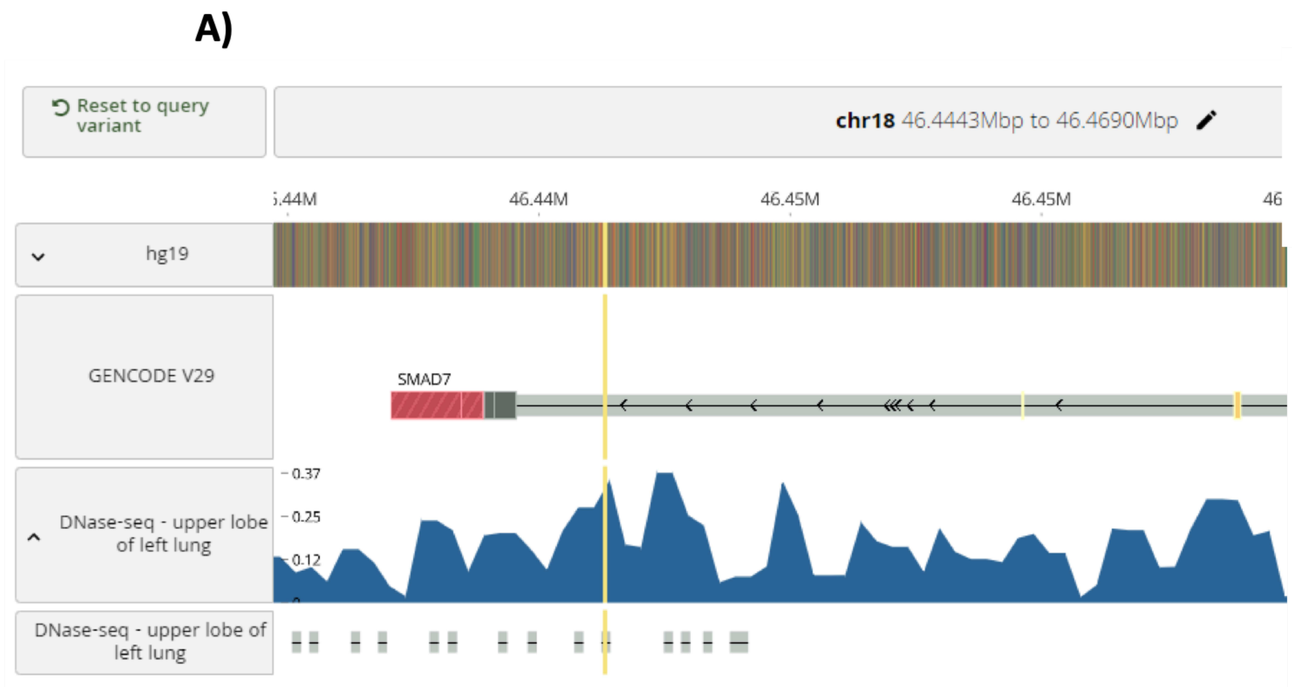
Supplementary

Fig S1



Chromatin state	Chromatin state window	Organ	Dataset
Active TSS	chr18:46449600..46449800	lung	ENCSR880GBI
Strong transcription	chr18:46449000..46450400	lung	ENCSR581XSQ
Strong transcription	chr18:46449400..46449800	lung	ENCSR191LKH
Strong transcription	chr18:46449600..46450200	Connec-tive tissue, lung	ENCSR930HYG
Enhancers	chr18:46448000..46450200	lung	ENCSR097DGV

