

21%O₂

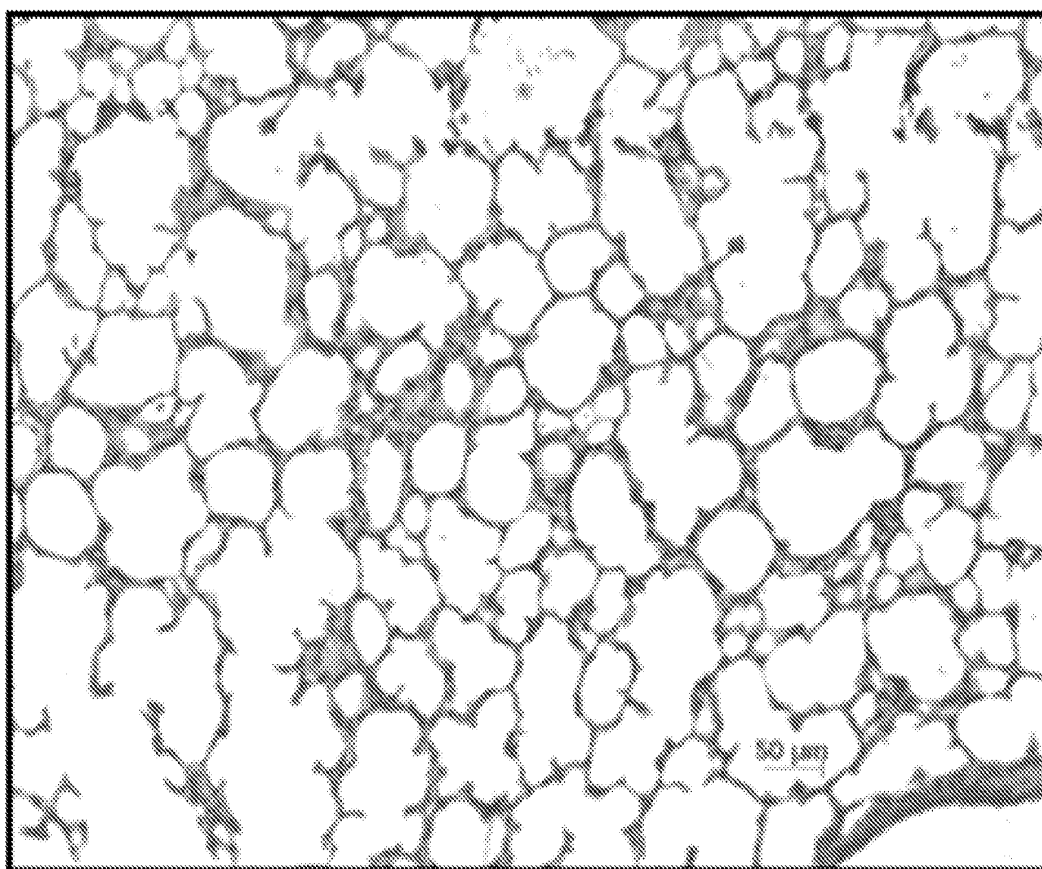


Figure 1A

95%O₂

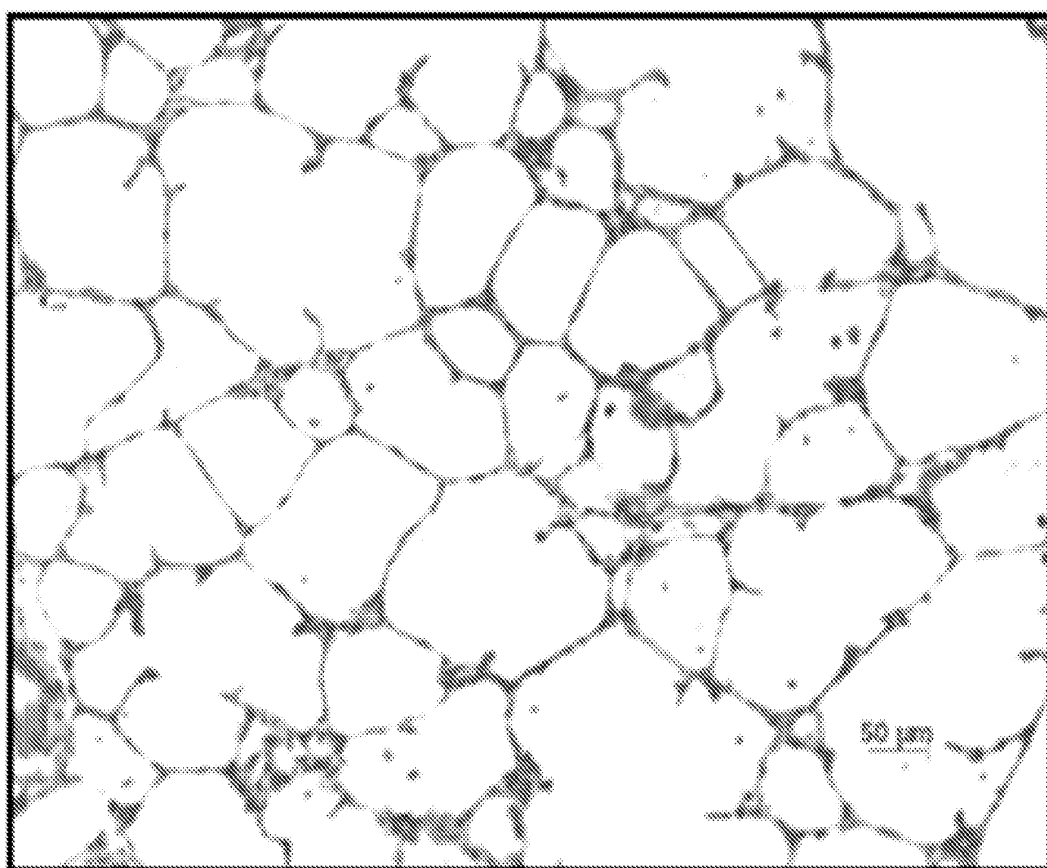


Figure 1A (continued)

95%O₂ + IM (VitA)

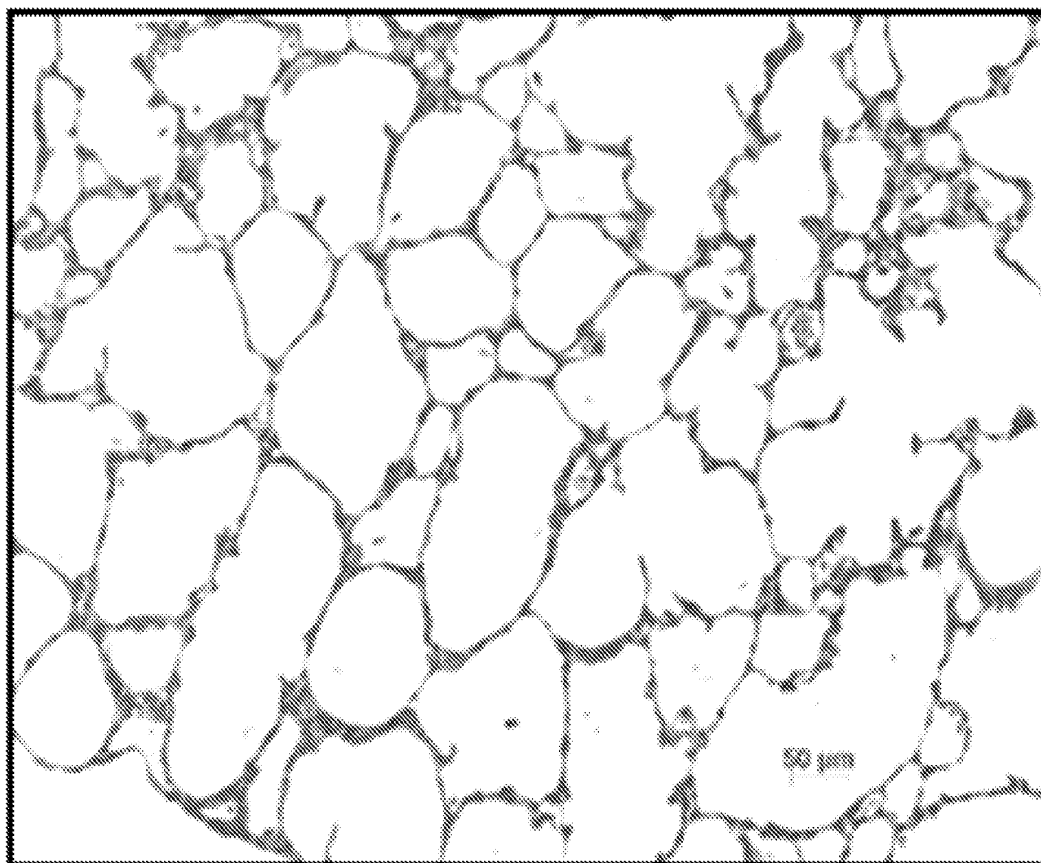


Figure 1A (continued)

95%O₂ + Neb (VitA)

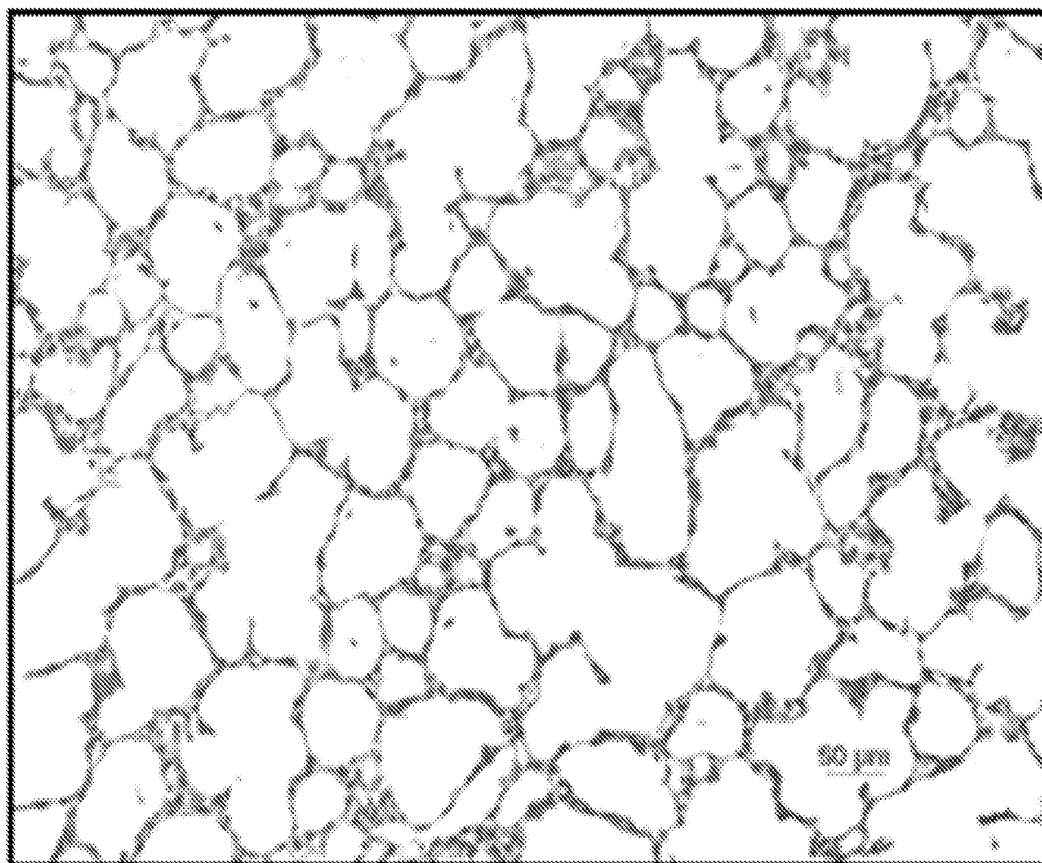


Figure 1A (continued)

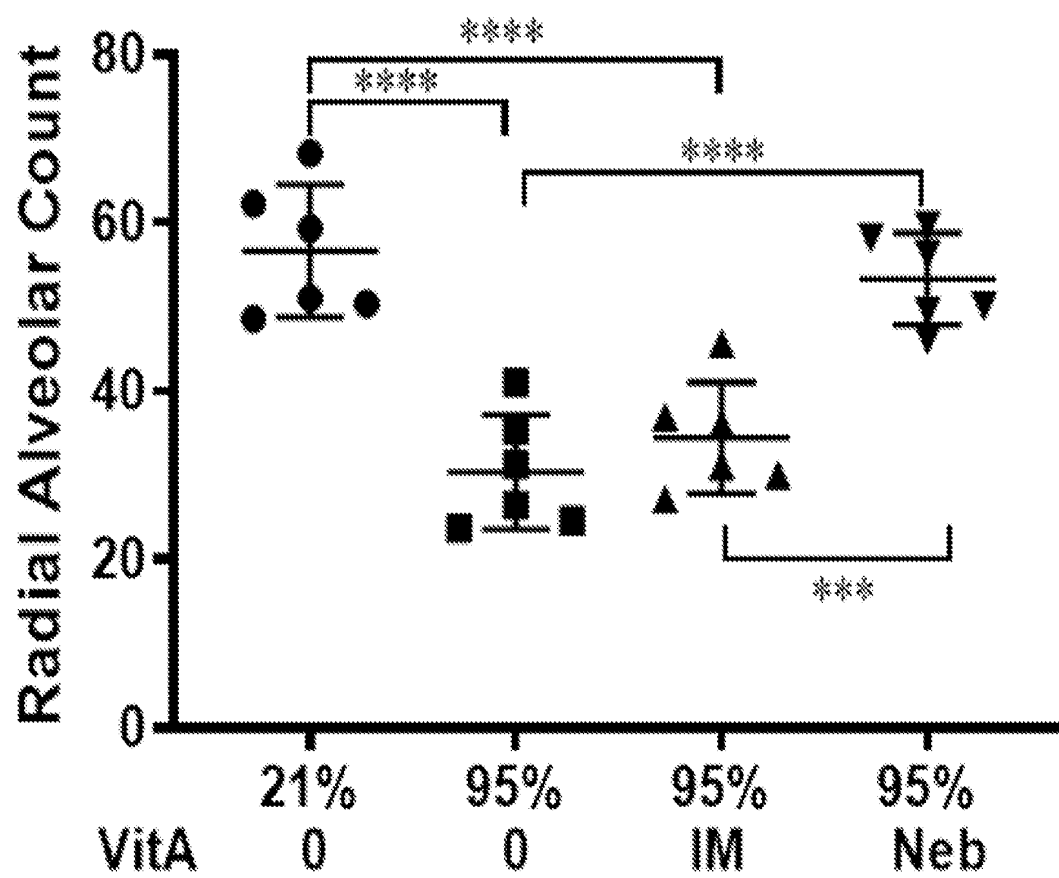


Figure 1A (continued)

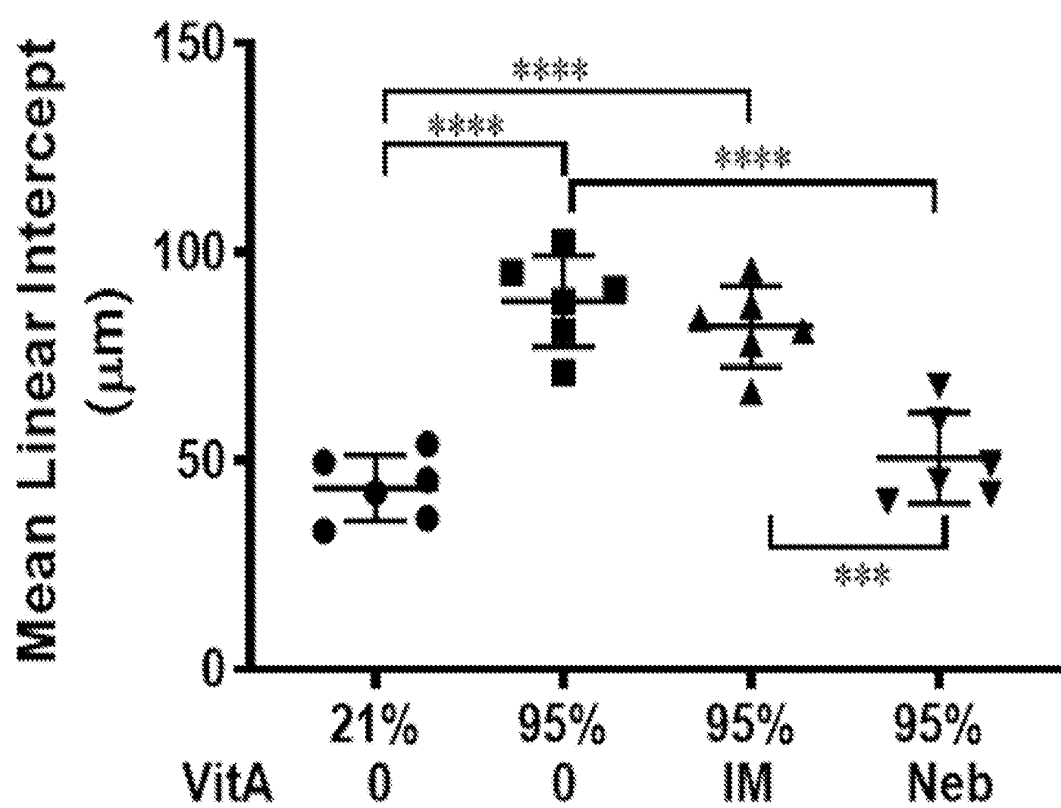


Figure 1A (continued)

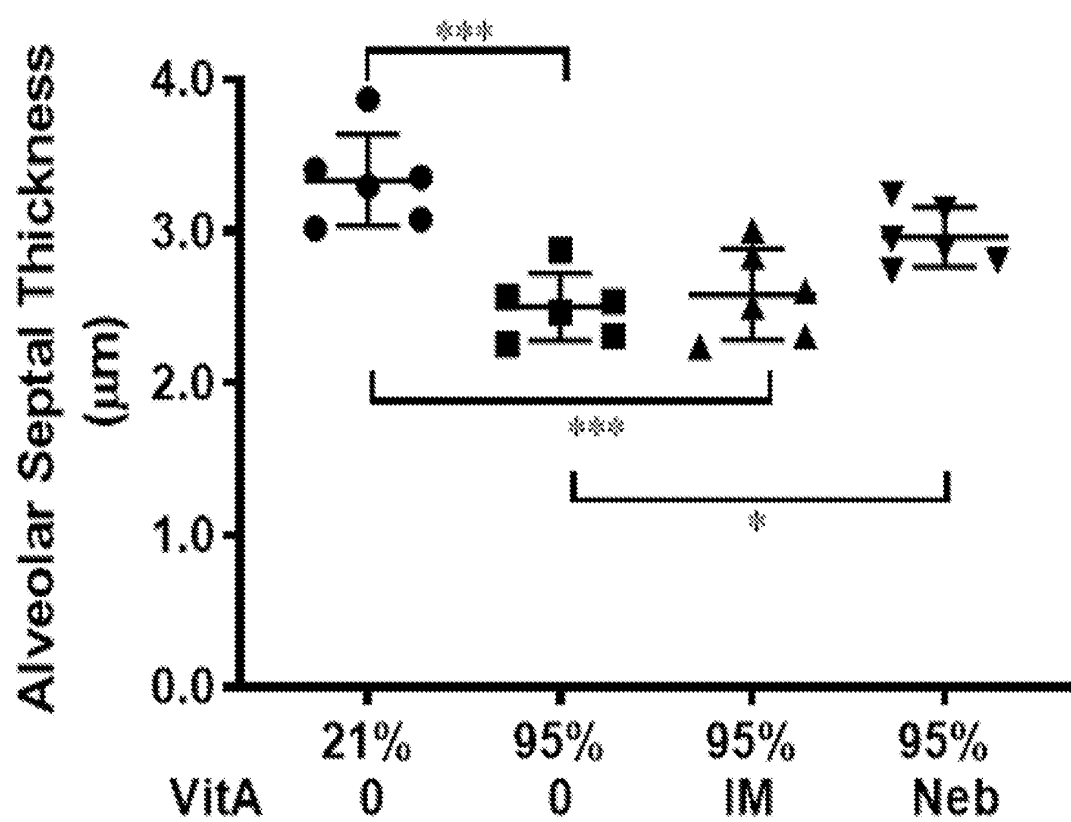


Figure 1A (continued)

