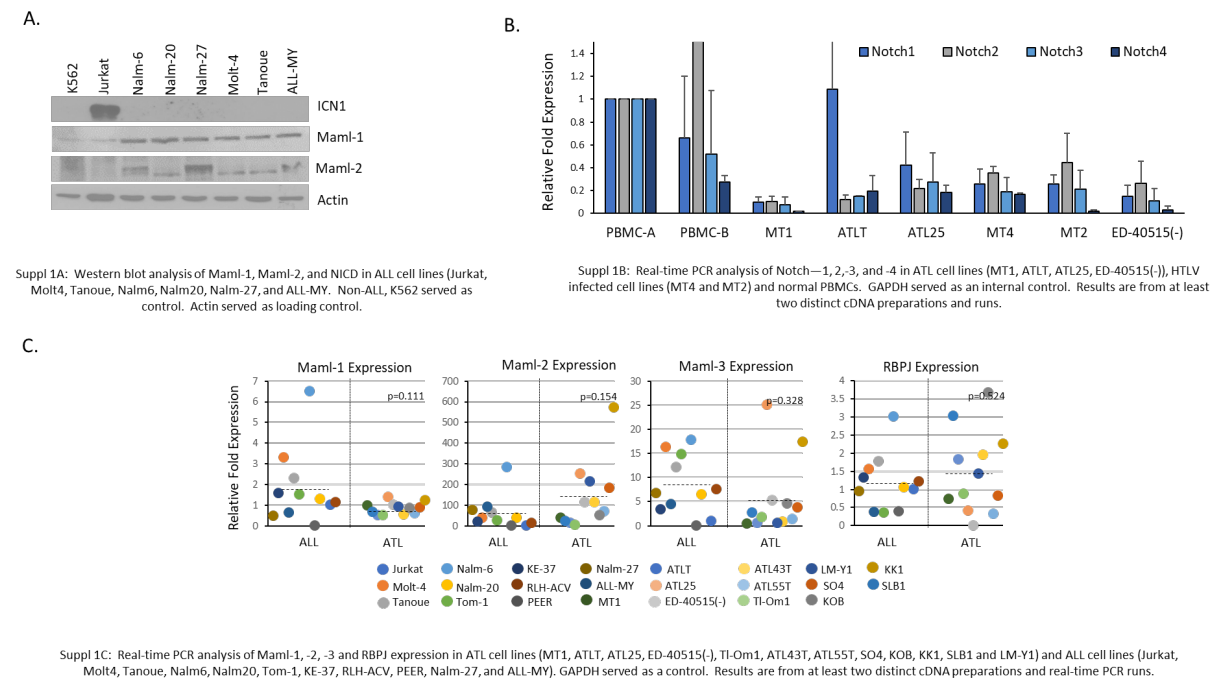


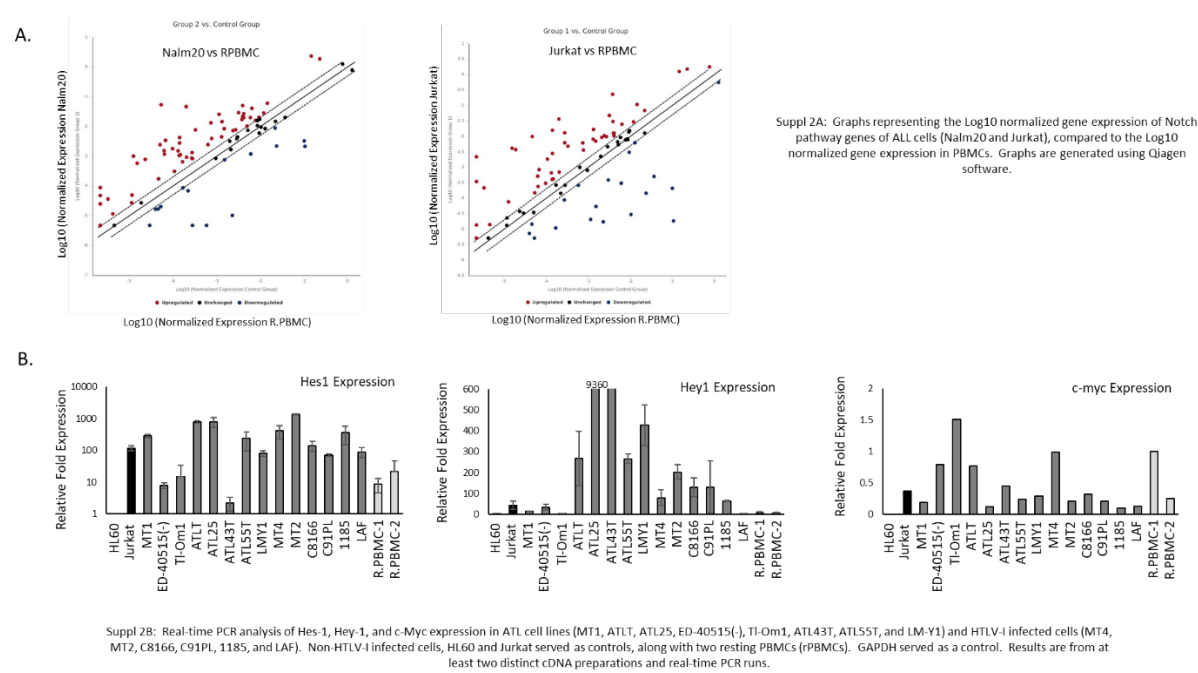
Supplemental Material

- Suppl S1: Notch and Maml expression in ATL and ALL cell lines.
- Suppl S2: ALL Notch Gene Array expression and Hes-1, Hey-1, and c-Myc expression in ATL cells.
- Suppl S3: ClusterGram Analysis and Gene Values for Notch Signaling Pathway Plus Array.