Fig S2

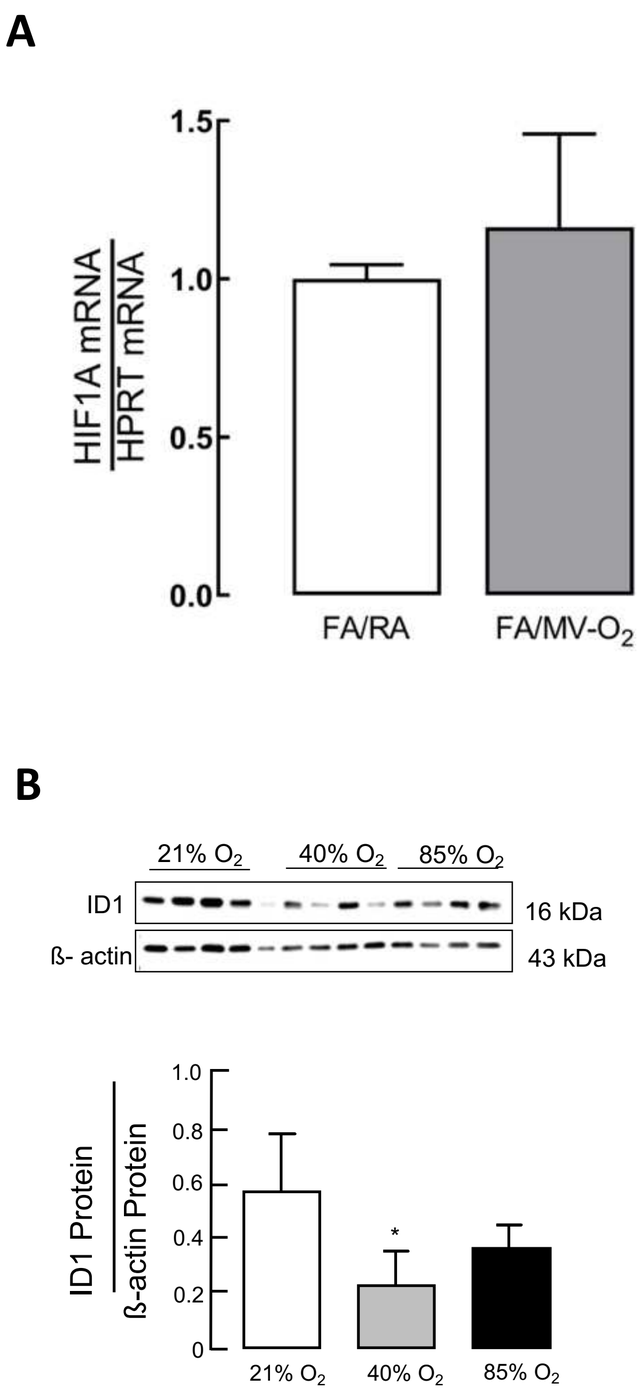


Fig S3

