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Supplemental Information

Macrophage-Derived mir-155-Containing Exosomes Suppress Fibroblast Proliferation and Promote Fibroblast Inflammation during Cardiac Injury

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Supplemental Figure.1

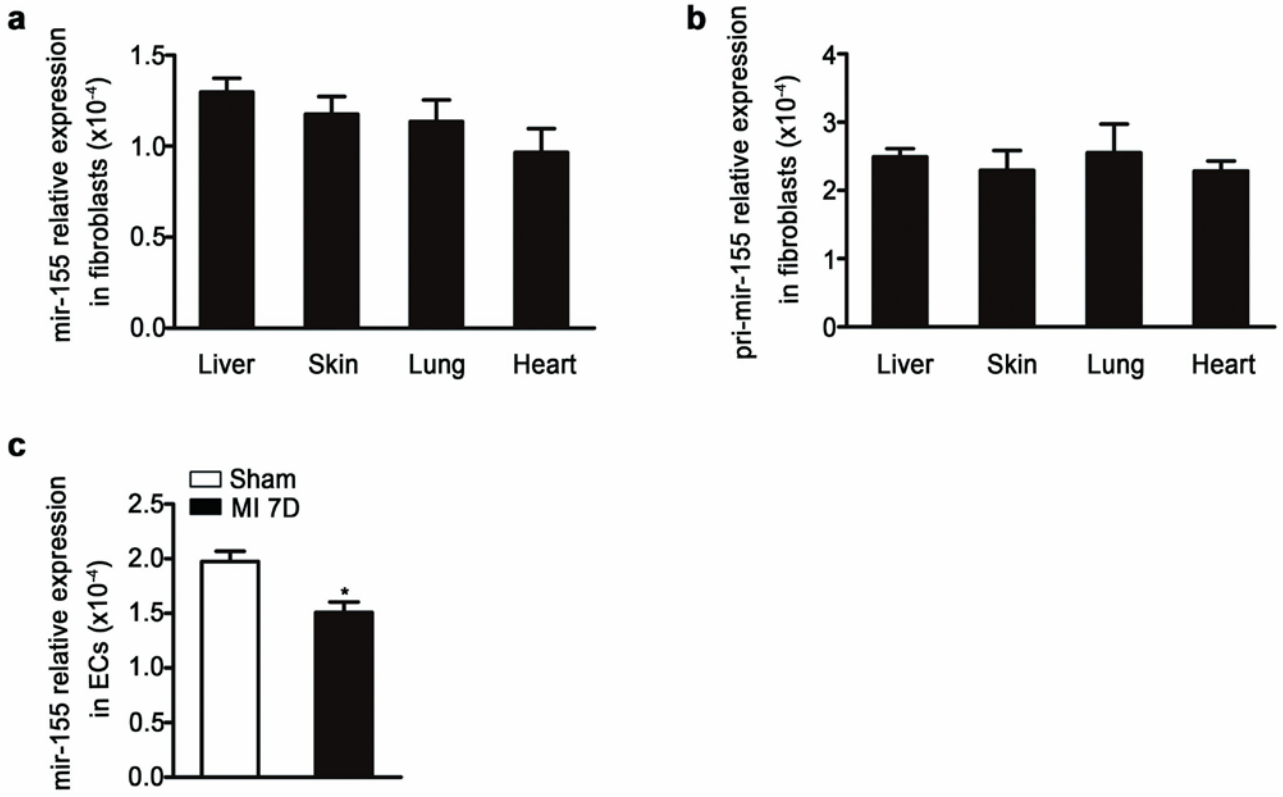

Figure S1. The expression of mir-155 in fibroblasts and endothelial cells

(a) qRT-PCR shows the mir-155 relative folds to U6 expression in fibroblasts of liver, skin, lung and heart. (n=3 per group). Data are mean±SEM. Paired t-test was used.

(b) The pri-mir-155 relative folds to GAPDH in fibroblasts of liver, skin, lung and heart. (n=3 per group). Data are mean±SEM. Paired t-test was used.

