Supplementary

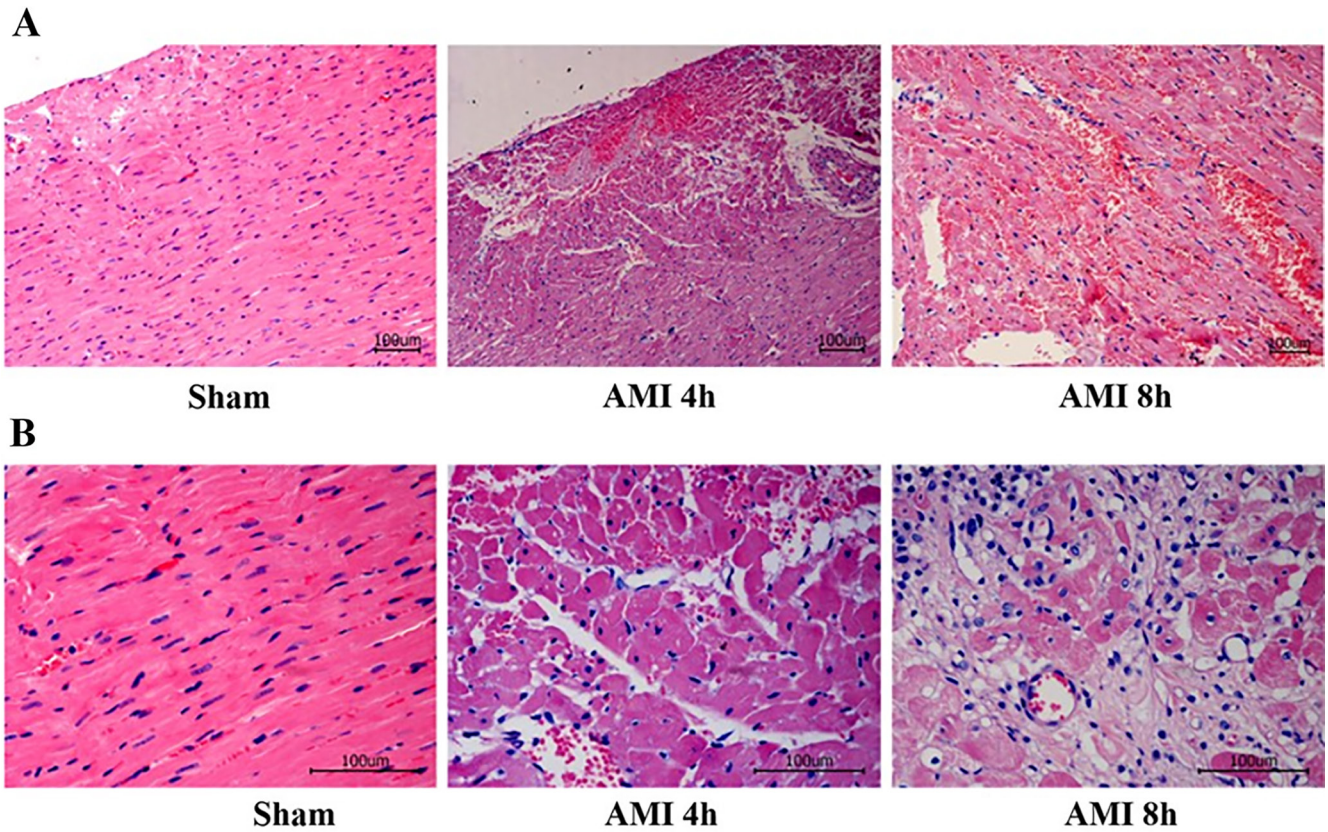

Figure S1 Myocardial tissues of rats stained with H&E. The myocardial tissues of rats in each group were stained with H&E. In the sham-operated group, the myocardial cells were arranged neatly, and the nucleus was clearly visible, and the cell membrane was intact, and only a few inflammatory cells could be observed. While, in the AMI model group, the cross-sectional myocardial tissues of the infarct regions showed the characteristics of necrosis and inflammatory infiltration, manifested as its structural disorder, interstitial enlargement, visible vacuoles in the cytoplasm, pyknotic and hyperchromatic nuclei, hyperemia, and leukocyte infiltration. And with the longer ligation time, the above changes are more obvious. The results of H&E staining indicated that the LAD coronary ligation surgery had successfully resulted in myocardial ischemia and infarction (A: ×100; B: ×400). H&E, hematoxylin and eosin; AMI, acute myocardial infarction; LAD, left anterior descending coronary artery.