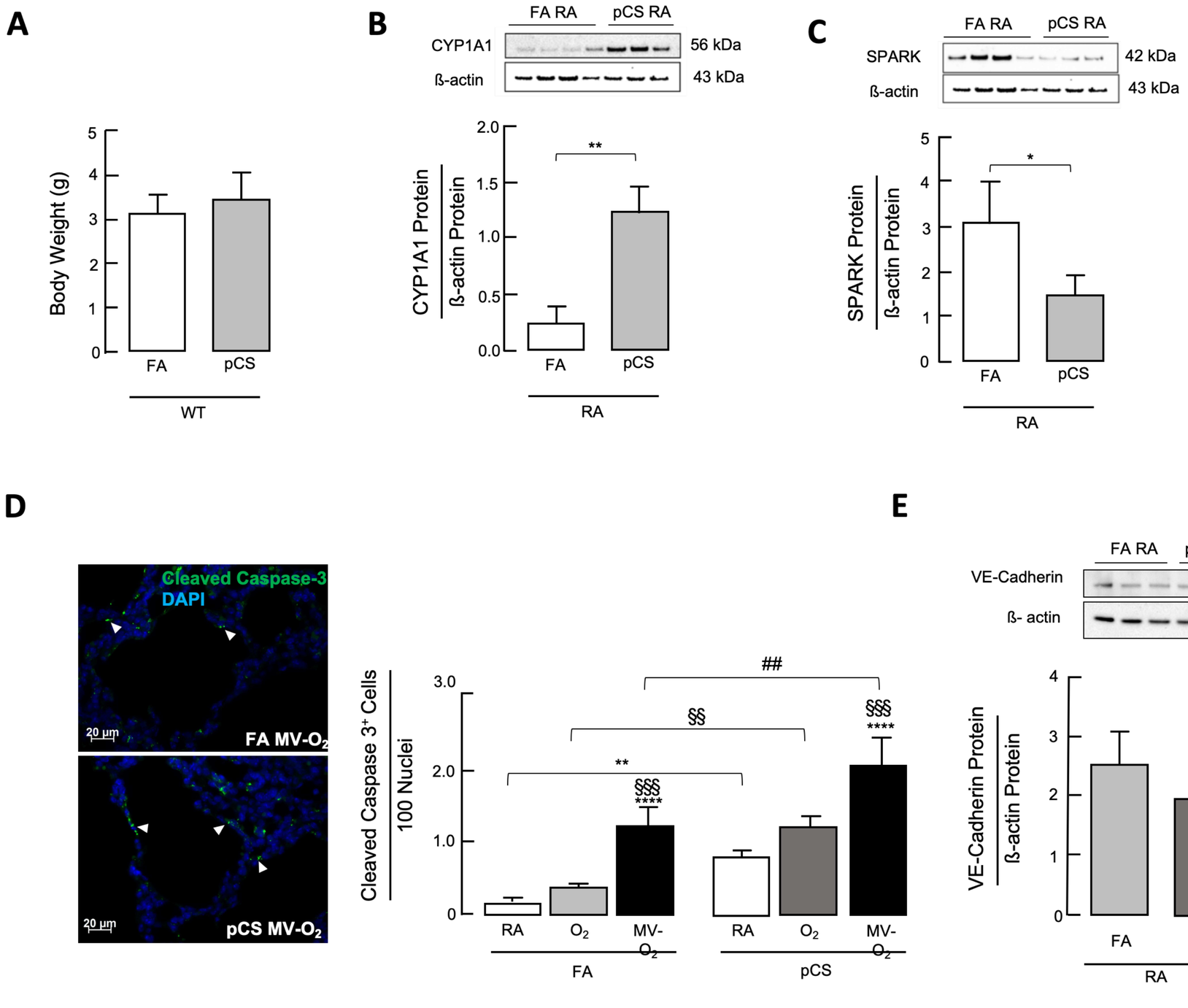
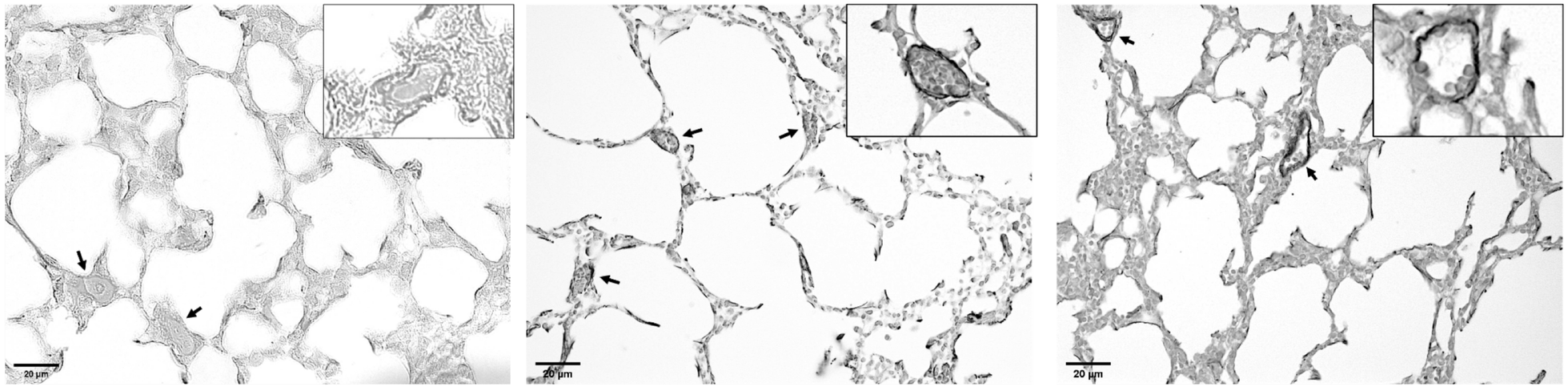

