

**Supplemental Table II: Cilia-related Gene Expression in Airway Epithelium<sup>1</sup>**

| <b>Gene symbol</b> | <b>Probe set ID</b> | <b>Gene title</b>   | <b>P call (%)</b> | <b>Fold-change<sup>2</sup></b> | <b>p value<sup>3</sup></b> | <b>Reference</b> |
|--------------------|---------------------|---|-------------------|--------------------------------|----------------------------|------------------|
| AKAP14             | 237281_at           | A kinase (PRKA) anchor protein 14   | 100               | -1.17                          | 1.18x10 <sup>-01</sup>     | [1]              |
| AKAP14             | 237282_s_at         | A kinase (PRKA) anchor protein 14   | 100               | -1.43                          | 1.35x10 <sup>-02</sup>     | [1]              |
| AKAP14             | 242698_at           | A kinase (PRKA) anchor protein 14   | 57                | -1.59                          | 4.75x10 <sup>-02</sup>     | [1]              |
| ALMS1              | 214220_s_at         | Alstrom syndrome 1  | 100               | -1.18                          | 4.16x10 <sup>-02</sup>     | [2]              |
| ALMS1              | 214221_at           | Alstrom syndrome 1  | 100               | -1.08                          | 7.02x10 <sup>-01</sup>     | [2]              |
| ALMS1              | 214707__at          | Alstrom syndrome 1  | 100               | 1.15                           | 4.86x10 <sup>-01</sup>     | [2]              |
| BBS1               | 218471_s_at         | Bardet-Biedl syndrome 1   | 100               | -1.08                          | 5.42x10 <sup>-01</sup>     | [3,4]            |
| BBS1               | 222643_s_at         | Bardet-Biedl syndrome 1   | 75                | -1.34                          | 6.62x10 <sup>-02</sup>     | [3,4]            |
| BBS1               | 229142_s_at         | CDNA FLJ52492 complete cds, highly similar to Bardet-Biedl syndrome 1 protein | 4                 | -1.15                          | 6.60x10 <sup>-01</sup>     | [3,4]            |
| BBS2               | 223227_at           | Bardet-Biedl syndrome 2   | 100               | -1.x10                         | 2.x10x10 <sup>-01</sup>    | [5]              |
| BBS4               | 212744_at           | Bardet-Biedl syndrome 4   | 100               | -1.x10                         | 3.61x10 <sup>-01</sup>     | [6]              |
| BBS4               | 212745_s_at         | Bardet-Biedl syndrome 4   | 100               | -1.19                          | 1.27x10 <sup>-01</sup>     | [6]              |
| BBS5               | 230697_at           | Bardet-Biedl syndrome 5   | 94                | -1.36                          | 6.36x10 <sup>-03</sup>     | [7]              |
| BBS7               | 219688_at           | Bardet-Biedl syndrome 7   | 88                | -1.03                          | 8.92x10 <sup>-01</sup>     | [8]              |
| BBS7               | 235007_at           | Bardet-Biedl syndrome 7   | 100               | -1.15                          | 2.80x10 <sup>-01</sup>     | [8]              |
| CDKN3              | 1555758_a_at        | cyclin-dependent kinase inhibitor 3   | 6                 | 1.14                           | 7.78x10 <sup>-01</sup>     | [9]              |
| CDKN3              | 209714_s_at         | cyclin-dependent kinase inhibitor 3   | 12                | 1.21                           | 4.86x10 <sup>-01</sup>     | [9]              |
| CEP164             | 1558953_s_at        | centrosomal protein 164kDa  | 100               | -1.05                          | 7.48x10 <sup>-01</sup>     | [10]             |
| CEP164             | 204250_s_at         | centrosomal protein 164kDa  | 69                | -1.14                          | 5.42x10 <sup>-01</sup>     | [10]             |
| CEP164             | 204251_s_at         | centrosomal protein 164kDa  | 100               | 1.00                           | 9.87x10 <sup>-01</sup>     | [10]             |
| CETN2              | 209194_at           | centrin, EF-hand protein, 2   | 100               | -1.17                          | 8.74x10 <sup>-02</sup>     | [11]             |
| CRB3               | 232609_at           | crumbs homolog 3 (Drosophila)   | 75                | -1.02                          | 9.29x10 <sup>-01</sup>     | [12]             |
| CROCC              | 206274_s_at         | ciliary rootlet coiled-coil, rootletin  | 100               | -1.17                          | 4.86x10 <sup>-01</sup>     | [12]             |
| CROCC              | 216419_at           | ciliary rootlet coiled-coil, rootletin  | 12                | -1.31                          | 3.65x10 <sup>-01</sup>     | [12]             |
| DNAHx10            | 1562462_at          | dynein, axonemal, heavy chain x10   | 92                | -1.75                          | 2.40x10 <sup>-03</sup>     | [13]             |
| DNAHx10            | 1565339_at          | dynein, axonemal, heavy chain x10   | 65                | -1.94                          | 3.24x10 <sup>-03</sup>     | [13]             |
| DNAHx10            | 229738_at           | dynein, axonemal, heavy chain x10   | 100               | -1.26                          | 5.76x10 <sup>-02</sup>     | [13]             |
| DNAH11             | 1553159_at          | dynein, axonemal, heavy chain 11  | 98                | -1.57                          | 9.03x10 <sup>-04</sup>     | [14]             |
| DNAH11             | 1560416_at          | dynein, axonemal, heavy chain 11  | 100               | -1.04                          | 8.35x10 <sup>-01</sup>     | [14]             |