(c) shown is the mir-155 relative folds to U6 expression in endothelial cells (ECs) from the sham-operated and infarcted hearts. (n=3 per group). Data are mean±SEM. Paired t-test was used. *P<0.05 vs Sham operation.

Supplemental Figure.2

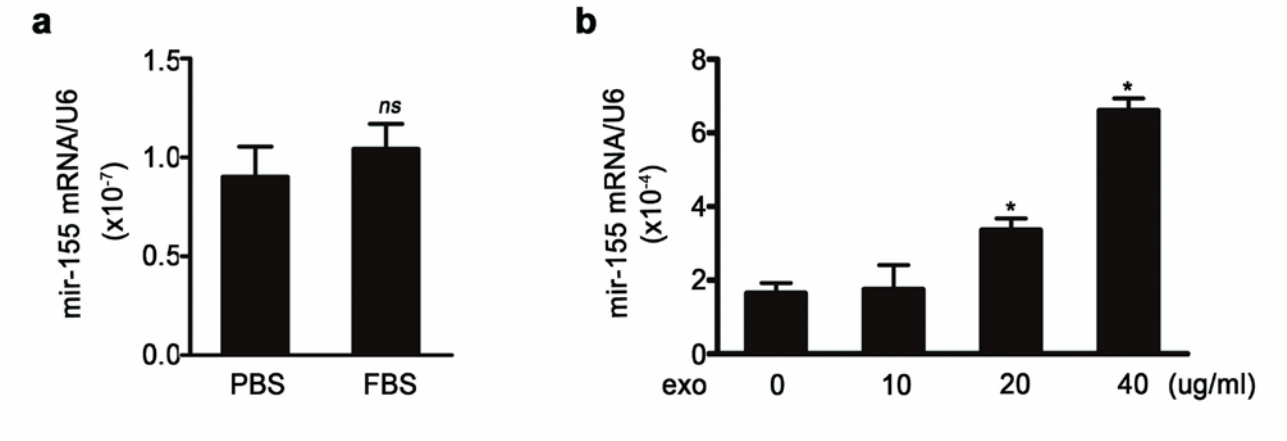

Figure S2. The increase of mir-155 expression in cardiac fibroblasts by exosomes was dose-dependent.

(a) qRT-PCR shows the mir-155 relative folds to U6 expression in serum free DMEM and DMEM containing 10% FBS. (n=3 per group). Data are mean±SEM. Paired t-test was used.

(b) shown is the mir-155 relative folds to U6 expression in cardiac fibroblasts co-cultured with 0, 10, 20, 40 ug/ml exosomes. (n=3 per group). Data are mean±SEM. Paired t-test was used. *P<0.05 vs 0ug/ml exosomes.