O ₂ condition and dosing	21% O ₂ (normoxia), no vitamin	95% O ₂ hyperoxia, no vitamin	95% O ₂ , IM vitamin A	95% O ₂ , nebulized vitamin A
Radial Alveolar Count	57 ± 6	28 ± 4 [<0.0001*]	31 ± 5 [<0.0001*]	56 ± 5 [<0.0001#] [<0.001 ^]
Mean Linear intercept (microns)	41 ± 5	88 ± 7 [<0.0001*]	82 ± 5 [<0.0001*]	45 ± 5 [<0.0001#] [<0.001 ^]
Alveolar septal thickness (microns)	3.2 ± 0.2	2.4 ± 0.2 [<0.001*]	2.5 ± 0.2 [<0.001*]	3.0 ± 0.1 [<0.05#]

Figure 1B

**21%O₂
no vitamin A**

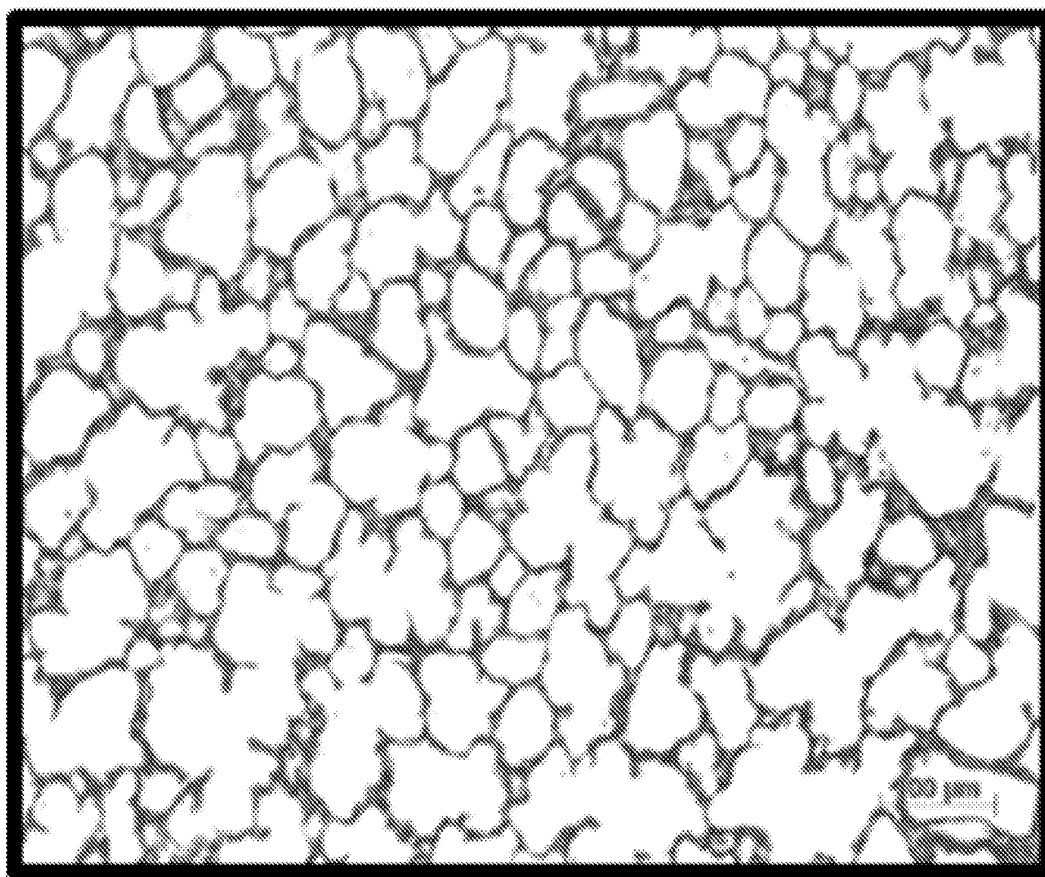


Figure 2

**95%O₂
no vitamin A**

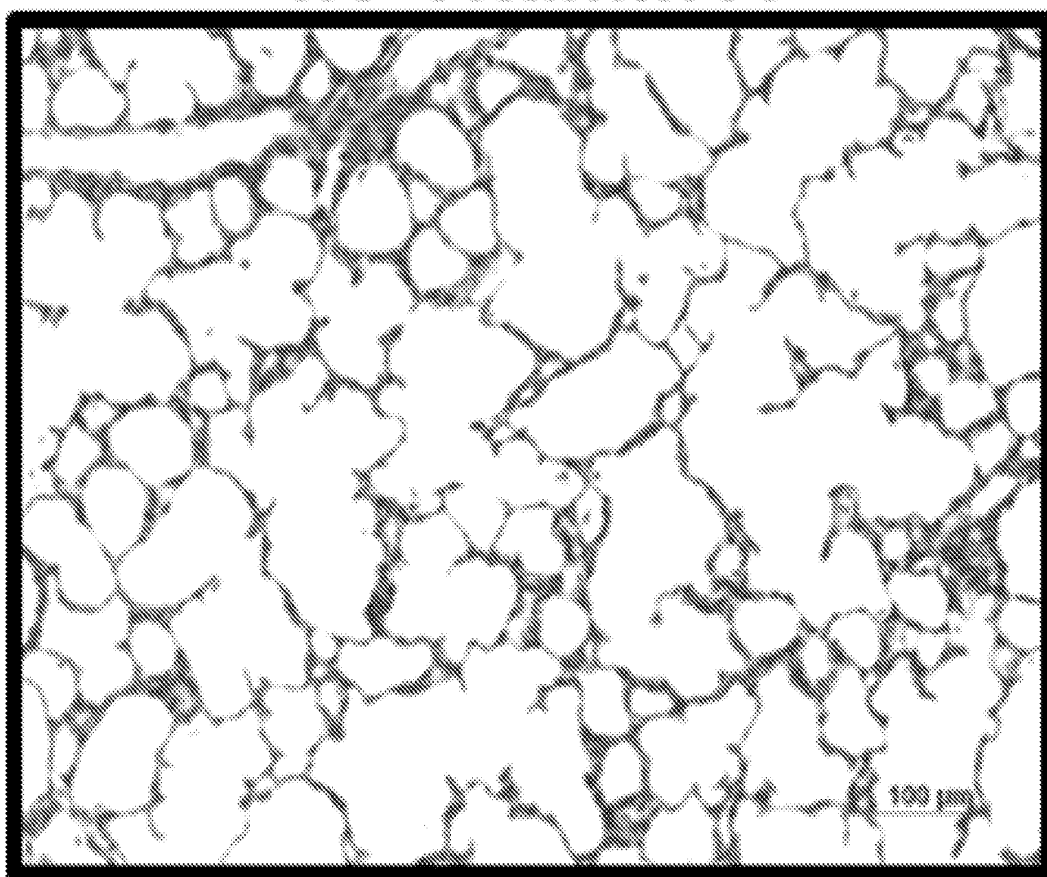


Figure 2 (continued)

**95%O₂
+ oral vitamin A**

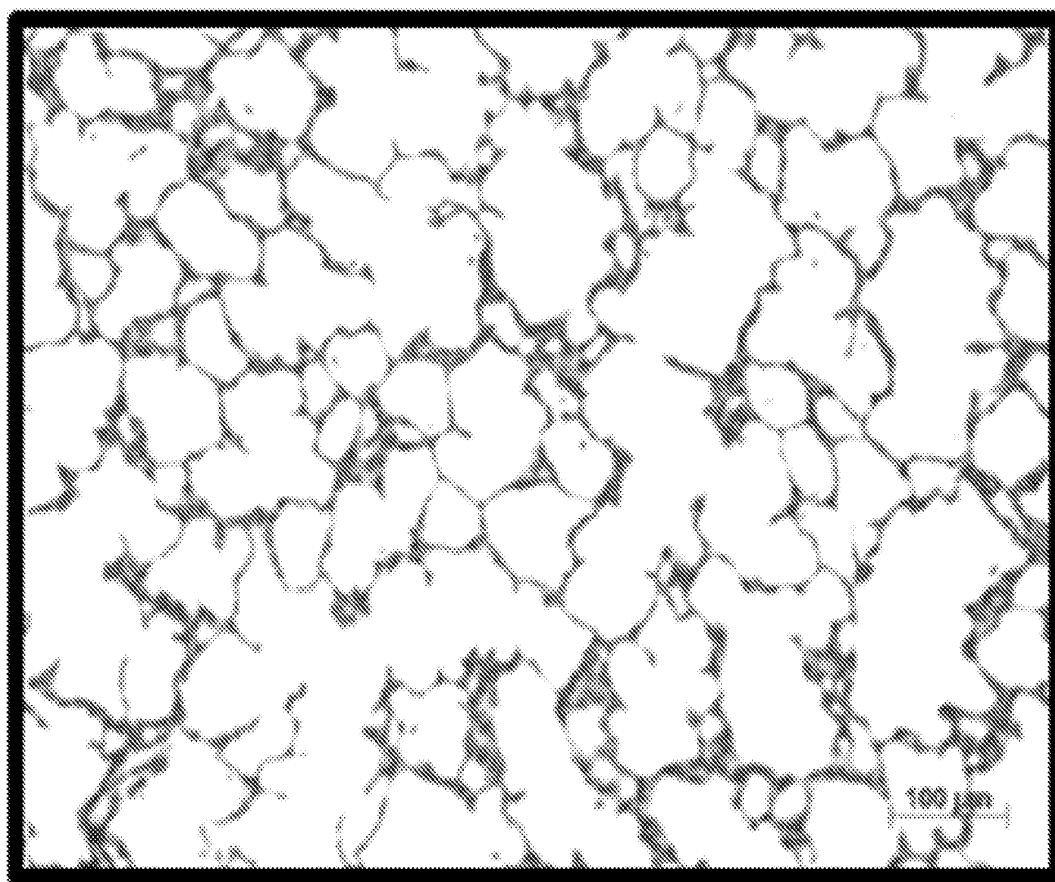


Figure 2 (continued)

95%O₂
+ nebulized vitamin A

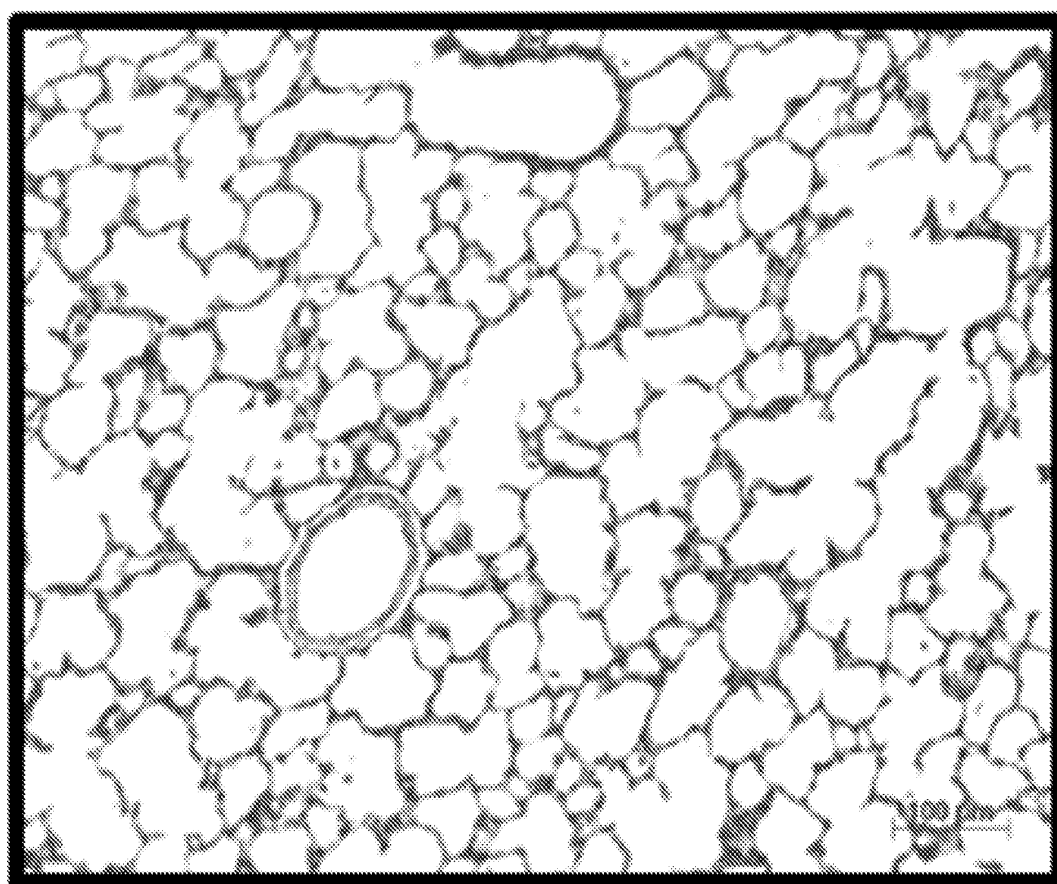


Figure 2 (continued)

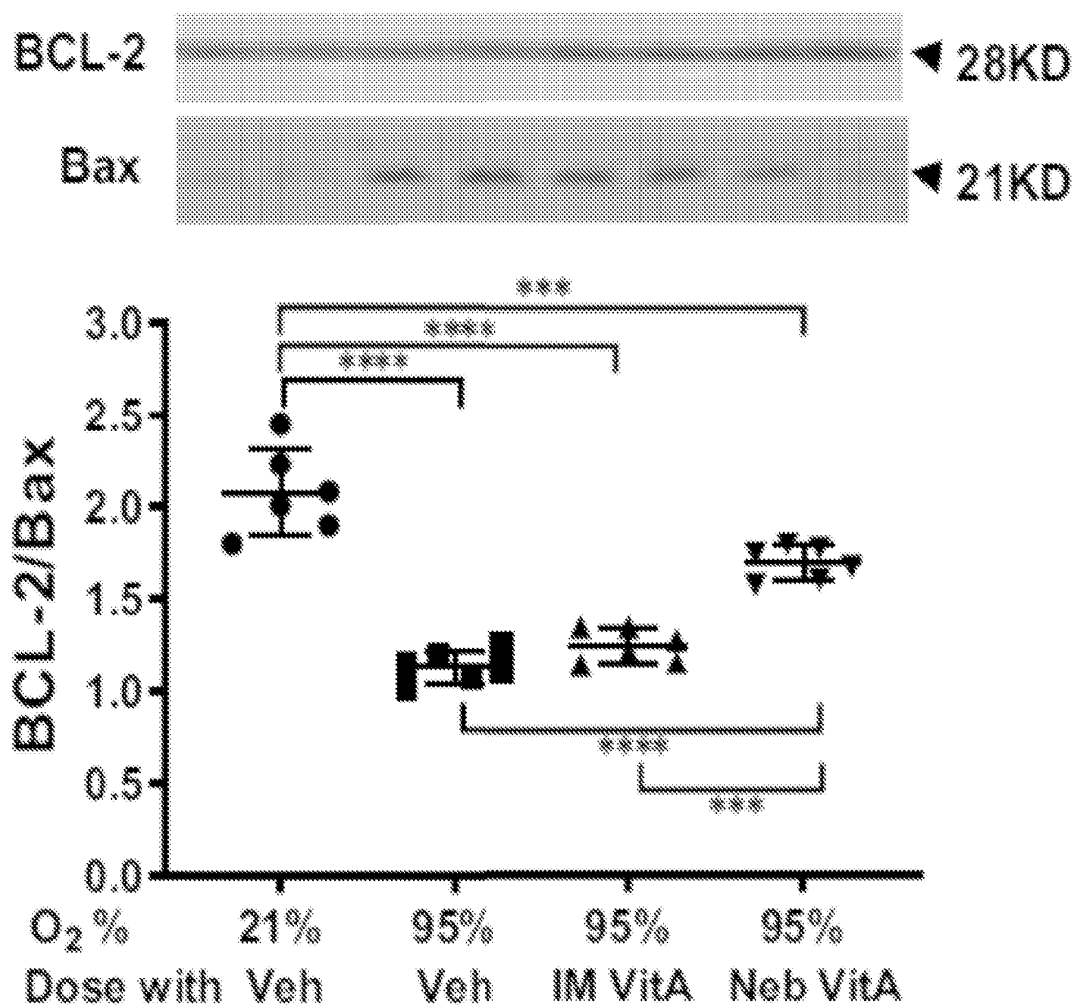


Figure 3A

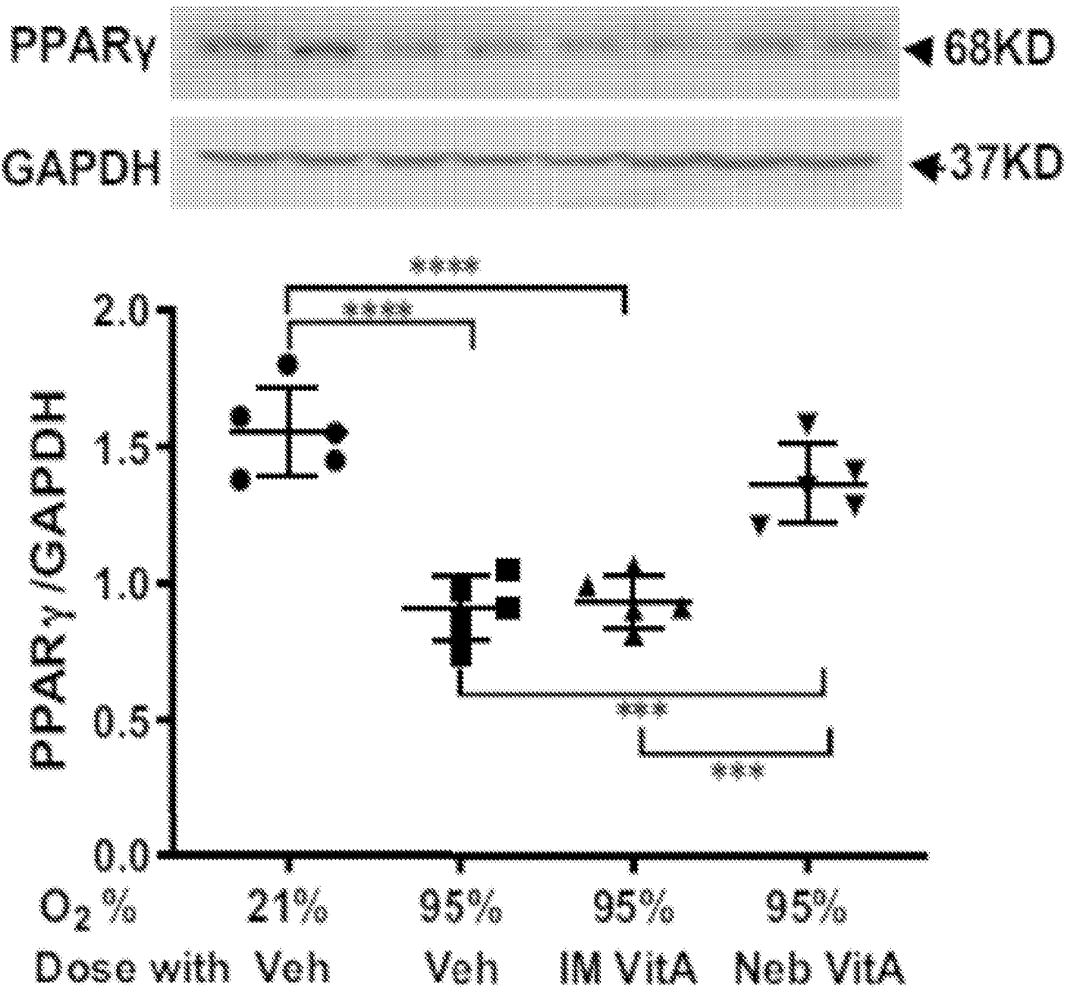


Figure 3A (continued)

