**The inhibition of miR-25 ameliorates cardiac fibrosis and inflammation through the restoration of KLF4 expression**

**Supplementary table 1. Echocardiographic parameter at 4 weeks tail vein injection with AAV9 EGFP and AAV9 miR-25 TuD**

|  |  |  |  |
| --- | --- | --- | --- |
|  | sham (n=4 ) | AAV9-EGFP  +Ang II (n=3) | AAV9-miR-25 TuD  +Ang II (n=4) |
| IVSd(mm) | 0.96±0.02 | 1.20±0.07†† | 1.10±0.01 |
| LVIDd(mm) | 4.52±0.09 | 4.74±0.10 | 4.62±0.09 |
| LVPWd(mm) | 0.98±0.01 | 1.12±0.05† | 1.05±0.03 |
| IVSs(mm) | 1.60±0.04 | 1.81±0.09 | 1.82±0.06 |
| LVIDs(mm) | 3.13±0.11 | 3.66±0.13† | 3.33±0.03 |
| LVPWs(mm) | 1.47±0.18 | 1.38±0.06 | 1.41±0.06 |
| EF(%) | 65.19±1.40 | 52.44±2.11†† | 60.83±1.37\* |
| FS(%) | 30.85±0.96 | 22.97±1.19†† | 27.98±0.89\* |
| HR (BPM) | 448.97±16.15 | 438.83±14.36 | 463.51±29.87 |

IVSD = interventricular septum, diastole (mm), LV = left ventricle, LVIDd = LV internal dimension, diastole (mm), LVPWd = LV posterior wall, diastole (mm), IVSs = interventricular septum, systole (mm), LVIDs = LV internal dimension, systole (mm), LVPWs = LV posterior wall, systole (mm), EF = ejection fraction (%), FS = fractional shortening (%), HR = heart rate (BPM), All data represent the mean±S.E.M of cardiac functional parameters. Statistical signiﬁcance was determined by one-way ANOVA analysis of variance followed by the post hoc Tukey’s multiple comparison test.

†p<0.05, ††p<0.01 vs sham

\*p<0.05, \*\*p<0.01 vs AAV9-EGFP+Ang II

**Supplementary table 2. Quantitative RT-PCR primer information**

|  |  |  |
| --- | --- | --- |
| Gene | | Sequence (5’ to 3’) |
| miR-25-3p | F | 5’-CAT TGC ACT TGT CTC GGT CTG A- 3’ |
| pri-miR-25 | F | 5’-CTC ACA GGA CAG CTG AAC ACC- 3’ |
| R | 5’-CCC CCA CAT CTG CAG TGT TG- 3’ |
| pre-miR-25 | F | 5’-CAG TGT TGA GAG GCG GAG ACT- 3’ |
| R | 5’-GCA CTG TCA GAC CGA GAC AAG- 3’ |
| β-MHC | F | 5’-CCC AAG GAA AAG AAG CAC GTC- 3’ |
| R | 5’-AGG TCA GCT GGA TAG CGA CAT C- 3’ |
| ANF | F | 5’-CGA GCA GCG GAT TGA ACT GT- 3’ |
| R | 5′-TTG TGG TGA AGC CAC TCC TG- 3’ |
| BNP | F | 5’-CTC CTA CTA CGA GCT GAA CCA G- 3’ |
| R | 5’-CCA GAA AGC TCA AAC TTG ACA GGC- 3’ |
| IL-18 | F | 5’-GAC AAA AGA AAC CCG CCT G- 3’ |
| R | 5’-ACA TCC TTC CAT CCT TCA CAG- 3’ |
| IL-1β | F | 5’-TCC AGG ATG AGG ACA TGA TGA GCA- 3’ |
| R | 5’-GAA CGT CAC ACA CAC CAG CAG GTT A- 3’ |
| IL-6 | F | 5’-CAA AGC CAG AGT CCT TCA GAG- 3’ |
| R | 5’-GTC CTT AGC CAC TCC TTC TG- 3’ |
| RANTES | F | 5’-TGC AGA GGA CTC TGA GAC AGC- 3’ |
| R | 5’-GAG TGG TGT CCG AGC CAT A- 3’ |
| 18s | F | 5’-TAA CGA ACG AGA CTC TGG CAT-3’ |
| R | 5’-CGG ACA TCT AAG GGC ATC ACAG-3’ |
| U6 |  | not available, Mir-X miRNA First-Strand Synthesis Kit(Takara Bio Inc, Shiga, Japan) components |