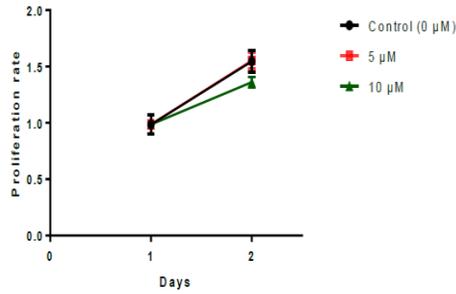


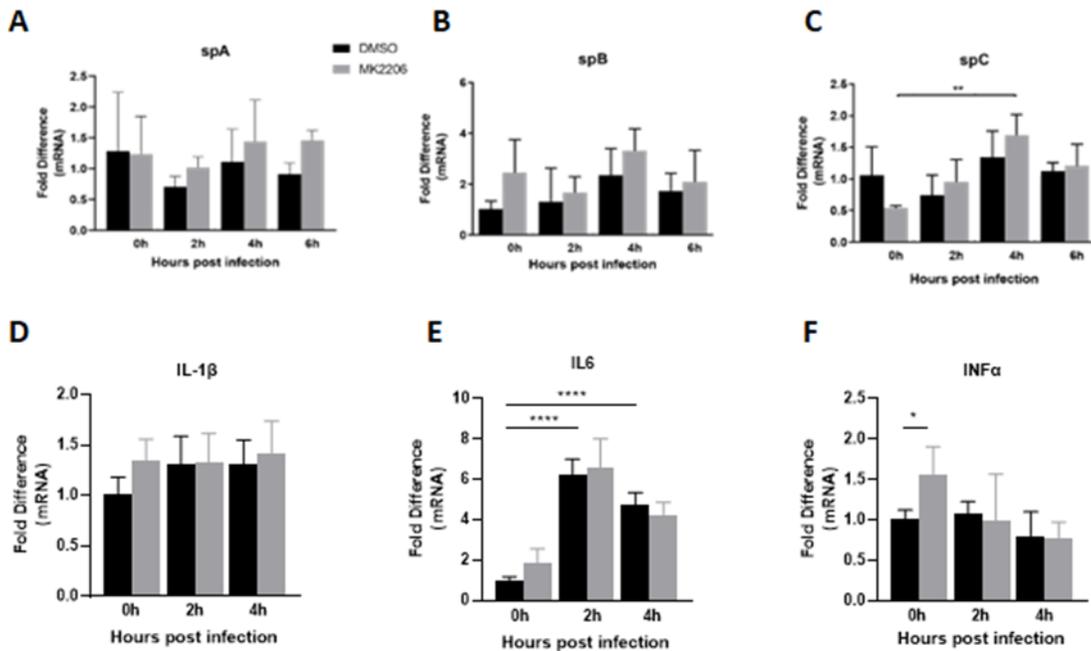
Supplementary Material

Supplementary Table S1. Primer sequences used in this study.