A
Body Weight (g)
FA
pCS
WT
B
FA RA
pCS RA
CYP1A1
56 kDa
ß-actin
43 kDa
CYP1A1 Protein / ß-actin Protein
**
FA
pCS
RA
C
FA RA
pCS RA
SPARK
42 kDa
ß-actin
43 kDa
SPARK Protein / ß-actin Protein
*
FA
pCS
RA
D
Cleaved Caspase-3
DAPI
20 µm
FA MV-O2
pCS MV-O2
Cleaved Caspase 3+ Cells / 100 Nuclei
##
§§
§§§
**
****
RA
O2
MV-O2
FA
pCS
E
FA RA
pCS RA
FA MV-O2
pCS MV-O2
VE-Cadherin
120 kDa
ß- actin
43 kDa
VE-Cadherin Protein / ß-actin Protein
**
FA
pCS
RA
MV-O2

Fig S4

A


20 µm
20 µm
20 µm

B

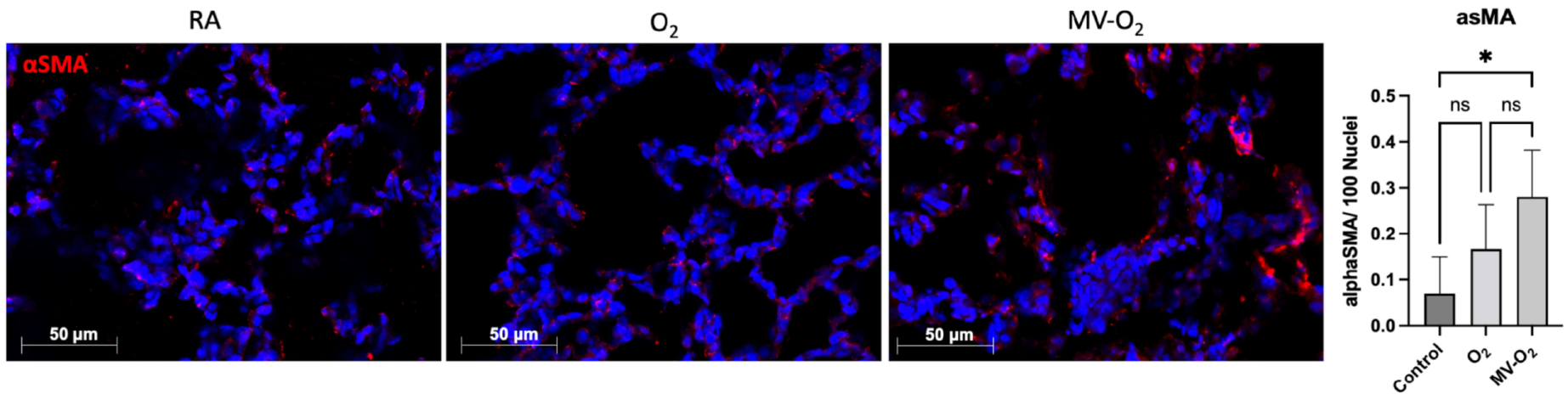

RA
O2
MV-O2
αSMA
50 µm
50 µm
50 µm
asMA
*
ns
ns
alphaSMA/ 100 Nuclei
0.5
0.4
0.3
0.2
0.1
0.0
Control
O2
MV-O2

