

Table S1. Distribution of experimental animals.

Experimental design	Observation period	Number of animals	Number of teeth (n)
Immediate replantation	1d	5	10
	3d	5	10
	5d	5	10
	1w	5	10
	2w	5	10
	4w	5	10
Intentionally-delayed replantation	1w	5	10
	2w	5	10

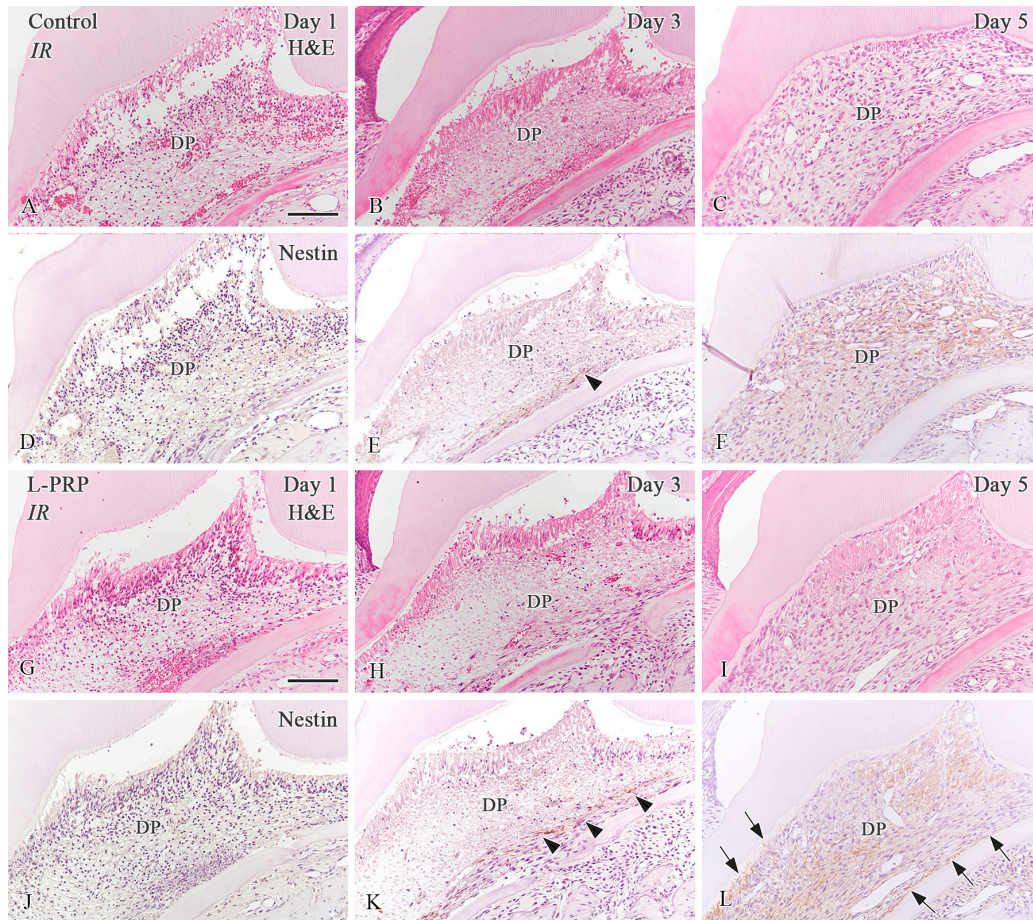


Figure S1. Hematoxylin–eosin (H&E) staining (A–C and G–I) and Nestin immunohistochemistry (D–F and J–L) in the samples from the CG (A–F) and EG (G–L) at days 1 (A, D, G, J), 3 (B, E, H, K) and 5 (C, F, I, L) after IR. (A, G) Expanded inflammatory reactions are observed in the dental pulp of the CG and EG on day 1 after the operation. (D, J) Nestin expression is absent in the odontoblast layer of samples from the CG and EG during this observation period. (B, H) The inflammatory cells decreased in number, but the pulpal tissue continued to show degenerative features in both groups. (E, K) Some Nestin-positive filamentous structures are observed in the pulpal floor (arrowheads), particularly in the EG. (C, I) The dental pulp begins to recover its characteristic features, including the reappearance of blood vessels. (F) Nestin-positive filamentous structures are observed in the central pulp of the CG. (L) Nestin-positive newly differentiated odontoblast-like cells (arrows) are present in the root and pulpal floor of some samples from the EG. DP: Dental pulp. Scale bars: 100 μ m (A–L).

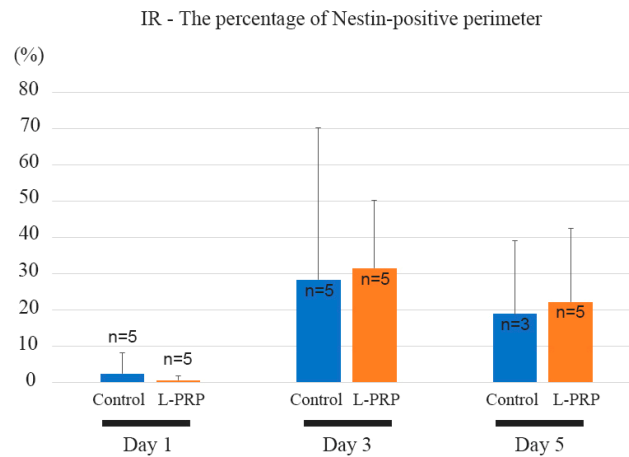


Figure S2. The percentage of the Nestin-positive perimeter. A positive trend in the EG was observed at days 3 and 5 after IR. No significant differences were observed between the groups or at any time point.