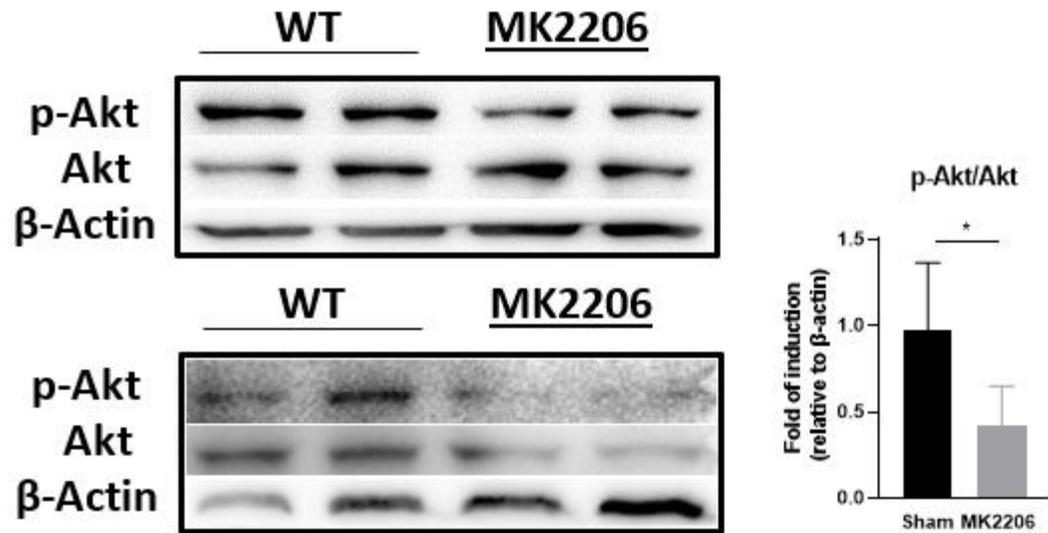
| Gene | | Sequence (5'-3') |
|--------------|---------|----------------------------|
| IL8 | Forward | TGTGAAGGTGCAGTTTTGCC |
| | Reverse | CACCCAGTTTTCTTGGGGT |
| CCL2 | Forward | GCTCAGCCAGATGCAATCAA |
| | Reverse | TGAACCCACTTCTGCTTGGG |
| CCL5 | Forward | CCAGCAGTCGTCCACAGGT |
| | Reverse | ACACTTGGCGGTTCTTTGGG |
| ATG5 | Forward | TGACGTTGGTAACTGACAAAGT |
| | Reverse | AATGCCATTTCAAG-TGGTGTG |
| CFTR | Forward | AAAAGGCCAGCGTTGTCTCC |
| | Reverse | GCTCTCTATCCCATTCTCTTTCCA |
| SP-A | Forward | CATGGGTCCACCTGGAGAAA |
| | Reverse | AAAGTCGTGGAGTGTGGCTT |
| SP-B | Forward | AAGCCATGATTCCCAAGGGTG |
| | Reverse | CATTCTCCTGTCGGCGACCT |
| SP-C | Forward | GAGCCAGAAACACACGGAGA |
| | Reverse | GTGAGAGCCTCAAGACTGGG |
| SP-D | Forward | ATTGAAGGGGGACAAAGGCAT |
| | Reverse | ATTTGGGAAGAGCTCAACTTTCTTA |
| INF α | Forward | GGAGGAGAGGGTGGGAGAAA |
| | Reverse | GACAACCTCCCAGGCACAAG |
| IL1- β | Forward | CGGACCCCAAAGATGAAGGGCTG |
| | Reverse | GCTCTTGTTGATGTGCTGCTGCGAG |
| IL6 | Forward | GTCAGGGGTGGTTATTGCAT |
| | Reverse | AGTGAGGAACAAGCCAGAGC |
| GAPDH | Forward | GGAAGGTGAAGGTCCGAGTCA |
| | Reverse | GTCATT-GATGGCAACAATATCCACT |



Supplementary Figure S1. Effect of Akt inhibition on alveolar epithelial cell proliferation. Cell proliferation was determined using MTT assay in A549 treated with MK2206 (5, 10 μM). Higher concentration of MK2206 (10μM) negatively impacts cell proliferation.



Supplemental Figure S2. Suppression of p-Akt *in vivo* by MK-2206 treatment. A, Representative western blot analysis of Akt phosphorylated levels in mice with GBS pneumonia that were treated with MK-2206 compared to sham. Data are illustrated as bars, and plotted as median with range and statistical analysis was performed with Mann-Whitney (n=4). *p < 0.05.



Supplementary Figure S3. Expression of surfactants by A549 epithelial cells upon GBS infection and Ak inhibition. A549 cells were treated with MK2206 or sham for 24 hours and infected with GBS for 2 hours. Expression (mRNA) of the surfactant proteins sp-A, sp-B and sp-C (A, B, C), and IL-1 β , IL6 and INF α (D, E, F) upon pre-treatment with MK2206 and GBS infection was observed. Data are illustrated as bars, plotted as mean \pm S.D and statistical analysis performed using One-Way ANOVA. * $p < 0.05$, ** $p < 0.01$, **** $p < 0.0001$.