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## SUPPLEMENTARY MATERIAL

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### SUSD2 suppresses lung adenocarcinoma tumorigenesis by inducing autophagy *via* inhibiting PI3K/AKT/mTOR signaling pathway

Shengwen Wang,<sup>1,2</sup> Gang Yang,<sup>3</sup> Qian Zhang,<sup>2</sup> Yanbei Zhang<sup>1</sup>

<sup>1</sup>Lung Cancer Diagnosis and Treatment, Department of Geriatric Respiratory and Critical Care Medicine, The First Affiliated Hospital of Anhui Medical University, Hefei

<sup>2</sup>Department of Geriatric Medicine, Wuhu Hospital Affiliated to East China Normal University (Second People's Hospital of Wuhu City), Wuhu

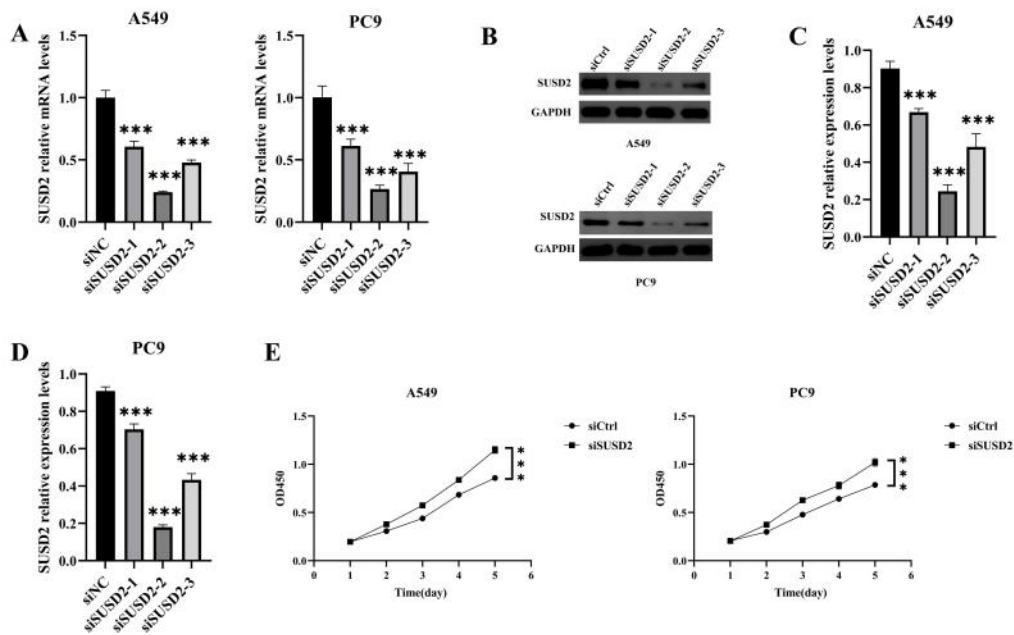
<sup>3</sup>Department of Respiratory Medicine, Wuhu Hospital Affiliated to East China Normal University (Second People's Hospital of Wuhu City), Wuhu, China

**Correspondence:** Yanbei Zhang, PhD, Lung Cancer Diagnosis and Treatment, Department of Geriatric Respiratory and Critical Care Medicine, The First Affiliated Hospital of Anhui Medical University, 218 Jixi Road, Shushan District, Hefei 230022, China. E-mail: [zhangyanbei@ahmu.edu.cn](mailto:zhangyanbei@ahmu.edu.cn)

**Key words:** SUSD2; LUAD; autophagy; tumor suppressor; cell proliferation; apoptosis.

### Supplementary Figure 1.

Knockdown of SUSD2 enhances cell viability in lung adenocarcinoma (LUAD) cells. (A) Knockdown efficiency of SUSD2 in A549 and PC9 cells was validated by qRT-PCR. (B-D) Knockdown efficiency of SUSD2 in A549 and PC9 cells was validated by Western blotting. (E) Cell viability of A549 and PC9 cells transfected with siSUSD2 was assessed using the CCK-8 assay. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .