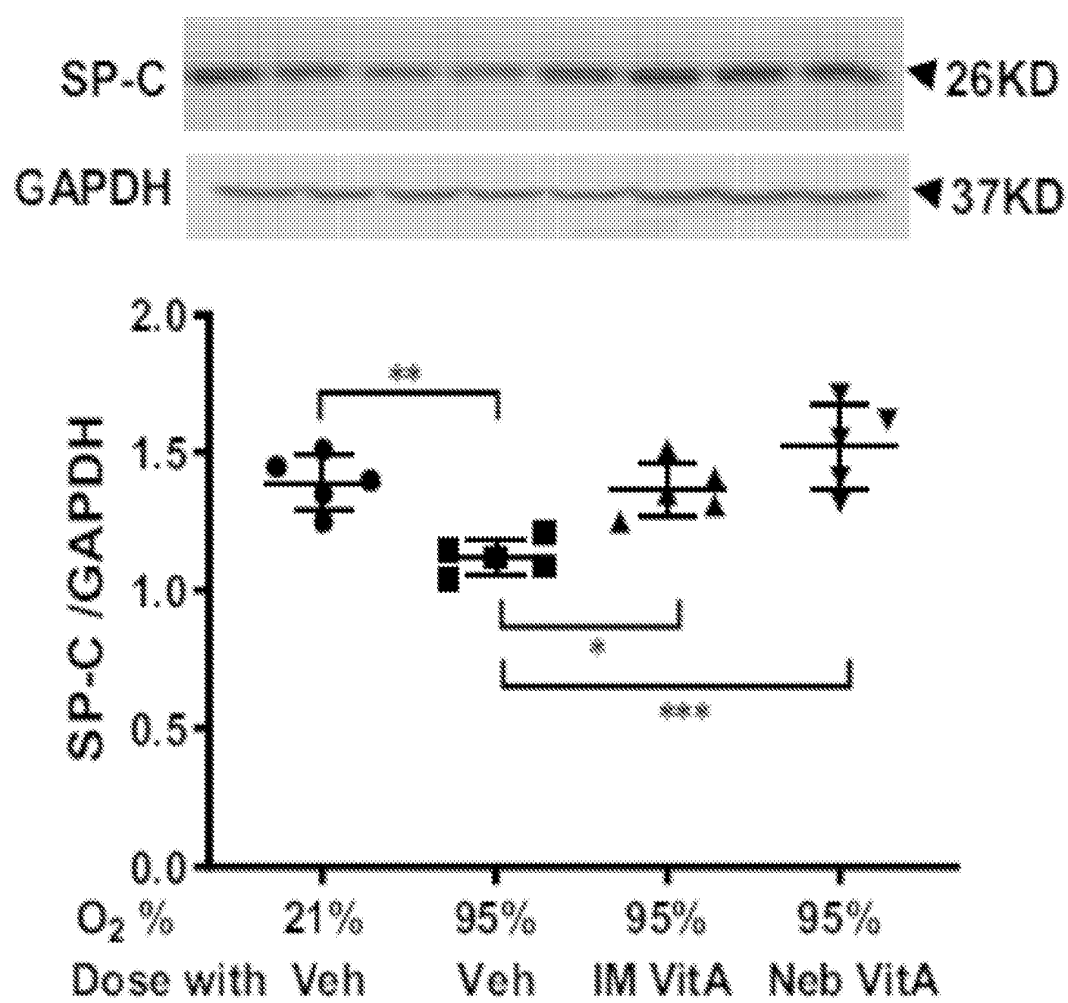
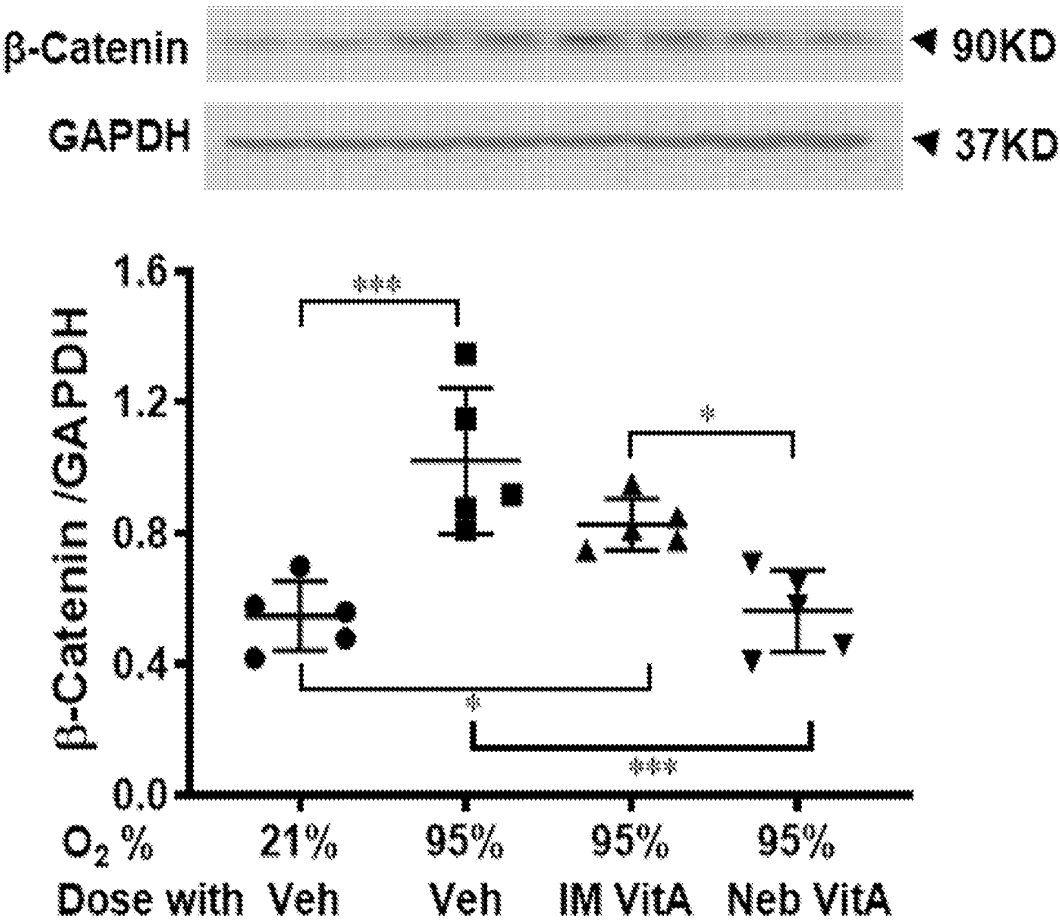
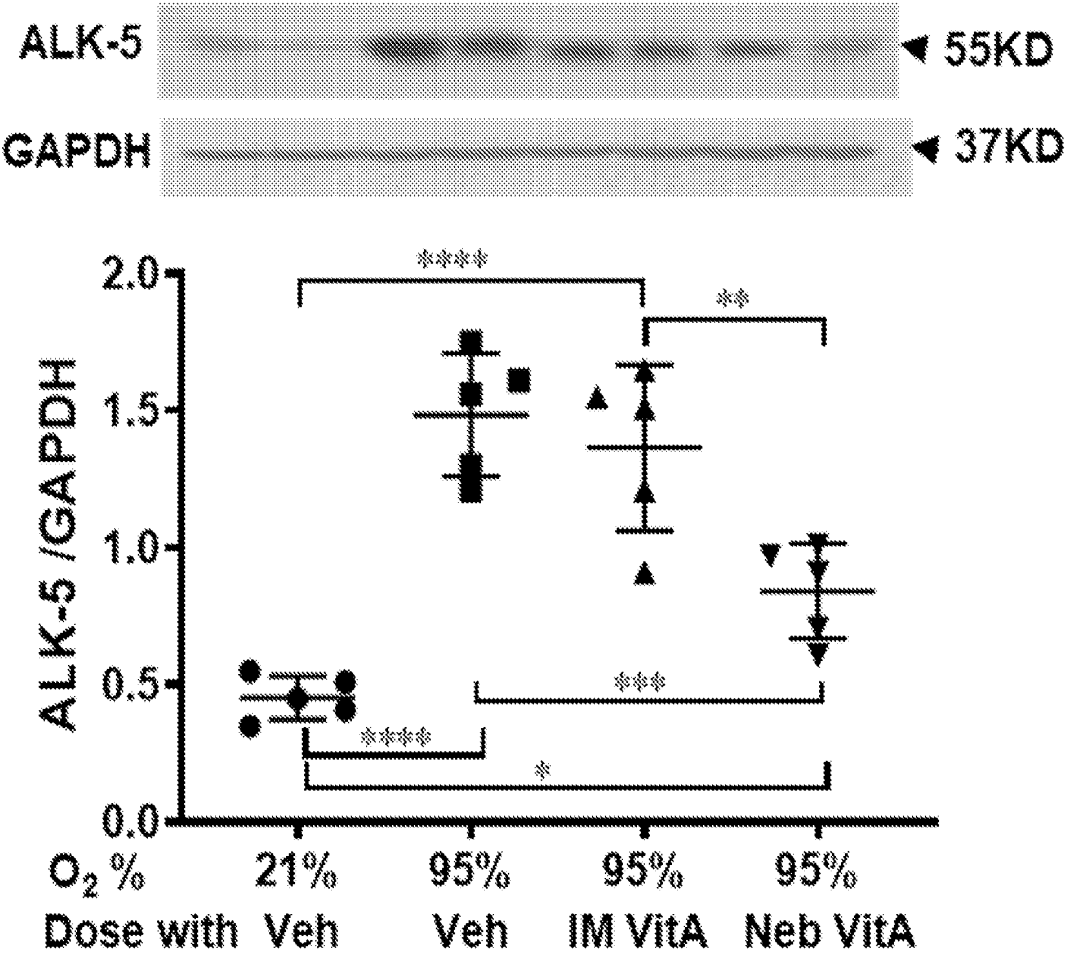


Figure 3A (continued)

O ₂ condition and dosing	21% O ₂ (normoxia), no vitamin	95% O ₂ hyperoxia, no vitamin	95% O ₂ , IM vitamin A	95% O ₂ , nebulized vitamin A
BCL-2/BAX	2.1 ± 0.2 ^	1.1 ± 0.1 ^	1.3 ± 0.1 ^	1.7 ± 0.1 ^ #
PPAR γ	1.5 ± 0.1	0.9 ± 0.1 ^	0.9 ± 0.1 ^	1.4 ± 0.1 #
SP-C	1.4 ± 0.1	1.1 ± 0.1 ^	1.4 ± 0.1 #	1.5 ± 0.1 #

Figure 3B





O ₂ condition and dosing	21% O ₂ (normoxia), no treatments	95% O ₂ hyperoxia, no treatments	95% O ₂ , IM vitamin A	95% O ₂ , nebulized vitamin A
Beta- catenin	0.55 ± 0.10	1.0 ± 0.2 ^	0.83 ± 0.07 ^	0.57 ± 0.13 #
ALK-5	0.46 ± 0.08	1.48 ± 0.22 ^	1.36 ± 0.29 ^	0.84 ± 0.16 ^#

Figure 4B

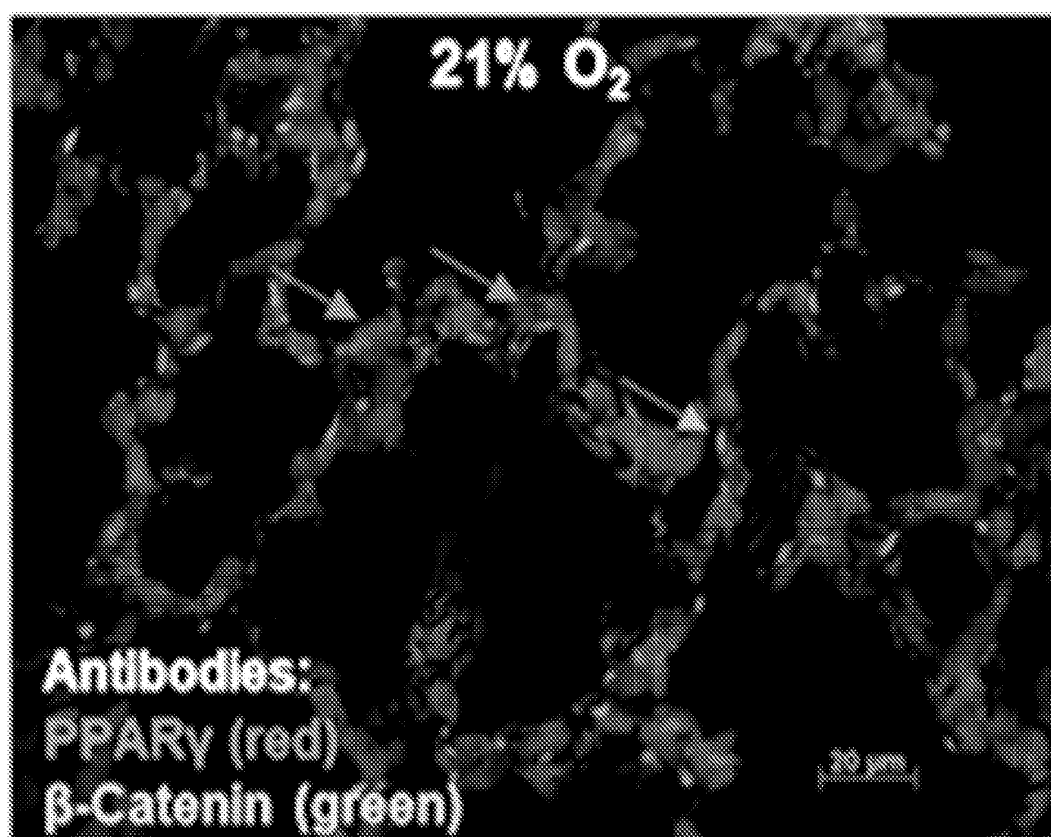


Figure 5

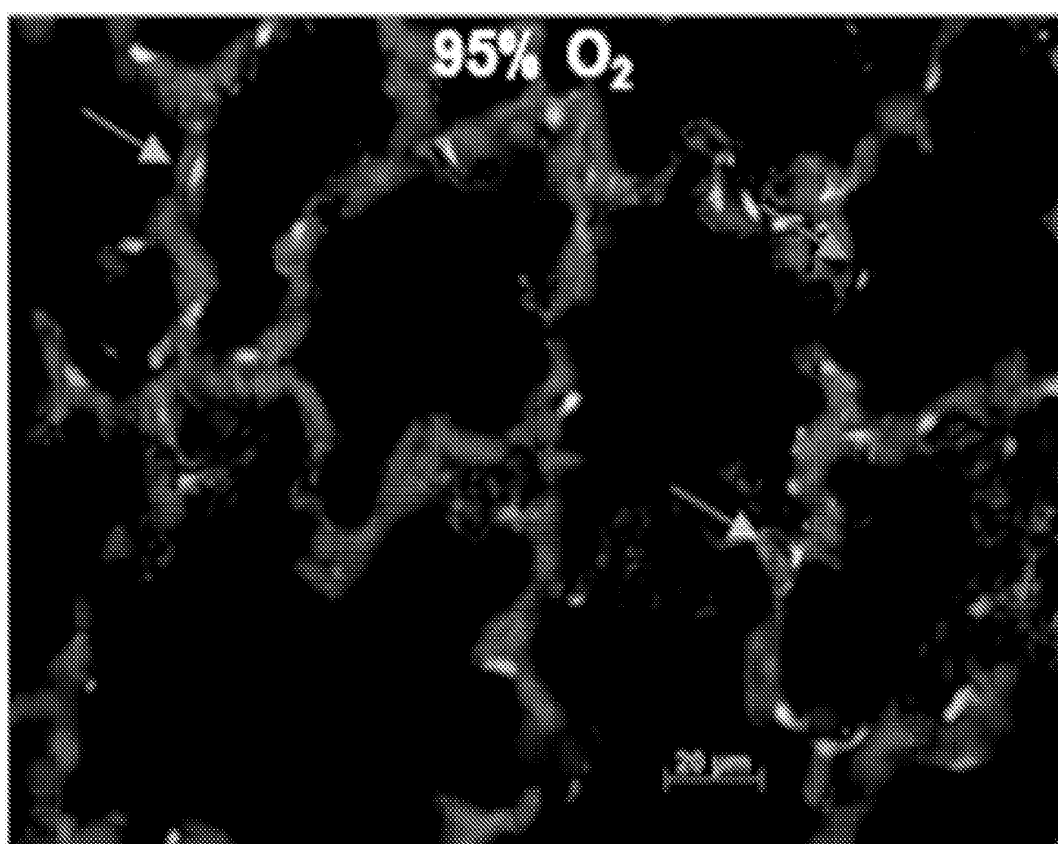


Figure 5 (continued)

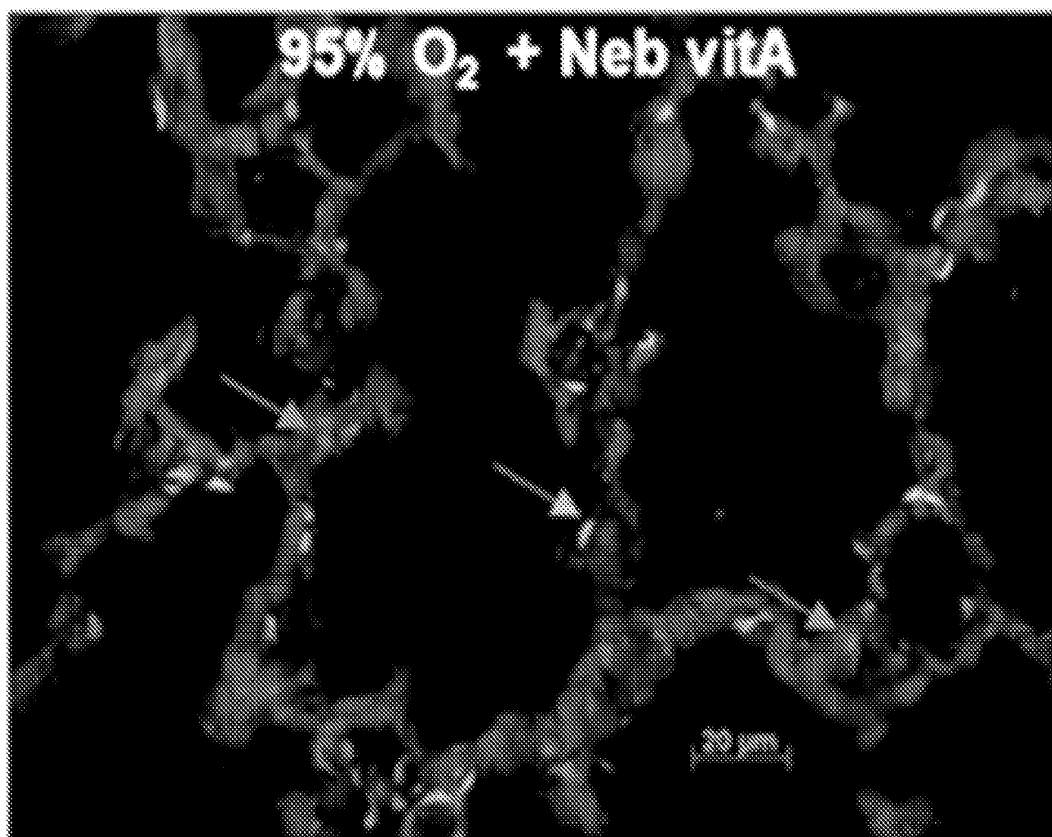


Figure 5 (continued)

