| Rank | Gene Symbol | PC9M2/PC9 | Rank | Gene Symbol | PC9M2/PC9 | Rank | Gene Symbol | PC9M2/PC9 |
|------|-------------|-----------|------|-------------|-----------|------|-------------|-----------|
| 1    | S100A8      | 2272.082277 | 51   | PLXNA2      | 34.03914444 | 101  | IRX5        | 14.86693275 |
| 2    | SLC1A6      | 1334.051818 | 52   | Inc-FOXG1-6 | 32.38830743 | 102  | GABBR2      | 14.80540127 |
| 3    | MAGE9       | 954.2400532 | 53   | C11orf86    | 32.36015754 | 103  | GGT5        | 14.54654878 |
| 4    | PASD1       | 661.2605929 | 54   | TUBB2B      | 32.13388138 | 104  | FOXN4       | 14.49601798 |
| 5    | KRT23       | 574.024574  | 55   | CCR1        | 32.11099471 | 105  | EMR2        | 14.46200973 |
| 6    | TCF4        | 493.6655798 | 56   | H19         | 29.93910534 | 106  | PTX3        | 14.20956559 |
| 7    | FAM9B       | 461.4654201 | 57   | NIPAL4      | 27.93386666 | 107  | Inc-EEPD1-1 | 14.17722592 |
| 8    | CYBA        | 310.2027112 | 58   | NR2F1       | 27.66661135 | 108  | PRSS3P2     | 14.06203505 |
| 9    | IL1RL1      | 297.9366267 | 59   | BAGE        | 27.71195225 | 109  | ZNFX1       | 13.784711 |
| 10   | Inc-GABRE-1 | 256.2041555 | 60   | HBE1        | 27.64311833 | 110  | AXIN2       | 13.64786906 |
| 11   | S100A9      | 250.4827594 | 61   | MNX1-AS1    | 25.97089404 | 111  | MUC5B       | 13.56552367 |
| 12   | BDKRB2      | 205.889977  | 62   | ONECUT2     | 25.10754228 | 112  | SHROOM2     | 13.39675351 |
| 13   | XLOC_i2_00798 | 185.6015783 | 63   | MUC6        | 24.96014347 | 113  | Inc-WDR7-6  | 13.37129234 |
| 14   | SLC1A3      | 174.8868191 | 64   | KRBOX1      | 24.87381284 | 114  | Cxor57      | 13.32062105 |
| 15   | ELF5        | 172.0889612 | 65   | NTSR1       | 24.21520058 | 115  | RTN4R1      | 13.20529683 |
| 16   | TRIM31      | 134.1476738 | 66   | ASB2        | 24.17468779 | 116  | SLC16A2     | 13.179923 |
| 17   | HSD3B1      | 121.5614812 | 67   | Inc-C7orf9-5 | 23.25774033 | 117  | Inc-PLS3-1  | 13.14850129 |
| 18   | DHR52       | 111.146204  | 68   | FAM198A     | 22.58052933 | 118  | C10orf53    | 13.0553255 |
| 19   | ADCY5       | 108.384547  | 69   | SGPP2       | 22.17430006 | 119  | GRHL3       | 12.9237113 |
| 20   | LINC00221   | 99.49794223 | 70   | VAV1        | 22.17090110 | 120  | TGFBR3      | 12.84757851 |
| 21   | NOVA1       | 97.23260054 | 71   | HAL         | 21.82389211 | 121  | SCNN1B      | 12.81478715 |
| 22   | SCN11G      | 92.61455879 | 72   | Inc-ICOSLG-2 | 21.54273959 | 122  | CYP24A1     | 12.74522062 |
| 23   | SEMAS5B     | 92.33744109 | 73   | DIO3        | 21.08562737 | 123  | LOC100057420 | 12.66047123 |
| 24   | NOVA2       | 87.82279949 | 74   | HOXC13-AS   | 20.97273676 | 124  | KIF5C       | 12.50933733 |
| 25   | DEFB135     | 82.65118741 | 75   | Inc-FAM213B-3 | 20.79353812 | 125  | CYP27C1     | 12.31063863 |
| 26   | PI3         | 81.12961352 | 76   | COL13A1     | 20.70884819 | 126  | LINC01447   | 12.29556968 |
| 27   | CTB-17M222  | 80.72865212 | 77   | CACCN6      | 20.19361731 | 127  | MX1         | 12.23182025 |
| 28   | CPNE4       | 80.32645998 | 78   | C6orf223    | 19.89520842 | 128  | UNCI3A      | 12.0608411 |
| 29   | S100A2       | 77.75613485 | 79   | Inc-KIAA0087-2 | 19.75722161 | 129  | Inc-ARHGAP26-2 | 12.00191573 |