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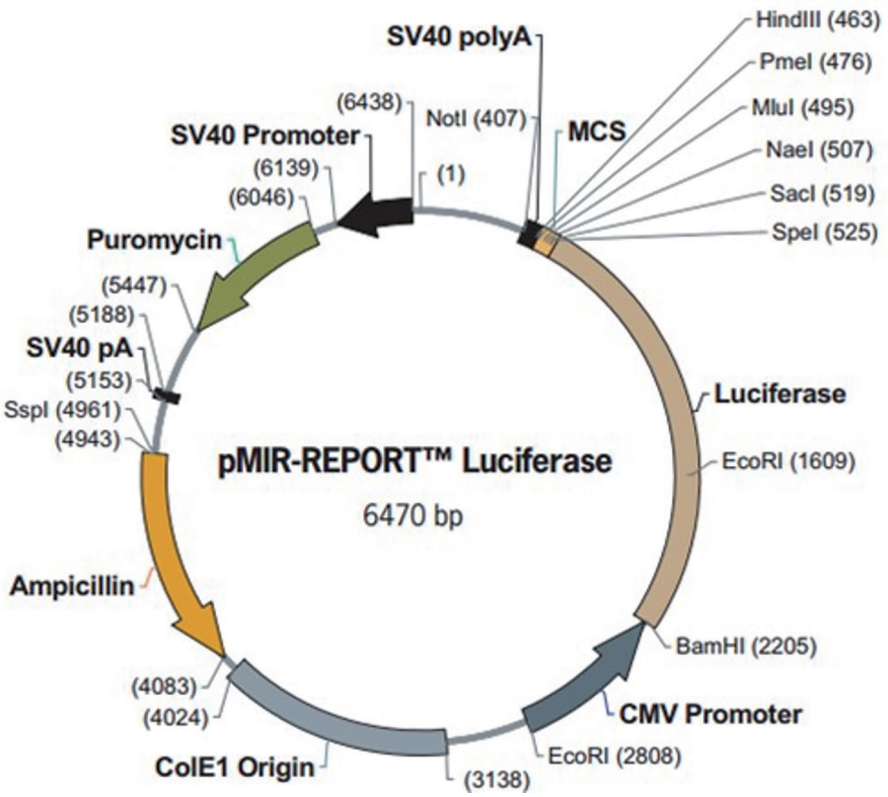

Figure S2 Schematic diagram of the plasmid containing the pMIR-report luciferase reporter gene.

Table S1 Sequences of the primers used for the ERK1/2 luciferase reporter assay

Gene	Sequence (5'-3')
ERK1/2-WT	TTTCACCTTAATTCTTTTGATGTTGTA
ERK1/2-MUT	TTTCACCTTATAAGAAATGATGTTGTA

For the WT sequence, the part in bold is the complementary binding site of miR-186-5p with the target gene, and the part in bold for the MUT sequence is the mutation site.

