

**Supplemental Table 5. Co-expressed genes of ABCC1 based on TCGA database of human LSCC.**

| Correlated Gene | Cytoband         | Spearman's Correlation | p-Value   | q-Value   |
|-----------------|------------------|------------------------|-----------|-----------|
| ADAM23          | 2q33. 3          | 0. 692278885           | 9. 98E-27 | 2. 01E-22 |
| GCLC            | 6p12. 1          | 0. 683199476           | 8. 14E-26 | 6. 07E-22 |
| CDK5RAP2        | 9q33. 2          | 0. 682731355           | 9. 05E-26 | 6. 07E-22 |
| MAP1B           | 5q13. 2          | 0. 674037082           | 6. 27E-25 | 2. 36E-21 |
| MAFG            | 17q25. 3         | 0. 673739187           | 6. 69E-25 | 2. 36E-21 |
| RBM19           | 12q24. 13-q24. 1 | 0. 673502999           | 7. 04E-25 | 2. 36E-21 |
| PTDSS1          | 8q22. 1          | 0. 671115584           | 1. 18E-24 | 3. 40E-21 |
| ADH7            | 4q23             | 0. 664863329           | 4. 50E-24 | 1. 13E-20 |
| MDGA1           | 6p21. 2          | 0. 663097957           | 6. 53E-24 | 1. 46E-20 |
| TSPAN7          | Xp11. 4          | 0. 661702107           | 8. 75E-24 | 1. 75E-20 |
| NTRK2           | 9q21. 33         | 0. 661285055           | 9. 54E-24 | 1. 75E-20 |
| WNT5A           | 3p14. 3          | 0. 65562718            | 3. 06E-23 | 5. 14E-20 |
| PGD             | 1p36. 22         | 0. 651450269           | 7. 13E-23 | 1. 10E-19 |
| DIP2B           | 12q13. 12        | 0. 650539562           | 8. 55E-23 | 1. 23E-19 |
| WASF1           | 6q21             | 0. 644790192           | 2. 67E-22 | 3. 58E-19 |
| SLC7A11         | 4q28. 3          | 0. 643562439           | 3. 39E-22 | 4. 27E-19 |
| GLI2            | 2q14. 2          | 0. 641868694           | 4. 71E-22 | 5. 58E-19 |
| PTGR1           | 9q31. 3          | 0. 639749385           | 7. 09E-22 | 7. 93E-19 |
| SIPA1L2         | 1q42. 2          | 0. 636644896           | 1. 28E-21 | 1. 36E-18 |
| CYP4F3          | 19p13. 12        | 0. 635446933           | 1. 61E-21 | 1. 62E-18 |
| SOST            | 17q21. 31        | 0. 631629791           | 3. 30E-21 | 3. 16E-18 |
| TXNRD1          | 12q23. 3         | 0. 628110208           | 6. 33E-21 | 5. 55E-18 |
| ALDH3A1         | 17p11. 2         | 0. 628105953           | 6. 34E-21 | 5. 55E-18 |
| G6PD            | Xq28             | 0. 624020538           | 1. 34E-20 | 1. 12E-17 |
| SCN9A           | 2q24. 3          | 0. 620220251           | 2. 65E-20 | 2. 14E-17 |
| SAMD12          | 8q24. 11-q24. 1  | 0. 619130807           | 3. 22E-20 | 2. 49E-17 |
| AKR1C1          | 10p15. 1         | 0. 618169032           | 3. 82E-20 | 2. 85E-17 |
| JAKMIP3         | 10q26. 3         | 0. 617720062           | 4. 14E-20 | 2. 98E-17 |
| LRP8            | 1p32. 3          | 0. 616092279           | 5. 52E-20 | 3. 83E-17 |
