Supplementary materials

Supplementary Table S1 Baseline demographic characteristics of the patients whose samples were analyzed by immunohistochemistry assay

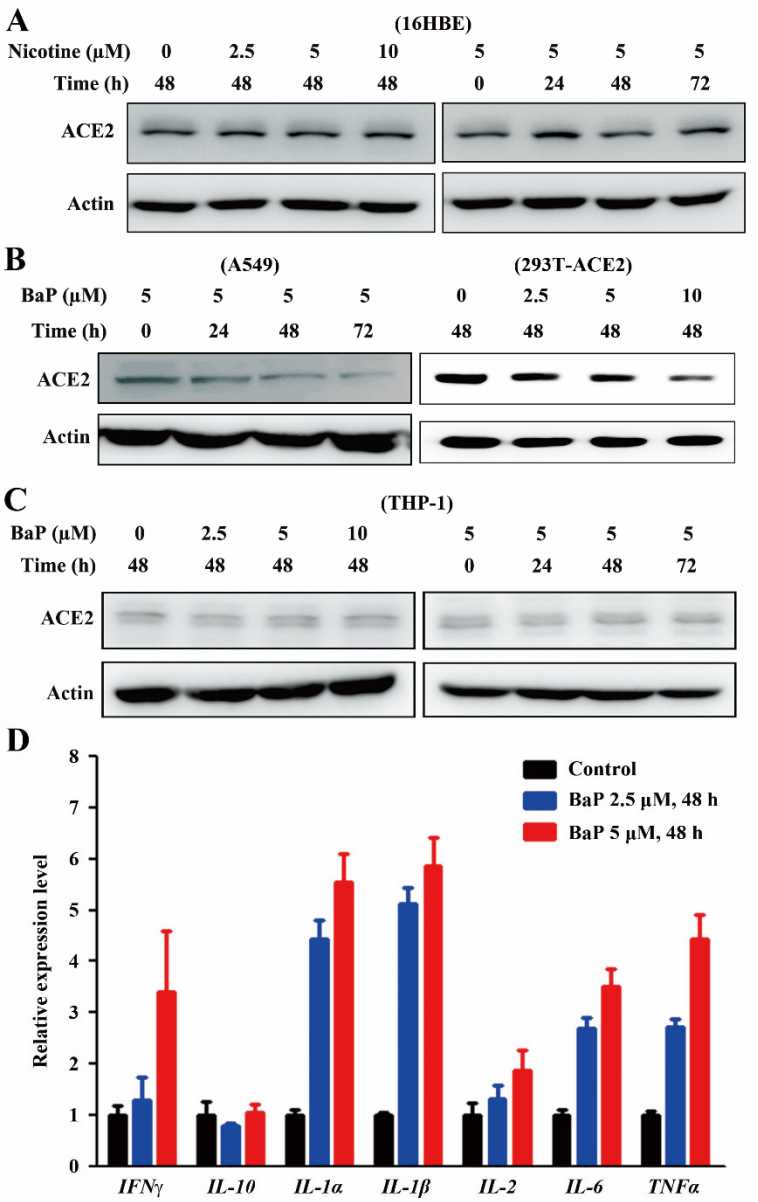
Case #	Age (year)	Sex	Smoking status	Histological diagnosis
1	70	Male	Never	Pulmonary chronic inflammation
2	73	Male	Never	Pulmonary chronic inflammation
3	56	Male	Never	Pulmonary chronic inflammation
4	53	Male	Never	Pulmonary chronic inflammation
5	36	Male	Never	Proliferation of alveolar epithelia and lymphoid tissue with carbon sedimentation
6	63	Male	Never	Fibrotic tubercle with carbon sedimentation
7	47	Male	Smoker	Pulmonary chronic inflammation
8	33	Male	Smoker	Pulmonary chronic inflammation
9	51	Male	Smoker	Pulmonary chronic inflammation
10	50	Male	Smoker	Inflammatory cell infiltration and cellulose exudation
11	56	Male	Smoker	Pulmonary carbon sedimentation and aggregation of phagocyte
12	60	Male	Smoker	Pulmonary chronic inflammation