**Supplemental Table II: Cilia-related Gene Expression in Airway Epithelium<sup>1</sup>** (cont., page 2)

| <b>Gene symbol</b> | <b>Probe set ID</b> | <b>Gene title</b>                             | <b>P call (%)</b> | <b>Fold-change<sup>2</sup></b> | <b>p value<sup>3</sup></b> | <b>Reference</b> |
|--------------------|---------------------|---|-------------------|--------------------------------|----------------------------|------------------|
| DNAH11             | 237804_at           | Axonemal dynein heavy chain (DNAH11), partial | 43                | -1.00                          | 9.98x10 <sup>-01</sup>     | [14]             |
| DNAH3              | 1560803_at          | dynein, axonemal, heavy chain 3               | 96                | -1.08                          | 6.34x10 <sup>-01</sup>     | [15]             |
| DNAH3              | 1563290_at          | dynein, axonemal, heavy chain 3               | 29                | -1.43                          | 7.47x10 <sup>-02</sup>     | [15]             |
| DNAH3              | 215266_at           | dynein, axonemal, heavy chain 3               | 100               | -1.36                          | 5.24x10 <sup>-02</sup>     | [15]             |
| DNAH3              | 216415_at           | dynein, axonemal, heavy chain 3 (DNAH3), mRNA | 71                | -1.00                          | 9.86x10 <sup>-01</sup>     | [15]             |
| DNAH3              | 220725__at          | dynein, axonemal, heavy chain 3 (DNAH3), mRNA | 100               | -1.06                          | 7.19x10 <sup>-01</sup>     | [15]             |
| DNAH5              | 232381_s_at         | dynein, axonemal, heavy chain 5               | 100               | -1.68                          | 9.60x10 <sup>-05</sup>     | [16]             |
| DNAH5              | 243938__at          | dynein, axonemal, heavy chain 5               | 100               | -1.83                          | 9.60x10 <sup>-05</sup>     | [16]             |
| DNAH7              | 214222_at           | dynein, axonemal, heavy chain 7               | 100               | -1.31                          | 4.79x10 <sup>-03</sup>     | [17]             |
| DNAH7              | 234476_at           | dynein, axonemal, heavy chain 7               | 100               | -1.23                          | 8.85x10 <sup>-02</sup>     | [17]             |
| DNAH7              | 234727_at           | dynein, axonemal, heavy chain 7               | 29                | 1.37                           | 2.x10x10 <sup>-01</sup>    | [17]             |
| DNAH9              | 207959_s_at         | dynein, axonemal, heavy chain 9               | 100               | -1.19                          | 1.67x10 <sup>-01</sup>     | [18]             |
| DNAH9              | 2x10345_s_at        | dynein, axonemal, heavy chain 9               | 100               | -1.56                          | 1.40x10 <sup>-02</sup>     | [18]             |
| DNAH9              | 240857_at           | dynein, axonemal, heavy chain 9               | 100               | -1.39                          | 3.24x10 <sup>-03</sup>     | [18]             |
| DNAI1              | 220125_at           | dynein, axonemal, intermediate chain 1        | 100               | -1.06                          | 7.48x10 <sup>-01</sup>     | [19]             |