- Suppl S4: Primers
- Supple S5: Gene Values and Statistical Analysis.

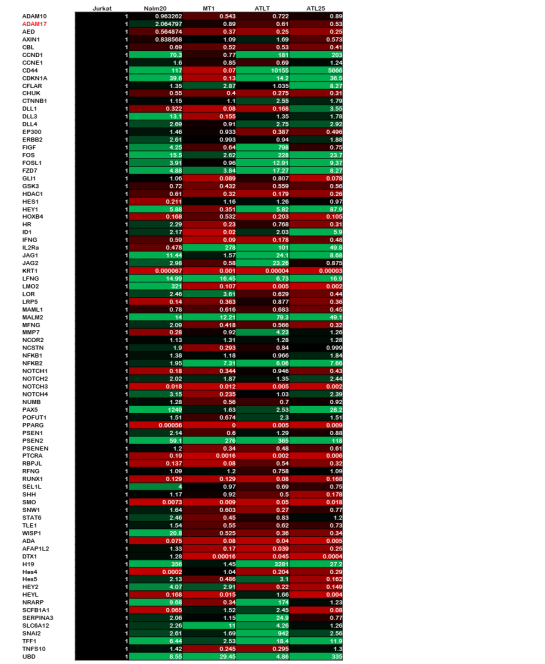
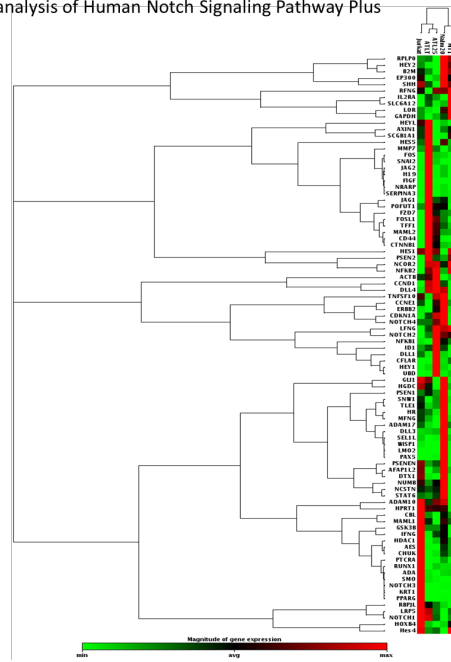
Supplemental 1: Notch and Maml expression in ATL and ALL cell lines.



Supplemental 2: ALL Notch Gene Array expression and Hes-1, Hey-1, and c-Myc expression in ATL cells.