| CORO2A          | 9q22. 33         | 0. 613347391           | 8. 94E-20 | 5. 94E-17 |
| CYP4F11         | 19p13. 12        | 0. 613217594           | 9. 14E-20 | 5. 94E-17 |
| TRIM16L         | 17p11. 2         | 0. 611577045           | 1. 22E-19 | 7. 65E-17 |
| RNF168          | 3q29             | 0. 610766345           | 1. 40E-19 | 8. 54E-17 |
| FAM102A         | 9q34. 11         | 0. 609664134           | 1. 69E-19 | 1. 00E-16 |
| PRKX            | Xp22. 33         | 0. 602480613           | 5. 75E-19 | 3. 31E-16 |
| UGDH            | 4p14             | 0. 600746439           | 7. 69E-19 | 4. 30E-16 |
| TALDO1          | 11p15. 5         | 0. 596484415           | 1. 56E-18 | 8. 48E-16 |
| MRAP2           | 6q14. 2          | 0. 595704886           | 1. 77E-18 | 9. 39E-16 |
| UNKL            | 16p13. 3         | 0. 594554482           | 2. 14E-18 | 1. 10E-15 |
| UGT1A6          | 2q37. 1          | 0. 593862941           | 2. 40E-18 | 1. 21E-15 |
| UGT1A7          | 2q37. 1          | 0. 593028169           | 2. 74E-18 | 1. 35E-15 |
| GCLM            | 1p22. 1          | 0. 591347857           | 3. 60E-18 | 1. 73E-15 |
| SLC47A1         | 17p11. 2         | 0. 589681774           | 4. 71E-18 | 2. 21E-15 |
| GPAT3           | 4q21. 23         | 0. 588428488           | 5. 76E-18 | 2. 64E-15 |
| AKR1C2          | 10p15. 1         | 0. 588185916           | 5. 99E-18 | 2. 68E-15 |
| MEGF9           | 9q33. 2          | 0. 587939089           | 6. 23E-18 | 2. 73E-15 |
| FOXE1           | 9q22. 33         | 0. 586597683           | 7. 72E-18 | 3. 31E-15 |
| GSTM4           | 1p13. 3          | 0. 586451743           | 7. 90E-18 | 3. 31E-15 |
| RFFL            | 17q12            | 0. 5857219             | 8. 87E-18 | 3. 60E-15 |
| UGT1A9          | 2q37. 1          | 0. 585669045           | 8. 95E-18 | 3. 60E-15 |

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|------------|-----------|---------------|-----------|-----------|
| SDK1       | 7p22. 2   | 0. 584181358  | 1. 13E-17 | 4. 47E-15 |
| GSR        | 8p12      | 0. 583483433  | 1. 26E-17 | 4. 87E-15 |
| RIT1       | 1q22      | 0. 583396193  | 1. 28E-17 | 4. 87E-15 |
| ARHGEF26   | 3q25. 2   | 0. 582276959  | 1. 53E-17 | 5. 69E-15 |
| AKR1B10    | 7q33      | 0. 581857779  | 1. 63E-17 | 5. 97E-15 |
| ARHGEF35   | 7q35      | 0. 581459876  | 1. 74E-17 | 6. 18E-15 |
| ABCC5      | 3q27. 1   | 0. 581413064  | 1. 75E-17 | 6. 18E-15 |
| DNAJB3     | 2q37. 1   | 0. 581263004  | 1. 79E-17 | 6. 21E-15 |
| DIAPH2     | Xq21. 33  | 0. 581032184  | 1. 86E-17 | 6. 33E-15 |
| TP63       | 3q28      | 0. 579908695  | 2. 21E-17 | 7. 42E-15 |
| CABYR      | 18q11. 2  | 0. 578961815  | 2. 56E-17 | 8. 32E-15 |
| TTC22      | 1p32. 3   | 0. 57895756   | 2. 56E-17 | 8. 32E-15 |
| STRBP      | 9q33. 3   | 0. 577710657  | 3. 11E-17 | 9. 93E-15 |