| DNAI1              | 233195_at           | dynein, axonemal, intermediate chain 1        | 59                | 1.09                           | 4.88x10 <sup>-01</sup>     | [19]             |
| DNAI2              | 220636_at           | dynein, axonemal, intermediate chain 2        | 100               | 1.07                           | 5.42x10 <sup>-01</sup>     | [20]             |
| DNAI2              | 221668_s_at         | dynein, axonemal, intermediate chain 2        | 100               | -1.07                          | 7.40x10 <sup>-01</sup>     | [20]             |
| DNAL4              | 204008_at           | dynein, axonemal, light chain 4               | 100               | -1.06                          | 6.95x10 <sup>-01</sup>     | [21]             |
| DNALI1             | 205186_at           | dynein, axonemal, light intermediate chain 1  | 100               | -1.46                          | 3.12x10 <sup>-02</sup>     | [22]             |
| DNALI1             | 227081_at           | dynein, axonemal, light intermediate chain 1  | 100               | -1.21                          | 5.58x10 <sup>-02</sup>     | [22]             |
| DYNC1H1            | 1556831_at          | KIAA0325 protein                              | 29                | 1.11                           | 7.65x10 <sup>-01</sup>     | [23]             |
| DYNC1H1            | 211928_at           | dynein, cytoplasmic 1, heavy chain 1          | 100               | -1.05                          | 7.48x10 <sup>-01</sup>     | [23]             |
| DYNC1H1            | 229042_s_at         | dynein, cytoplasmic 1, heavy chain 1          | 2                 | 1.47                           | 3.69x10 <sup>-01</sup>     | [23]             |
| DYNC1H1            | 229115_at           | dynein, cytoplasmic 1, heavy chain 1          | 20                | -1.03                          | 9.20x10 <sup>-01</sup>     | [23]             |
| DYNC1H1            | 236183_at           | dynein, cytoplasmic 1, heavy chain 1          | 0                 | 1.16                           | 7.90x10 <sup>-01</sup>     | [23]             |
| DYNC1H1            | 24x1084__at         | dynein, cytoplasmic 1, heavy chain 1          | 0                 | -1.09                          | 8.85x10 <sup>-01</sup>     | [23]             |
| DYNC1H1            | 244768_at           | dynein, cytoplasmic 1, heavy chain 1          | 0                 | -1.05                          | 9.20x10 <sup>-01</sup>     | [23]             |
| DYNC1I2            | 211684_s_at         | dynein, cytoplasmic 1, intermediate chain 2   | 100               | -1.08                          | 4.51x10 <sup>-01</sup>     | [24]             |
| DYNC2H1            | 1561939_at          | dynein, cytoplasmic 2, heavy chain 1          | 100               | -1.90                          | 9.03x10 <sup>-04</sup>     | [25]             |
| DYNC2H1            | 1565149_at          | dynein, cytoplasmic 2, heavy chain 1          | 100               | 1.05                           | 7.89x10 <sup>-01</sup>     | [25]             |
| DYNC2H1            | 219469_at           | dynein, cytoplasmic 2, heavy chain 1          | 100               | -1.26                          | 6.63x10 <sup>-02</sup>     | [25]             |