Fig S5

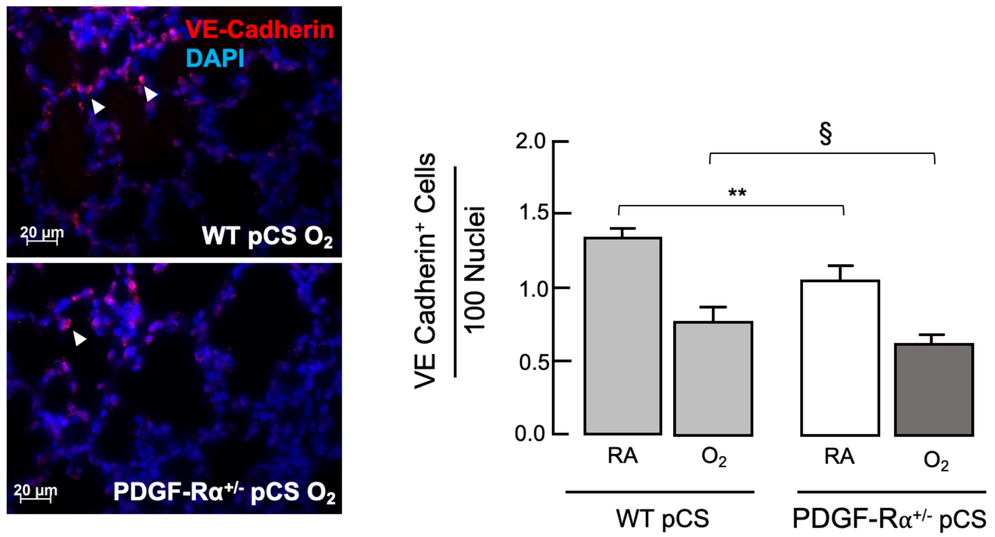

VE-Cadherin
DAPI
20 µm
WT pCS O2
20 µm
PDGF-Rα+/- pCS O2
VE Cadherin+ Cells
100 Nuclei
2.0
1.5
1.0
0.5
0.0
§
**
RA
O2
RA
O2
WT pCS
PDGF-Rα+/- pCS