| 30   | BDKRB1      | 77.14071216 | 80   | GOLGA7B     | 19.71484984 | 130  | PRRT4       | 11.87066612 |
| 31   | CCAT1       | 75.85192282 | 81   | Inc-SYN-3   | 19.67765495 | 131  | LOC10273379 | 11.85933835 |
| 32   | CPVL        | 71.70869017 | 82   | LOC102724297 | 19.28762704 | 132  | CDYL2       | 11.85712935 |
| 33   | LOC102723854 | 67.78579055 | 83   | ARL15       | 19.08930343 | 133  | C16orf45    | 11.75087284 |
| 34   | CASP14      | 59.56547892 | 84   | SLAIN1      | 18.64193382 | 134  | ENTPD3      | 11.73081495 |
| 35   | VCX2        | 58.40794682 | 85   | SYCP2       | 18.18177573 | 135  | SALL4       | 11.33185736 |
| 36   | VCY         | 54.58120618 | 86   | CCR2L       | 18.11669243 | 136  | KRTAP3-1     | 11.30667024 |

Table S1. The ratios of expression levels of each gene in ALDH-positive cell populations, PC9M2 cells / PC9 cells.
|   | Gene Symbol | Gene Product |   | Gene Symbol | Gene Product |   | Gene Symbol | Gene Product |
|---|-------------|--------------|---|-------------|--------------|---|-------------|--------------|
| 37 | OLFML3      |              | 87 | HBG1        |              | 137 | Inc-MGST2-1 |              |
| 38 | Inc-THADA-4 |              | 88 | GAS1        |              | 138 | SA4A        |              |
| 39 | Inc-BDKRB1-1|              | 89 | IL18R1      |              | 139 | RRA4D       |              |
| 40 | WNT6        | 17.06042632  | 90 | GJB2        | 17.10604263 | 140 | PNMA2       | 11.06934139 |
| 41 | HTR2C       | 17.10166616  | 91 | Inc-DNTTIP2-1| 17.10166616 | 141 | CCR2        | 11.03843619 |
| 42 | FAM27E2     | 16.60955665  | 92 | HCAR3       | 16.60955665 | 142 | RIMKLA      | 11.01735153 |
| 43 | PRSS1       | 16.47800262  | 93 | LRRTM4      | 16.47800262 | 143 | ADAM19      | 10.96631329 |
| 44 | CHN2        | 16.06863336  | 94 | LOC102725386| 16.06863336 | 144 | PCDH20      | 10.88532198 |
| 45 | GRIN2D      | 15.95558856  | 95 | BMP6        | 15.95558856 | 145 | PRSS3       | 10.78054618 |
| 46 | HOXC13      | 15.84215337  | 96 | NEK3        | 15.84215337 | 146 | NCR3LG1     | 10.73643418 |
| 47 | PDE3B       | 15.67816425  | 97 | KIAA0408    | 15.67816425 | 147 | FAM189A2    | 10.6717406 |
| 48 | XLOC_i2_000706 | 16.54273673 | 98 | ACKR2       | 16.54273673 | 148 | HAS2        | 10.1070133  |
| 49 | KCNMA1      |              | 99 | Inc-NTSR2-3 | 15.56031877 | 149 | SEL1L       | 10.58808311 |
| 50 | LOC728392   | 15.14285837  | 100| PCOLCE2     | 15.14285837 | 150 | Inc-BRD1-3 | 10.58808311 |

|   |            |              |   |            |              |   |            |              |
|---|------------|--------------|---|------------|--------------|---|------------|--------------|
| 187| GDF15      |              | 138| SAA4       |              | 188| HAS2-AS1   |              |
| 189| LOC102723471 | 11.21955623  | 189| RRA4D      | 11.1070133  | 190| TEX19      | 11.1070133  |
| 191| LOC101929705| 8.588192693  | 192| SLC16A14   | 8.560600816 | 193| AC SL6     | 8.57744434 |
| 194| KLHD6C7B   | 8.482311397  | 195| CCDC160    | 8.432956643 | 196| MID2       | 8.431502963 |
| 197| ZNF251     | 8.39889253  | 198| FFAR4      | 8.39889253  | 199| MB         | 8.39889253  |
| 200| UBL4B      | 8.230253762  |   |            |              |   |            |              |