## Supplemental 3: ClusterGram analysis of Human Notch Signaling Pathway Plus



## Supplemental 4: Primers

|               | Forward                    | Reverse                    |
|---------------|----------------------------|----------------------------|
| Notch-1       | GCTGGCTGCAGGTTCTGCT        | CCAGATGATGAGCTACCAGG       |
| Notch-2       | TTTGGCAACTAAGCTAGAAACTCAAC | TGCCAAGAGCATGAATACAGAGA    |
| Notch-3       | GTTTCCCAAGTGAGCACCTTAC     | GTGGATTGCGACCACCTGTGAGAG   |
| Notch-4       | CCAGGAATCTGAGATGGAA        | CCACAGCAACTGCTGACAT        |
| LFNG          | TCGCTGTCAAGACCACCAA        | CCTCATCTTCCCGTCAGTG        |
| RFNG          | CTTCACTCTCACTGGGAACCTG     | GTCTTGATGAGGCTGAAGCCTCCAG  |
| MFNG          | CACCTGGAGACCTGCAAGCTGCTGAG | GAGCAGACAATGGAGGGAGCGAAATC |
| DTX1          | CTACGATATGACATCTGCATCAC    | GTTCATCTGCGACATGCTGTTG     |
| Hes-1         | CTGGAATGCAGTGAAGCACCT      | ATTGATCTGGGTCAATGCAAGTTG   |
| Hey-1         | CCGAGATCTGCAGATGACC        | CCCGAAATCCAAACTCCGA        |
| JAG-1         | ATCTGTGCTGCCCTTCAGTTT      | GATCATGCCGAGTGAGAA         |
| c-Myc         | CGTCTCCACACATCAGCACAA      | TCTTGGCAGCAGGATATGCTT      |
| HeyL          | CGCAGAGGGATCATAGAGAAACG    | GCCAGGGCTCGGGCATCAAGAAGAA  |
| Hey-2         | GAGTTGAGAAGACTTGTGCCAAC    | GAGCGTGTGCGTCAAAGTAG       |
| ID1           | AAACGTGCTGCTCTACGACA       | TCAGCGACACAAGATGCG         |
| IL2R $\alpha$ | CAGTGGCGTCAGGGATACAG       | CTCTTCACTCGGAAACTGACTG     |
| Maml-1        | CACCTCCATGTCAGATGACTTGCAC  | GGGTCTCACCTGTGCTTACCA      |
| Maml-2        | GAGAATCTCTCTGAGGACAAG      | CAGAGTCTCTCTGGCTCCTCT      |
| Maml-3        | AAGCCCGAGGACCGAGGCAA       | GAGCCTTGGAGGGGCTTGG        |
| RBPI-k        | GCTGACTATGCATTCTCCAGGA     | CCACTGCTGTGAACCTGGCATGAAA  |
| CHUK          | CATAGTTCTTCAGGATGTTGGTG    | GTGGCTGTGTAAAGGCTATTCTC    |
| PTCRA         | CTAGTGGTTCAGCGCGGCATG      | GATGCGACGCTCTCAGAAGGCAG    |
| NFKB2         | GATCGAGGTGGACCTGTTAAAC     | GTACATGACGAGGACACCCAG      |
| GIMAP5        | CAAGAGCTGTCAAGAACATCG      | GACCTTTTCACTTCTCTGATG      |
| ERBB2         | CCTCTGAGCTCCATCATCTC       | ATCTTCTGCTGCCGTGCTT        |
| TFF1          | GAGAAACAAGTGATCTGCGC       | TGGTATTAGGATAGAAGCACC      |
| SNAI2         | TAGGAAGAGATCTGCCAGAC       | CCCCAAGGCACATCTGTTA        |
| miR-675       | CCGAGGCTTGTGTGCGGAGA       | CAGGGGCTGAGCGGTGAGGG       |
| GAPDH         | GTCGGAGTACAGGATTGTTGTCG    | GGAAATGCTAAACCATGTAGTTGAGG |

|      | Forward              | Reverse             | Probe                          |
|------|----------------------|---------------------|--------------------------------|
| H19  | TGGTGGAGTGTGGAGACG   | CAGTGTCCAAAGTGGCTCA | CCTTGAGTCTCAGTACGAGTGTGCGTGAGT |
| Hes4 | CAAGCCGGCTCATGGAGAAG | TGGCGGGAGCTCTCTTT   | CGAGCGCGTATTAACGAGAGCCCT       |
| Hes5 | GACTACACGCAAGGCTACTC | CCGCTGCAAGTGGTCTT   | CCAGCGACACGCAAGTGAAGCT         |

