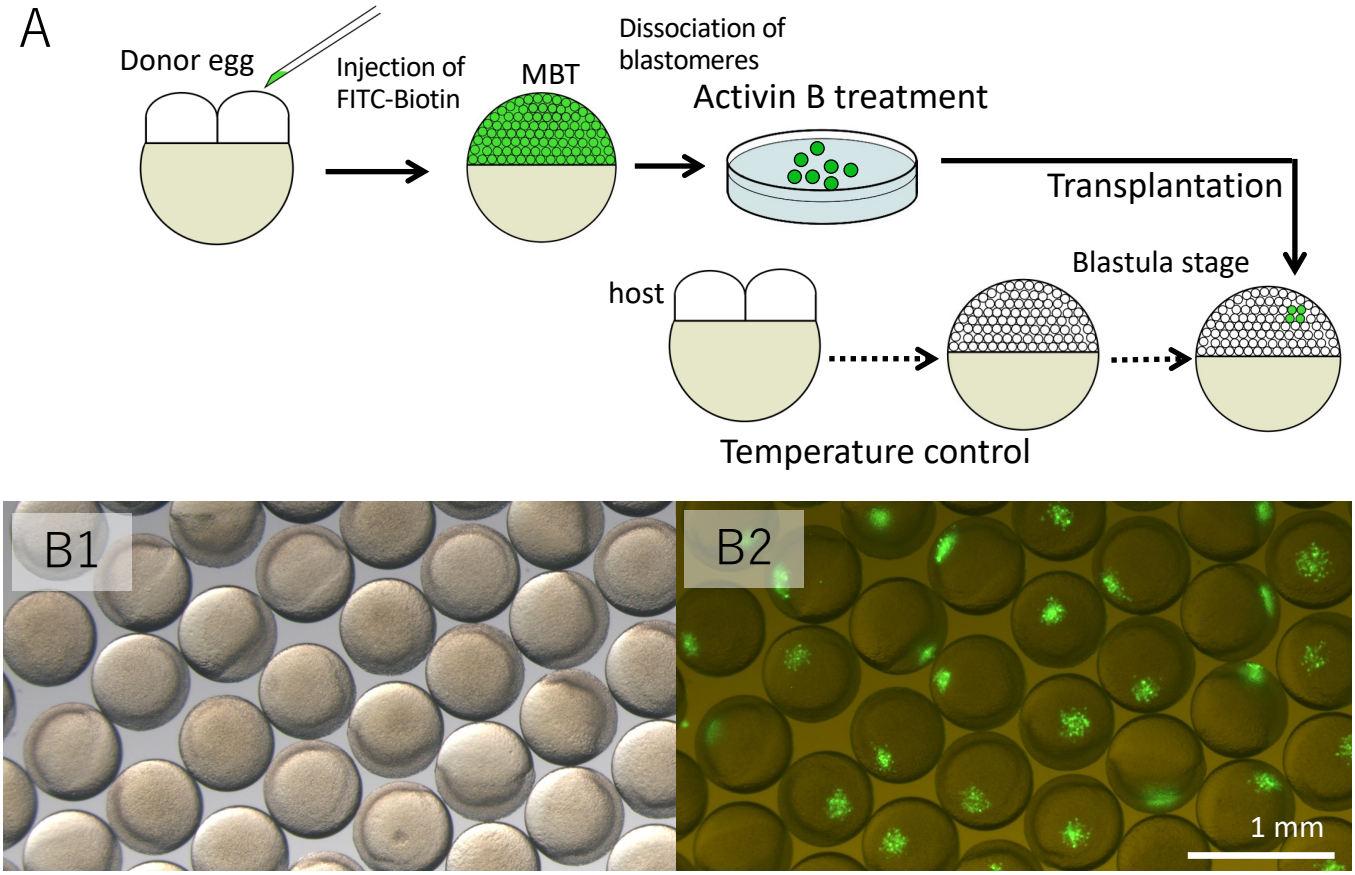

Fig. S1. Experimental representation of the transplantation of blastomeres treated with rhAct B treatment and the external appearances of transplanted embryos at the dome stage. Experimental diagrams of transplantation (A). External appearances of zebrafish embryos with blastomeres in bright field (B1) and fluorescent views of FITC by G-excitation (B2). Scale indicates 1 mm.