**Supplemental Table II: Cilia-related Gene Expression in Airway Epithelium<sup>1</sup>** (cont., page 3)

| <b>Gene symbol</b> | <b>Probe set ID</b> | <b>Gene title</b>                                    | <b>P call (%)</b> | <b>Fold-change<sup>2</sup></b> | <b>p value<sup>3</sup></b> | <b>Reference</b> |
|--------------------|---------------------|--|-------------------|--------------------------------|----------------------------|------------------|
| DYNC2LI1           | 1554324_s_at        | dynein, cytoplasmic 2, light intermediate chain 1    | 82                | -1.03                          | 8.92x10 <sup>-01</sup>     | [26]             |
| DYNC2LI1           | 203762_s_at         | dynein, cytoplasmic 2, light intermediate chain 1    | 100               | -1.04                          | 7.97x10 <sup>-01</sup>     | [26]             |
| DYNC2LI1           | 203763_at           | dynein, cytoplasmic 2, light intermediate chain 1    | 100               | -1.14                          | 2.85x10 <sup>-01</sup>     | [26]             |
| DYNC2LI1           | 241757__at          | dynein, cytoplasmic 2, light intermediate chain 1    | 100               | -1.01                          | 9.58x10 <sup>-01</sup>     | [26]             |
| DYNLT1             | 201999_s_at         | dynein, light chain, Tcte-type 1                     | 100               | -1.08                          | 3.42x10 <sup>-01</sup>     | [27]             |
| EFHC1              | 219833_s_at         | EF-hand domain (C-terminal) containing 1             | 100               | -1.18                          | 5.87x10 <sup>-02</sup>     | [28]             |
| EFHC1              | 225656_at           | EF-hand domain (C-terminal) containing 1             | 100               | -1.05                          | 7.19x10 <sup>-01</sup>     | [28]             |
| EFHC1              | 23x1026_at          | EF-hand domain (C-terminal) containing 1             | 100               | -1.24                          | 3.12x10 <sup>-02</sup>     | [28]             |
| EML1               | 204796_at           | echinoderm microtubule associated protein like 1     | 100               | -1.41                          | 2.48x10 <sup>-02</sup>     | [29]             |
| EML1               | 204797_s_at         | echinoderm microtubule associated protein like 1     | 100               | -1.36                          | 3.24x10 <sup>-03</sup>     | [29]             |
| EZR                | 208621_s_at         | ezrin  | 100               | -1.67                          | 5.64x10 <sup>-03</sup>     | [30]             |
| EZR                | 208622_s_at         | ezrin  | 100               | -1.41                          | 1.02x10 <sup>-02</sup>     | [30]             |
| EZR                | 208623_s_at         | ezrin  | 100               | -1.15                          | 3.88x10 <sup>-02</sup>     | [30]             |
| EZR                | 217230_at           | ezrin  | 49                | 1.09                           | 8.52x10 <sup>-01</sup>     | [30]             |
| EZR                | 217234_s_at         | ezrin  | 100               | -1.69                          | 4.47x10 <sup>-03</sup>     | [30]             |
| F2RL2              | 206795_at           | coagulation factor II (thrombin) receptor-like 2     | 0                 | 1.24                           | 6.79x10 <sup>-01</sup>     | [31]             |
| F2RL2              | 230147_at           | coagulation factor II (thrombin) receptor-like 2     | 6                 | 2.60                           | 1.38x10 <sup>-02</sup>     | [31]             |
| FOXJ1              | 205906_at           | forkhead box J1                                      | 100               | -1.38                          | 1.53x10 <sup>-01</sup>     | [30]             |
| GAS8               | 204921_at           | growth arrest-specific 8                             | 100               | 1.01                           | 9.33x10 <sup>-01</sup>     | [32]             |
| GSK3B              | 209945_s_at         | glycogen synthase kinase 3 beta                      | 100               | -1.13                          | 2.78x10 <sup>-01</sup>     | [33]             |
| IFT122             | 1563794_s_at        | intraflagellar transport 122 homolog (Chlamydomonas) | 51                | -1.01                          | 9.75x10 <sup>-01</sup>     | [34]             |
| IFT122             | 216678_at           | intraflagellar transport 122 homolog (Chlamydomonas) | 73                | -1.06                          | 7.89x10 <sup>-01</sup>     | [34]             |
| IFT122             | 220744_s_at         | intraflagellar transport 122 homolog (Chlamydomonas) | 100               | -1.02                          | 8.77x10 <sup>-01</sup>     | [34]             |
| IFT140             | 204792_s_at         | intraflagellar transport 140 homolog (Chlamydomonas) | 100               | 1.06                           | 7.89x10 <sup>-01</sup>     | [35]             |
| IFT140             | 232844_at           | KIAA0590 protein                                     | 43                | 1.03                           | 8.52x10 <sup>-01</sup>     | [35]             |
| IFT140             | 244585_at           | intraflagellar transport 140 homolog (Chlamydomonas) | 0                 | 1.42                           | 3.65x10 <sup>-01</sup>     | [35]             |
| IFT172             | 226324_s_at         | intraflagellar transport 172 homolog (Chlamydomonas) | 100               | -1.24                          | 1.50x10 <sup>-02</sup>     | [36]             |
| IFT20              | 2x10312_s_at        | intraflagellar transport 20 homolog (Chlamydomonas)  | 100               | -1.22                          | 4.75x10 <sup>-02</sup>     | [37]             |
| IFT52              | 218709_s_at         | intraflagellar transport 52 homolog (Chlamydomonas)  | 100               | -1.17                          | 6.24x10 <sup>-02</sup>     | [38]             |
| IFT52              | 233532__at          | intraflagellar transport 52 homolog (Chlamydomonas)  | 92                | -1.19                          | 1.82x10 <sup>-01</sup>     | [38]             |
| IFT57              | 218x100_s_at        | intraflagellar transport 57 homolog (Chlamydomonas)  | 100               | -1.17                          | 1.41x10 <sup>-01</sup>     | [37]             |
| IFT57              | 222519_s_at         | intraflagellar transport 57 homolog (Chlamydomonas)  | 100               | -1.46                          | 3.12x10 <sup>-02</sup>     | [37]             |