# Supplemental S5

|         | GSI<br>(Average Fold Change to DMSO)       | Standard Deviation                           | p-value   | Significance<br>p>0.05 *<br>p>0.01 **<br>p>0.001 *** |
|---------|--|--|-----------|--|
| Jurkat  |  |  |           |  |
| Hes1    | 0.0255                                     | 0.0015                                       | 2.37E-06  | ***  |
| Hes4    | 0.1285                                     | 0.0120208                                    | 9.511E-05 | ***  |
| Hes5    | 0.32305                                    | 0.275135                                     | 0.073593  | ***  |
| Hey1    | 0.234                                      | 0.036  | 0.002     | **   |
| Hey2    | 0.39                                       | 0.05   | 0.007     | **   |
| HeyL    | 0.53                                       | 0.07   | 0.011129  | *  |
| ID1     | 0.135                                      | 0.009  | 0.0001    |  |
| Cmyc    | 0.63                                       | 0.09   | 0.00073   | ***  |
| IL2Ra   | 0.985                                      | 0.145  | 0.634364  |  |
| DTX1    | 0.123                                      | 0.003  | 0.192987  |  |
| PTCRA   | 0.275                                      | 0.025  | 0.034419  | *  |
| NFKB2   | 1.12                                       | 0.08   | 0.512565  |  |
| GIMAP5  | 0.22                                       | 0.04   | 0.0026    | **   |
| LFNG    | 0.795                                      | 0.045  | 0.045     | *  |
| ERRB2   | 1.005                                      | 0.0495                                       | 0.052046  |  |
| TFF1    | 0.92                                       | 0.0283                                       | 0.057191  |  |
| SNAI2   | 1.1  | 0.905  | 0.694005  |  |
| JAG1    | 0.264                                      | 0.186  | 0.0109    | *  |
| Notch1  | 0.7055                                     | 0.742  | 0.630989  |  |
| MT1     |  |  |           |  |
| Hes1    | 0.127                                      | 0.057  | 0.004     | **   |
| Hes4    | 0.554                                      | 0.145664                                     | 0.0494143 | *  |
| Hes5    | 0.82775                                    | 0.064842                                     | 0.064114  |  |
| Hey1    | 0.675                                      | 0.015  | 0.0021    | **   |
| Hey2    | 0.1455                                     | 0.0045                                       | 2.77E10-5 | ***  |
| HeyL    | 0.6  | 0.099  | 0.003403  | **   |
| ID1     | 1.03                                       | 0.183848                                     | 0.689747  |  |
| Cmyc    | 0.455                                      | 0.025  | 0.00073   | ***  |
| IL2Ra   | 1.29                                       | 0.06   | 0.634364  |  |
| DTX1    | 0.185                                      | 0.075  | 0.192987  |  |
| PTCRA   | 0.705                                      | 0.155  | 0.034419  | *  |
| NFKB2   | 1.14                                       | 0.12   | 0.512565  |  |
| GIMAP5  | 1.515                                      | 0.085  | 0.026     | *  |
| LFNG    | 0.94                                       | 0.03   | 0.184     |  |
| ERRB2   | 1.09                                       | 0.167  | 0.052046  |  |
| TFF1    | 0.82                                       | 0.1556                                       | 0.476707  |  |
| SNAI2   | 1.27                                       | 0.556  | 0.694005  |  |
| JAG1    | 0.659                                      | 0.46   | 0.0109    | *  |
| Notch1  | 0.929                                      | 0.286  | 0.296474  |  |
| ATL25   |  |  |           |  |
| Hes1    | 0.58                                       | 0.1058301                                    | 0.0023465 | **   |
| Hes4    | 0.534                                      | 0.1909188                                    | 0.0746497 |  |
| Hes5    | 0.36425                                    | 0.32633                                      | 0.110355  |  |
| Hey1    | 0.672667                                   | 0.1954                                       | 0.044051  | *  |
| Hey2    | 0.72                                       | 0.08556                                      | 0.03015   | *  |
| HeyL    | 4.505                                      | 0.289914                                     | 0.003403  | **   |
