

Figure S1. The morphology of embryos by hypertonic treatment. (A) 2-cell stage embryos after treatment with several hypertonic conditions. (B) *In vitro* development of embryos after 2-cell EP under constant voltage (30V). (C) Those under constant current (0.20A). Scale bars, 100 μm .

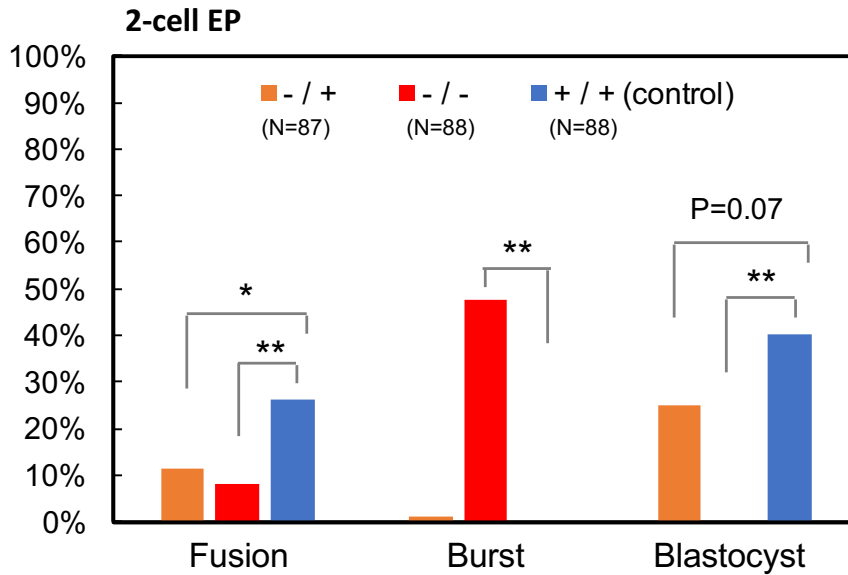
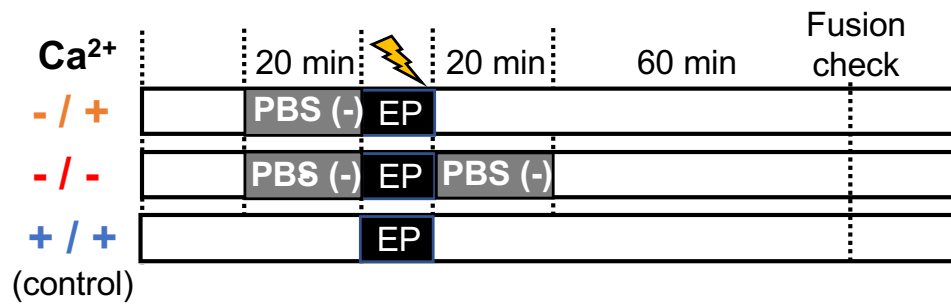
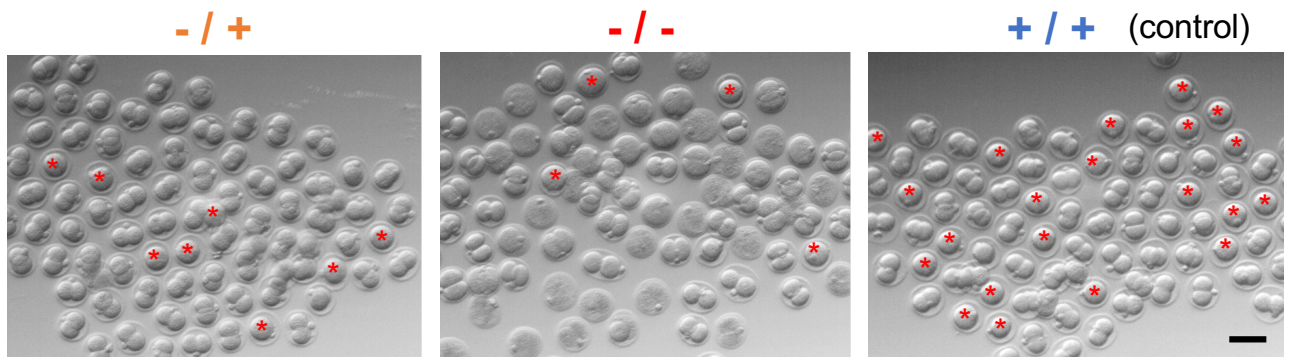
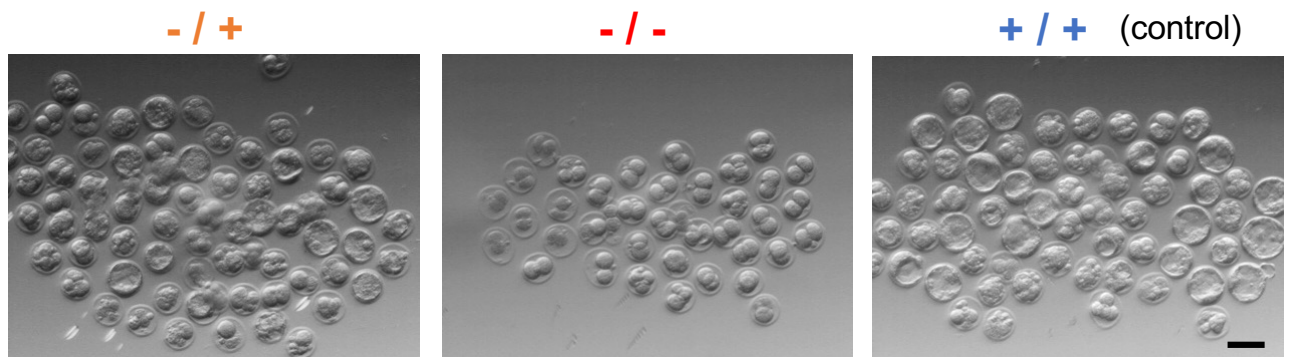
A**B****C**