| RNF217     | 6q22. 31  | 0. 576267995  | 3. 88E-17 | 1. 22E-14 |
| PSMD11     | 17q11. 2  | 0. 572940084  | 6. 45E-17 | 2. 00E-14 |
| SLC2A12    | 6q23. 2   | 0. 572682618  | 6. 70E-17 | 2. 04E-14 |
| CZIB       | 1p32. 3   | -0. 571959159 | 7. 48E-17 | 2. 25E-14 |
| ZNF746     | 7q36. 1   | 0. 569720692  | 1. 05E-16 | 3. 10E-14 |
| ME1        | 6q14. 2   | 0. 569512165  | 1. 08E-16 | 3. 16E-14 |
| ATP2B1     | 12q21. 33 | 0. 567556698  | 1. 45E-16 | 4. 17E-14 |
| CCSER1     | 4q22. 1   | 0. 565738777  | 1. 90E-16 | 5. 38E-14 |
| CES1P1     | 16q12. 2  | 0. 565126542  | 2. 08E-16 | 5. 81E-14 |
| F2RL2      | 5q13. 3   | 0. 562096712  | 3. 24E-16 | 8. 84E-14 |
| GPX2       | 14q23. 3  | 0. 562060539  | 3. 26E-16 | 8. 84E-14 |
| SLC47A2    | 17p11. 2  | 0. 561995939  | 3. 29E-16 | 8. 84E-14 |
| RNF217-AS1 | 6q22. 31  | 0. 561610803  | 3. 48E-16 | 9. 23E-14 |
| ALDH3A2    | 17p11. 2  | 0. 559962508  | 4. 43E-16 | 1. 16E-13 |
| KIAA0319   | 6p22. 3   | 0. 559521283  | 4. 72E-16 | 1. 22E-13 |
| OSGIN1     | 16q23. 3  | 0. 558673049  | 5. 34E-16 | 1. 36E-13 |
| BICD2      | 9q22. 31  | 0. 558311319  | 5. 63E-16 | 1. 42E-13 |
| UGT1A3     | 2q37. 1   | 0. 558166405  | 5. 75E-16 | 1. 42E-13 |
| ADCY10     | 1q24. 2   | 0. 558136295  | 5. 77E-16 | 1. 42E-13 |
| UROD       | 1p34. 1   | -0. 556277123 | 7. 54E-16 | 1. 83E-13 |
| CES1       | 16q12. 2  | 0. 55461104   | 9. 57E-16 | 2. 29E-13 |
| UBE2H      | 7q32. 2   | 0. 553802468  | 1. 07E-15 | 2. 54E-13 |
| SRXN1      | 20p13     | 0. 553655648  | 1. 10E-15 | 2. 57E-13 |
| SELENOI    | 2p23. 3   | 0. 553489678  | 1. 12E-15 | 2. 60E-13 |
| GAB1       | 4q31. 21  | 0. 552840693  | 1. 23E-15 | 2. 82E-13 |
| YWHAG      | 7q11. 23  | 0. 551302279  | 1. 53E-15 | 3. 46E-13 |
| C10RF50    | 1p34. 2   | -0. 550319226 | 1. 76E-15 | 3. 93E-13 |
| HRG        | 3q27. 3   | 0. 549542121  | 1. 96E-15 | 4. 34E-13 |
| SLC03A1    | 15q26. 1  | 0. 548795707  | 2. 18E-15 | 4. 77E-13 |
| PANX2      | 22q13. 33 | 0. 547793504  | 2. 51E-15 | 5. 40E-13 |
| STARD7     | 2q11. 2   | 0. 547748819  | 2. 52E-15 | 5. 40E-13 |
| NDRG4      | 16q21     | 0. 547623278  | 2. 57E-15 | 5. 44E-13 |
| TRIM16     | 17p12     | 0. 547282827  | 2. 69E-15 | 5. 64E-13 |
| UBXN7      | 3q29      | 0. 547174308  | 2. 73E-15 | 5. 67E-13 |
| DMRT2      | 9p24. 3   | 0. 546185162  | 3. 13E-15 | 6. 44E-13 |
| UGT1A1     | 2q37. 1   | 0. 545965183  | 3. 23E-15 | 6. 57E-13 |
| SLC9A3R1   | 17q25. 1  | 0. 544723059  | 3. 84E-15 | 7. 72E-13 |
| RAD23B     | 9q31. 2   | 0. 542378201  | 5. 30E-15 | 1. 06E-12 |
| EIF4G1     | 3q27. 1   | 0. 541503667  | 5. 97E-15 | 1. 18E-12 |
| BLMH       | 17q11. 2  | 0. 541352592  | 6. 09E-15 | 1. 19E-12 |
| KIF13A     | 6p22. 3   | 0. 540665306  | 6. 69E-15 | 1. 30E-12 |

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|----------|-----------------|---------------|-----------|-----------|