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|--------------------|---------------------|---|-------------------|--------------------------------|----------------------------|------------------|
| IFT57              | 222520_s_at         | intraflagellar transport 57 homolog (Chlamydomonas)   | 100               | -1.46                          | 2.40x10 <sup>-03</sup>     | [37]             |
| IFT80              | 1558956_s_at        | intraflagellar transport 80 homolog (Chlamydomonas)   | 100               | -1.03                          | 8.92x10 <sup>-01</sup>     | [39]             |
| IFT80              | 1564231_at          | intraflagellar transport 80 homolog (Chlamydomonas)   | 96                | 1.37                           | 5.94x10 <sup>-03</sup>     | [39]             |
| IFT80              | 226098_at           | intraflagellar transport 80 homolog (Chlamydomonas)   | 100               | -1.08                          | 5.42x10 <sup>-01</sup>     | [39]             |
| IFT80              | 240251_at           | CDNA FLJ52072 complete cds, highly similar to<br>Intraflagellar transport 80 homolog        | 22                | 1.67                           | 9.61x10 <sup>-02</sup>     | [39]             |
| IFT88              | 204703_at           | intraflagellar transport 88 homolog (Chlamydomonas)   | 100               | -1.18                          | 5.82x10 <sup>-02</sup>     | [13]             |
| KIF17              | 222144_at           | kinesin family member 17  | 18                | -1.07                          | 8.77x10 <sup>-01</sup>     | [40]             |
| KIF3A              | 213623_at           | kinesin family member 3A  | 100               | -1.28                          | 5.55x10 <sup>-02</sup>     | [23]             |
| KIF3A              | 228680_at           | kinesin family member 3A  | 100               | -1.26                          | 8.52x10 <sup>-03</sup>     | [23]             |
| KIF3B              | 203943_at           | kinesin family member 3B  | 100               | -1.01                          | 9.29x10 <sup>-01</sup>     | [23]             |
| KIF3B              | 225205_at           | kinesin family member 3B  | 100               | -1.05                          | 6.25x10 <sup>-01</sup>     | [23]             |
| KIFAP3             | 203333_at           | kinesin-associated protein 3  | 100               | -1.24                          | 5.24x10 <sup>-02</sup>     | [41]             |
| KLC1               | 212877_at           | kinesin light chain 1   | 98                | 1.06                           | 6.34x10 <sup>-01</sup>     | [42]             |
| KLC1               | 212878_s_at         | kinesin light chain 1   | 100               | -1.23                          | 6.29x10 <sup>-02</sup>     | [42]             |
| KLC1               | 213656_s_at         | kinesin light chain 1   | 100               | -1.03                          | 7.89x10 <sup>-01</sup>     | [42]             |
| KLC1               | 232036_at           | KLC1 mRNA for kinesin light chain 1, complete cds,<br>clone: FLJ08153AAAN                   | 2                 | 1.14                           | 8.09x10 <sup>-01</sup>     | [42]             |
| KLC2               | 218906__at          | kinesin light chain 2   | 65                | -1.04                          | 8.52x10 <sup>-01</sup>     | [42]             |
| LBR                | 201795_at           | lamin B receptor  | 100               | -1.x10                         | 5.57x10 <sup>-01</sup>     | [43]             |
| MKS1               | 1555820_a_at        | Meckel syndrome, type 1   | 100               | -1.20                          | 1.41x10 <sup>-01</sup>     | [44]             |
| MKS1               | 218630_at           | Meckel syndrome, type 1   | 100               | -1.08                          | 5.42x10 <sup>-01</sup>     | [44]             |
| MLF1               | 204783_at           | myeloid leukemia factor 1   | 100               | -1.38                          | 4.05x10 <sup>-03</sup>     | [32]             |
| MLF1               | 204784_s_at         | myeloid leukemia factor 1   | 100               | -1.41                          | 3.24x10 <sup>-03</sup>     | [32]             |
| MYCBP              | 203359_s_at         | c-myc binding protein   | 100               | 1.03                           | 8.52x10 <sup>-01</sup>     | [32]             |
| MYCBP              | 203360_s_at         | c-myc binding protein   | 100               | -1.14                          | 2.60x10 <sup>-01</sup>     | [32]             |
| MYCBP              | 203361_s_at         | c-myc binding protein   | 100               | -1.01                          | 9.54x10 <sup>-01</sup>     | [32]             |
| NASP               | 201969_at           | nuclear autoantigenic sperm protein (histone-binding)                                       | 94                | -1.09                          | 4.65x10 <sup>-01</sup>     | [45]             |
| NASP               | 201970_s_at         | nuclear autoantigenic sperm protein (histone-binding)                                       | 100               | -1.29                          | 4.75x10 <sup>-02</sup>     | [45]             |
| NASP               | 237276_at           | Nuclear autoantigenic sperm protein (histone-binding)<br>(NASP), transcript variant 1, mRNA | 0                 | 1.03                           | 9.38x10 <sup>-01</sup>     | [45]             |
| NASP               | 242918_at           | Nuclear autoantigenic sperm protein (histone-binding)                                       | 65                | -1.23                          | 4.29x10 <sup>-01</sup>     | [45]             |