Figure S2. Effects of PBS(-) treatment on blastomere fusion and embryonic development of 2-cell EP. (A) Fusion, burst, and development (blastocyst) rate by 2-cell EP. (B) Morphology of 2-cell EP embryos. Asterisks indicate fused embryos. (C) Morphology of 2-cell embryos in 3 days of culture post-EP. N indicates the number of 2-cell stage embryos used for the analysis. *P < 0.05, **P < 0.01 (compared with control). Scale bars, 100 μ m.

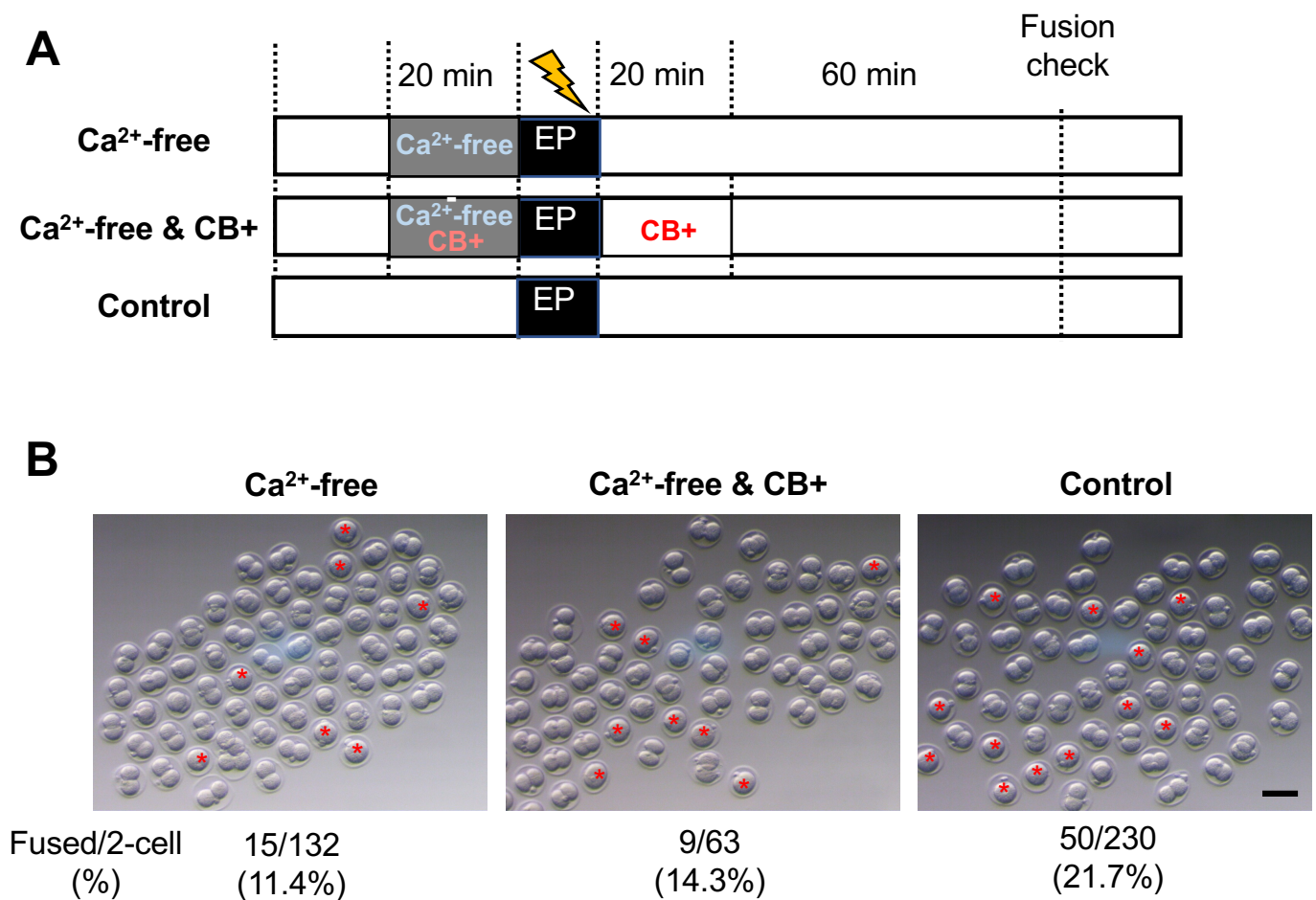


Figure S3 The combined Ca²⁺-free and CB treatment does not have a better effect on blastomere fusion than the only Ca²⁺-free treatment. **(A)** Experimental timeline of Ca²⁺-free and CB treatment. **(B)** Morphology of 2-cell EP embryos. Asterisks indicate fused embryos. Scale bars, 100 μ m.