**Supplementary Table 1.** Clinical patients' information.

Gender	Age	Tumor staging	Expression of SUSD2 (positive area%)	
			Normal	Tumor
Female	68	Right upper lobe adenocarcinoma ( pT2aN0M0, stage IB )	9	2
Male	72	Left lower lung adenocarcinoma ( pT2aN0M0, stage IB )	9	3
Male	75	Right lower lobe adenocarcinoma ( pT2N2M0, stage IIIA )	12	2
Female	53	Right upper lung adenocarcinoma in situ with microinvasion ( pTmiN0M0, IA1 )	9	9
Male	58	Malignant tumor of left lower lung ( pT1bN0M0, IA2 )	8	6
Female	60	Left lower lung adenocarcinoma ( pT1bN0M0, IA2 )	6	4
Female	75	Left lower lobe adenocarcinoma ( pT1bN0M0, IA2 )	6	4
Male	69	Right lower lobe adenocarcinoma ( pT1cN0M0, IA3 )	9	4
Male	59	Malignant tumor of right middle lung ( invasive adenocarcinoma, pT2aN0M0, stage IB )	12	4
Male	72	Malignant tumor of right upper lung ( invasive adenocarcinoma, pT1bN0M0, IA2 )	6	2
Male	72	Malignant tumor of the right lower lung ( invasive adenocarcinoma of the right lower lung, pT1aN0M0, IA1 stage )	2	3
Male	45	Left upper lung adenocarcinoma ( pT1aN0M0, IA1 )	4	4
Female	67	Left upper lung malignant tumor * 2 ( 1, invasive adenocarcinoma, pT1aN0M0, IA1 stage ; 2. Microinvasive adenocarcinoma )	2	2
Female	68	Adenocarcinoma in situ in the upper lobe of the right lung with microinvasion ( pTmiN0M0, IA1 )	6	6
Female	58	Right lower lobe adenocarcinoma ( pT1bN0M0, IA2 )	6	4
Female	59	Left upper lobe adenocarcinoma ( pT1bN0M0, IA2 )	3	1
Female	64	Right upper lobe adenocarcinoma ( pT1bN0M0, IA2 )	4	0
Male	76	Right lower lobe adenocarcinoma ( pT4N0M0, stage IIIA )	9	0
Female	60	Adenocarcinoma of the anterior segment of the left upper lobe ( pT1cN0M0, IA3 ), carcinoma in situ of the tongue with microinvasion	9	4
Male	78	Right upper lobe adenocarcinoma ( pT1bN0M0, IA2 )	4	0
Female	54	Right lower lung adenocarcinoma ( pT2aN0M0, stage IB )	9	0
Female	70	Left lower lobe adenocarcinoma ( pT2bN0M0, stage IIA )	9	0
Male	68	Right upper lobe adenocarcinoma ( pT2aN0M0, stage IB )	8	0
Female	67	Right middle lobe adenocarcinoma ( pT2aN0M0, stage IB )	6	0
Male	59	Left lower lung adenocarcinoma in situ with microinvasion ( pTmiN0M0, IA1 )	9	2
Male	56	Malignant tumor of left upper lobe ( pT1cN0M0, IA3 )	9	4
Female	54	Adenocarcinoma in situ of the right lower lobe with microinvasion ( pTmiN0M0, IA1 )	6	6
Female	50	Microinvasive adenocarcinoma of the right upper lobe ( pTmiN0M0, IA1 ).	3	3
Female	60	Right upper lobe adenocarcinoma ( pT1bN0M0, IA2 )	4	0

Gender	Age	Tumor staging	Expression of SUSD2 (positive area%)	
			Normal	Tumor
Female	60	Malignant tumor of right lung ( TisN0M0, carcinoma in situ )	6	9
Male	67	Malignant tumor of the lower lobe of the right lung ( pT1aN0M0, IA1 )	6	6
Male	67	Right upper lobe adenocarcinoma in situ ( TisN0M0, carcinoma in situ )	1	4
Female	50	Right upper lung adenocarcinoma in situ ( TisN0M0, carcinoma in situ )	6	9
Female	69	Microinvasive adenocarcinoma of the right upper lung ( pTmiN0M0, IA1 )	6	3
Male	48	Microinvasive adenocarcinoma of the right upper lung ( pTmiN0M0, IA1 )	2	4
Female	39	Microinvasive adenocarcinoma of the right lower lobe ( pTmiN0M0, IA1 )	4	6
Female	66	Right upper lobe adenocarcinoma ( pT2aN0M0, stage IB )	9	0
Male	73	Left upper lung adenocarcinoma ( cT1cN0M0, IA3 )	6	0
Male	66	Microinvasive adenocarcinoma of the right middle lung ( pTmiN0M0, IA1 )	6	4
Female	57	Malignant tumor of the right upper lobe ( pT1bN0M0 IA2 )	6	4