**Supplemental Table II: Cilia-related Gene Expression in Airway Epithelium <sup>1</sup> (cont., page 5)**

| Gene symbol | Probe set ID | Gene title   | P call (%) | Fold-change <sup>2</sup> | p value <sup>3</sup>    | Reference |
|-------------|--------------|--|------------|--------------------------|-------------------------|-----------|
|             |              | (NASP), transcript variant 1, mRNA   |            |                          |                         |           |
| NME5        | 206197_at    | non-metastatic cells 5, protein expressed in (nucleoside-diphosphate kinase) | 100        | -1.14                    | 2.x10x10 <sup>-01</sup> | [32]      |
| NME7        | 219553_at    | non-metastatic cells 7, protein expressed in (nucleoside-diphosphate kinase) | 100        | -1.x10                   | 4.77x10 <sup>-01</sup>  | [32]      |
| NME7        | 227556_at    | non-metastatic cells 7, protein expressed in (nucleoside-diphosphate kinase) | 100        | 1.x10                    | 7.04x10 <sup>-01</sup>  | [32]      |
| NPHP1       | 206285_at    | nephronophthisis 1 (juvenile)  | 78         | 1.11                     | 5.42x10 <sup>-01</sup>  | [46]      |
| NPHP1       | 238843_at    | nephronophthisis 1 (juvenile)  | 100        | 1.02                     | 9.20x10 <sup>-01</sup>  | [46]      |
| NPHP1       | 238844_s_at  | nephronophthisis 1 (juvenile)  | 100        | -1.41                    | 4.79x10 <sup>-03</sup>  | [46]      |
| NPHP3       | 1553389_at   | nephronophthisis 3 (adolescent)  | 16         | 1.11                     | 7.97x10 <sup>-01</sup>  | [46]      |
| NPHP4       | 213471_at    | nephronophthisis 4   | 98         | 1.09                     | 5.57x10 <sup>-01</sup>  | [46]      |
| NPHP4       | 216344_at    | nephronophthisis 4   | 6          | 1.05                     | 9.20x10 <sup>-01</sup>  | [46]      |
| ODF2        | 2x10415_s_at | outer dense fiber of sperm tails 2   | 82         | -1.63                    | 4.05x10 <sup>-03</sup>  | [47]      |
| ODF2        | 225617_at    | outer dense fiber of sperm tails 2   | 94         | -1.17                    | 5.37x10 <sup>-01</sup>  | [47]      |
| OFD1        | 203569_s_at  | oral-facial-digital syndrome 1   | 100        | -1.18                    | 3.57x10 <sup>-02</sup>  | [48]      |
| OFD1        | 241751_at    | oral-facial-digital syndrome 1   | 100        | 1.x10                    | 7.18x10 <sup>-01</sup>  | [48]      |
| PACRG       | 214204_at    | PARK2 co-regulated   | 100        | -1.17                    | 2.31x10 <sup>-01</sup>  | [49]      |
| PACRG       | 215472_at    | PARK2 co-regulated   | 100        | -1.25                    | 7.47x10 <sup>-02</sup>  | [49]      |
| PCM1        | 202174_s_at  | pericentriolar material 1  | 100        | -1.28                    | 4.79x10 <sup>-03</sup>  | [50]      |
| PCM1        | 209996__at   | pericentriolar material 1  | 14         | -1.53                    | 5.76x10 <sup>-02</sup>  | [50]      |
| PCM1        | 209997__at   | pericentriolar material 1  | 100        | -1.20                    | 1.24x10 <sup>-01</sup>  | [50]      |
| PCM1        | 214118__at   | pericentriolar material 1  | 100        | -1.08                    | 6.14x10 <sup>-01</sup>  | [50]      |
| PCM1        | 214937__at   | pericentriolar material 1  | 100        | -1.09                    | 2.21x10 <sup>-01</sup>  | [50]      |
| PCM1        | 228905_at    | pericentriolar material 1  | 100        | -1.37                    | 9.44x10 <sup>-03</sup>  | [50]      |
| PCNT        | 203660_s_at  | pericentrin  | 98         | -1.05                    | 7.09x10 <sup>-01</sup>  | [51]      |
| PCNT        | 233387_s_at  | pericentrin  | 14         | -1.71                    | 5.34x10 <sup>-02</sup>  | [51]      |
| PKD1        | 202327_s_at  | polycystic kidney disease 1 (autosomal dominant)                             | 25         | -1.17                    | 5.68x10 <sup>-01</sup>  | [52]      |
| PKD1        | 202328_s_at  | polycystic kidney disease 1 (autosomal dominant)                             | 98         | -1.01                    | 9.58x10 <sup>-01</sup>  | [52]      |
| PKD1        | 216949_s_at  | polycystic kidney disease 1 (autosomal dominant)                             | 25         | -1.47                    | 3.71x10 <sup>-01</sup>  | [52]      |
| PKD2        | 203688_at    | polycystic kidney disease 2 (autosomal dominant)                             | 100        | -1.31                    | 3.71x10 <sup>-02</sup>  | [52]      |
| PLEKHA8     | 1560556_a_at | Homo sapiens, clone IMAGE:4617677, mRNA                                      | 20         | 1.22                     | 7.19x10 <sup>-01</sup>  | [53]      |