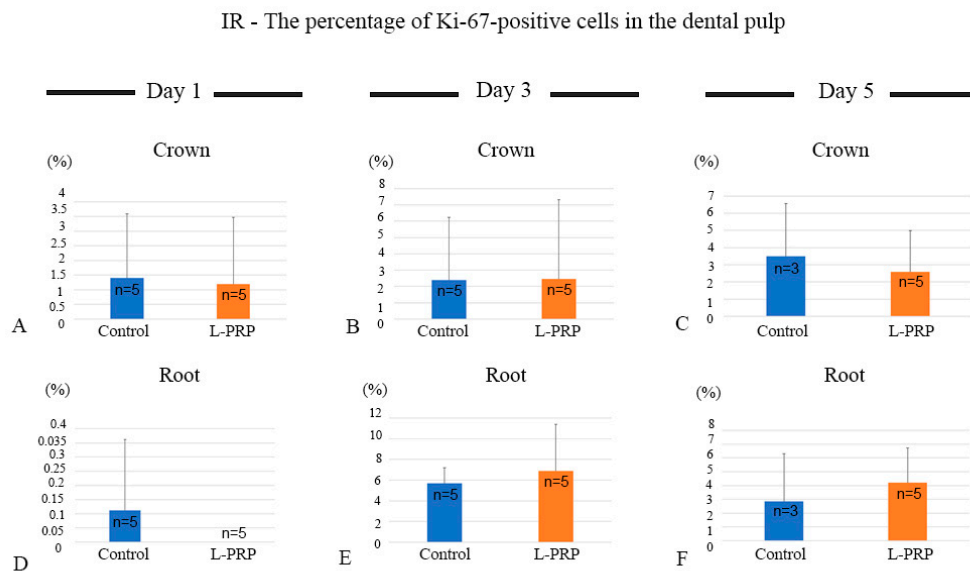


Figure S3. The proliferative activity of pulpal cells in the coronal (A–C) and root (D–F) pulp in the CG and EG following IR at days 1 (A, D), 3 (B, E), and 5 (C, F). (A, D) At day 1, the number of proliferative cells slightly decreased in the EG, particularly in the root pulp. (B, E) No differences are observed between groups in the crown and root pulp at day 3. (C, F) The coronal pulp appears to show higher proliferation activity in the CG, while it is slightly higher in the root pulp in the EG at day 5. No significant differences were observed between the groups or among the observation points.

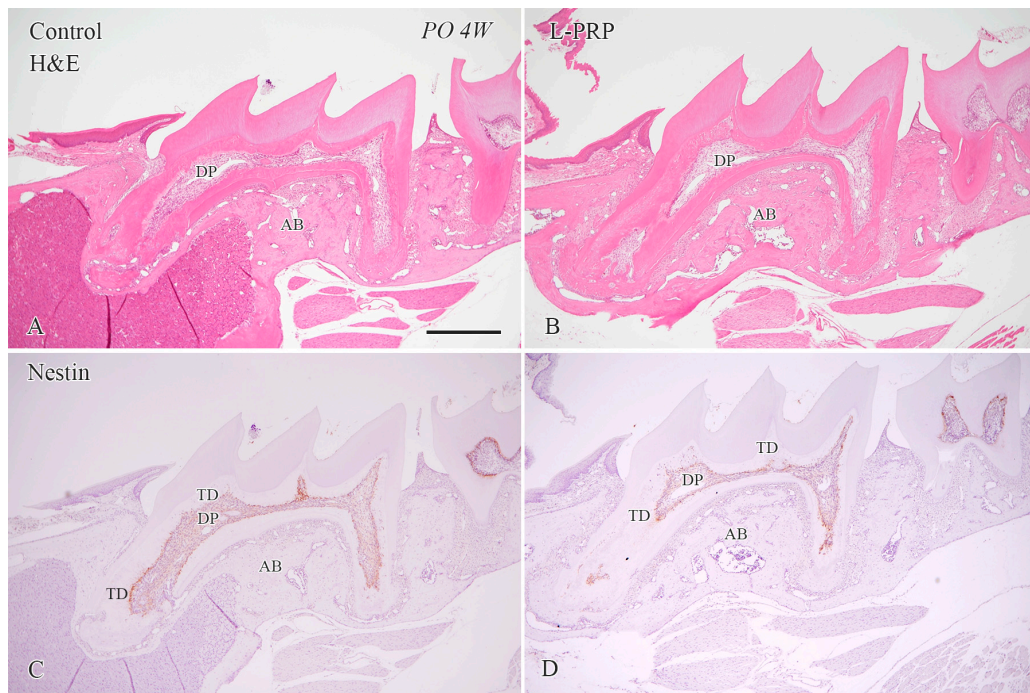


Figure S4. H&E staining (A, B) and Nestin immunoreactivity (C, D) in the samples from the CG (A, C) and EG (B, D) at week 4 after IR. (A, B) Continued deposition of hard tissue is observed in the pulpal space of both groups. (C, D) Healing patterns, such as tertiary dentin and/or bone-like tissue in the dental pulp, are evident by Nestin immunostaining of the CG and EG. AB: Alveolar bone, DP: Dental pulp, TD: Tertiary dentin. Scale bars: 500 μ m (A–D).