Supplementary Table S2 Baseline demographic characteristics of the patients with lung adenocarcinoma whose samples were detected by Western blot analyses

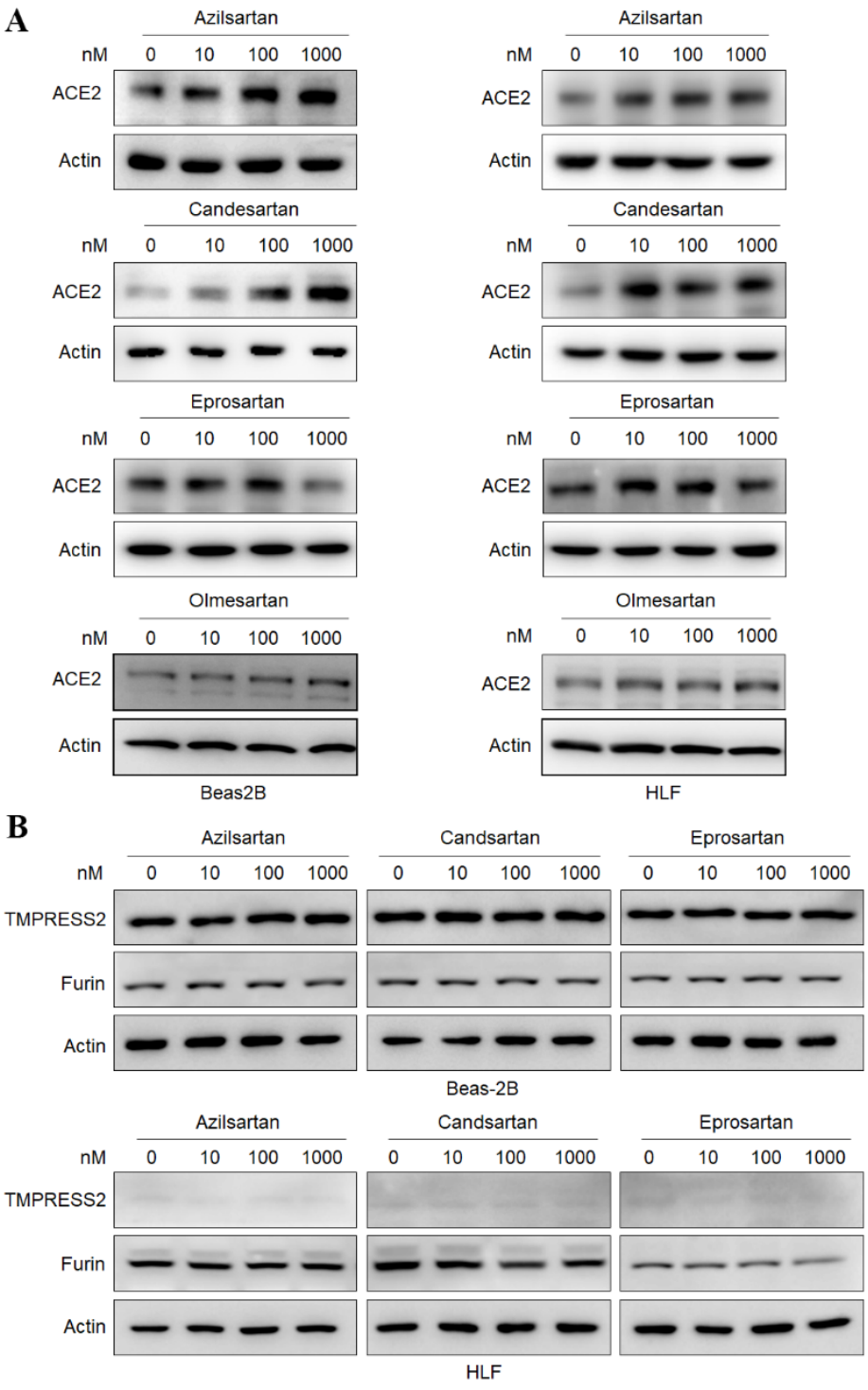
Characteristics	Total, n=49	Smoker, n=28	Non-smoker, n=21
Gender			
Male	35	28	7
Female	14	0	14
Age, year			
< 65	38	21	17
≥ 65	11	7	4