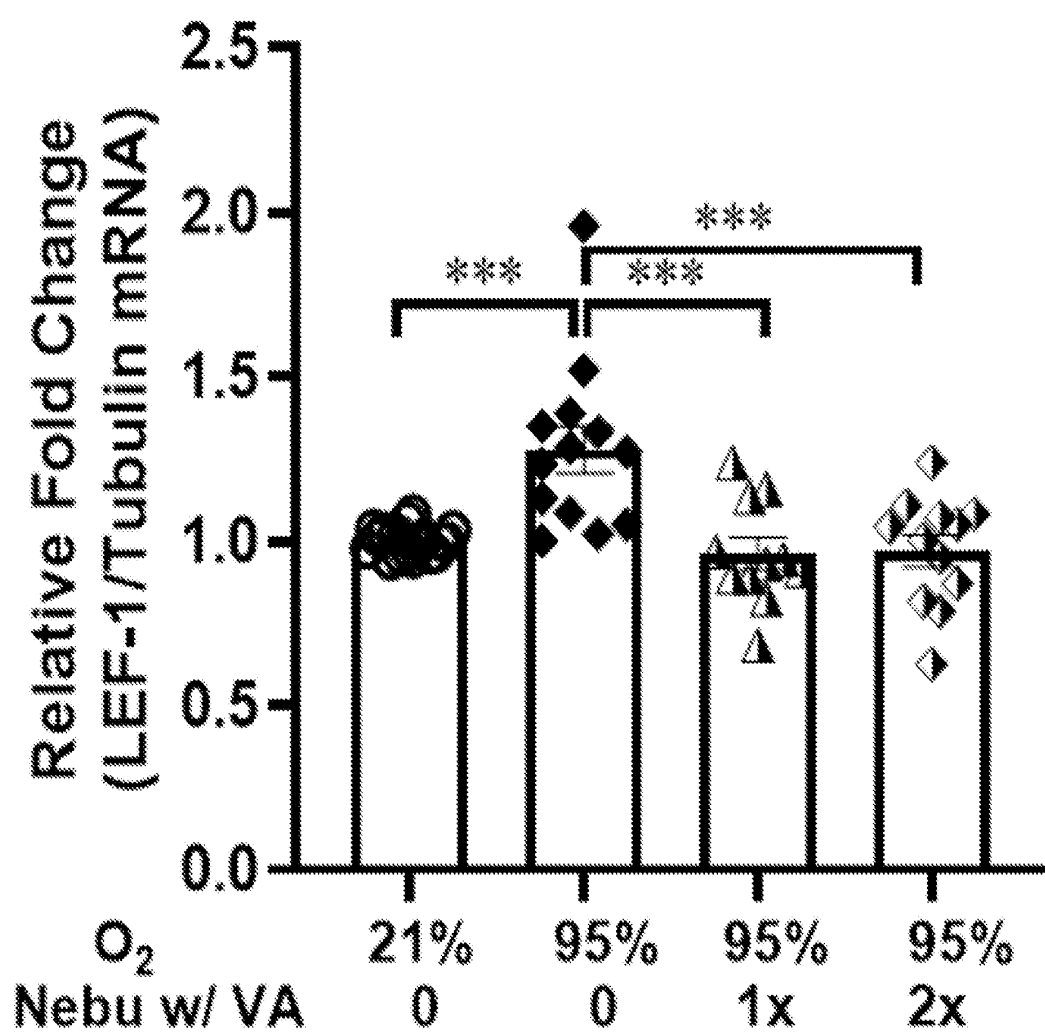
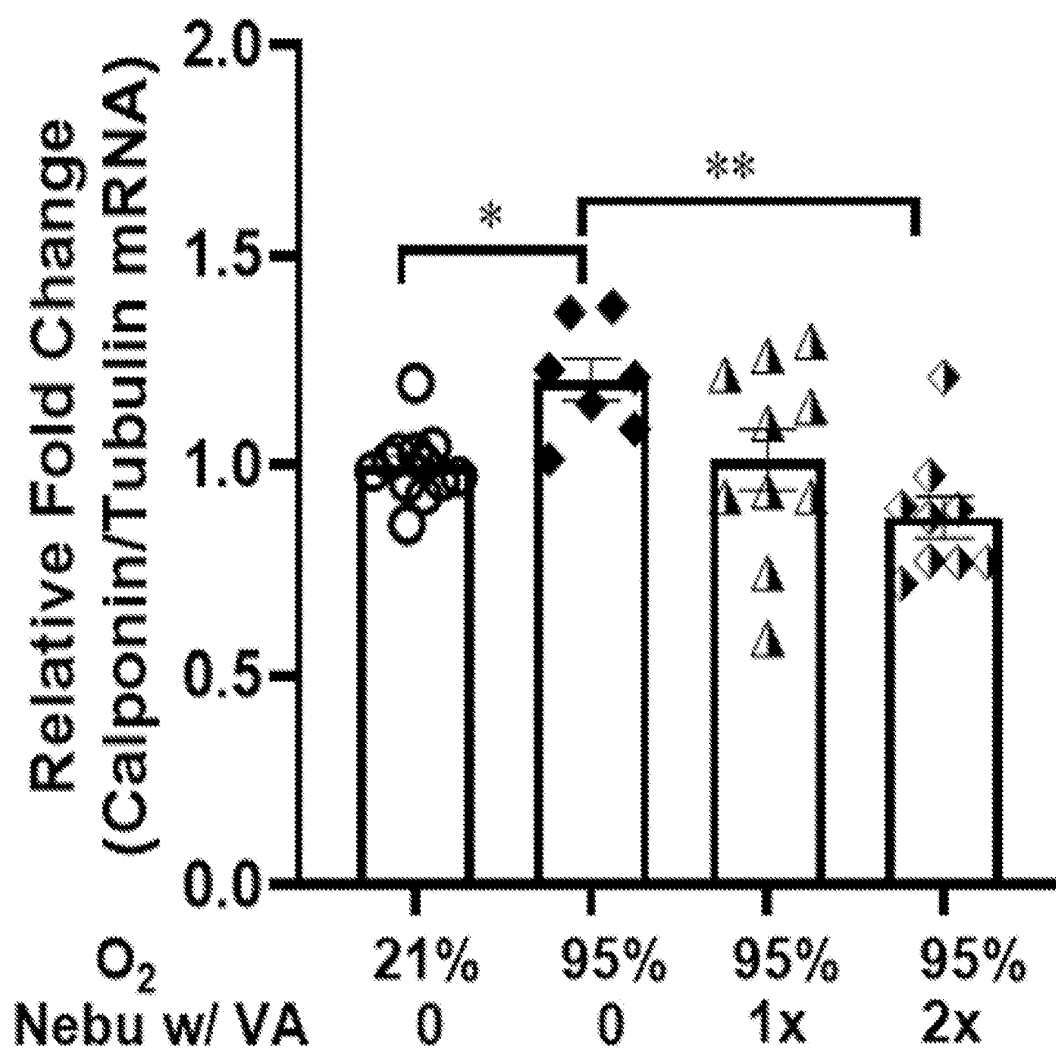
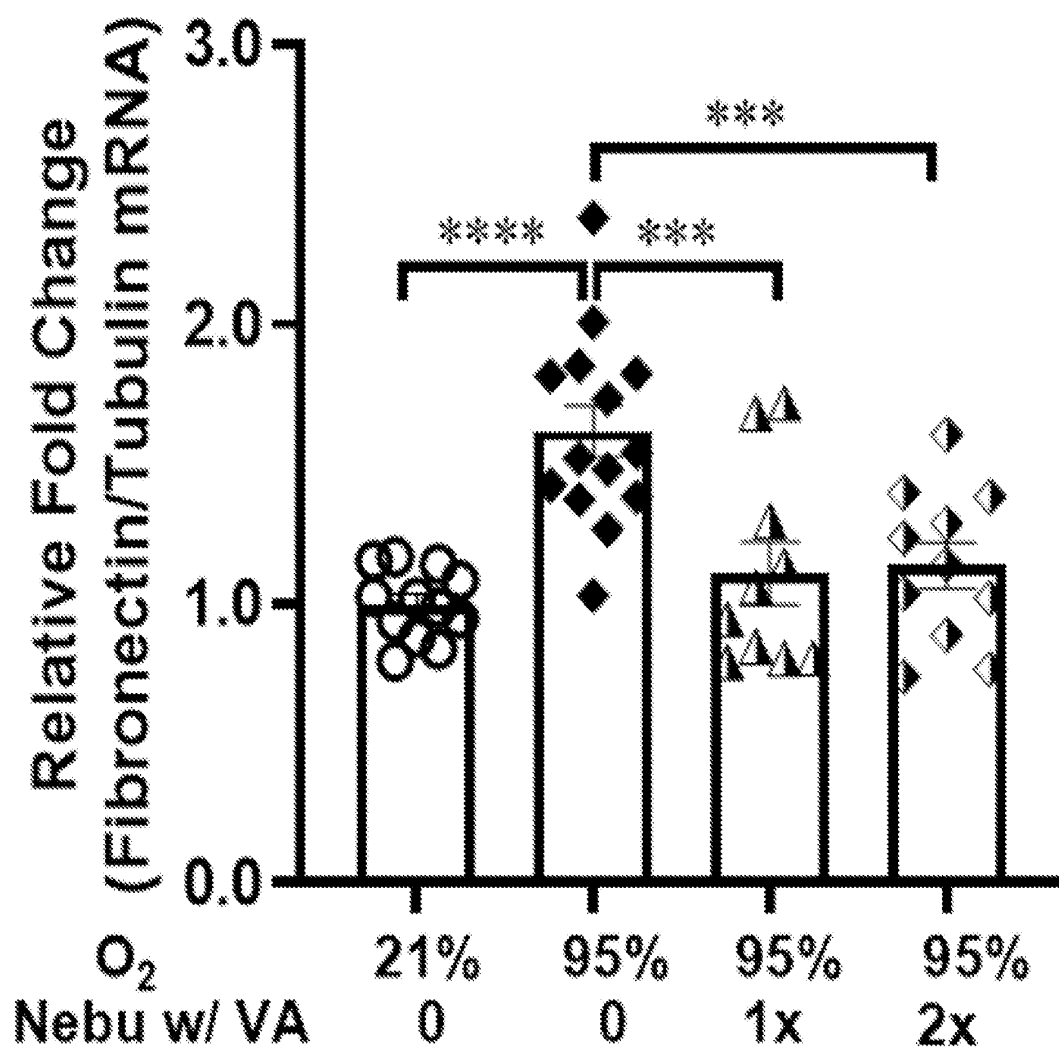


Figure 6A





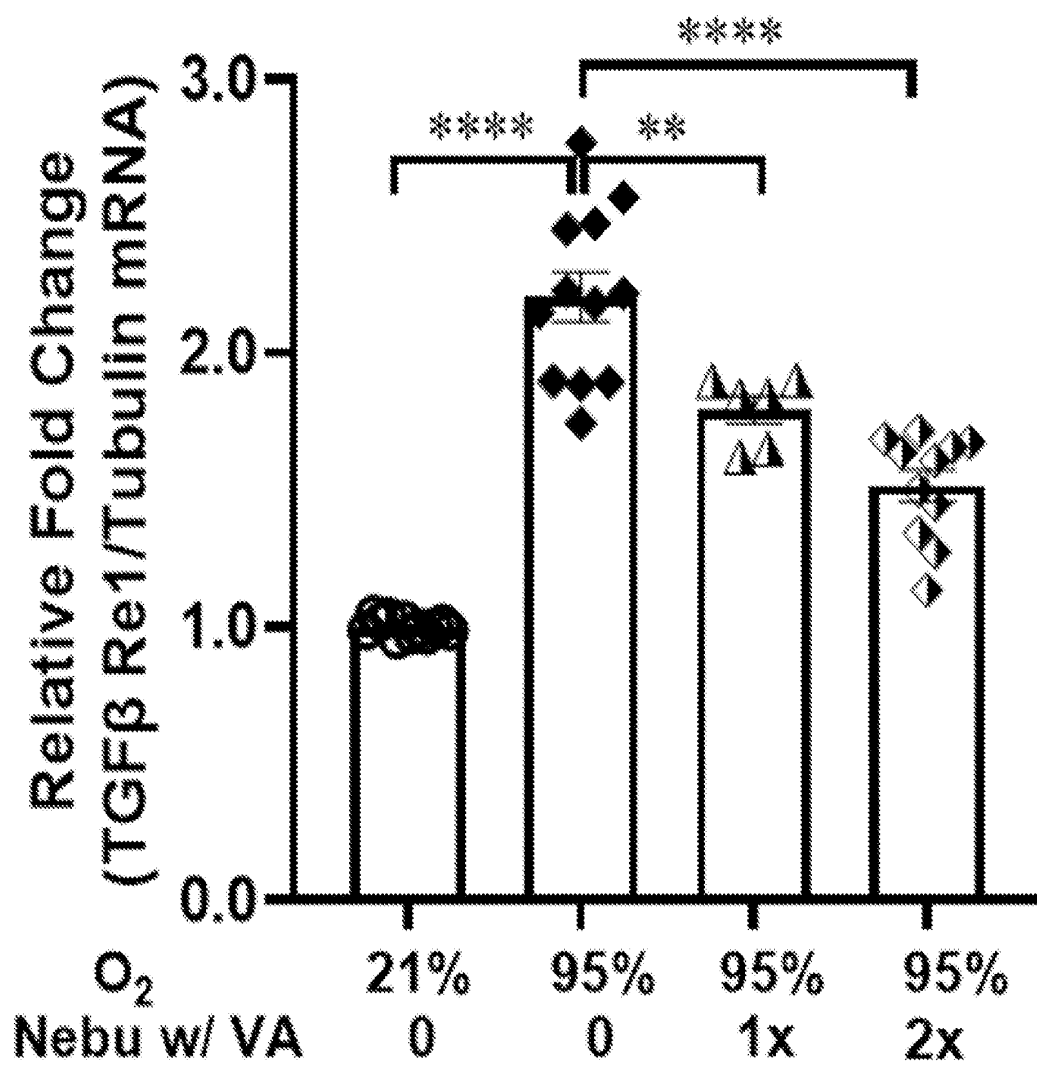


Figure 6A (continued)

<u>O₂ condition gene</u>	21% O ₂ (normoxia), no vitamin	95% O ₂ hyperoxia, no vitamin	95% O ₂ , 1x level of inhaled vitamin A	95% O ₂ , 2x level of inhaled vitamin A
LEF-1	1.0 ± 0.03	1.27 ± 0.06	0.96 ± 0.93	0.96 ± 0.04
Calponin	1.0 ± 0.03	1.19 ± 0.03	1.0 ± 0.06	0.87 ± 0.04
Fibronectin	1.0 ± 0.06	1.61 ± 0.07	1.09 ± 0.09	1.12 ± 0.07
TGFβ	1.0 ± 0.04	2.18 ± 0.08	1.78 ± 0.03	1.48 ± 0.04

Figure 6B

21% O₂

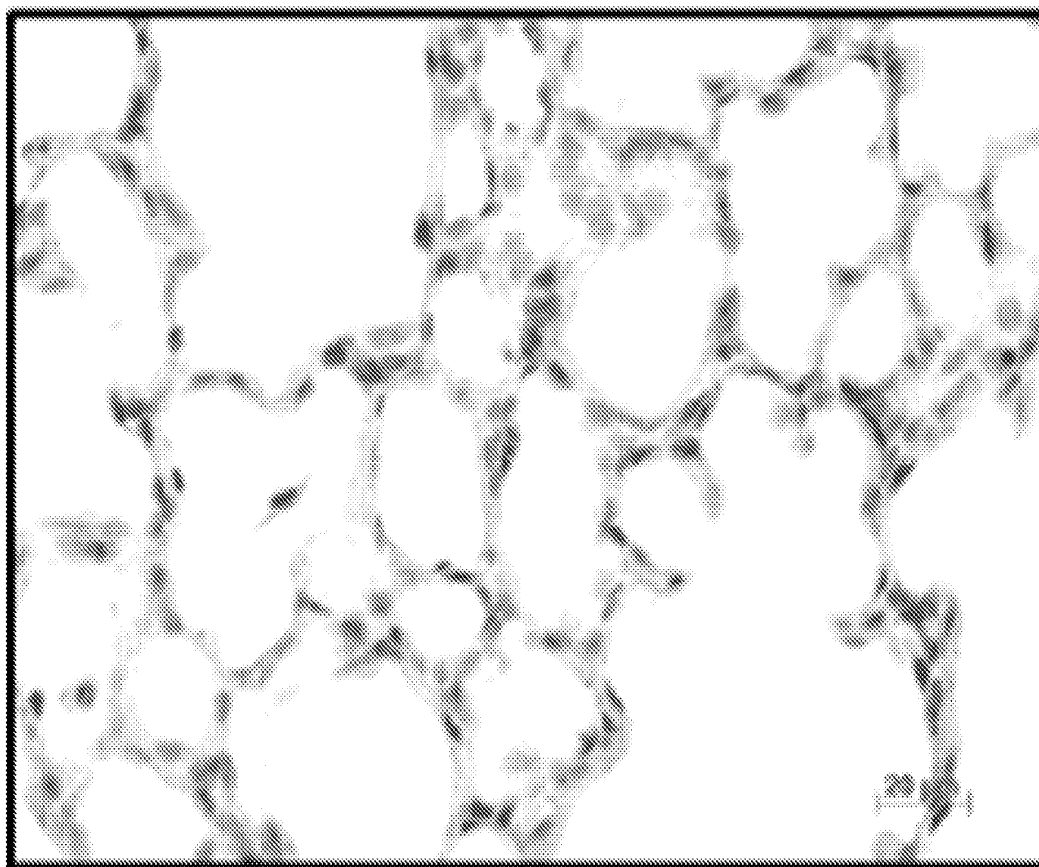


Figure 7A

95% O₂

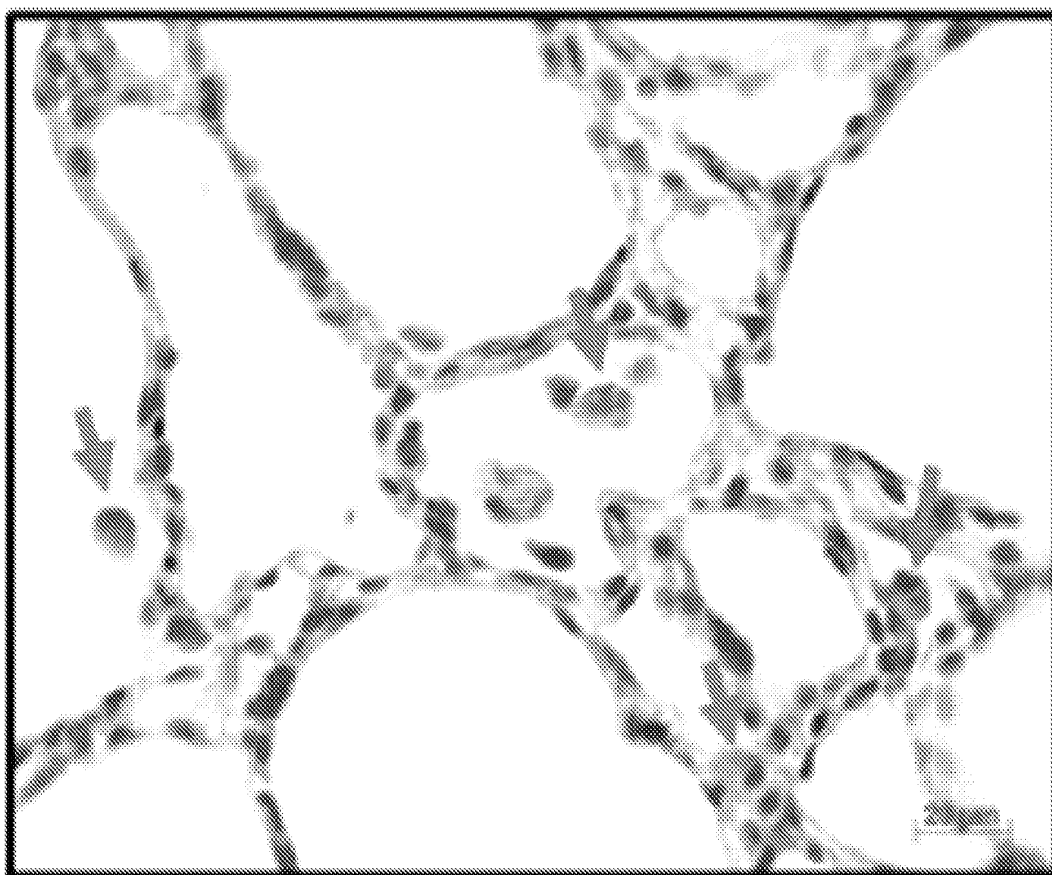


Figure 7A (continued)

