

Q-PCR data are represented as mean \pm SD. Scale Bars: E=50 μ m; F and J=100 μ m.

SUPPLEMENTAL FIGURE

Figure S1.

(A-L) Double immunostaining for GFP and several mesenchymal lineage markers in Dermo1^{cre}: Rosa^{mTmG} lungs at E16.5 show that the cre is active in the developing lung mesenchyme. Note the less than complete activity observed in CD31+ endothelial cells (M-P) PO4-H3 immunostaining shows that proliferation is decreased in HDAC3^{Dermo1creKO} mutant lungs at E15.5 and E18.5. (Q-R) Double staining of SM22 α and Sox2 shows that airway smooth muscle differentiation and development are not altered in HDAC3^{Dermo1creKO} lungs at E18.5. (S-T) PECAM staining shows that vascular development appears to be unaffected in HDAC3^{Dermo1creKO} lungs. (U) Q-PCR analysis of SM22 α and PECAM marker reveal no significant changes in HDAC3^{Dermo1creKO} lungs compared to control lungs. (V-Y) Assessment of cell survival by TUNEL staining shows no significant change in cell apoptosis in the HDAC3^{Dermo1creKO} mutant lungs at E18.5. (Z) Expression of several Wnt ligands in HDAC3^{Dermo1creKO} mutant lung Epcam+ epithelial cells is reduced. Mesenchymal expression of Wnt target genes is decreased in HDAC3^{Dermo1creKO} mutants lungs.

Ctrl=Control; KO= Hdac3^{Dermo1creKO} lungs. Two tail student's t test: **p<0.01; NS=Not Significant. n=3 for I; n=6 for N. Q-PCR data are represented as mean \pm SD. Scale Bars: 50 μ m.

Table S1: Primer sequences

| Genes | Forward | Reverse |
|-----------------|---------------------------|------------------------------|
| Axin2 | CAGCCCTTGTGGTTCAAGCT | GGTAGATTCCTGATGGCCGATGT |
| Aqp5 | ATGAACCCAGCCCGATCTTT | ACGATCGGTCTTACCCAGAAG |
| Abca3 | TTCATCACCTGATGGCGGTGAAC | ACGCATGATGGCTTTGTCTACAGC |
| CyclinA2 | GCCTTCACCATTTCATGTGGAT | TTGCTCCGGGTAAAGAGACAG |
| CyclinB1 | ACTTCCTCCGTAGAGCATC | GCAGAGTTGGTGTCCATTC |
| CyclinD1 | GCGTACCCTGACACCAATCTC | CTCCTCTTCGCACTTCTGCTC |
| CyclinE1 | TGTTTTTGAAGACCCAGATGA | GGCTGACTGCTATCCTCGCT |
| CDK1 | TTTGCAGAACTGGCCACCAA | ACTTCTGGCCACACTTCGTTGT |
| CDK2 | TCTGCTCTCACGGGCATTC | AGCTGGAACAGATAGCTCTTGATGA |
| CDK4 | GCTGGAGGCCTTTGAACATC | CCCGATCAGTTCGGGAAGTAG |
| CDK6 | GCGTACCCACAGAAACCATAA | GCACTACTCTGTGAGAATGAAGAA |
| Fgf10 | TGATGCAAAGGTTATCTGCACAT | GAGAGTTGCACTTCATACCAAATTC |
| Fgf9 | TTCATGCGGTGGGTTCTTATT | TCCTCATCCAAGCTTCCATCA |
| Foxj1 | AGTGGATCACGGACAATTCTGCT | TTCTCCCGAGGCACCTTGTGAAG |
| GAPDH | GCCCTTCCACAATGCCAAAG | ATCACCATCTTCCAGGAGCGAG |
| P27 | AGCAGTGTCCAGGGATGAGGAA | ATTAACCCACCGGAGCTGTTTACG |
| P57 | CAAGAGAACTGCGCAGGAGAACAA | TCTCTGGCCGTTAGCCTCTAAACT |
| Pdgfr- α | ACCTCAGAGAGAATCGGCC | CCATAGCTCCTGAGACCCGC |
| Pdgfr- β | CTCCGTAGATGAAGATGGGGC | AGCTTTCCAACCTCGACTCCG |
| Sftpc | ACCCTGTGTGGAGAGCTACCA | TTTGCGGAGGGTCTTTCCT |
| Scgb1a1 | ATACCCTCCACAAGAGACCAGGATA | ACACAGGGCAGTGACAAGGCTTTA |
| SM22a | TTCCAGGTGTGGCTGAAGAATGGT | TTGATGACTCCATAATCTTCAGCT |
| SMA | ACCACCATGTACCCAGGCATTCT | CCACGAGTAACAAATCAAAGCTTTGGGC |
| TubblV | AACCCGGCACCATGGACTCTGT | TGCCTGCTCCGGATTGACCAAATA |
| Vimentin | TGACCTTGAACGGAAAGTGG | GGACATGCTGTTCTGAATCT |
| Wnt2 | TCTTGAAACAAGAATGCAAGTGTC | GAGATAGTCGCCTGTTTTCTGAA |
| Wnt2b | GGAATTGCACCACACTGGA | CCTGCTGACGAGATAGCATAGA |
| Wnt7a | GGACGCTCATGAACTTACACA | TGACACACCATGGCACTTAC |
| Wnt 5a | AATTCCTCGGCCGCCTTCGC | GCGGTCCCCAAAGCCACTCC |
| Wnt7b | GGATGCCCGTGAGATCAAAA | CACACCGTGACACTTACATTCCA |
| Wnt11 | TTGACCTGGAGAGAGGTACA | CGATGGTGTGACTGATGG T |