Supplementary Table S3 Primers and siRNAs used in the study

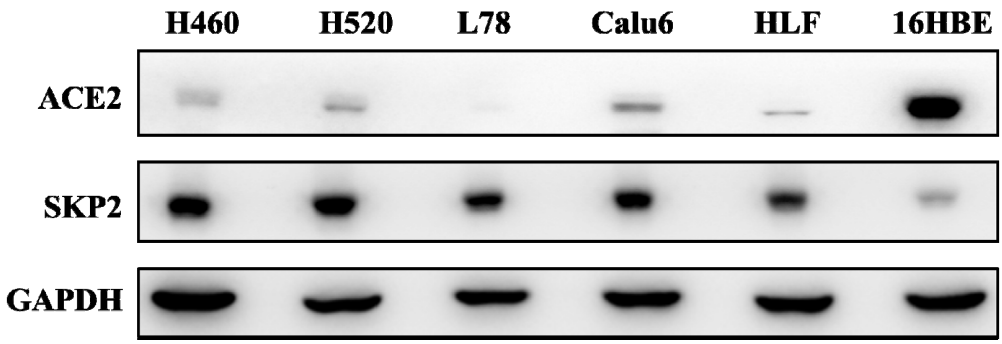
Target	**Forward primer (5'→3')**	**Reverse primer (5'→3')**
ACE2	CATTGGAGCAAGTGTTGGATCTT	GAGCTAATGCATGCCATTCTCA
IFNγ	TCGGTAACTGACTTGAATGTCCA	TCGCTTCCCTGTTTTAGCTGC
IL-10	TCAAGGCGCATGTGAACTCC	GATGTCAAACTCACTCATGGCT
IL-1α	AGATGCCTGAGATACCCAAAACC	CCAAGCACACCCAGTAGTCT
IL-1β	ATGATGGCTTATTACAGTGGCAA	GTCGGAGATTCGTAGCTGGA
IL-2	TCCTGTCTTGCATTGCACTAAG	CATCCTGGTGAGTTTGGGATTC
IL-6	ACTCACCTCTTCAGAACGAATTG	CCATCTTTGGAAGGTTCAGGTTG
TNFα	CCTCTCTCTAATCAGCCCTCTG	GAGGACCTGGGAGTAGATGAG
siRNA		
si*Skp2-1*	GGGAGUGACAAAGACUUUGTT	CAAAGUCUUUGUCACUCCCTT
si*Skp2-2*	GCAUGUACAGGUGGCUGUUTT	AACAGCCACCUGUACAUGCTT



Supplementary Fig. S1 Effects of tobacco compounds on ACE2. (A - C) Indicated cells were treated with nicotine or BaP at indicated protocols, lysed, and subjected to Western blot. (D) THP-1 cells were treated with phorbol 12-myristate 13-acetate (PMA) at 100 ng/mL for 24 h, followed by BaP co-incubation for 48 h. The cells were lysed, RNA was extracted, and real-time PCR was conducted to evaluate the expression of indicated genes.



Supplementary Fig. S2 Effects of the angiotensin receptor blockers on the expression of ACE2 (A) and TMPRSS2 and Furin (B) in Beas-2B and HLF cells. The cells were treated indicated compounds at indicated concentrations for 48 h, lysed, and subjected to Western blot using indicated antibodies.



Supplementary Fig. S3 The expression ACE2 and Skp2 in 6 cell lines. H460 and H520, non-small cell lung cancer cell lines; L78, human lung squamous carcinoma cell line; Calu6, human pulmonary carcinoma cell line; HLF, human embryonic lung fibroblast cell line; 16HBE, human normal bronchial epithelial cell.