95% O₂ + Neb Vit A

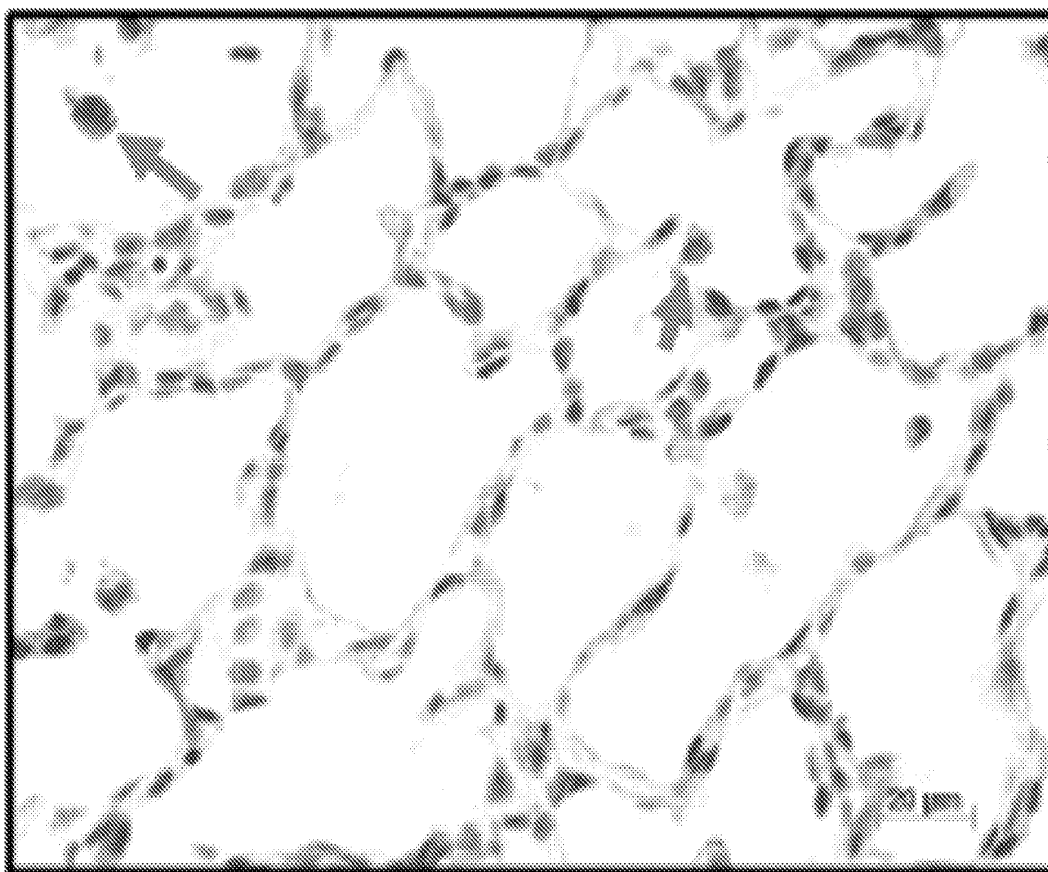


Figure 7A (continued)

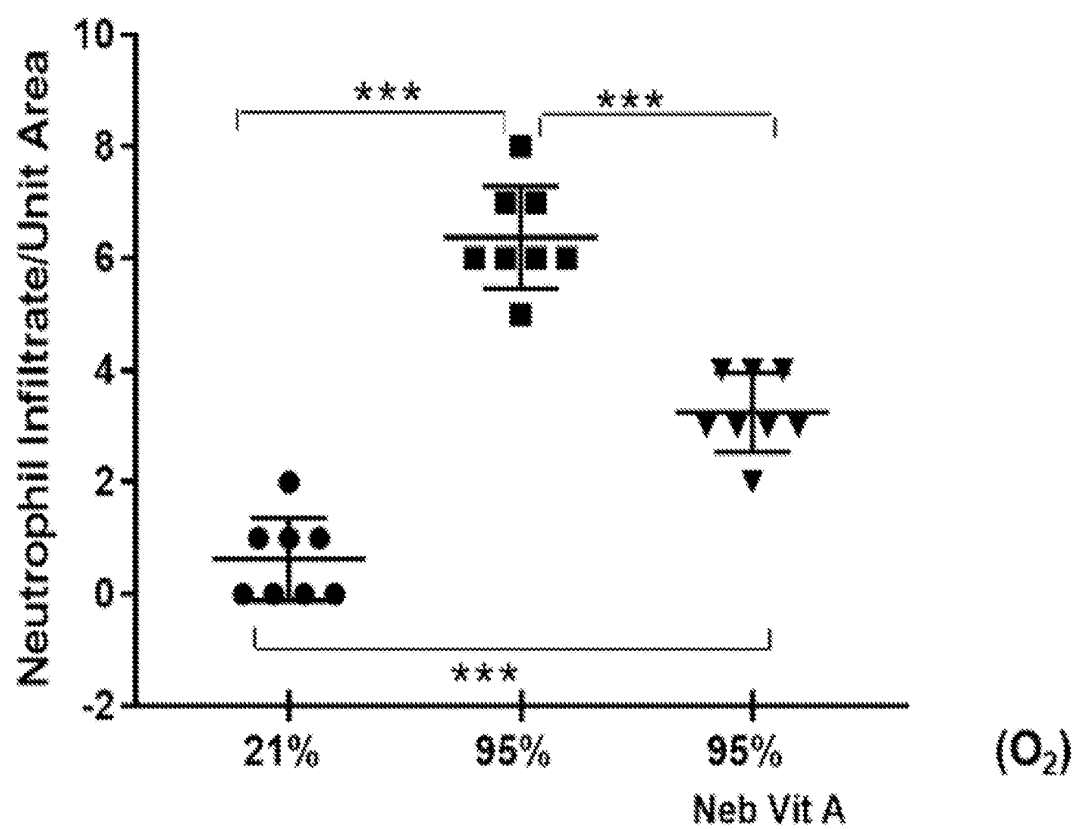


Figure 7A (continued)

O ₂ condition and dosing	21% O ₂ (normoxia), no treatments	95% O ₂ hyperoxia, no treatments	95% O ₂ , nebulized vitamin A
Neutrophils	0.6 ± 0.7	6.4 ± 0.9	3.3 ± 0.7

Figure 7B

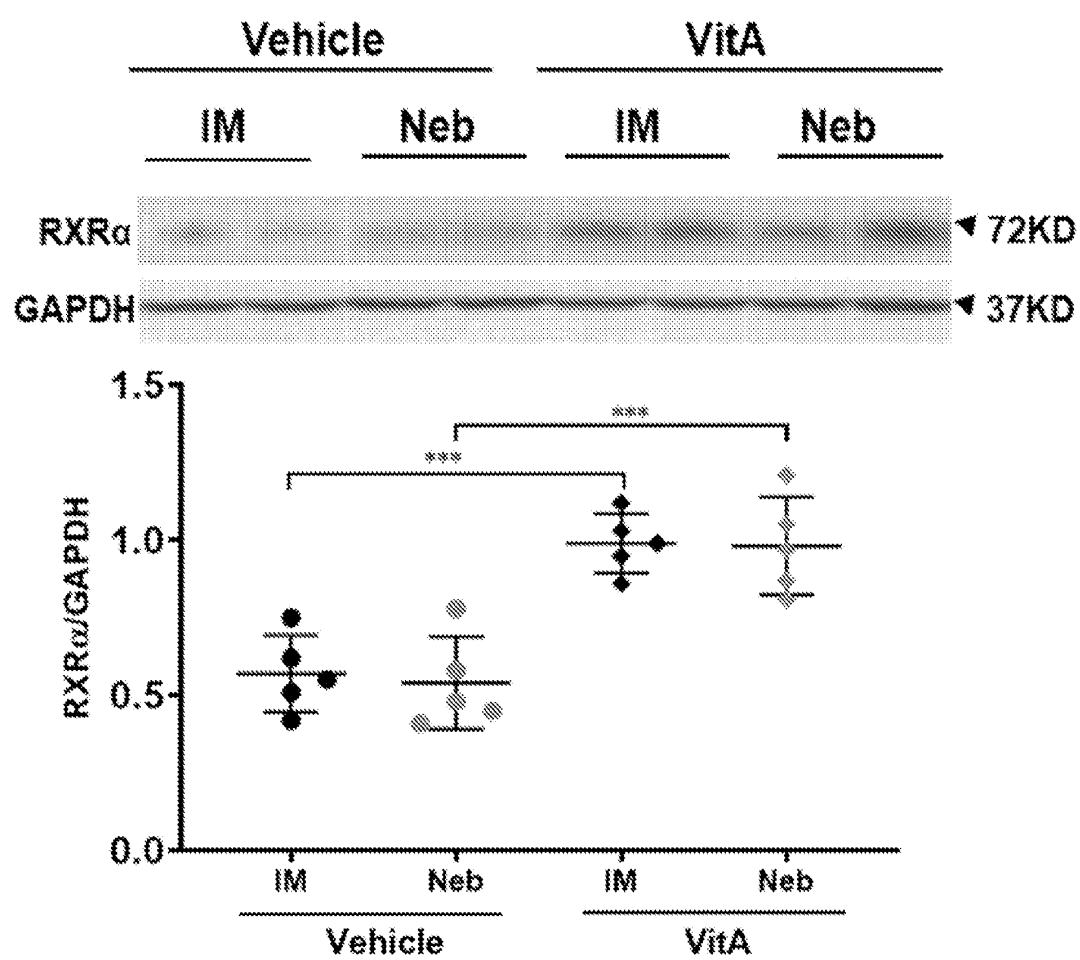


Figure 8A

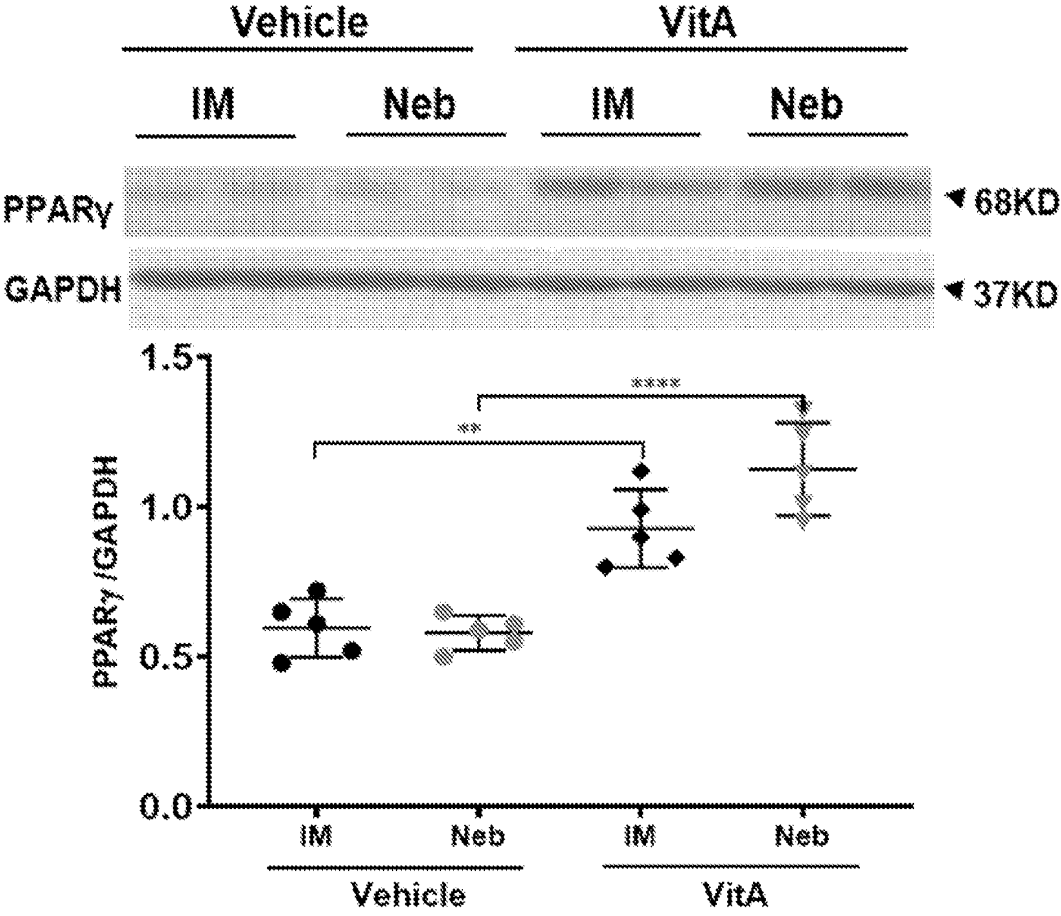


Figure 8A (continued)

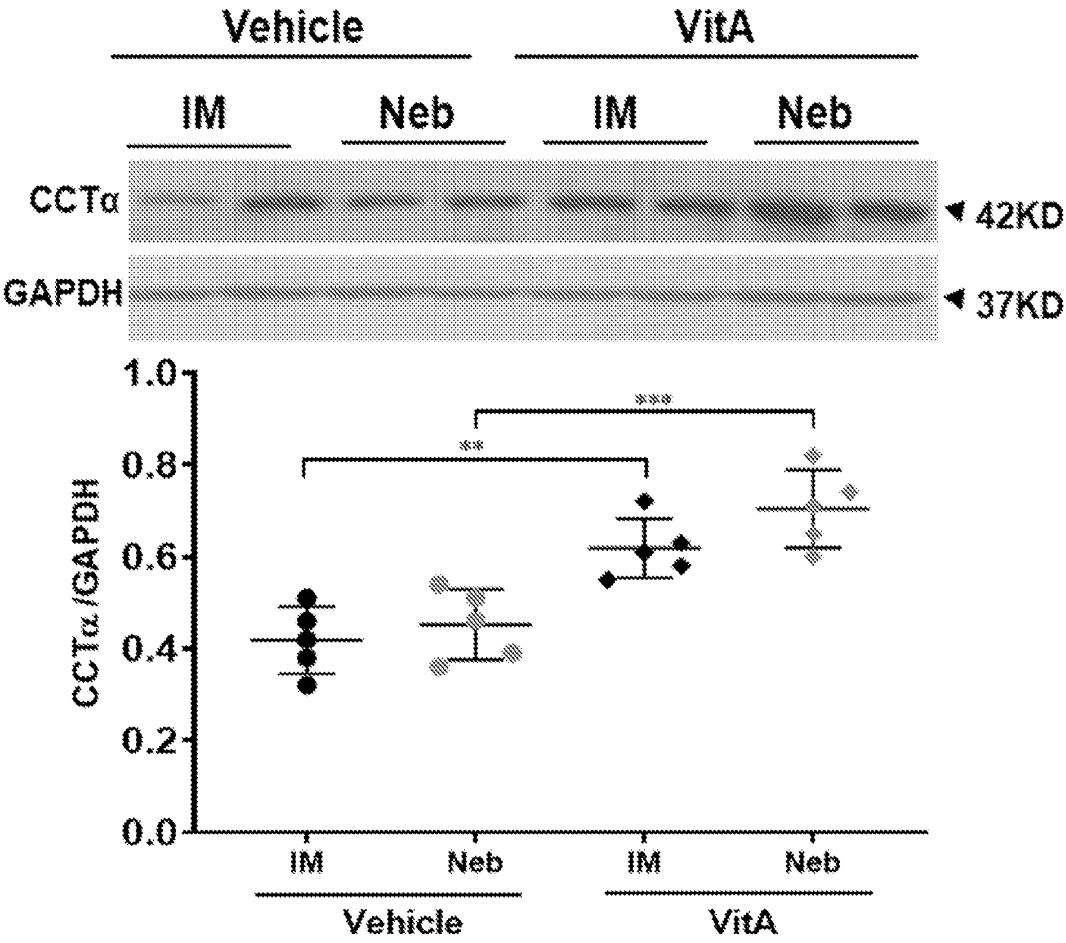


Figure 8A (continued)

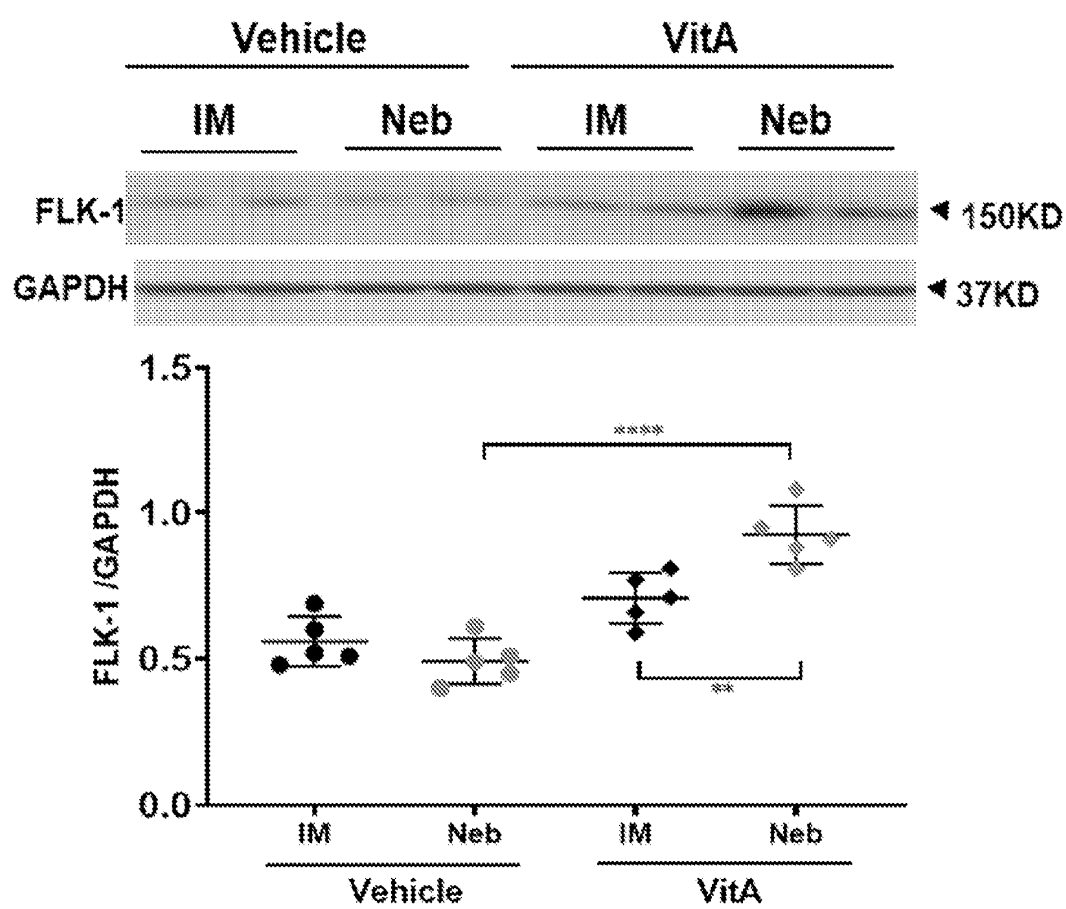


Figure 8A (continued)

Dosing	IM Vehicle	Nebulized vehicle	IM vitamin A	Nebulized vitamin A
RXR- α	0.57 ± 0.13	0.54 ± 0.15	0.99 ± 0.10 #	0.98 ± 0.16 #
CCT α	0.42 ± 0.08	0.45 ± 0.08	0.62 ± 0.06 *	0.71 ± 0.09 #
PPAR γ	0.60 ± 0.10	0.59 ± 0.07	0.92 ± 0.13 *	1.13 ± 0.16 ^
FLK-1	0.56 ± 0.08	0.50 ± 0.08	0.70 ± 0.08	0.93 ± 0.10 ^