| AKR1C3   | 10p15. 1        | 0. 540154629  | 7. 17E-15 | 1. 37E-12 |
| HENMT1   | 1p13. 3         | -0. 540107817 | 7. 22E-15 | 1. 37E-12 |
| ADAM17   | 2p25. 1         | 0. 539639696  | 7. 69E-15 | 1. 45E-12 |
| ODF2L    | 1p22. 3         | -0. 538973688 | 8. 42E-15 | 1. 57E-12 |
| HK1      | 10q22. 1        | 0. 538509824  | 8. 97E-15 | 1. 66E-12 |
| PTPRD    | 9p24. 1-p23     | 0. 537973613  | 9. 64E-15 | 1. 77E-12 |
| DCC      | 18q21. 2        | 0. 536800512  | 1. 13E-14 | 2. 05E-12 |
| NFE2L2   | 2q31. 2         | 0. 535554281  | 1. 34E-14 | 2. 40E-12 |
| MGMT     | 10q26. 3        | -0. 53478401  | 1. 48E-14 | 2. 64E-12 |
| TTBK2    | 15q15. 2        | 0. 533941393  | 1. 66E-14 | 2. 93E-12 |
| GAPVD1   | 9q33. 3         | 0. 533760529  | 1. 70E-14 | 2. 97E-12 |
| TMEM51   | 1p36. 21        | -0. 532394468 | 2. 03E-14 | 3. 53E-12 |
| SOX2     | 3q26. 33        | 0. 5314944    | 2. 29E-14 | 3. 93E-12 |
| TMEM116  | 12q24. 12-q24.  | 0. 531458227  | 2. 30E-14 | 3. 93E-12 |
| ZNF684   | 1p34. 2         | -0. 530696467 | 2. 55E-14 | 4. 31E-12 |
| ZNF280C  | Xq26. 1         | 0. 529819806  | 2. 86E-14 | 4. 80E-12 |
| TBL1X    | Xp22. 31-p22. 2 | 0. 529755971  | 2. 88E-14 | 4. 80E-12 |
| DVL3     | 3q27. 1         | 0. 529162309  | 3. 12E-14 | 5. 12E-12 |
| MSI2     | 17q22           | 0. 529134647  | 3. 13E-14 | 5. 12E-12 |
| ABHD4    | 14q11. 2        | 0. 529068685  | 3. 15E-14 | 5. 12E-12 |
| F11R     | 1q23. 3         | 0. 528902715  | 3. 22E-14 | 5. 19E-12 |
| OLFM1    | 9q34. 3         | 0. 52853673   | 3. 38E-14 | 5. 40E-12 |
| KLHL35   | 11q13. 4        | -0. 528364376 | 3. 46E-14 | 5. 48E-12 |
| NSRP1    | 17q11. 2        | 0. 526855752  | 4. 21E-14 | 6. 62E-12 |
| FREM2    | 13q13. 3        | 0. 526753616  | 4. 27E-14 | 6. 66E-12 |
| SMO      | 7q32. 1         | 0. 526636586  | 4. 33E-14 | 6. 71E-12 |
| GSTM2    | 1p13. 3         | 0. 526423804  | 4. 45E-14 | 6. 80E-12 |
| MFHAS1   | 8p23. 1         | 0. 526421677  | 4. 46E-14 | 6. 80E-12 |
| NHSL1    | 6q24. 1         | 0. 524555578  | 5. 67E-14 | 8. 59E-12 |
| RRM1     | 11p15. 4        | 0. 52413427   | 5. 99E-14 | 9. 00E-12 |
| ADCY8    | 8q24. 22        | 0. 522600056  | 7. 30E-14 | 1. 09E-11 |
| QPCT     | 2p22. 2         | -0. 522219231 | 7. 67E-14 | 1. 13E-11 |
| PCYT1A   | 3q29            | 0. 522214976  | 7. 67E-14 | 1. 13E-11 |
| UGT1A4   | 2q37. 1         | 0. 521988565  | 7. 90E-14 | 1. 15E-11 |
| MTMR1    | Xq28            | 0. 521770261  | 8. 12E-14 | 1. 18E-11 |
| PCYT1B   | Xp22. 11        | 0. 52051272   | 9. 53E-14 | 1. 37E-11 |
| MT1G     | 16q13           | -0. 520359517 | 9. 72E-14 | 1. 39E-11 |
| ZFAND2B  | 2q35            | -0. 520157374 | 9. 98E-14 | 1. 41E-11 |
| NAV1     | 1q32. 1         | 0. 520155246  | 9. 98E-14 | 1. 41E-11 |
