

**Plant miRNA osa-miR172d-5p suppressed lung fibrosis by targeting Tab1**

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Running title: **Antifibrotic effects of Osa-miR172d-5p through Tab1 suppression**

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**Keywords:** plant miR, Fibrosis, Bleomycin, TGF $\beta$ , Tab1

**SIFig1 The effect of osa-miR172d-5p on the viable cell number of HFL1 cells.**

HFL1 cells were treated with indicated miRs (10 nM) for 24 h, 48 h. Viable cells were assessed by ATPlite (n = 4). Data are shown as mean  $\pm$  SEM. Student's t test.

**SIFig2 The effect of osa-miR172d-5p on the expression levels of senescence-related genes and autophagy related genes of HFL1 cells.**

(A-C) HFL1 cells were treated with indicated miRs (10 nM) for 24 h, 48 h. The expression levels of (A-B) senescence-related genes and (C) autophagy related genes were assessed by qRT-PCR (n = 4). Data are shown as mean  $\pm$  SEM. Student's t test.  $**P < 0.01$ .

**SIFig3 The effect of osa-miR172d-5p on the Human Pulmonary Artery Endothelial Cells.**

(A) Human Pulmonary Artery Endothelial Cells (HPAECs) were treated with indicated miRs (10 nM) for 48 h. Viable cells were assessed by ATPlite (n = 4). (B-D) HPAECs were treated with indicated miRs (10 nM) for 48 h. The expression levels of (B) TGF related gene, (C) senescence-related gene and (D) autophagy related gene were assessed by qRT-PCR (n = 4). Data are shown as mean  $\pm$  SEM. Student's t test.

**SIFig4 Osa-miR172d-5p suppressed Colla upregulation in a bleomycin-induced fibrosis model.**

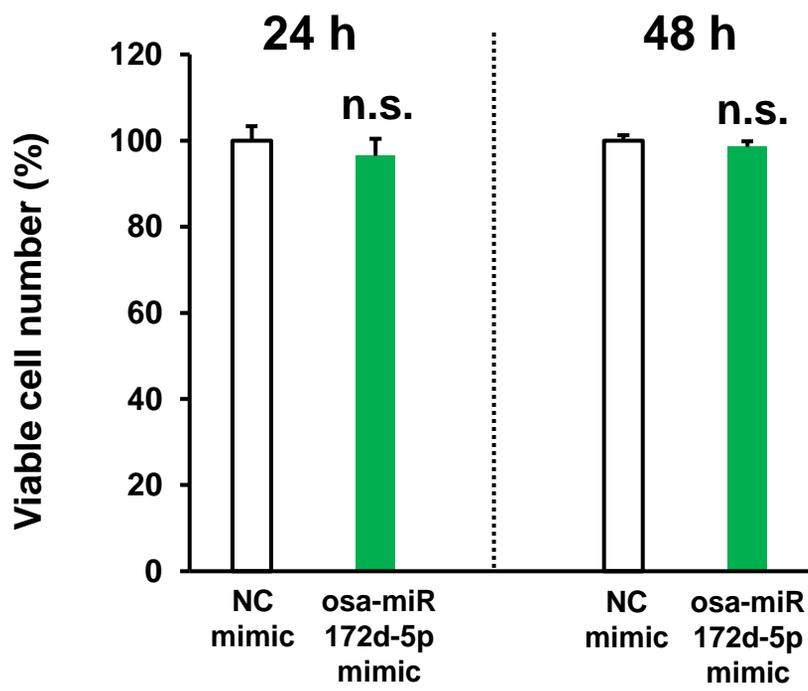
C57BL male mice were treated with bleomycin (1 mg/kg bw intratracheal administration); after 1 week, the bleomycin-treated mice were treated with the negative control miR (3 nmol/mice 5 times every 2 weeks, intraperitoneal injection of AteloGene<sup>TM</sup>) or miR Osa-miR172d-5p mimic miR (3 nmol/mice five times every 2 weeks, intraperitoneal injection of AteloGene<sup>TM</sup>). After 3 weeks, the mice were sacrificed, their lung tissues were harvested, and Colla levels were assessed by western blot analysis (n = 5, 5, 4). Data are shown as mean  $\pm$  SEM. Dunnett's test.  $***P < 0.001$ .