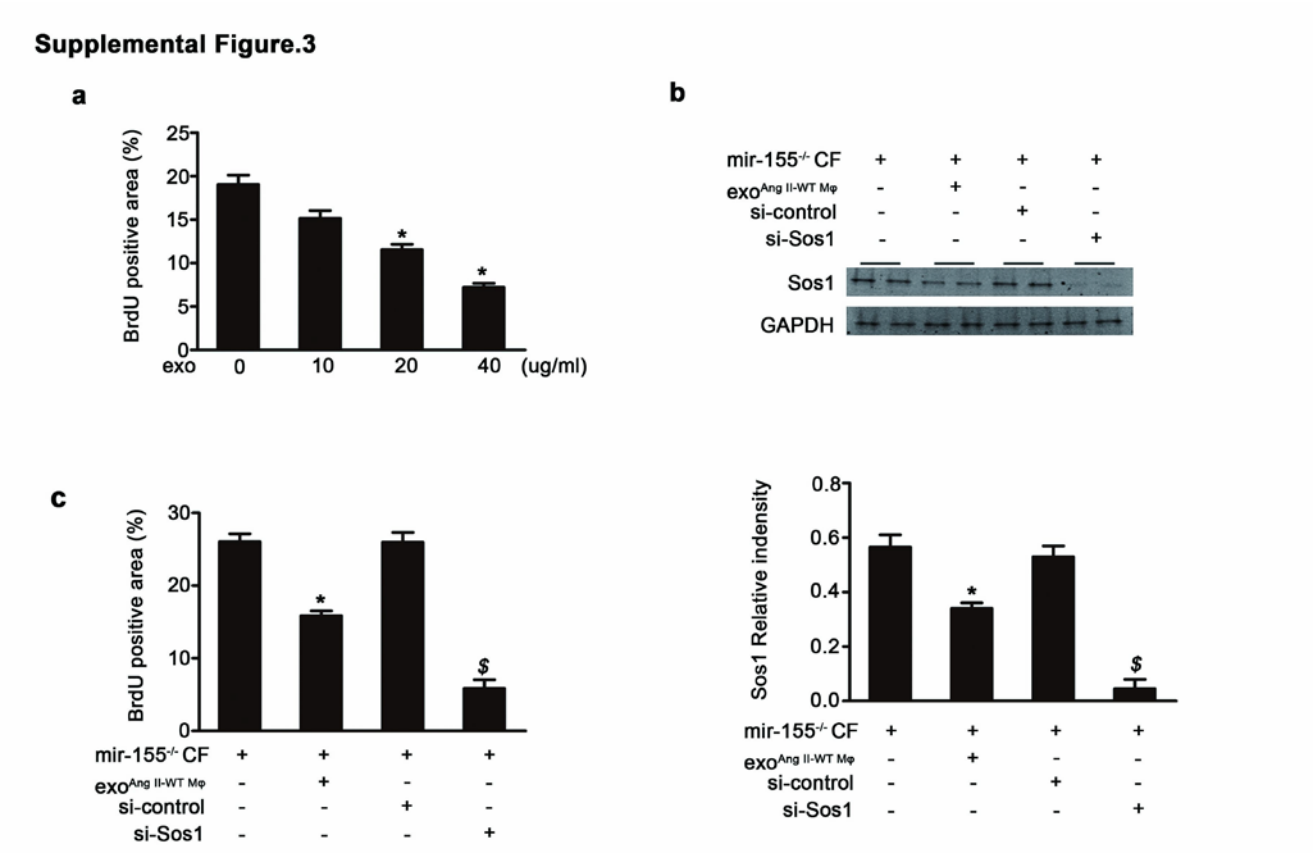

Figure S3. mir-155-containing exosomes suppress cardiac fibroblast proliferation by down-regulating Sos1 expression.

(a) Shown is the BrdU staining and quantification of BrdU positive cells of cardiac fibroblasts treated with 0, 10, 20, 40 ug/ml exosomes for 48 hours. (n=3 per group). *P<0.05 vs 0ug/ml exosomes.

(b) Western blotting analysis and quantification of Sos1 protein level in WT exosomes-treated mir-155-/- cardiac fibroblasts transfected with si-control or si-Sos1. (n=3 per group). *P<0.05 vs PBS. $P<0.05 vs si-control.

(c) Shown is the BrdU staining and quantification of BrdU positive cells of WT exosomes-treated mir-155-/- cardiac fibroblasts transfected with si-control or si-Sos1. (n=3 per group). *P<0.05 vs PBS. $P<0.05 vs si-control.

