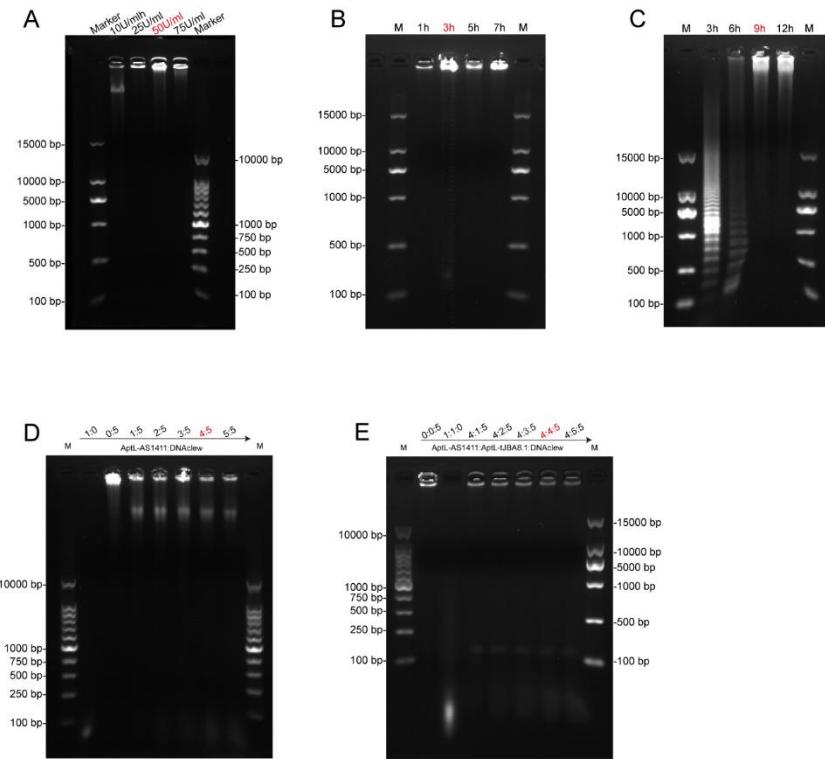
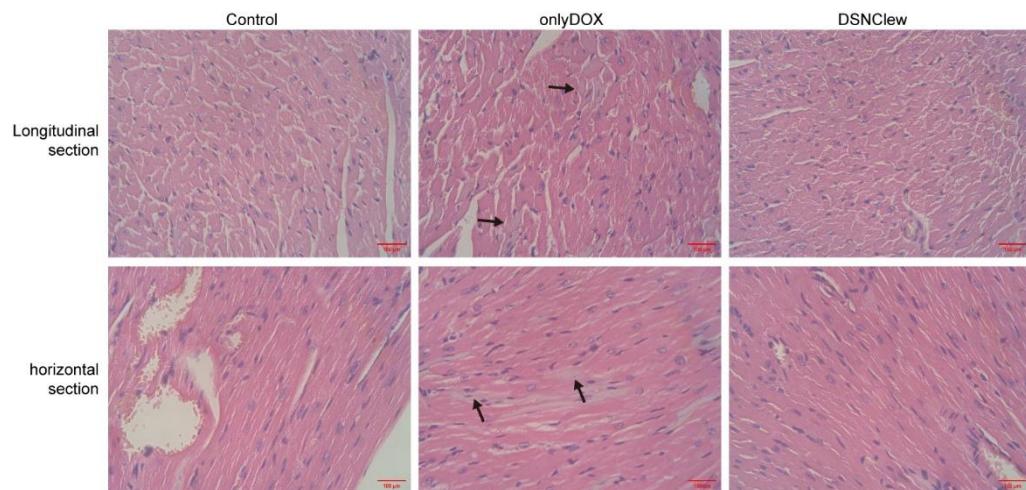


**Figure S1.** Wound healing experiments of HEC-1A and Ishikawa. (A) Wound healing experiments of knocking down SRC versus DOX alone. (B) Wound healing experiments of DOX alone versus using DSNClew.



**Figure S2.** Optimization of Key Enzyme Parameters for DSNClew Synthesis. (A) Different concentrations of T4 DNA ligase. (B) Different incubation times of T4 DNA ligase. (C) Exploration of the optimal incubation time for Phi29 DNA polymerase. (D) Optimization of the mixing ratio of DNAclew and AptL-AS1411. (E) Optimization of the mixing ratios of AptL-AS1411, AptL-tJBA8.1, and DNAclew.



**Figure S3.** HE staining of cardiac tissue, black arrow pointing to edematous tissue.

**Table S1.** Sequences used in this paper.

| Name    | Sequences                                   |
|---------|---|
| Padlock | CTGATAAGCTATCCTAGTCGAACTTGTAGCATCATTCTCCGAT |

|              |   |
|--------------|---|
|              | TCCGTTGCCGTGCCTGCAACATCAGT  |
| Primer       | TAGCTTATCAGACTGATGTTGC  |
| AptL-AS1411  | CATCATTCTCCGATTCCGTTTTGGTGGTGGTTGGTG                                    |
| AptL-tJBA8.1 | GCAGCAGCGTAAAGGGGGTGTTCGCGGTGGAGTGC<br>GCGTGCTGCTTTCTGATAAGCTATCCTAGTCG |
| SRC-sh1      | GAAGAGCAAGCCCAGGAU  |
| SRC-sh2      | GCUUGUGGGUGAUGUUUGA   |
| SRC-sh3      | GUUCAGAUUGUCAACAAC  |
| OH-siSRC-1   | AUCCUUGGGCUUGCUCUUCTGCCGTGCCTGCAACATCAGT                                |
| OH-siSRC-2   | UCAAACAUCAUCACCCACAAGCTGCCGTGCCTGCAACATCAGT                             |
| OH-siSRC-3   | GUUGUUGACAAUCUGGAGCTTGCCTGCAACATCAGT                                    |
| SRC-F        | GGCTCCAGATTGTCAACA  |
| SRC-R        | GCTTGCAGATCTGTAGT   |
| β-actin-F    | CACCATTGGCAATGAGCGGTTTC   |
| β-actin-R    | AGGTCTTGCGGATGTCCACGT   |