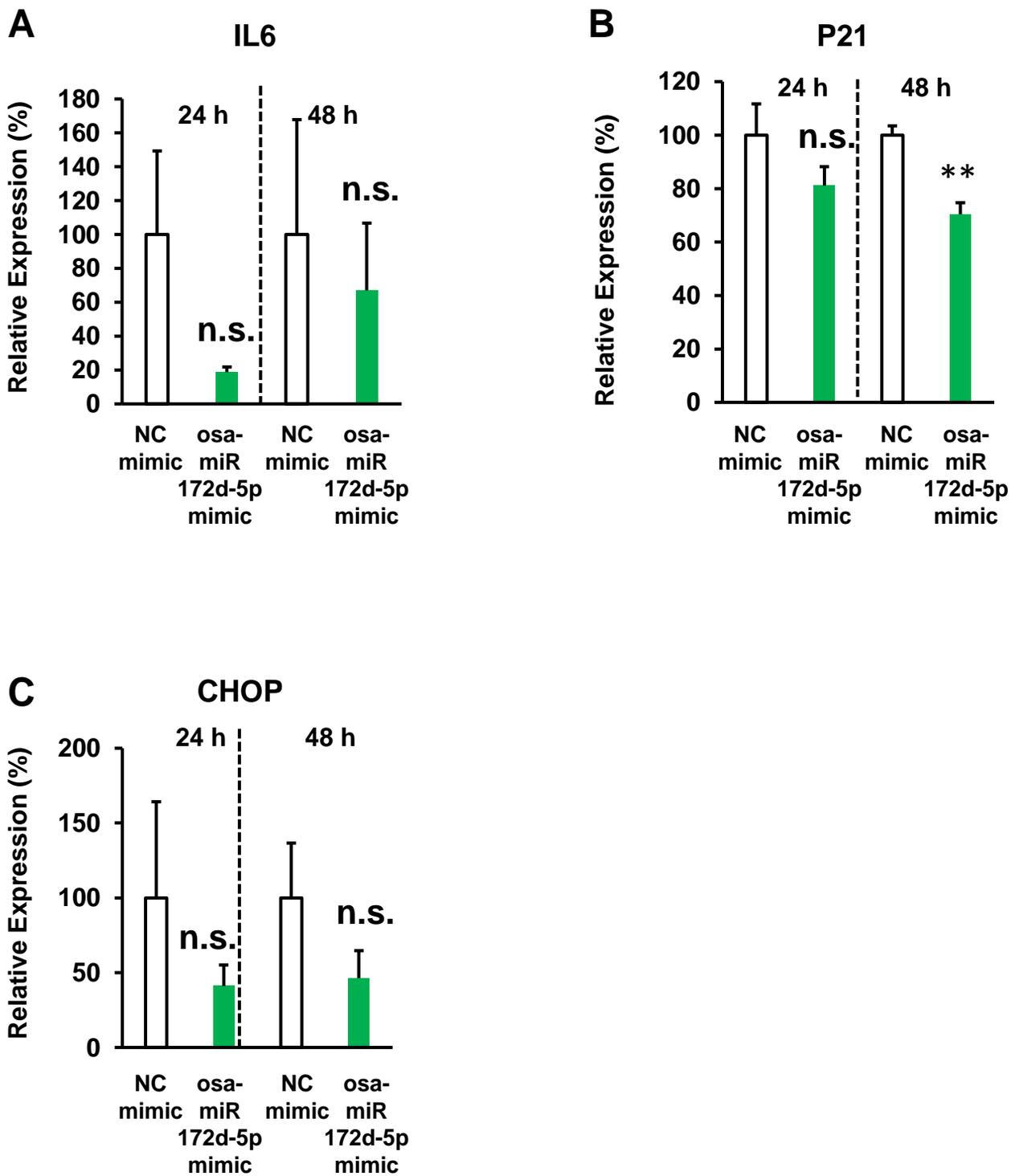
**SIFig5 Western Blot images**

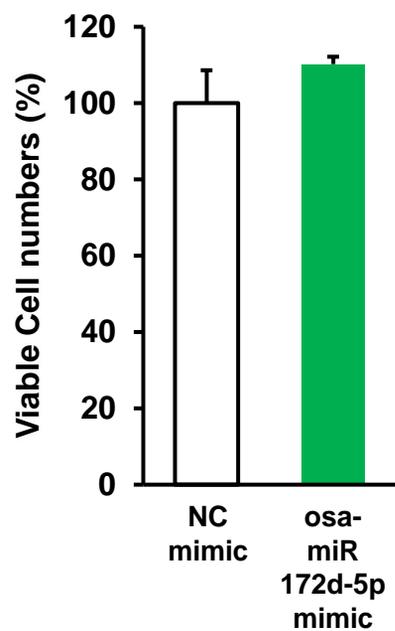
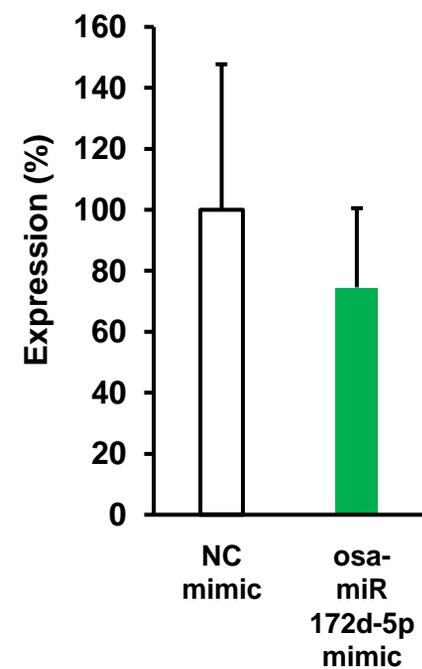