**Supplemental Table II: Cilia-related Gene Expression in Airway Epithelium <sup>1</sup> (cont., page 6)**

| <b>Gene symbol</b>  | <b>Probe set ID</b> | <b>Gene title</b>   | <b>P call (%)</b> | <b>Fold-change<sup>2</sup></b> | <b>p value<sup>3</sup></b> | <b>Reference</b> |
|---------------------|---------------------|---|-------------------|--------------------------------|----------------------------|------------------|
| PLEKHA8             | 224208_at           | pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 8  | 2                 | 1.27                           | 6.85x10 <sup>-01</sup>     | [53]             |
| PLEKHA8             | 231543_at           | pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 8  | 0                 | -1.x10                         | 8.52x10 <sup>-01</sup>     | [53]             |
| PLEKHA8             | 232212_at           | pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 8  | 2                 | -1.08                          | 8.62x10 <sup>-01</sup>     | [53]             |
| PLEKHA8             | 233943__at          | pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 8  | 47                | 1.34                           | 2.86x10 <sup>-01</sup>     | [53]             |
| PLEKHA8 /// PLEKHA9 | 220157__at          | pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 8 /// pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 9 | 61                | 1.08                           | 6.64x10 <sup>-01</sup>     | [53]             |
| PPP2R1A             | 200695_at           | protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform  | 96                | -1.20                          | 2.78x10 <sup>-01</sup>     | [32]             |
| RABL4               | 205037_at           | RAB, member of RAS oncogene family-like 4   | 100               | -1.21                          | 1.27x10 <sup>-01</sup>     | [32]             |
| RABL4               | 213784_at           | RAB, member of RAS oncogene family-like 4   | 100               | -1.04                          | 8.32x10 <sup>-01</sup>     | [32]             |
| RABL4               | 243812_at           | RAB, member of RAS oncogene family-like 4   | 0                 | -1.03                          | 9.45x10 <sup>-01</sup>     | [32]             |
| RPGRIP1L            | 213959_s_at         | RPGRIP1-like  | 100               | -1.02                          | 9.20x10 <sup>-01</sup>     | [54]             |
| RPGRIP1L            | 24x1028_at          | RPGRIP1-like, mRNA (cDNA clone IMAGE:4697938)   | 6                 | -1.04                          | 9.29x10 <sup>-01</sup>     | [54]             |
| RSPH3               | 1568613_at          | radial spoke 3 homolog (Chlamydomonas)  | 0                 | -1.03                          | 8.86x10 <sup>-01</sup>     | [55]             |
| RSPH3               | 223713_at           | radial spoke 3 homolog (Chlamydomonas)  | 98                | -1.16                          | 3.90x10 <sup>-01</sup>     | [55]             |
| SLC9A3R1            | 201349_at           | solute carrier family 9 (sodium/hydrogen echanger), member 3 regulator 1  | 100               | -1.08                          | 5.18x10 <sup>-01</sup>     | [56]             |
| SPAG6               | 2x10032_s_at        | sperm associated antigen 6  | 100               | -1.45                          | 2.48x10 <sup>-03</sup>     | [57]             |
| SPAG6               | 2x10033_s_at        | sperm associated antigen 6  | 100               | -1.34                          | 3.31x10 <sup>-03</sup>     | [57]             |
| TCTE3               | 1554400_at          | t-comple-associated-testis-epressed 3   | 8                 | 1.63                           | 2.x10x10 <sup>-01</sup>    | [58]             |
| TCTE3               | 1554401_a_at        | t-comple-associated-testis-epressed 3   | 2                 | -1.40                          | 4.74x10 <sup>-01</sup>     | [58]             |
| TCTE3               | 1557945_at          | dynein light chain 2 TCTE2  | 98                | 1.05                           | 7.48x10 <sup>-01</sup>     | [58]             |
| TCTE3               | 232258_at           | dynein light chain 2 TCTE2  | 4                 | -1.01                          | 9.77x10 <sup>-01</sup>     | [58]             |
| TEKT1               | 239216_at           | tektin 1  | 100               | -1.45                          | 2.40x10 <sup>-03</sup>     | [59]             |
| TEKT2               | 2x10323_at          | tektin 2 (testicular)   | 100               | -1.37                          | 3.77x10 <sup>-02</sup>     | [60]             |
| TEKT3               | 223867_at           | tektin 3  | 100               | -1.27                          | 5.87x10 <sup>-02</sup>     | [61]             |