Figure 8A2

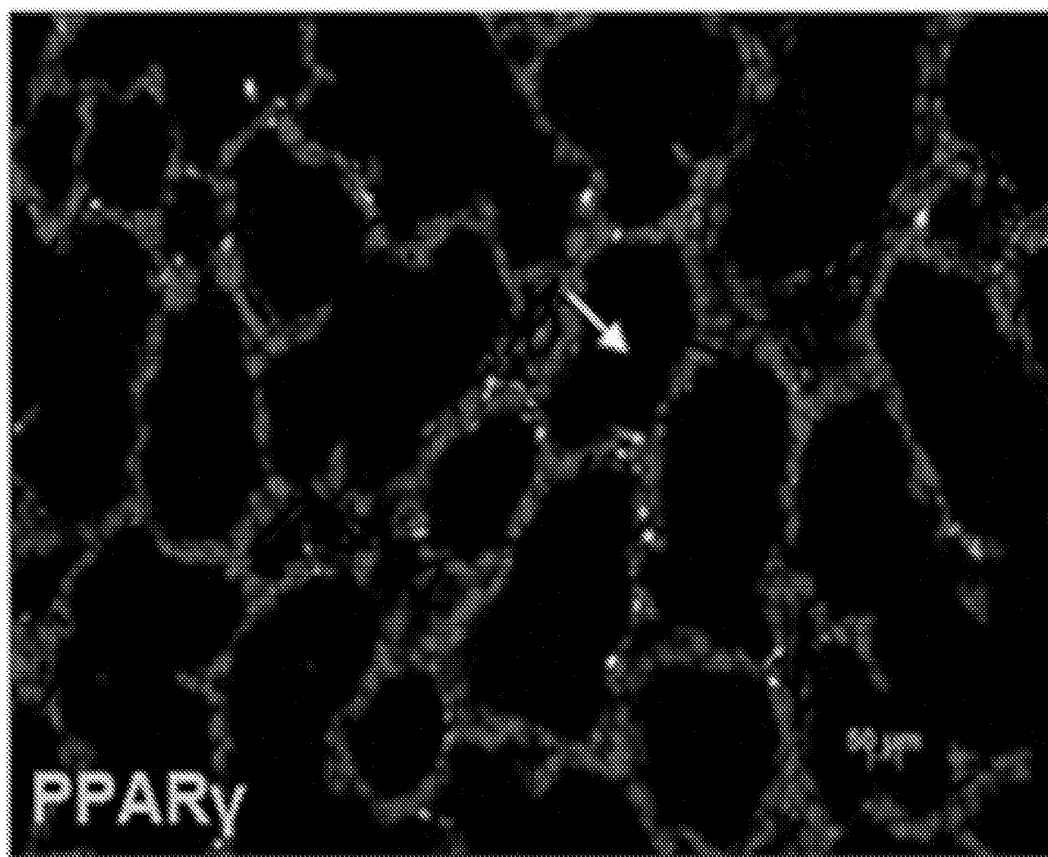


Figure 8B

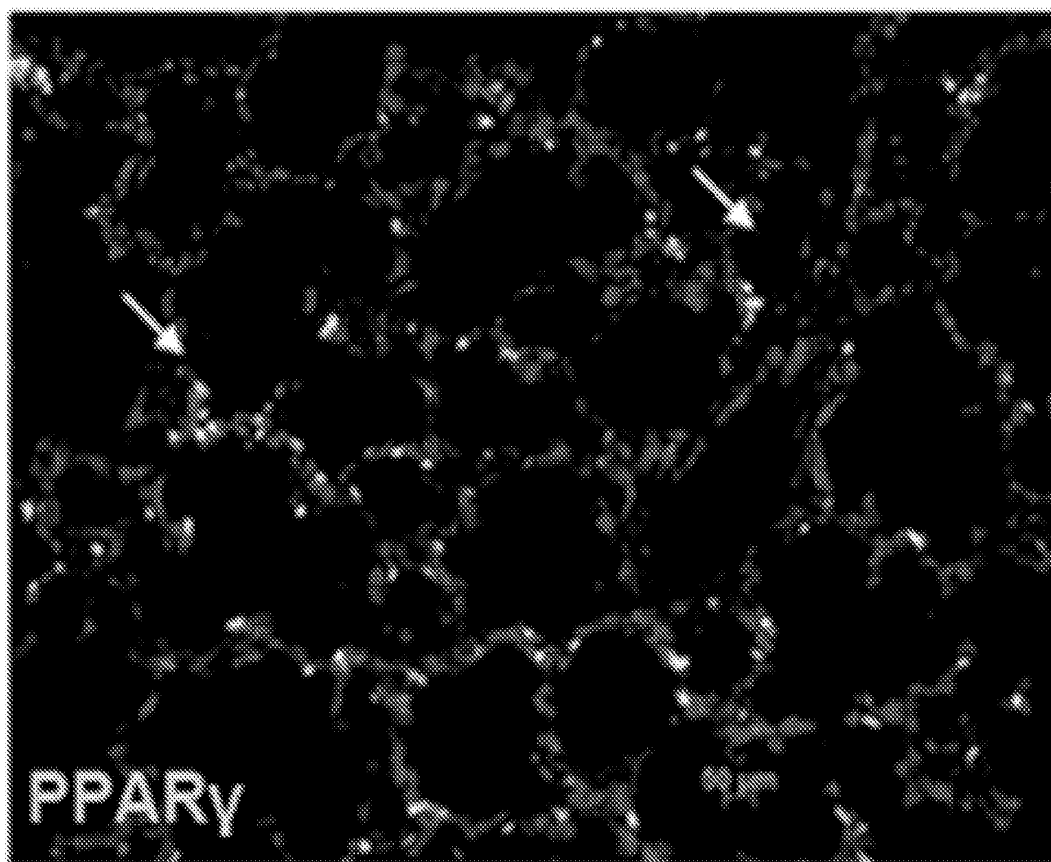


Figure 8B (continued)

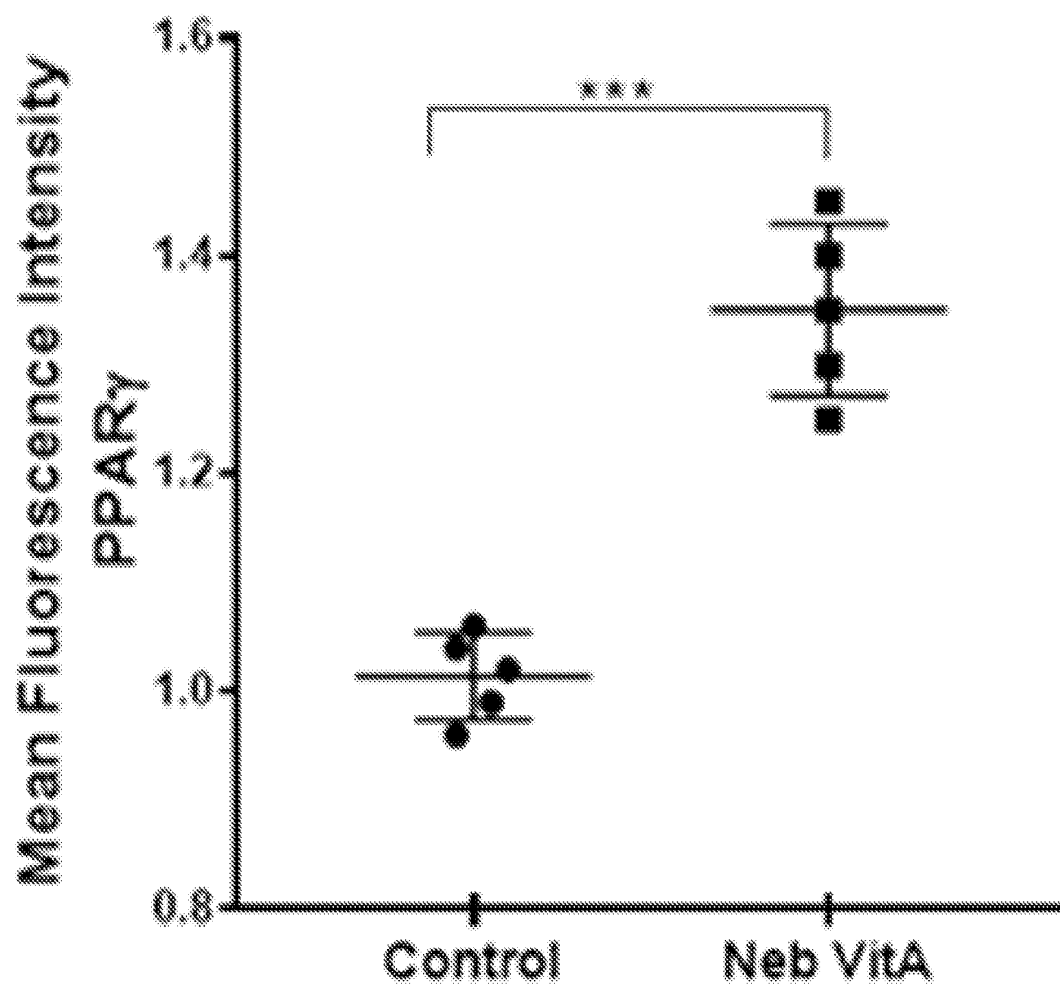


Figure 8B (continued)

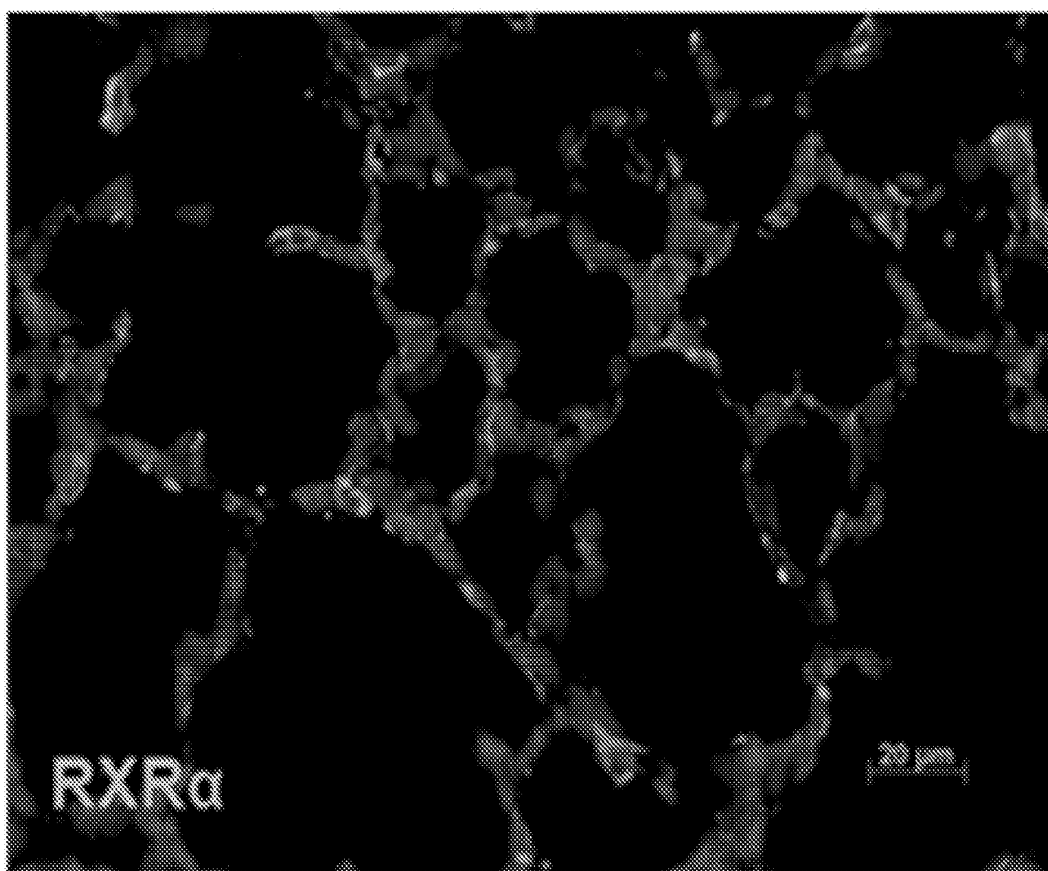


Figure 8B (continued)

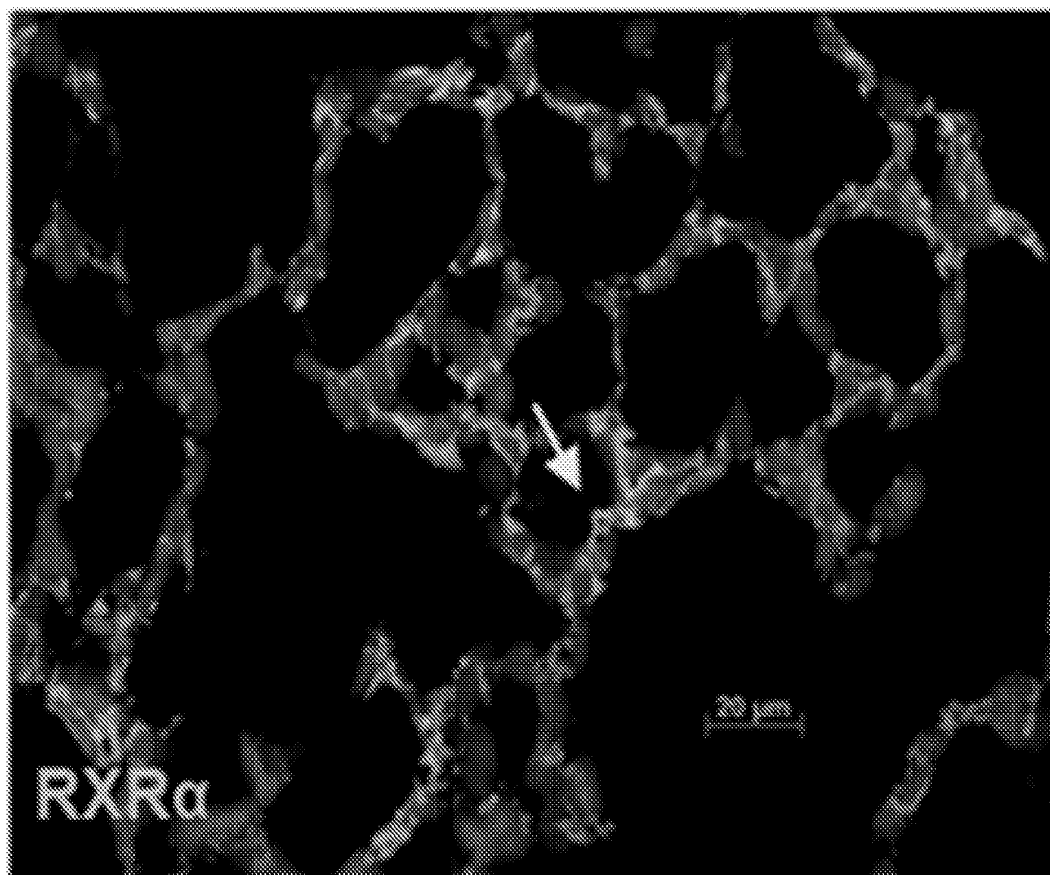
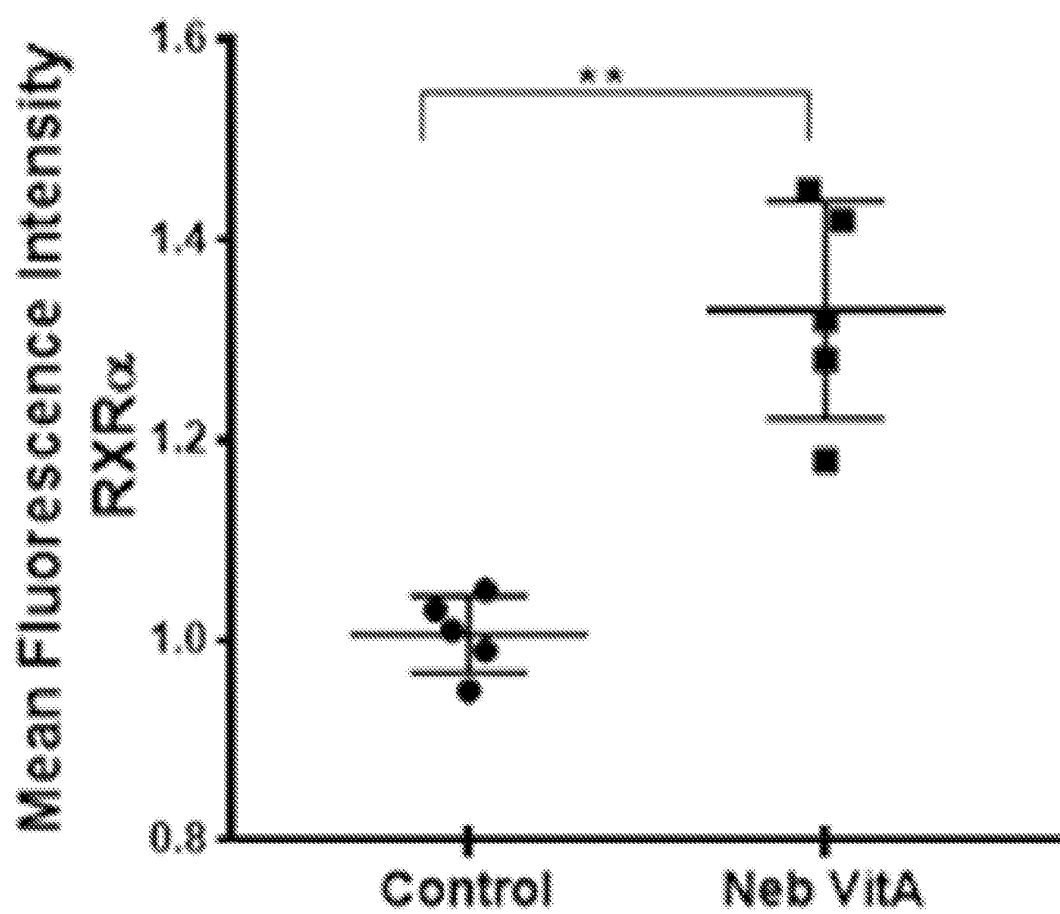


Figure 8B (continued)



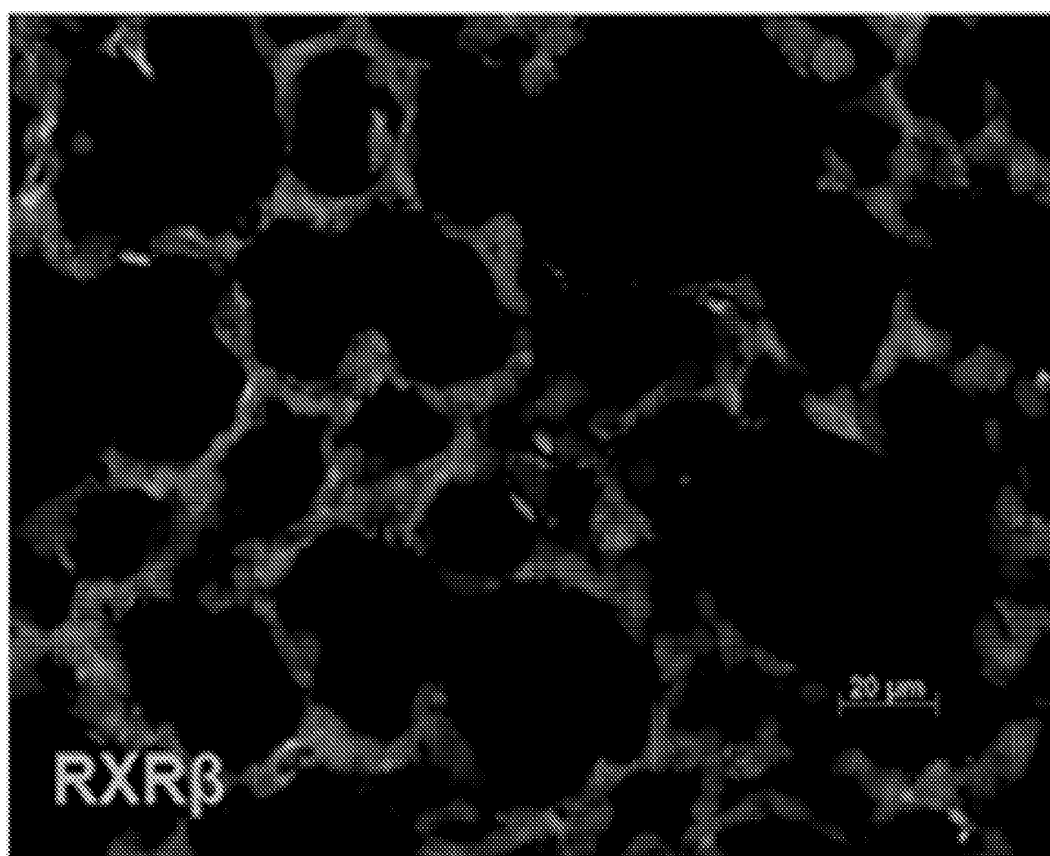


Figure 8B (continued)