Fig S6

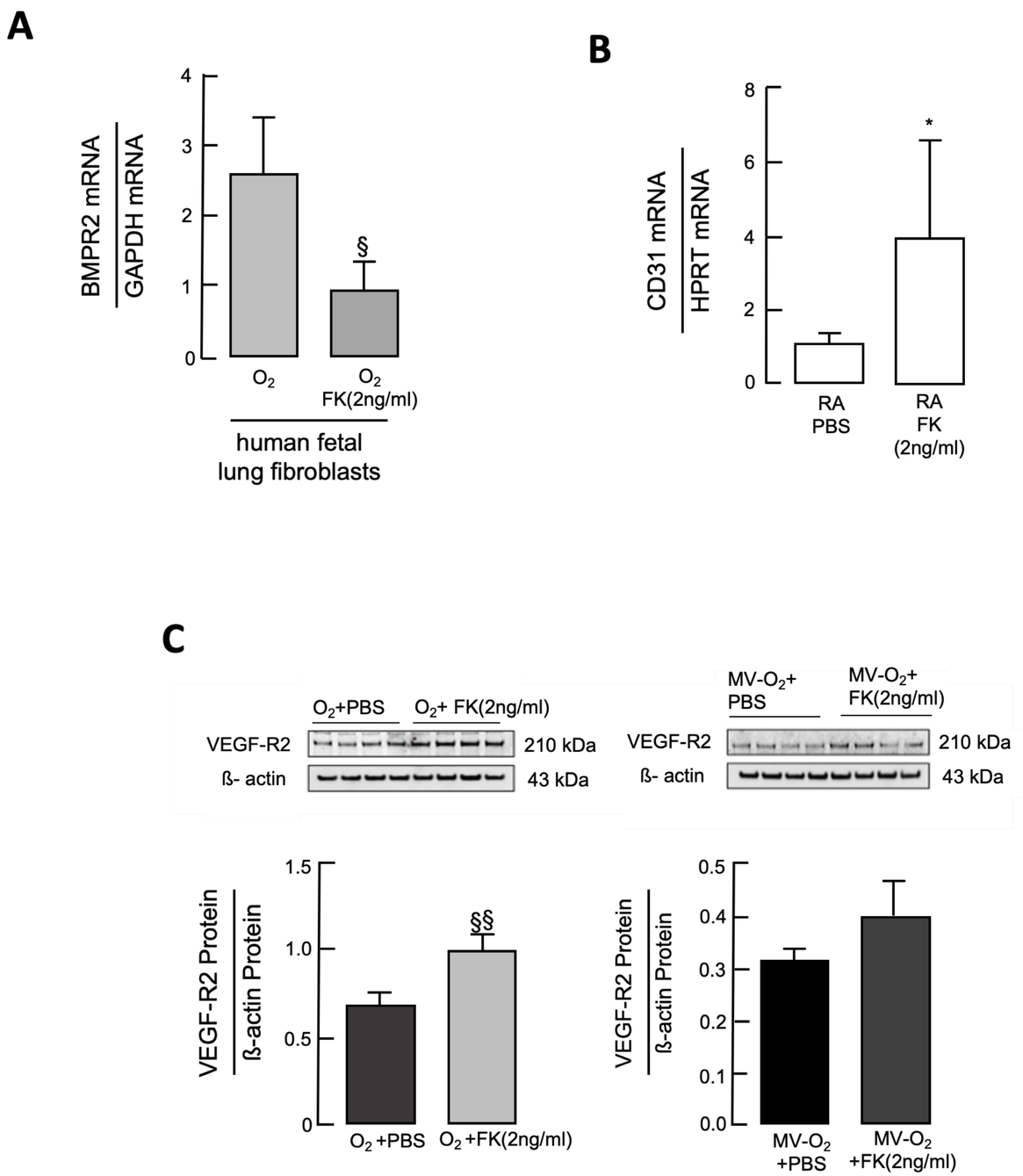

A
BMPR2 mRNA / GAPDH mRNA
4
3
2
1
0
§
O2
O2 FK(2ng/ml)
human fetal lung fibroblasts
B
CD31 mRNA / HPRT mRNA
8
6
4
2
0
*
RA PBS
RA FK (2ng/ml)
C
O2+PBS
O2+ FK(2ng/ml)
VEGF-R2
210 kDa
ß- actin
43 kDa
MV-O2+ PBS
MV-O2+ FK(2ng/ml)
VEGF-R2 Protein / ß-actin Protein
1.5
1.0
0.5
0
§§
O2 +PBS
O2 +FK(2ng/ml)
0.5
0.4
0.3
0.2
0.1
0.0
MV-O2 +PBS
MV-O2 +FK(2ng/ml)

Table S1. Patient characteristics preterm infants.

n	28
GA (weeks)	28.2 (25.1-30.6)
Birth weight (g)	1031 (650-1770)
IUGR	2 (8%)
Gender (female/male)	12/16
ANCS	25 (89.3%)
Chorioamnionitis	11 (39.3%)
Early onset infection	7 (25.0%)
RDS≥III°	7 (25.0%)
Days of mechanical ventilation	34 (0-70)
Days of oxygen supplementation	22 (0-88)
PDA	18 (78.3%)
Postnatal steroids	10 (35.7%)
ROP	5 (17.9%)
IVH	2 (7.1%)
ICU days	64 (30-109)
BPD	
- None	17 (60.7%)
- Mild	7 (25.0%)
- Moderate	3 (10.7%)
- Severe	1 (3.6%)

Data are given as median and range or number and percent of total in group respective range.
GA, gestational age; IUGR, intrauterine growth retardation; ANCS, antenatal corticosteroids; RDS, respiratory distress syndrome; PDA, patent ductus arteriosus; ROP, retinopathy of prematurity; IVH, intraventricular hemorrhage; ICU, intensive care unit; BPD, bronchopulmonary dysplasia. NA (not available): IUGR n=3; PDA n=7. Intrauterine growth restriction was defined as birth weight below the 10th percentile. Postnatally, diagnosis and severity of respiratory distress syndrome (RDS) were scored on anterior-posterior (a.-p.) chest radiographs according to Couchard et al (1). Chorioamnionitis was defined as inflammatory alterations of the chorionic plate (histologic examination) or signs of maternal and fetal signs of infection (2) Systemic infections were diagnosed according to Sherman et al. (3) based on one or more clinical and laboratory signs of infection. BPD was defined according to Jobe and Bancalari (4) and graded as mild (oxygen supplementation at 28 days postnatally), moderate (oxygen supplementation < 30% and/or ventilator support at 36 weeks postmenstrual age), and severe (oxygen supplementation > 30% and/or ventilator support at 36 weeks postmenstrual age).

1. Couchard M, Polge J, Bomsel F. Hyaline membrane disease: diagnosis, radiologic surveillance, treatment and complications. *Ann. Radiol. (Paris).* 1974;17(7):669–83.
2. Franz A, Steinbach G, Kron M, Pohlandt F. Interleukin-8: a valuable tool to restrict antibiotic therapy in newborn infants. *Acta Paediatr.* 2007;90(9):1025–1032.
3. Sherman MP, Goetzman BW, Ahlfors CE, Wennberg RP. Tracheal Aspiration and Its Clinical Correlates in the Diagnosis of Congenital Pneumonia. *Pediatrics* 1980;65(2):258–263.
4. Jobe AH, Bancalari E. Bronchopulmonary dysplasia. *Am. J. Respir. Crit. Care Med.* 2001;163(7):1723–1729.