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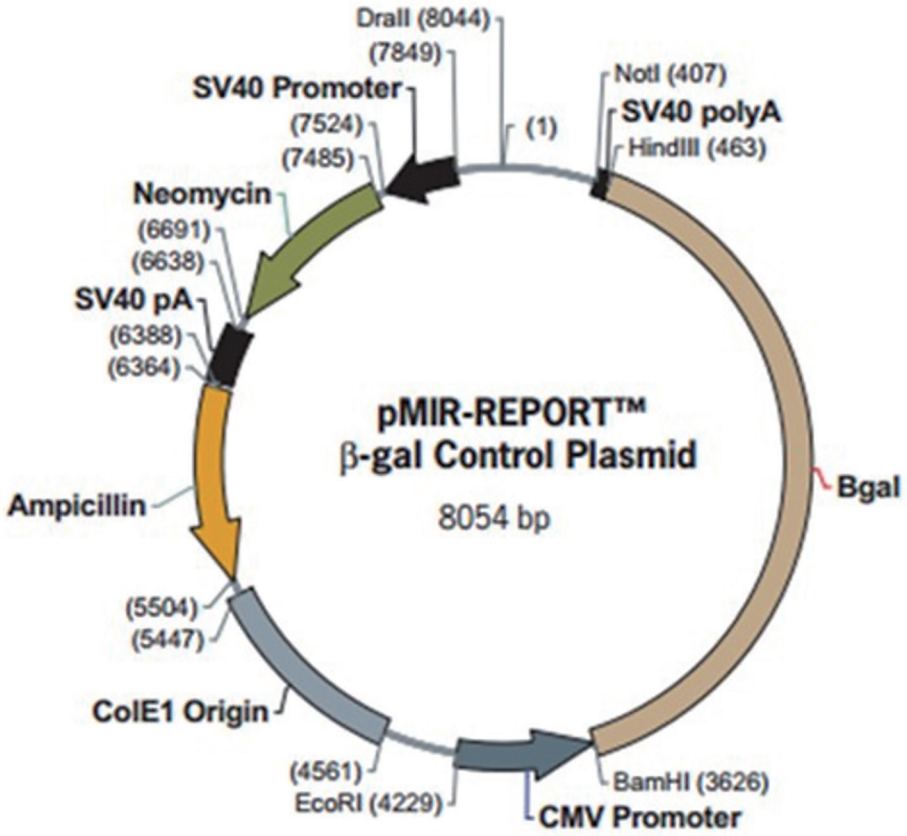

Figure S3 Schematic diagram of the β-gal reporter plasmid.

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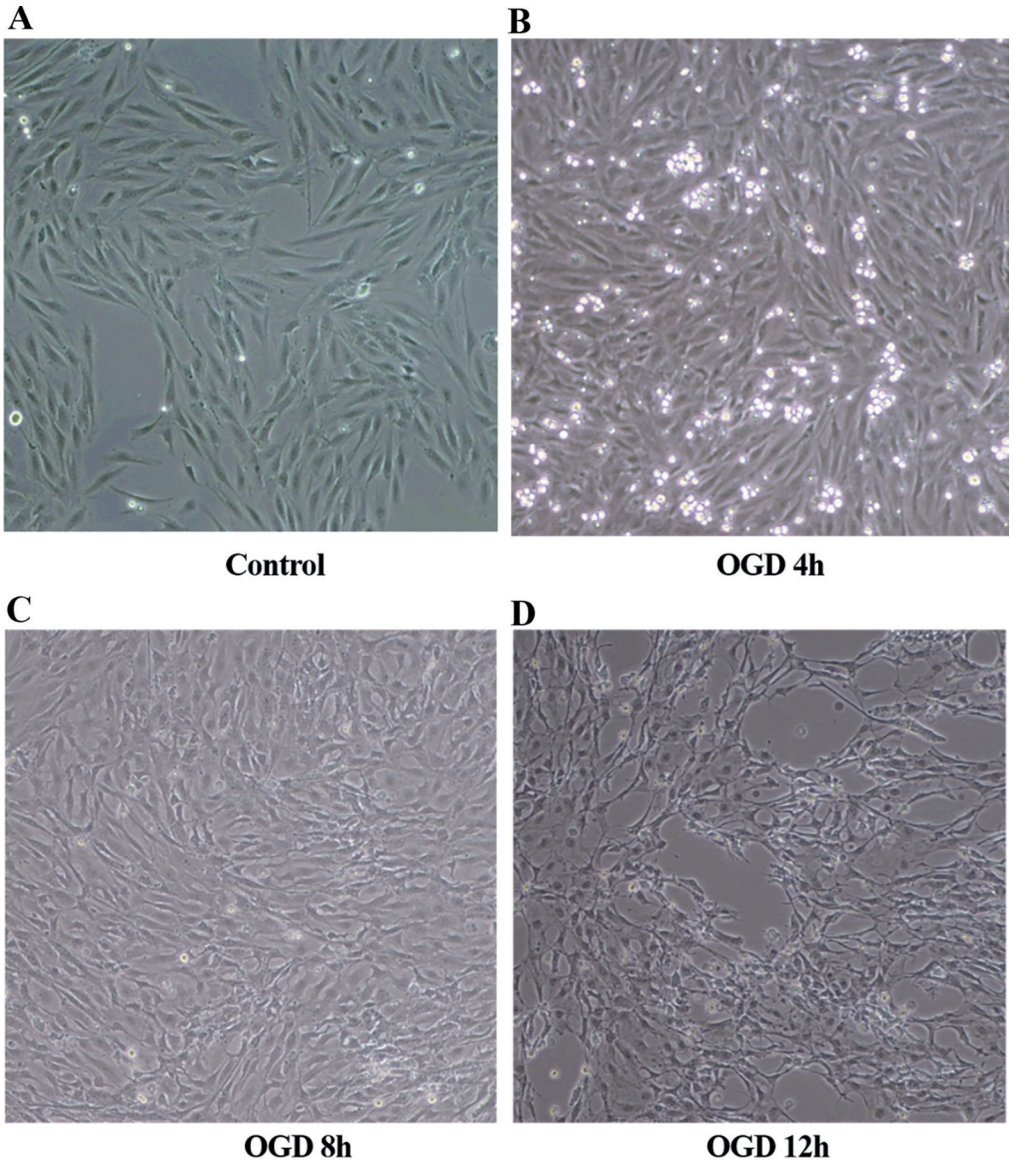