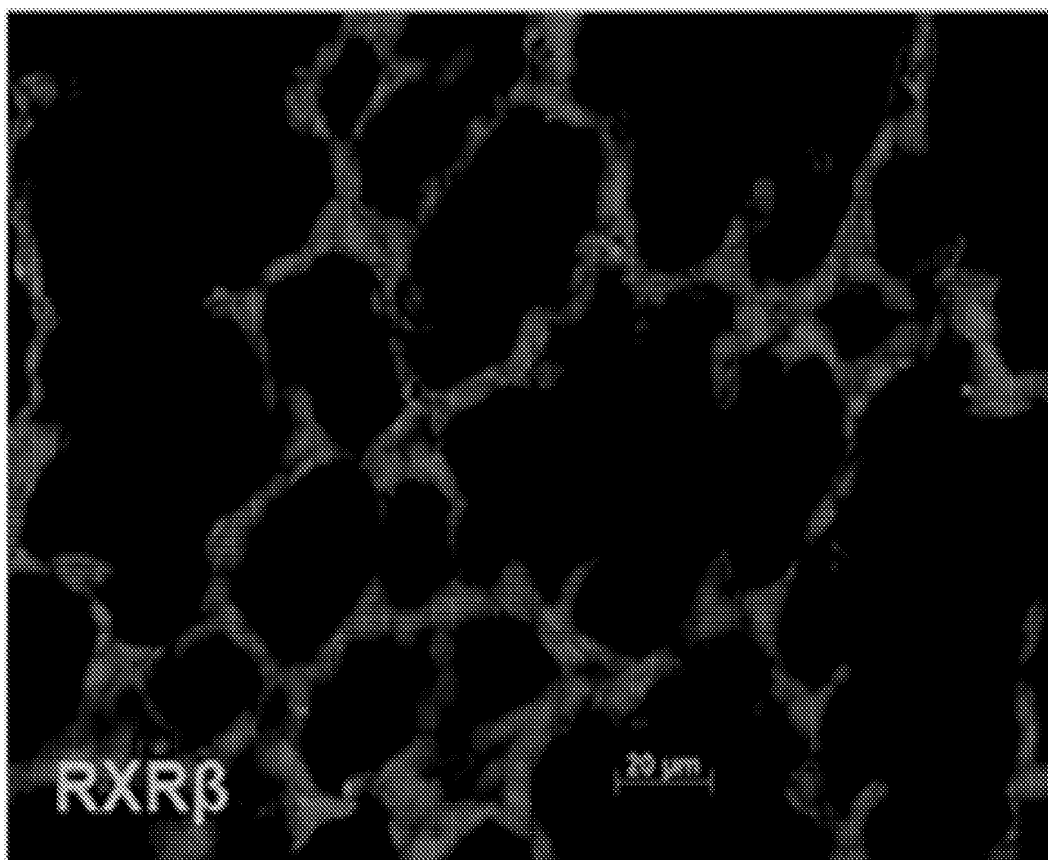


Figure 8B (continued)

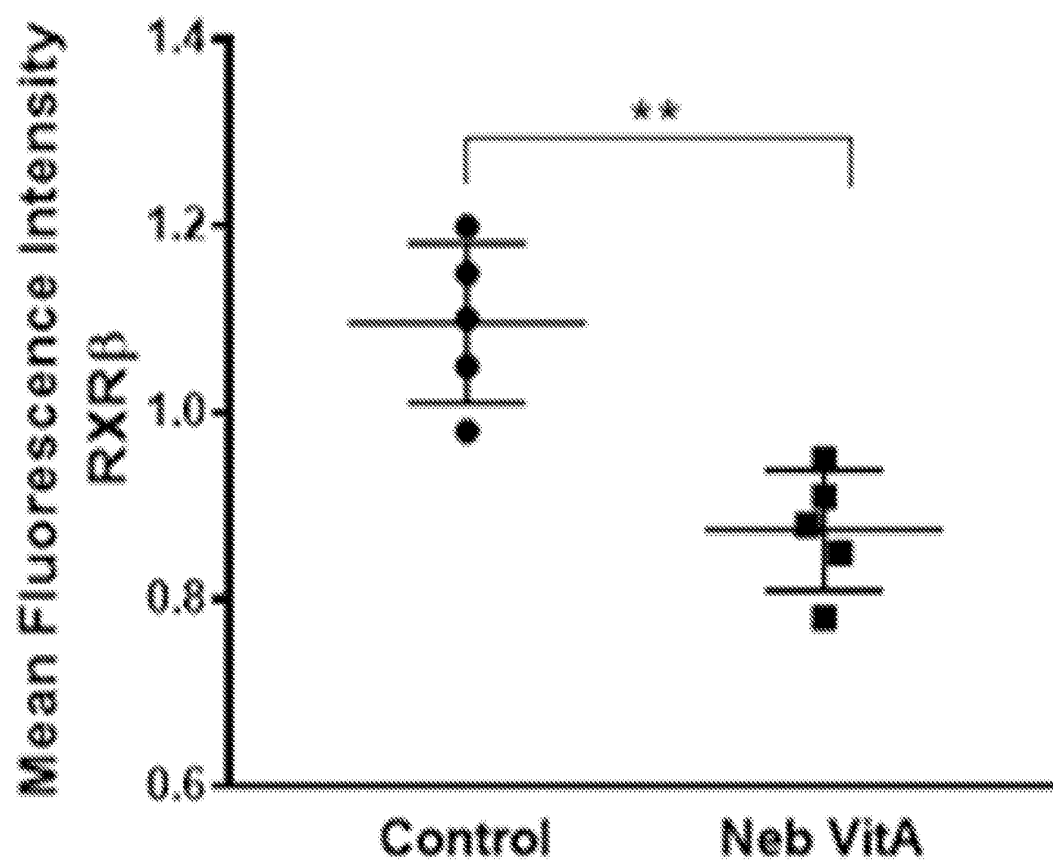


Figure 8B (continued)

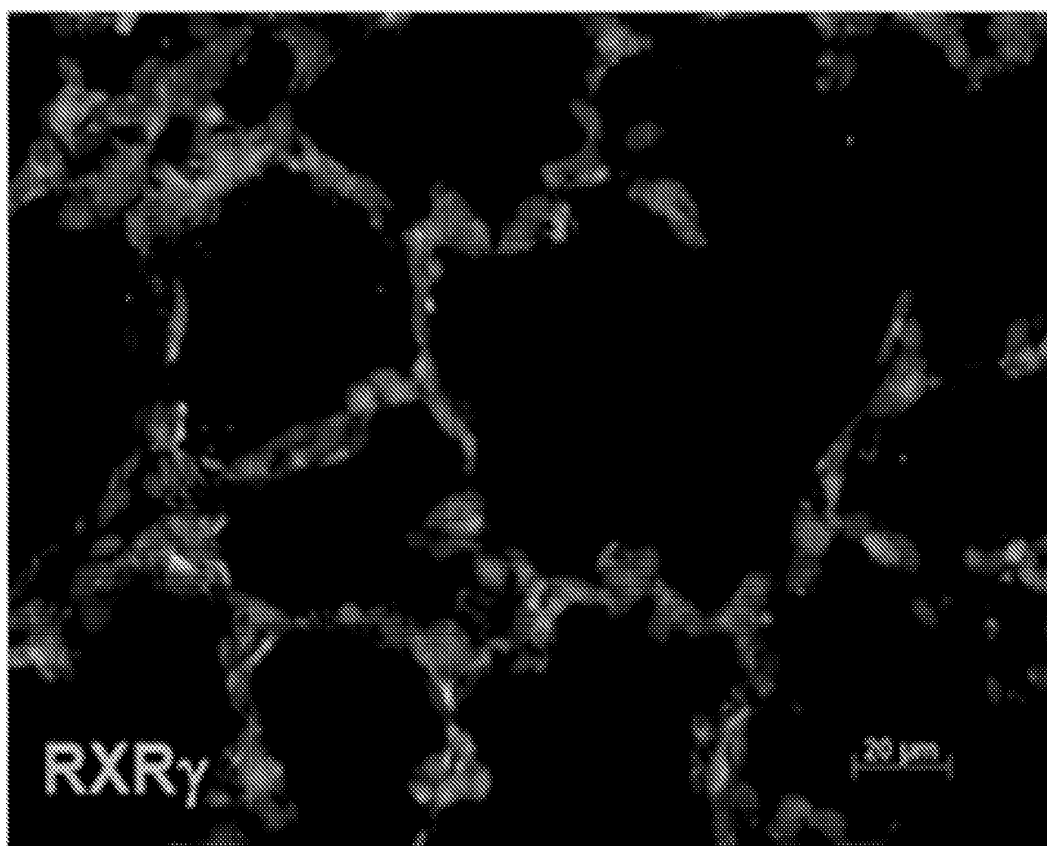


Figure 8B (continued)

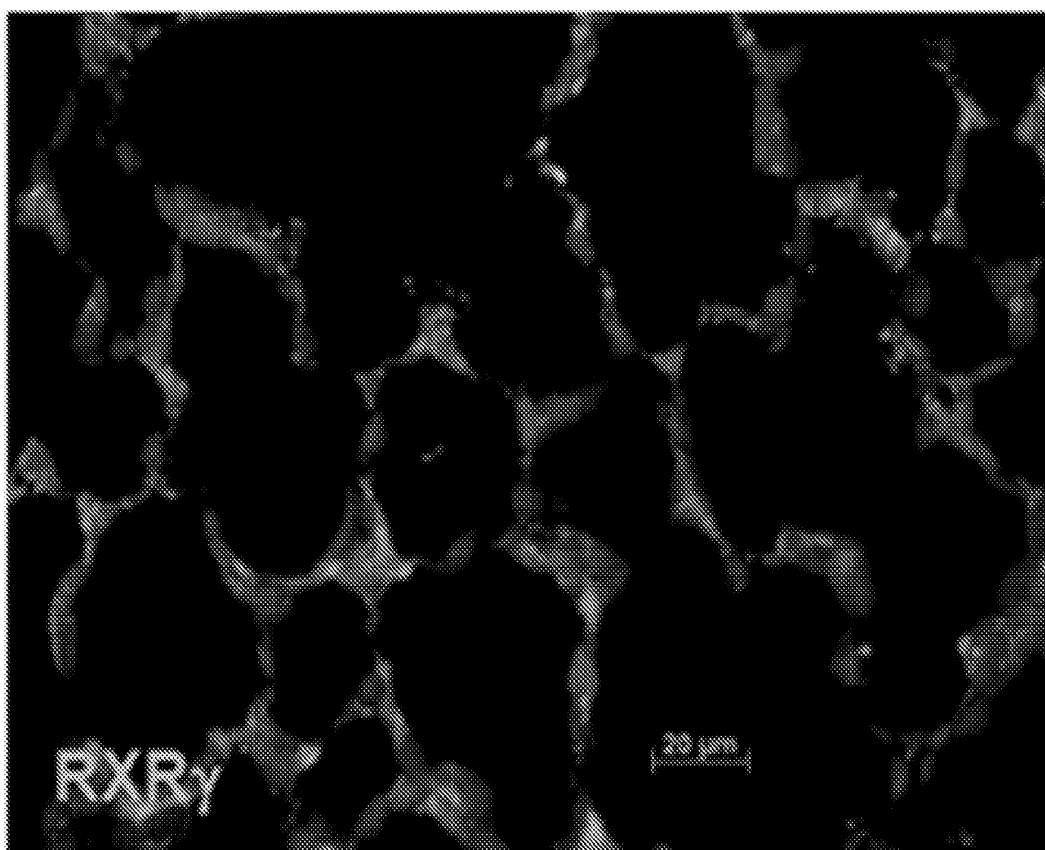


Figure 8B (continued)

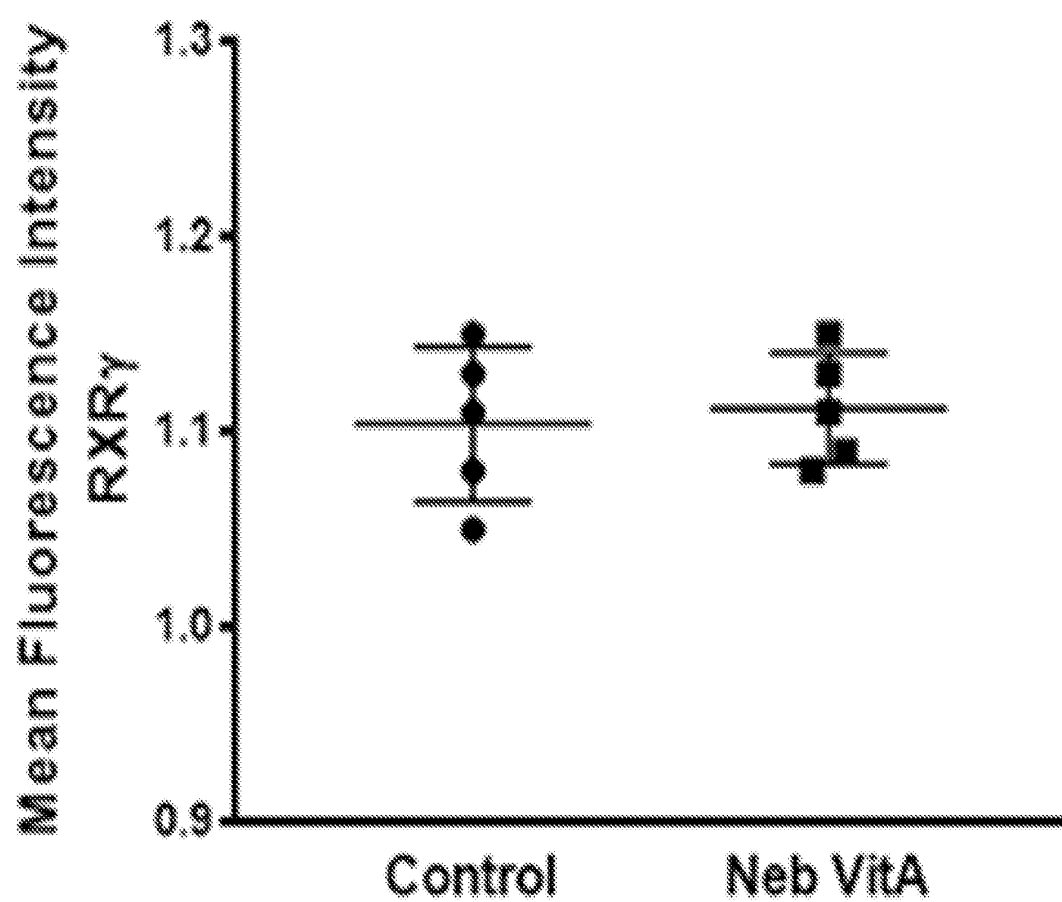


Figure 8B (continued)

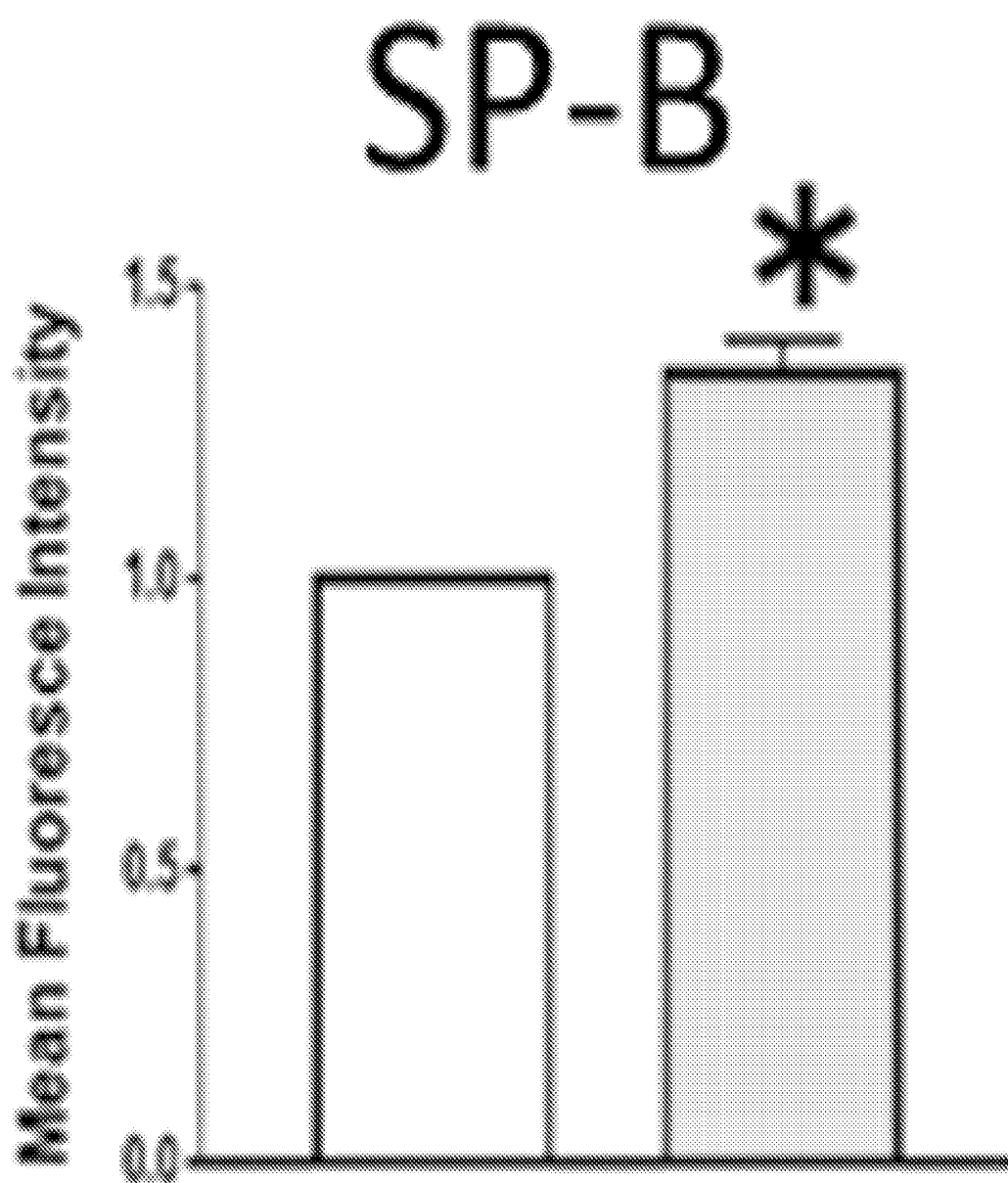


Figure 8B (continued)

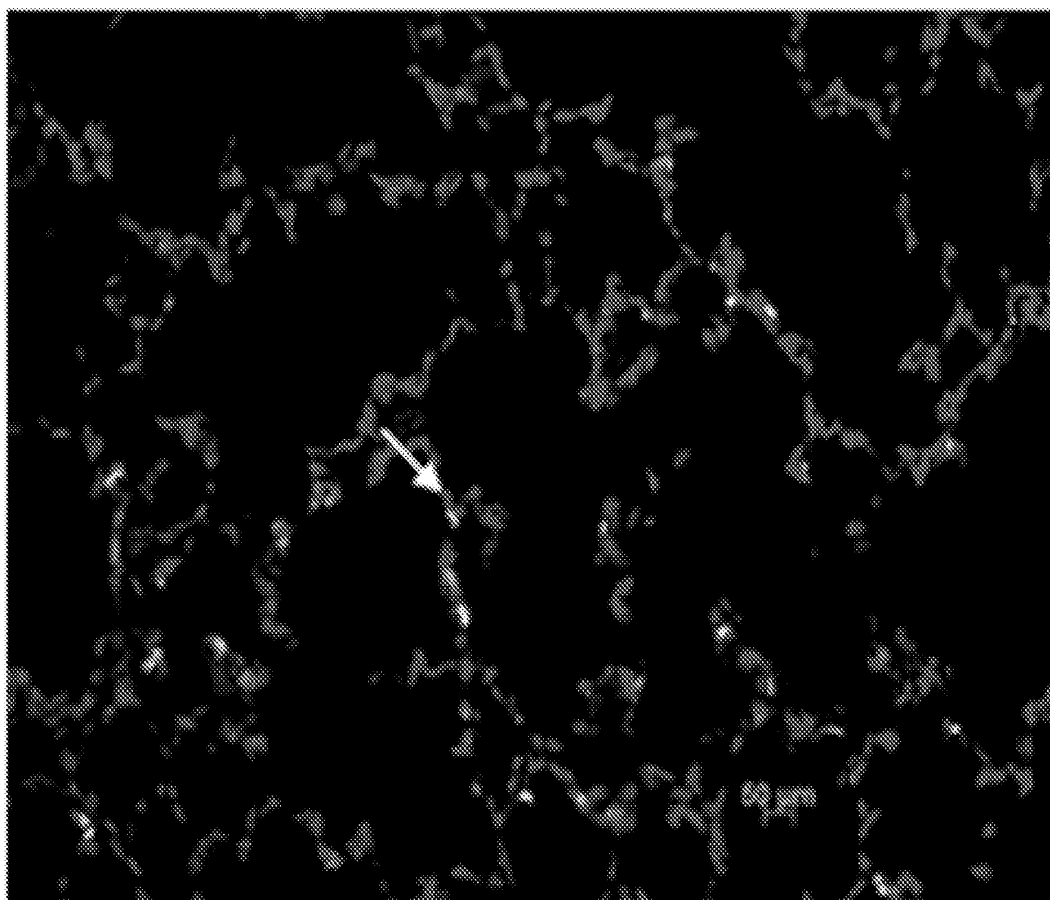


Figure 8B (continued)