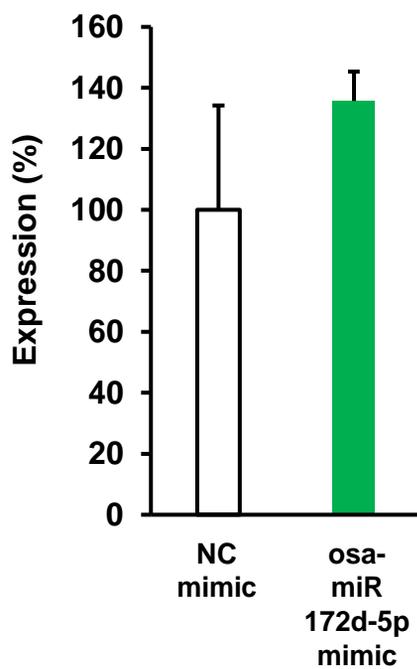
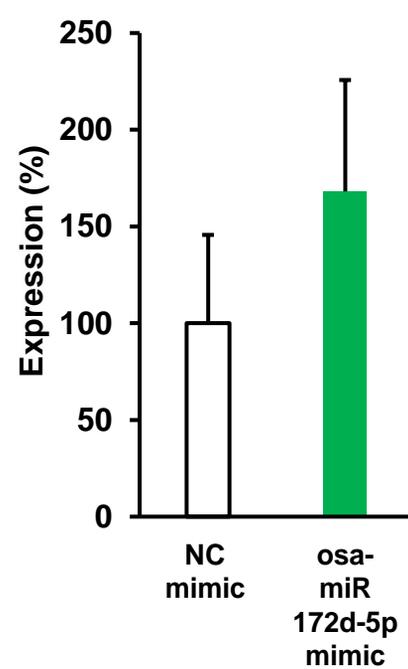
Western Blot images A, B (for Fig1C), C, D (for Fig3A), E and F (for SIFig4A).