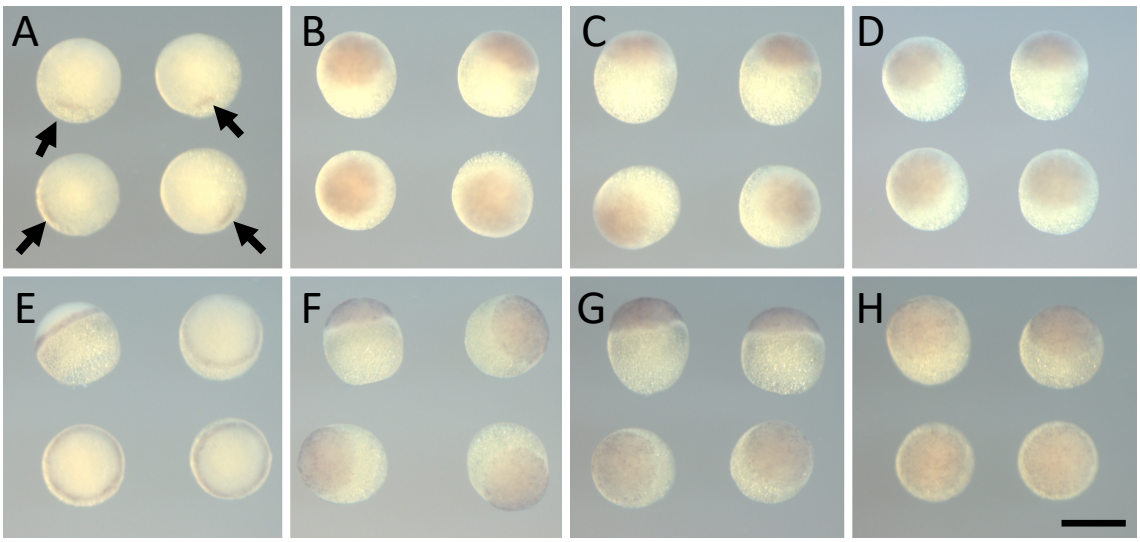

Fig. S2. *goosecoid* (*gsc*: A-D) and *no tail* (*ntl*: E-H) expression detected by whole mount *in situ* hybridization at 50% epiboly stage in zebrafish control and experimental embryos. In control, rhodamine solution was injected into the blastoderms at the mid-blastula stage (A and E), and, in experimental embryos, rhAct A (B and F), rhAct B (C and G), or rhAct AB (D and H) were injected. Arrows indicate normal *gsc* expression in a part of marginal region (A). Normal *ntl* expression are observed marginal part of blastoderm (E). Note that all embryos injected with rhActs overexpress *gsc* and *ntl* in the whole blastoderm. Scale bar indicates 1 mm.

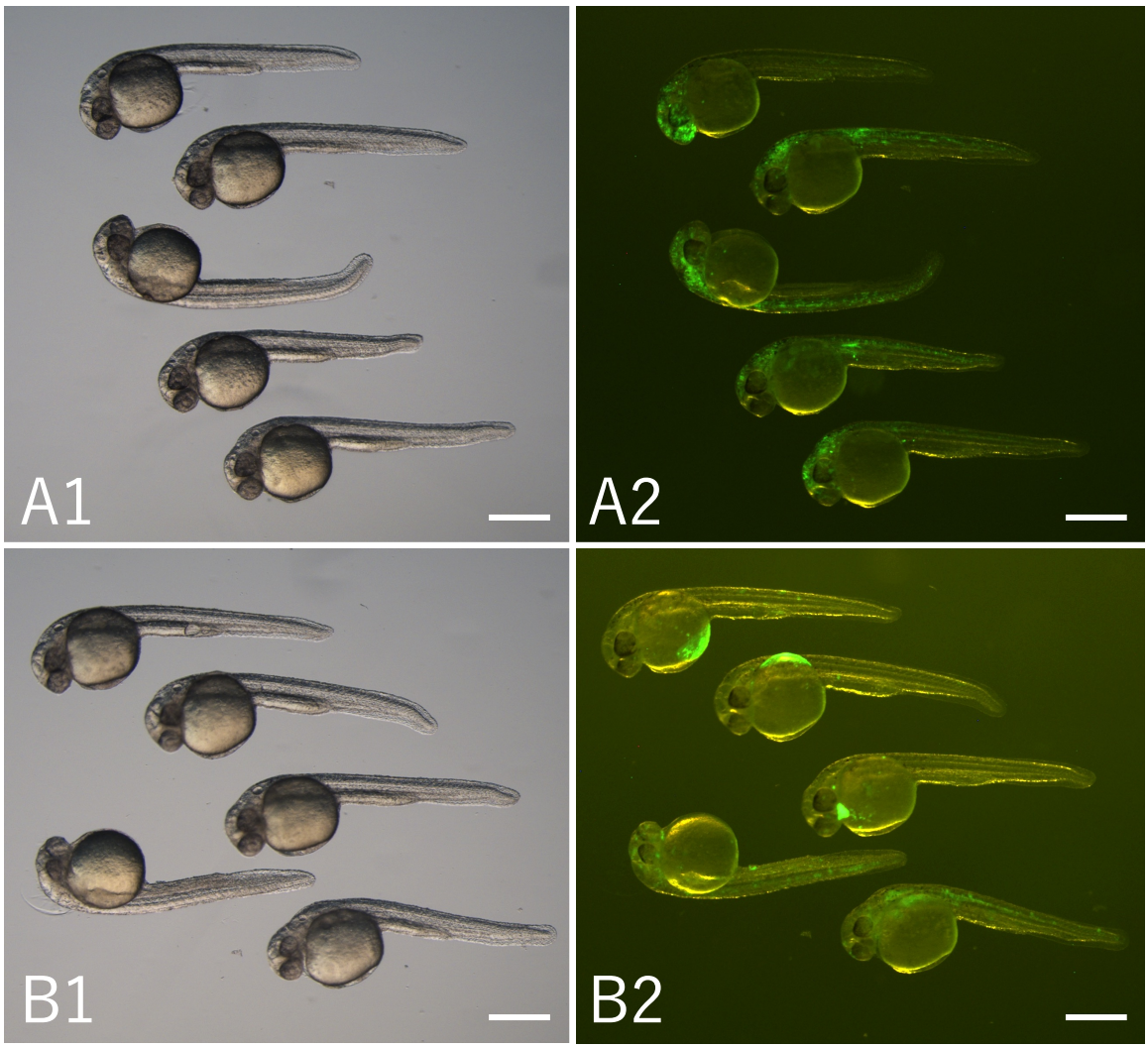

Fig. S3. External appearances of embryos developed from zebrafish blastula embryos transplanted with dissociated blastomeres from zebrafish (A) and goldfish (B) without rhAct B treatment. Bright field (A1 and B1) and fluorescence view (A2 and B2). Scale bars indicate 500 µm.