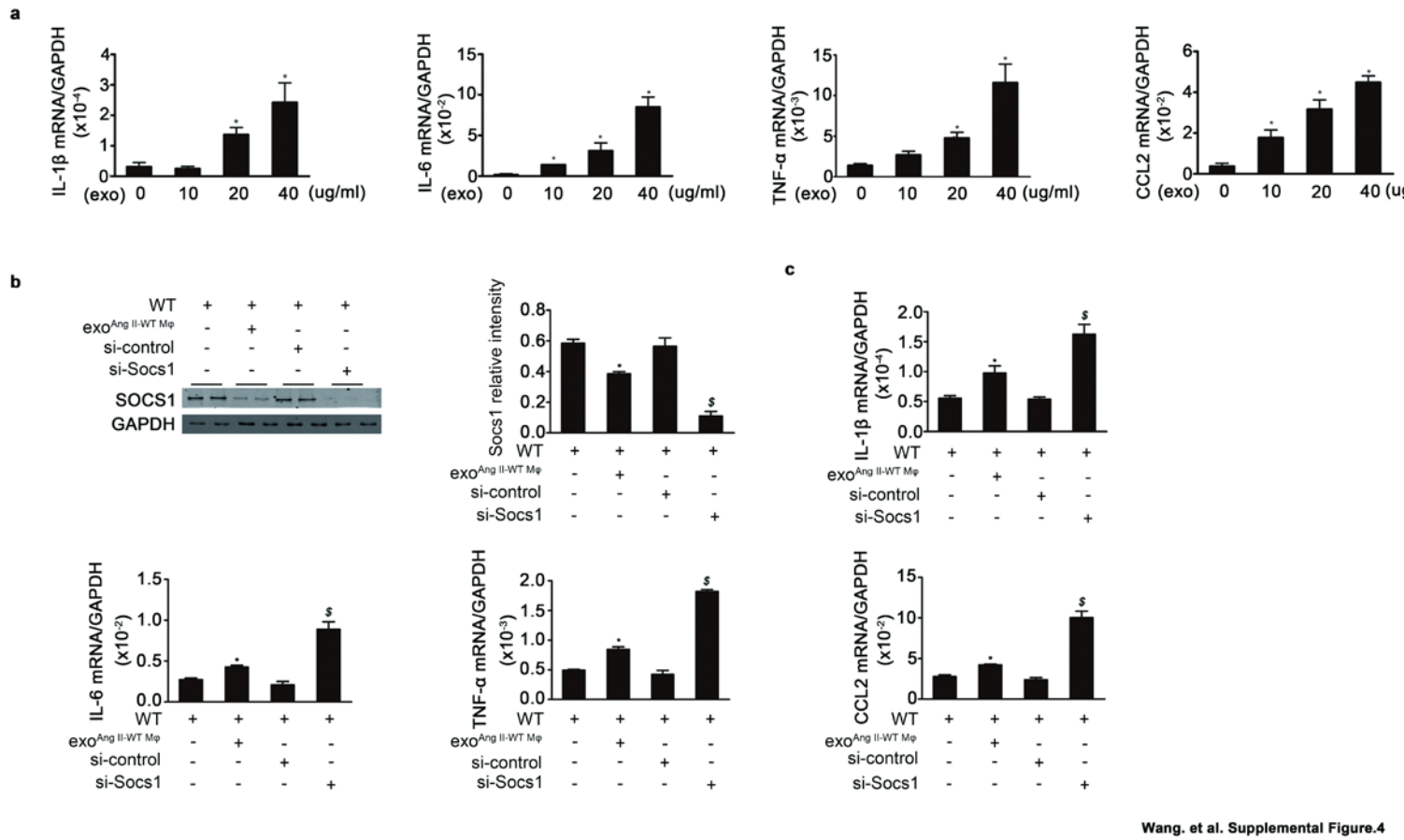

Figure S4. mir-155-containing exosomes promote cardiac fibroblast inflammation by down-regulating Socs1 expression.

(a) Shown is the IL-1 β , IL-6, TNF- α and CCL2 relative folds to GAPDH expression in cardiac fibroblasts co-cultured with 0, 10, 20, 40 ug/ml exosomes. (n=3 per group). Data are mean±SEM. Paired t-test was used. *P<0.05 vs 0ug/ml exosomes.

(b) Western blotting analysis and quantification of Socs1 protein level in WT exosomes-treated mir-155-/- cardiac fibroblasts transfected with si-control or si-Socs1. (n=3 per group). *P<0.05 vs PBS. $P<0.05 vs si-control.

(c) Shown is the IL-1 β , IL-6, TNF- α and CCL2 relative folds to GAPDH expression in WT exosomes-treated mir-155-/- cardiac fibroblasts transfected with si-control or si-Socs1. (n=3 per group). *P<0.05 vs PBS. $P<0.05 vs si-control.