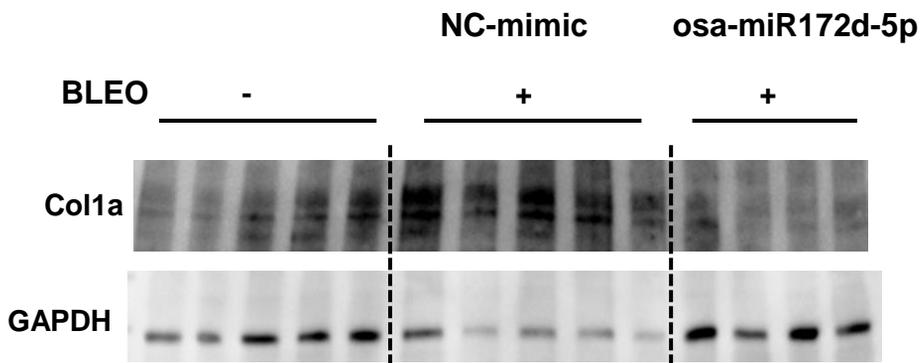
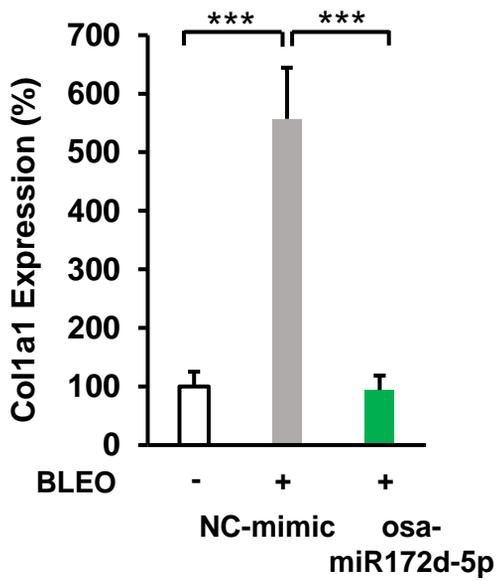
**SI Table1 Primer List**

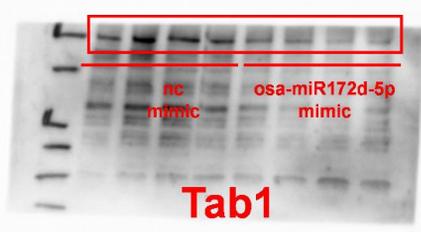
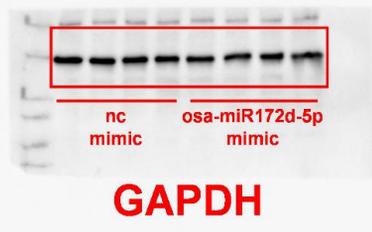
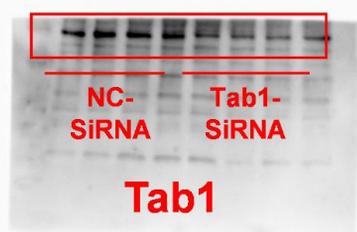
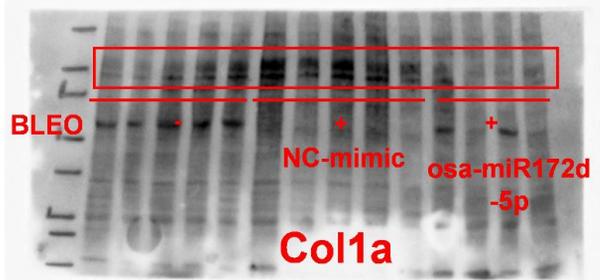
P21 (CDKN1A)	F	5'	TCAAATCGTCCAGCGACCTTC	3'
	R	5'	CATGCCCTGTCCATAGCCTCTAC	3'
IL-1B	F	5'	GAAGCTGATGGCCCTAAACA	3'
	R	5'	AAGCCCTTGCTGTAGTGGTG	3'
GLS	F	5'	CAGAAGGCACAGACATGGTTGG	3'
	R	5'	GGCAGAAACCACCATTAGCCAG	3'
IL-6	F	5'	CCTGAACCTTCCAAAGATGGC	3'
	R	5'	TTCACCAGGCAAGTCTCCTCA	3'
CHOP	F	5'	TGTAAAGATGAGCGGGTGGC	3'
	R	5'	CTTGAACACTCTCTCCTCAGGTTTC	3'
ATG9B	F	5'	AACTGCTTCGCTCAGTCTGC	3'
	R	5'	AGCTCAGCTCCTCCGGG	3'
ATG16L2	F	5'	ACCTGCGTGTCAGCAACAT	3'
	R	5'	CAGCTTTGGTCCAGTCAGAAC	3'
BECN1	F	5'	GATGGTGTCTCTCGCAGATTC	3'
	R	5'	AGTCTTCGGCTGAGGTTCTCC	3'
ACTB	F	5'	ATGTGGCCGAGGACTTTGATT	3'
	R	5'	AGTGGGGTGGCTTTTAGGATG	3'





**A****B****ASMA****C****P21****D****GLS1**

**A****B**

**A****B****C****D****E****F**