## **Supplementary Figures and Tables**

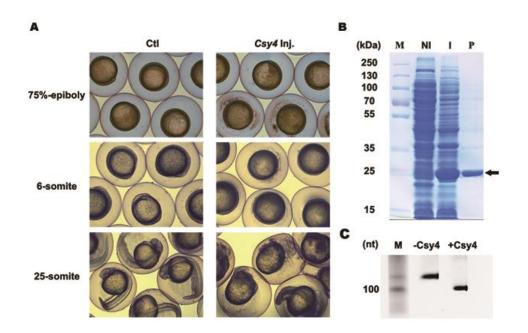


Figure S1. Injection of *Csy4* mRNA results in severe malformation in zebrafish and expression of Csy4 protein. (A) Injection of *csy4* mRNA in zebrafish lead to serious malformation at bout 25-somite stage. Inj. is short for injection. (B) 10% SDS-PAGE analysis of IPTG-induced (I=induced) or not induced (NI= not induced) Csy4 expression. Black arrow indicates purified Csy4 protein (P=purified) with Ni-NTA affinity resin. (C) Pre-gRNAs can be cleaved

by expressed Csy4 protein in vitro. Products were separated with 12% urea denaturing PAGE.