| ID1     | 1.06                                       | 0.183848                                     | 0.689747  |  |
| Cmyc    | 0.63                                       | 0.014142                                     | 0.00073   | ***  |
| IL2Ra   | 1.075                                      | 0.1901919                                    | 0.634364  |  |
| DTX1    | 0.8135                                     | 0.136472                                     | 0.192987  |  |
| PTCRA   | 0.79                                       | 0.056569                                     | 0.034419  | *  |
| NFKB2   | 1.075                                      | 0.13435                                      | 0.512565  |  |
| GIMAP5  | 0.735                                      | 0.049497                                     | 0.017     | *  |
| LFNG    | 1.335                                      | 0.120208                                     | 0.058762  |  |
| ERRB2   | 1.035                                      | 0.021213                                     | 0.052046  |  |
| TFF1    | 1.031                                      | 0.083439                                     | 0.651729  |  |
| SNAI2   | 1.025                                      | 0.077782                                     | 0.694005  |  |
| JAG1    | 0.81                                       | 0.028284                                     | 0.0109    | *  |
| Notch1  | 0.965                                      | 0.035355                                     | 0.296474  |  |
|         | PBMC<br>(Average Fold Change:<br>n=#PBMCs) | Primary ATL (Average Fold<br>Change: n=#ATL) | p-value   | Significance<br>p>0.05 *<br>p>0.01 **<br>p>0.001 *** |
| Notch-1 | 0.365157 (n=17)                            | 0.523129 (n=23)                              | 0.107186  |  |
| Notch-2 | 1.498373 (n=17)                            | 0.854622 (n=23)                              | 0.025352  | *  |
| Notch-3 | 0.482175 (n=17)                            | 0.413342 (n=23)                              | 0.595599  |  |
| Notch-4 | 0.363592 (n=17)                            | 0.217121 (n=23)                              | 0.304353  |  |
| LFNG    | 14.456 (n=18)                              | 31.80118 (n=28)                              | 0.00291   | **   |
| RFNG    | 1.914868 (n=18)                            | 2.52651 (n=28)                               | 0.038985  | *  |
| MFNG    | 1.477355 (n=18)                            | 1.950028 (n=28)                              | 0.102667  |  |
| DTX1    | 1.583477 (n=20)                            | 7.755291 (n=22)                              | 0.005918  | **   |
| PSEN1   | 3.671533 (n=18)                            | 4.991018 (n=28)                              | 0.154448  |  |
| PSEN2   | 1.478934 (n=18)                            | 2.668966 (n=28)                              | 0.05849   |  |
| Maml1   | 0.31800305 (n=20)                          | 0.292432 (n=21)                              | 0.767733  |  |
| Maml2   | 0.314237 (n=20)                            | 0.383452 (n=21)                              | 0.475818  |  |
| Maml3   | 0.491254 (n=20)                            | 0.377991 (n=21)                              | 0.191731  |  |
| RBPI-K  | 1.356693 (n=18)                            | 2.760729 (n=28)                              | 0.016346  | *  |
| Hes-1   | 0.447342 (n=16)                            | 0.161971 (n=28)                              | 0.032     |  |
| Hes-4   | 1.231733 (n=18)                            | 7.256128 (n=28)                              | 0.140751  |  |
| Hes-5   | 0.46703 (n=18)                             | 0.368926 (n=29)                              | 0.501148  |  |
| Hey-1   | 6.481062 (n=16)                            | 6.687755 (n=28)                              | 0.899     |  |
| Hey-2   | 0.98041 (n=16)                             | 1.08688936 (n=28)                            | 0.855     |  |
| Hey-L   | 3.571415 (n=18)                            | 8.363886 (n=28)                              | 0.184641  |  |
| c-Myc   | 2.045568 (n=16)                            | 4.295062 (n=28)                              | 0.005     | **   |
| ID1     | 0.4861 (n=16)                              | 0.099377 (n=28)                              | 0.077     |  |
| miR-675 | 2.761015 (n=18)                            | 6.121786 (n=29)                              | 0.014947  | *  |
| H19     | 1.675244602 (n=17)                         | 31.35084 (n=51)                              | 0.007     | **   |