Figure S4 H9c2 cells under a light microscope (×100). We observed the H9C2 cells and found that the cells in the Control group were fusiform with regular morphology and well-adhered to the wall. Besides, they had a clear nucleus and abundant cytoplasm. Conversely, some of the OGD-treated H9C2 cells were detached from the culture plate, and they were shriveled and branched. These cells also showed fragmentation of the nucleus, reduction of the cytoplasm, and a reduced refractive activity; the changes were more pronounced with an increase in the duration of the OGD treatment. OGD, oxygen-glucose deprivation.

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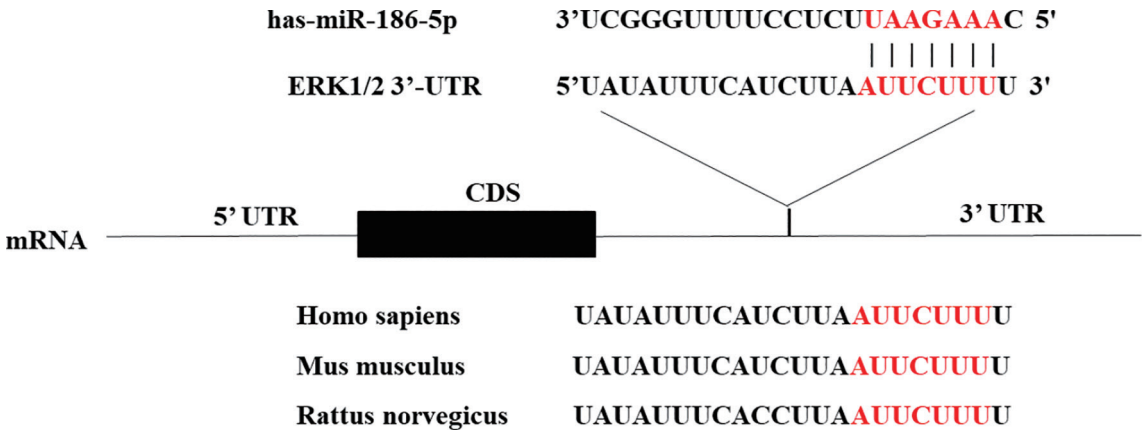

Figure S5 Binding sites of miR-186-5p and the ERK1/2 3'-UTR region.

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