

## *Supplementary Material*

**Supplementary Figure 1.** The heatmap for top100 DE-mRNA in GSE97358.

**Supplementary Figure 2.** The heatmap for top100 DE-mRNA in GSE116250.

**Supplementary Figure 3.** The heatmap for 39 DE-lncRNA in GSE97358.

**Supplementary Figure 4.** The heatmap for 93 DE-lncRNA in GSE116250.

**Supplementary Figure 5.** The knockdown efficiency of siRNA targeting LINC00511 and LncRNA-SNHG15 in PBS-treated HCFs and TGF $\beta$ 1-treated HCFs. (A) The knockdown efficiency of siRNA-LINC00511. (B) The knockdown efficiency of siRNA-SNHG15. \*\*, P<0.01; \*\*\*, P<0.001

**Supplementary Figure 6.** Supplementary results based on cardiac fibroblasts-specific DE-mRNAs in the ceRNA network (*ADAM19* and *TGFBI*). (A) ES of cell cycle for *ADAM19* in GSE97358 dataset. (B) ES of cytokine-cytokine receptor interaction for *ADAM19* in GSE97358 dataset. (C) ES of cell cycle for *ADAM19* in GSE116250 dataset. (D) ES of cytokine-cytokine receptor interaction for *ADAM19* in GSE116250 dataset. (E) ES of cell cycle for *TGFBI* in GSE97358 dataset. (F) ES of cytokine-cytokine receptor interaction for *TGFBI* in GSE97358 dataset. (G) ES of cell cycle for *TGFBI* in GSE116250 dataset. (H) ES of cytokine-cytokine receptor interaction for *TGFBI* in GSE116250 dataset. (I) ES of cytokine-cytokine receptor interaction for *TGFBI* in GSE116250 dataset.

**Table S1.** List of PCR primers sequence used in this study

Gene	Primer	Sequence (5'-3')
<i>miR-25-3p</i>	Forward	ATACATTGCACTTGTCTCG
	Reverse	CATTGCACTTGTCTCGGTCTGA
<i>miR-32-5p</i>	Reverse Transcription (RT)	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACTCAGACC
	Forward	CGGTATTGCACATTACTAAG
	Reverse	TATTGCACATTACTAAGTTGCA
<i>miR-92a-3p<sup>#</sup></i>	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACTGCAACT
	Forward	CCCTATTGCACTTGTCCCG
	Reverse	TATTGCACTTGTCCCGGCCTGT
<i>miR-367-3p</i>	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACACAGGCC
	Forward	CCGAATTGCACTTTAGCAATG
	Reverse	AATTGCACTTTAGCAATGGTGA
<i>miR-26b-5p</i>	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACTCACCAT
	Forward	CGGATTCAAGTAATTCAGGA
	Reverse	TTCAAGTAATTCAGGATAGGT
<i>miR-1297</i>	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACACCTATC
	Forward	CGGTTCAAGTAATTCAGGTG
	Reverse	TTCAAGTAATTCAGGTG
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACCACCTGA

<i>miR-30c-5p</i>	Forward	TGTAAACATCCTACACTCTC
	Reverse	TGTAAACATCCTACACTCTCAGC
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACGCTGAGA
<i>miR-30a-5p<sup>#</sup></i>	Forward	CCTGTAAACATCCTCGACTG
	Reverse	TGTAAACATCCTCGACTGGAAG
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACCTTCCAG
<i>miR-153-3p</i>	Forward	CCTTGCAATAGTCACAAAAGT
	Reverse	TTGCATAGTCACAAAAGTGATC
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACGATCACT
<i>miR-106b-5p</i>	Forward	CCTAAAGTGCTGACAGTGCA
	Reverse	TAAAGTGCTGACAGTGCAGAT
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACATCTGCA

Gene	Primer	Sequence (5'-3')
<i>miR-106a-5p<sup>#</sup></i>	Forward	GGAAAAGTGCTTACAGTGCA
	Reverse	AAAAGTGCTTACAGTGCAGGTAG
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACCTACCTG
<i>miR-874-3p</i>	Forward	ATATCTGCCCTGGCCCGAG
	Reverse	CTGCCCTGGCCCGAGGGACCGA
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACTCGGTCC
<i>miR-590-5p</i>	Forward	AAGAGCTTATTCATAAAAGT

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	Reverse	GAGCTTATTCATAAAAGTGCAG
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACCTGCACT
<i>miR-9-5p</i>	Forward	TTTTCTTTGGTTATCTAGCTG
	Reverse	TCTTTGGTTATCTAGCTGTATGA
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACTCATACA
<i>miR-26a-5p</i>	Forward	TATTTCAAGTAAT CCAGGATA
	Reverse	TTCAAGTAATCCAGGATAGGCT
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACAGCCTAT
<i>miR-124-3p</i>	Forward	ATATAAGGCACGCGGTGAATG
	Reverse	TAAGGCACGCGGTGAATGCC
	RT	GTCGTATCCAGTGCGTGTCGTGGAGTCG GCAATTGCACTGGATACGACGGCATTCA
<i>U6</i>	Forward	CTCGCTTCGGCAGCACA
	Reverse	AACGCTTCACGAATTTGCG

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**Table S2.** List of siRNA sequence used in this study

<b>Gene</b>		<b>Sequence (5'-3')</b>
<i>LINC00511-1</i>	Forward	GGGUCGAAUUCUUCAGUUUCUTT
	Reverse	AGAAACUGAAGAAUUCGACCCTT
<i>LINC00511-2</i>	Forward	GCUCAAGUUCCUGACAUAAAUTT
	Reverse	AUUUAUGUCAGGAACUUGAGCTT
<i>SNHG15-1</i>	Forward	GCACCUUAAUUGAGCAAGUUUTT
	Reverse	AAACUUGCUCAAUUAAGGUGCTT
<i>SNHG15-2</i>	Forward	GACCUGACCUGAGAGAAGAUATT
	Reverse	UAUCUUCUCUCAGGUCAGGUCTT
<i>TGFBI-1</i>	Forward	UCCUAUUAGUGCCAAUAACCUUTT
	Reverse	GUUAUUGGCACUAAUAGGAAGTT
<i>TGFBI-2</i>	Forward	AAGUACUUCCUAUUAGUGCCATT
	Reverse	GCACUAAUAGGAAGUACUUCATT
<i>ADAM19-1</i>	Forward	AAAAGUUGCUCAUUCUUCUCTT
	Reverse	GAAGAAUGAGCAACUUUUUGCTT
<i>ADAM19-2</i>	Forward	AGUAUAAUGGGUUUCUGUGUATT
	Reverse	CACAGAAACCCAUUAUACUUCTT
Negative control	Forward	UUCUCCGAACGUGUCACGUTT
	Reverse	ACGUGACACGUUCGGAGAATT