inoculation. Results represent the mean \pm SEM. *Pg*, *Porphyromonas gingivalis*; IL, interleukin; TNF- α , tumor necrosis factor- α ; KC, keratinocyte chemoattractant; IFN- γ , interferon γ ; M-CSF, macrophage colony-stimulating factor; GM-CSF, granulocyte-macrophage colony-stimulating factor; VEGF, vascular endothelial growth factor; MCP-1, monocyte chemotactic protein-1; RANTES, regulated upon activation, normal T cell expressed and secreted.

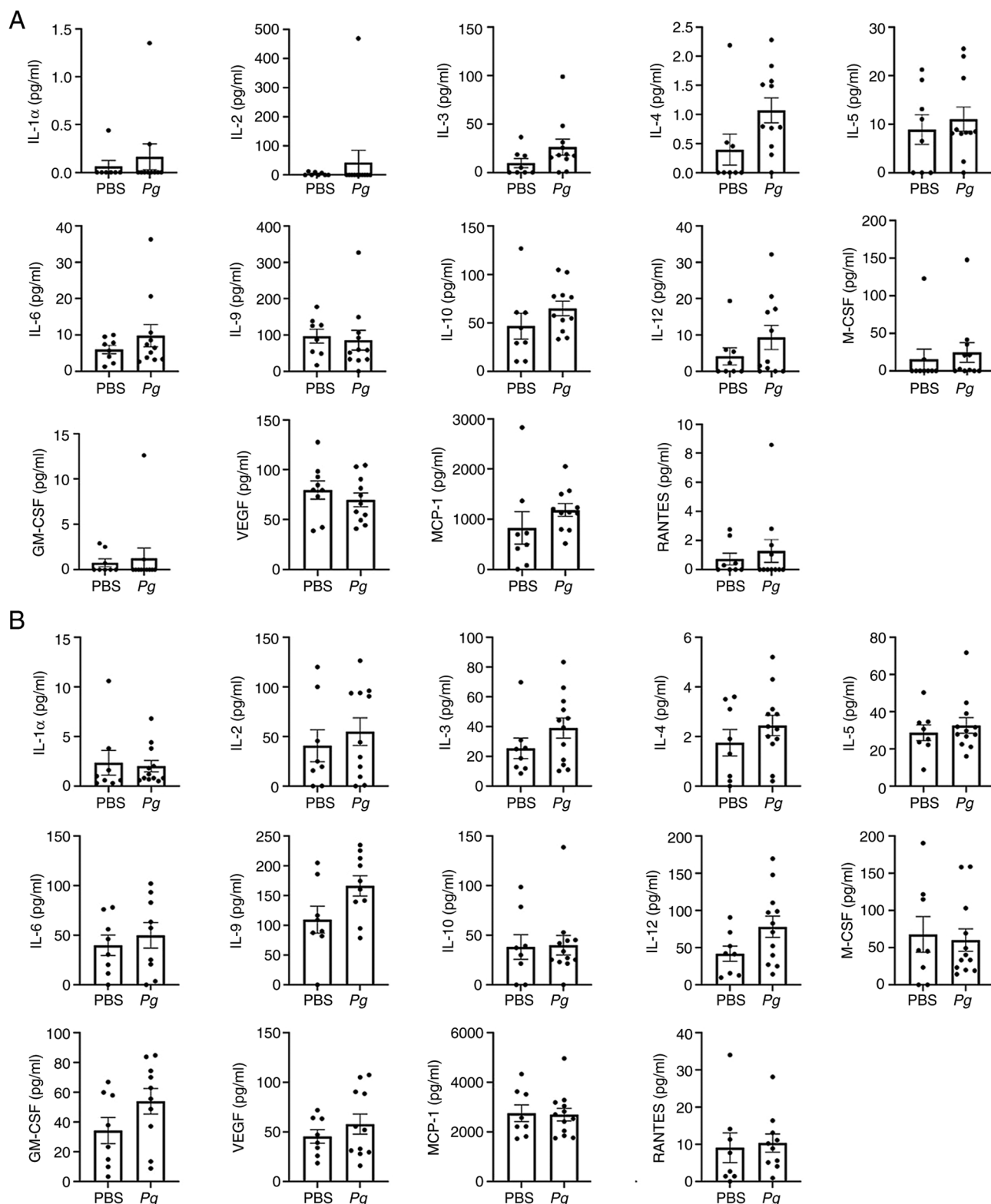


Figure S3. Purification of gingipain recombinant proteins by Ni-NTA affinity chromatography for polyclonal antibody production. (A) Gel image of the amplified Kgp and RgpB gene fragments. (B) Recombinant proteins were induced in and purified from *E. coli* by Ni-NTA affinity chromatography. Protein samples from un-induced (-), induced (+) with IPTG. After a few washings of the column with buffer solution, the bound target proteins (RgpB and Kgp) in the column were eluted by 0.1 to 0.5 M imidazole (Sigma-Aldrich; Merck KGaA) shown by lanes E to E5 on a SDS-PAGE followed by Coomassie blue staining. Kgp, lysine-gingipain; RgpB, arginine-gingipain B.

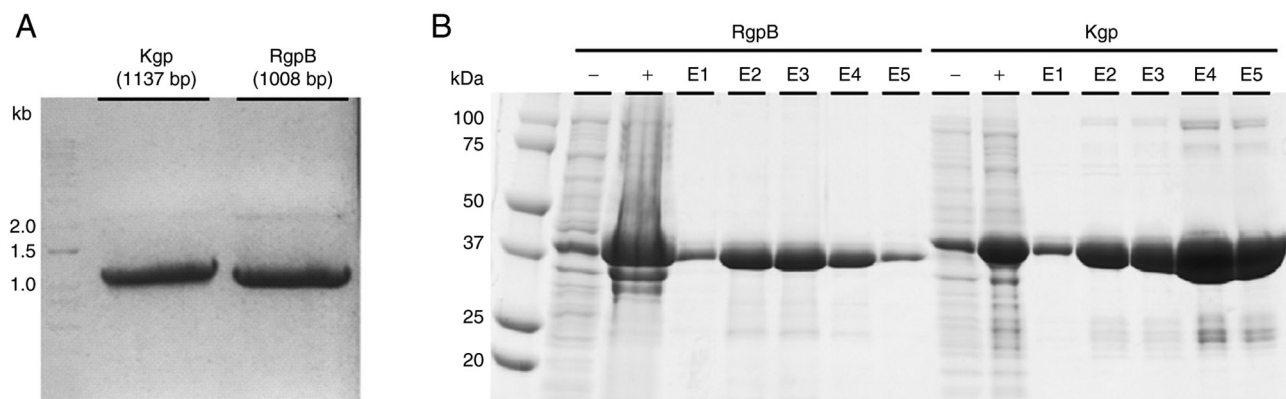


Figure S4. Hematoxylin and eosin, and Oil Red O staining of aortic roots of mice inoculated with PBS or *Pg* in the gingival sulcus for 5 weeks. There was no difference in histological features between the PBS and *Pg* inoculation groups. Scale bar, 200 μ m. AW, aortic wall; AL, aortic leaflet; L, lumen.