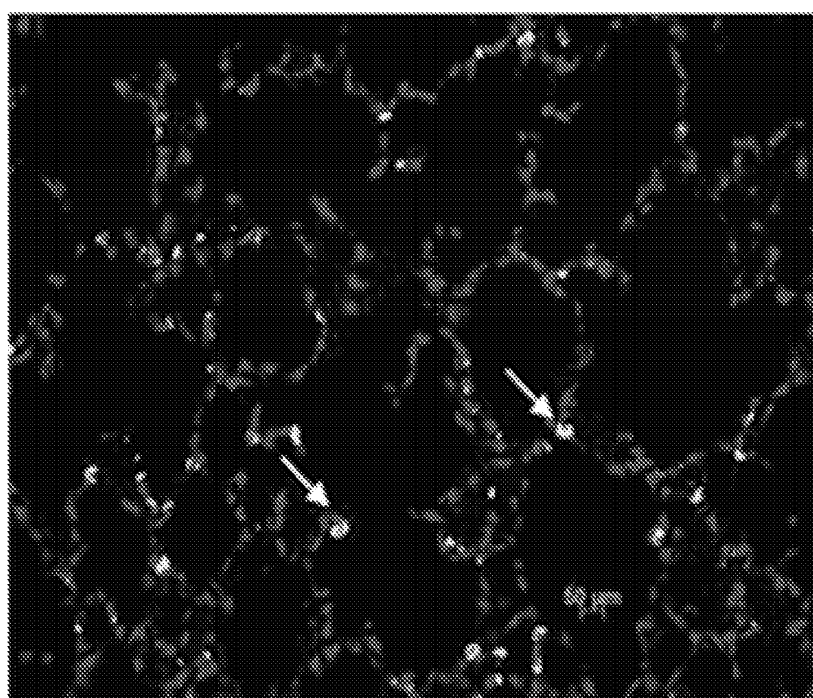


Figure 8B (continued)

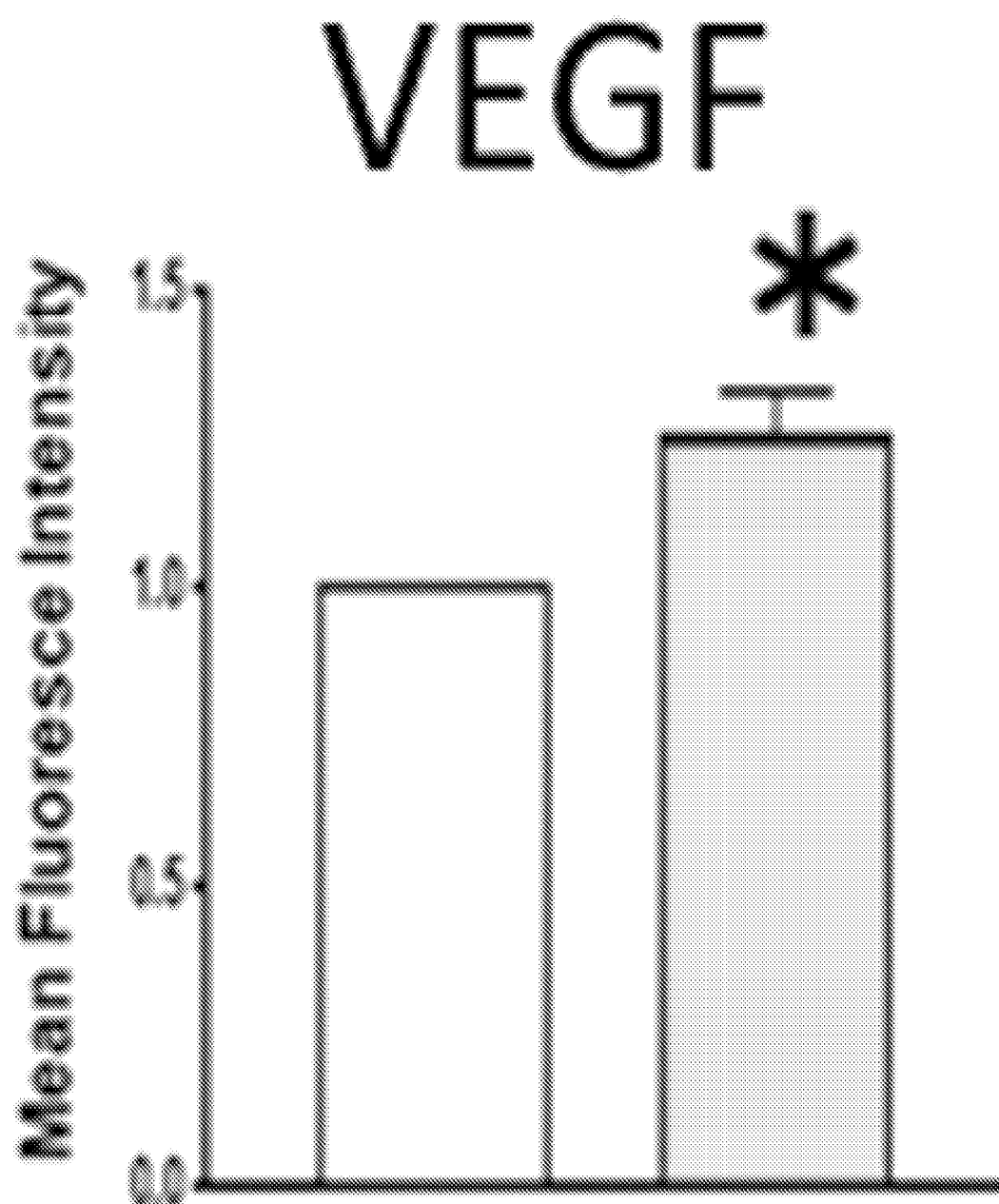


Figure 8B (continued)

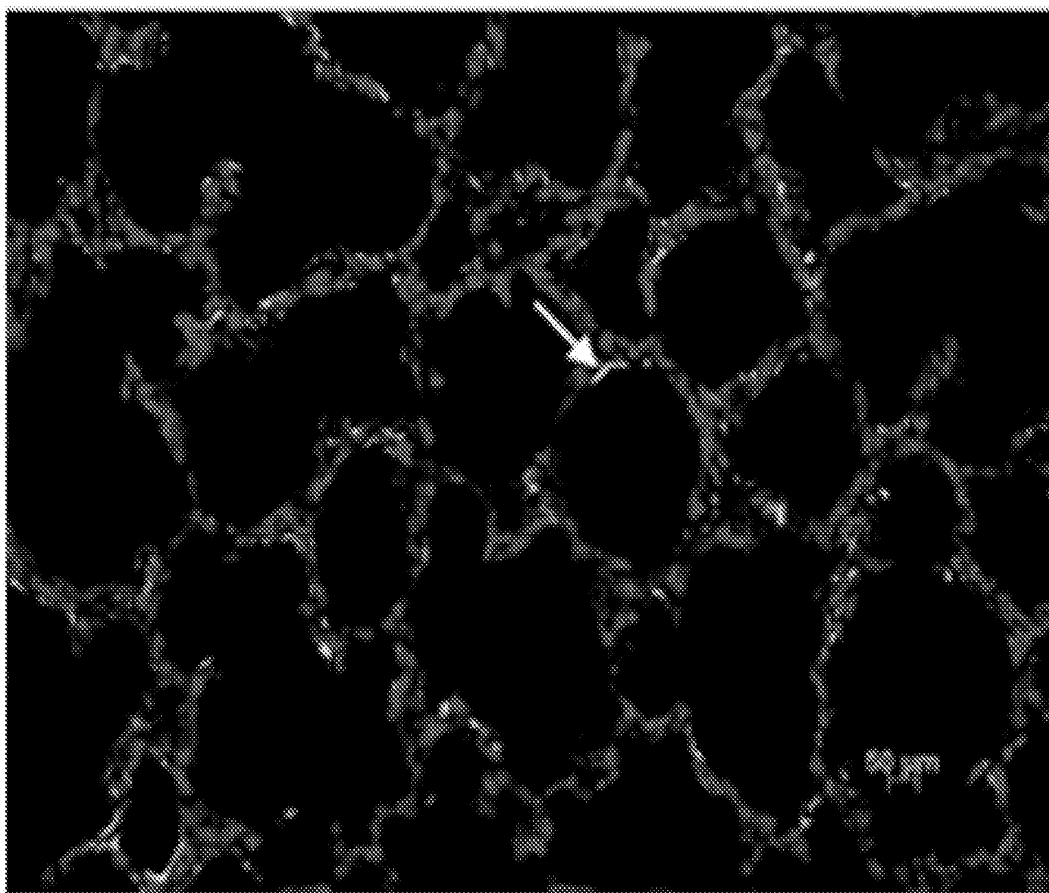


Figure 8B (continued)

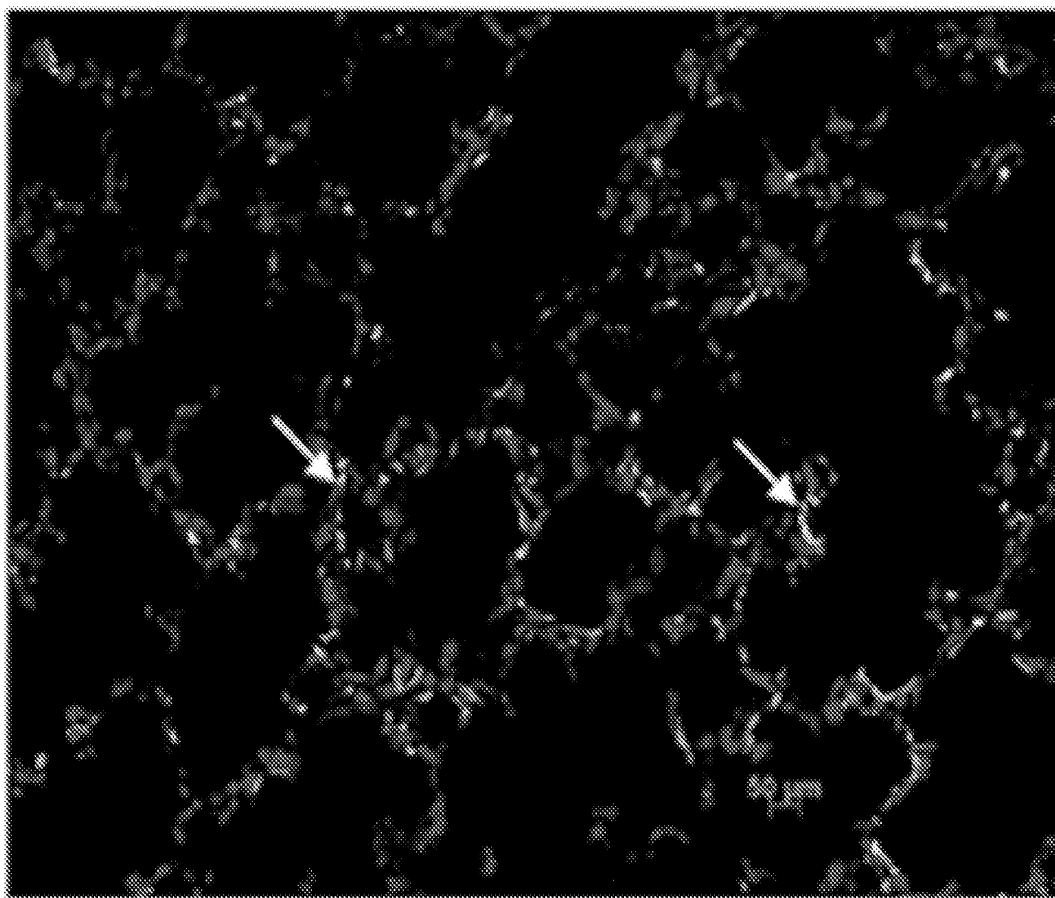


Figure 8B (continued)

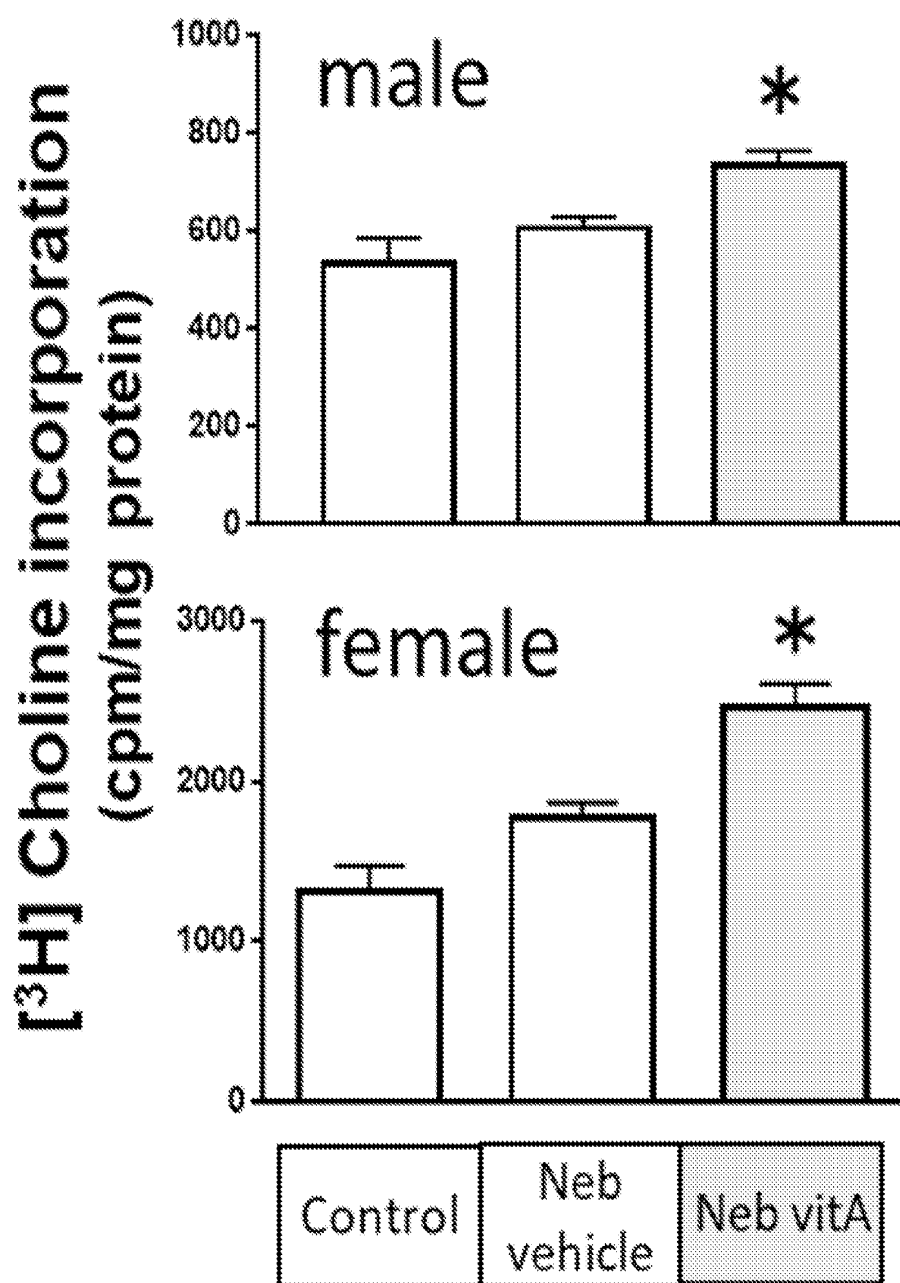


Figure 8C1

Dosing	Healthy control animals	Nebulized vehicle	Nebulized vitamin A
Males	530 ± 50	610 ± 20	730 ± 30 *
Females	1300 ± 200	1800 ± 100	2500 ± 100 *

Figure 8C2

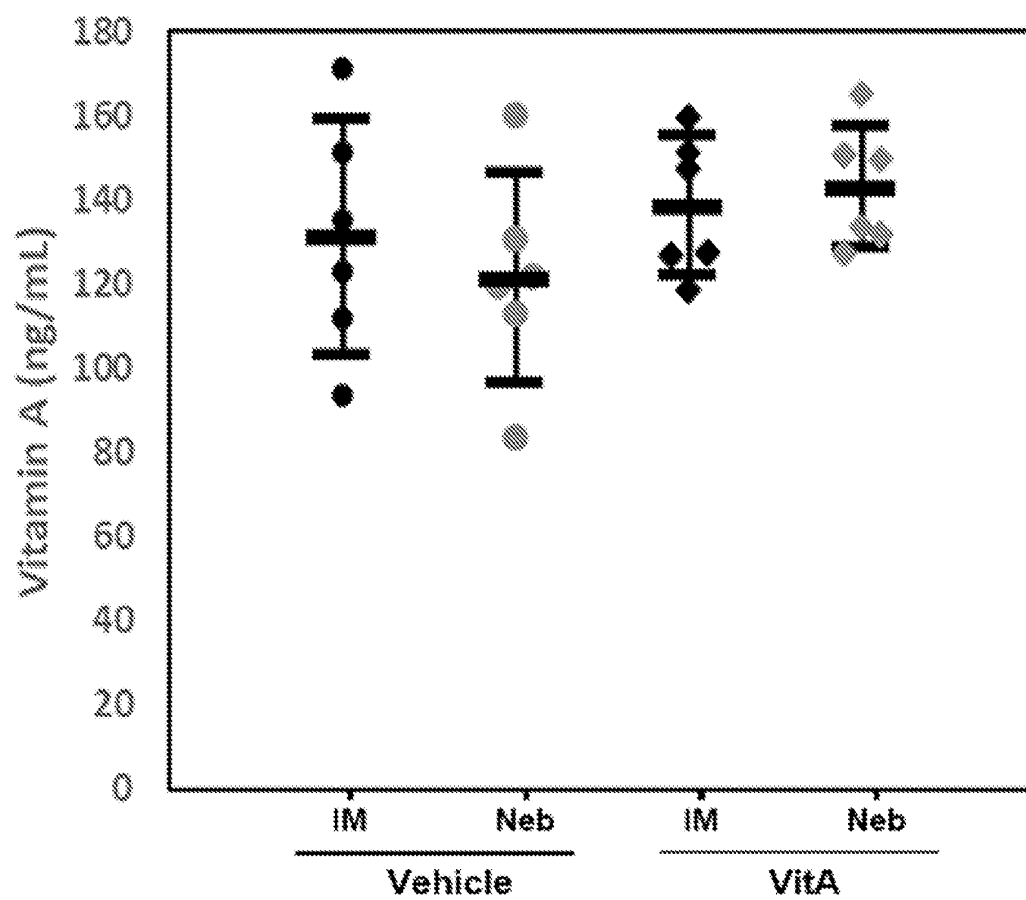


Figure 9A

Dosing	IM Vehicle	Nebulized vehicle	IM vitamin A	Nebulized vitamin A
vitA (ng/mL)	131 ± 28	121 ± 25	138 ± 16	143 ± 15

Figure 9B