| PTCH1    | 9q22. 32        | 0. 519131764  | 1. 14E-13 | 1. 59E-11 |
| PSMD2    | 3q27. 1         | 0. 518727478  | 1. 20E-13 | 1. 66E-11 |
| YEATS2   | 3q27. 1         | 0. 518561508  | 1. 22E-13 | 1. 69E-11 |
| COLGALT2 | 1q25. 3         | 0. 517363546  | 1. 42E-13 | 1. 95E-11 |
| TXN      | 9q31. 3         | 0. 517106079  | 1. 47E-13 | 2. 00E-11 |
| CCL28    | 5p12            | -0. 516806057 | 1. 53E-13 | 2. 06E-11 |
| TUFT1    | 1q21. 3         | 0. 516414538  | 1. 60E-13 | 2. 15E-11 |
| GPR107   | 9q34. 11        | 0. 515588943  | 1. 78E-13 | 2. 37E-11 |
| HRNR     | 1q21. 3         | 0. 515360235  | 1. 83E-13 | 2. 42E-11 |
| RAD54L2  | 3p21. 2         | 0. 515267643  | 1. 85E-13 | 2. 44E-11 |
| DIRAS2   | 9q22. 2         | 0. 512432053  | 2. 64E-13 | 3. 45E-11 |
| MMACHC   | 1p34. 1         | -0. 511941859 | 2. 80E-13 | 3. 64E-11 |
| LRRC4    | 7q32. 1         | 0. 511701416  | 2. 89E-13 | 3. 72E-11 |
| ATP2A2   | 12q24. 11       | 0. 511639709  | 2. 91E-13 | 3. 73E-11 |
| FXR1     | 3q26. 33        | 0. 511060942  | 3. 12E-13 | 3. 98E-11 |

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|-----------|--------------|--------------|----------|----------|
| CLDN20    | 6q25.3       | 0.510797145  | 3.23E-13 | 4.09E-11 |
| SLC20A2   | 8p11.21      | 0.51051622   | 3.34E-13 | 4.19E-11 |
| ABCB6     | 2q35         | 0.510465152  | 3.36E-13 | 4.19E-11 |
| GCNT2     | 6p24.3-p24.2 | 0.510435363  | 3.37E-13 | 4.19E-11 |
| CYP26A1   | 10q23.33     | 0.510306651  | 3.43E-13 | 4.24E-11 |
| ABCC3     | 17q21.33     | 0.509571468  | 3.75E-13 | 4.61E-11 |
| FNDC8     | 17q12        | 0.50947146   | 3.80E-13 | 4.64E-11 |
| TMTC1     | 12p11.22     | 0.507786226  | 4.67E-13 | 5.67E-11 |
| PYCR2     | 1q42.12      | 0.507303211  | 4.96E-13 | 5.96E-11 |
| KIAA1549L | 11p13        | 0.507271294  | 4.98E-13 | 5.96E-11 |
| KAT7      | 17q21.33     | 0.506556346  | 5.43E-13 | 6.47E-11 |
| LRRC8D    | 1p22.2       | 0.506283985  | 5.61E-13 | 6.65E-11 |
| EPS8      | 12p12.3      | 0.505875444  | 5.90E-13 | 6.95E-11 |
| KIAA1671  | 22q11.23     | 0.505456263  | 6.21E-13 | 7.27E-11 |
| CORO1C    | 12q24.11     | 0.504430654  | 7.03E-13 | 8.18E-11 |
| EGF       | 4q25         | 0.503919977  | 7.48E-13 | 8.65E-11 |
| ACTR1A    | 10q24.32     | -0.503830608 | 7.56E-13 | 8.69E-11 |
| ACSF2     | 17q21.33     | -0.503156089 | 8.20E-13 | 9.38E-11 |
| PKP1      | 1q32.1       | 0.502115585  | 9.29E-13 | 1.06E-10 |
| TNK2      | 3q29         | 0.501785773  | 9.66E-13 | 1.09E-10 |
| BTBD11    | 12q23.3      | 0.501585758  | 9.90E-13 | 1.11E-10 |
| SPATA7    | 14q31.3      | -0.50101763  | 1.06E-12 | 1.19E-10 |
| FLYWCH1   | 16p13.3      | 0.500647389  | 1.11E-12 | 1.23E-10 |
| TMEM158   | 3p21.31      | 0.50030481   | 1.15E-12 | 1.28E-10 |
| FAM120A   | 9q22.31      | 0.500164374  | 1.17E-12 | 1.29E-10 |