**Supplemental Table II: Cilia-related Gene Expression in Airway Epithelium** <sup>1</sup> (cont., page 7)

| <b>Gene symbol</b>   | <b>Probe set ID</b> | <b>Gene title</b>                     | <b>P call (%)</b> | <b>Fold-change<sup>2</sup></b> | <b>p value<sup>3</sup></b> | <b>Reference</b> |
|----------------------|---------------------|---------------------------------------|-------------------|--------------------------------|----------------------------|------------------|
| TMEM67               | 1552763_at          | transmembrane protein 67              | 14                | -1.58                          | 3.42x10 <sup>-01</sup>     | [44]             |
| TMEM67               | 1552765_at          | transmembrane protein 67              | 37                | -1.05                          | 9.29x10 <sup>-01</sup>     | [44]             |
| TMEM67               | 1563646_a_at        | transmembrane protein 67              | 100               | -1.44                          | 3.12x10 <sup>-02</sup>     | [44]             |
| TMEM67               | 1569377_at          | transmembrane protein 67              | 100               | -1.02                          | 9.29x10 <sup>-01</sup>     | [44]             |
| TMEM67               | 1569411_at          | transmembrane protein 67              | 22                | -1.57                          | 2.28x10 <sup>-01</sup>     | [44]             |
| TMEM67               | 232023_at           | transmembrane protein 67              | 100               | -1.38                          | 4.75x10 <sup>-02</sup>     | [44]             |
| TMEM67               | 238229_at           | transmembrane protein 67              | 100               | -1.17                          | 2.31x10 <sup>-01</sup>     | [44]             |
| TUBA1C               | 209251_at           | tubulin, alpha 1c                     | 100               | -1.01                          | 9.33x10 <sup>-01</sup>     | [62]             |
| TUBA1C               | 211750_at           | tubulin, alpha 1c                     | 100               | -1.03                          | 7.90x10 <sup>-01</sup>     | [62]             |
| TUBB2A               | 204141_at           | tubulin, beta 2A                      | 100               | -1.08                          | 6.44x10 <sup>-01</sup>     | [62]             |
| TUBB2A ///<br>TUBB2B | 209372_at           | tubulin, beta 2A /// tubulin, beta 2B | 90                | -1.64                          | 4.75x10 <sup>-02</sup>     | [62]             |
| VCP                  | 208648_at           | valosin-containing protein            | 100               | -1.01                          | 9.29x10 <sup>-01</sup>     | [32,63]          |
| VCP                  | 208649_s_at         | valosin-containing protein            | 100               | -1.04                          | 7.60x10 <sup>-01</sup>     | [32,63]          |
| VHL                  | 1559227_s_at        | von Hippel-Lindau tumor suppressor    | 59                | 1.05                           | 7.90x10 <sup>-01</sup>     | [64]             |
| VHL                  | 203844_at           | von Hippel-Lindau tumor suppressor    | 29                | 1.53                           | 4.19x10 <sup>-01</sup>     | [64]             |

<sup>1</sup> The HG-U133 Plus 2.0 microarray platform was used to detect differences in the expression of these genes in healthy smokers compared to healthy nonsmokers.

<sup>2</sup> Magnitude of fold change in average expression values for healthy smokers vs healthy nonsmokers.

<sup>3</sup> A Benjamini-Hochberg correction was used to limit the false positive rate.

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