

# TSS GROUP A (UPSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern | ORI        | % TAR | % BCG | Prob TARGE | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value  |
|--------------|------------|-------|-------|------------|------------|-------|-------|---------|---------|----------|
| =====        | =====      | ===== | ===== | =====      | =====      | ===== | ===== | =====   | =====   | =====    |
| -1 KROX      | 4014.7197+ | 15.71 | 0.26  | 1.92E-03   | 2.90E-05   | 5379  | 106   | 34245   | 41000   | 0.00E+00 |
| +1 KROX      | 2307.6721+ | 11.84 | 0.25  | 1.42E-03   | 2.88E-05   | 4056  | 104   | 34245   | 41000   | 0.00E+00 |
| -1 Hairy     | 1020.6855+ | 12.12 | 0.39  | 1.35E-03   | 4.10E-05   | 4151  | 160   | 34245   | 41000   | 0.00E+00 |
| +1 E2F       | 365.8805+  | 51.48 | 3.24  | 1.01E-02   | 4.38E-04   | 17631 | 1330  | 34245   | 41000   | 0.00E+00 |
| +1 Churchill | 315.6059+  | 56.11 | 4.07  | 1.03E-02   | 4.49E-04   | 19216 | 1670  | 34245   | 41000   | 0.00E+00 |
| +1 ETF       | 260.6690+  | 40.27 | 2.91  | 7.39E-03   | 3.92E-04   | 13790 | 1194  | 34245   | 41000   | 0.00E+00 |
| -1 Churchill | 228.2272+  | 50.43 | 4.17  | 8.74E-03   | 4.63E-04   | 17271 | 1708  | 34245   | 41000   | 0.00E+00 |
| -1 E2F       | 222.2317+  | 42.97 | 3.33  | 7.76E-03   | 4.50E-04   | 14714 | 1367  | 34245   | 41000   | 0.00E+00 |
| +1 ZF5       | 212.8799+  | 74.38 | 8.04  | 2.45E-02   | 1.06E-03   | 25471 | 3298  | 34245   | 41000   | 0.00E+00 |
| +1 MAZR      | 194.6093+  | 10.84 | 0.64  | 1.51E-03   | 1.32E-04   | 3711  | 262   | 34245   | 41000   | 0.00E+00 |
| -1 ETF       | 173.3759+  | 32.51 | 2.82  | 5.63E-03   | 3.74E-04   | 11133 | 1157  | 34245   | 41000   | 0.00E+00 |
| -1 ZF5       | 171.0610+  | 71.11 | 8.3   | 2.19E-02   | 1.10E-03   | 24351 | 3403  | 34245   | 41000   | 0.00E+00 |
| +1 GC box    | 149.7130+  | 49.75 | 4.58  | 9.93E-03   | 7.20E-04   | 17037 | 1879  | 34245   | 41000   | 0.00E+00 |
| +1 EGR       | 133.9548+  | 22.21 | 1.9   | 2.94E-03   | 2.56E-04   | 7607  | 779   | 34245   | 41000   | 0.00E+00 |
| -1 CREB      | 133.2002+  | 16.73 | 1.81  | 4.33E-03   | 3.00E-04   | 5728  | 743   | 34245   | 41000   | 0.00E+00 |
| +1 Sp-1      | 128.6165+  | 65.01 | 6.5   | 2.03E-02   | 1.58E-03   | 22264 | 2663  | 34245   | 41000   | 0.00E+00 |
| +1 AHRHIF    | 126.9181+  | 11.32 | 1.03  | 1.29E-03   | 1.12E-04   | 3877  | 422   | 34245   | 41000   | 0.00E+00 |
| +1 CREB      | 118.7973+  | 16.3  | 1.9   | 4.31E-03   | 3.10E-04   | 5583  | 781   | 34245   | 41000   | 0.00E+00 |
| -1 Sp-1      | 113.8594+  | 63.84 | 6.49  | 1.85E-02   | 1.60E-03   | 21861 | 2659  | 34245   | 41000   | 0.00E+00 |
| -1 GC box    | 86.4010+   | 40.44 | 4.85  | 7.81E-03   | 7.53E-04   | 13847 | 1989  | 34245   | 41000   | 0.00E+00 |
| +1 MAZ       | 83.6542+   | 22    | 2.46  | 3.07E-03   | 3.29E-04   | 7533  | 1008  | 34245   | 41000   | 0.00E+00 |
| -1 AP-2alpha | 83.6344+   | 45.73 | 5.8   | 6.67E-03   | 6.28E-04   | 15661 | 2380  | 34245   | 41000   | 0.00E+00 |
| +1 AP-2alpha | 76.7122+   | 44.32 | 5.81  | 6.24E-03   | 6.21E-04   | 15179 | 2381  | 34245   | 41000   | 0.00E+00 |
| +1 E2F-1     | 75.7355+   | 70.85 | 10.93 | 1.59E-02   | 1.36E-03   | 24261 | 4483  | 34245   | 41000   | 0.00E+00 |
| -1 MAZ       | 71.8710+   | 18.83 | 2.3   | 2.75E-03   | 3.14E-04   | 6450  | 941   | 34245   | 41000   | 0.00E+00 |
| -1 E2F-1     | 63.3131+   | 66.78 | 10.91 | 1.40E-02   | 1.36E-03   | 22870 | 4474  | 34245   | 41000   | 0.00E+00 |
| +1 Sp1       | 61.8822+   | 62.74 | 11.46 | 2.08E-02   | 1.84E-03   | 21486 | 4697  | 34245   | 41000   | 0.00E+00 |
| -1 EGR       | 61.0325+   | 16.47 | 2.17  | 2.26E-03   | 2.82E-04   | 5639  | 889   | 34245   | 41000   | 0.00E+00 |
| +1 Elk-1     | 55.5817+   | 19.89 | 3     | 2.91E-03   | 3.47E-04   | 6810  | 1230  | 34245   | 41000   | 0.00E+00 |
| -1 PCF2      | 54.0154+   | 16.1  | 2.31  | 1.83E-03   | 2.36E-04   | 5514  | 949   | 34245   | 41000   | 0.00E+00 |

|                     |          |       |       |          |          |       |       |       |       |           |
|---------------------|----------|-------|-------|----------|----------|-------|-------|-------|-------|-----------|
| -1 AP-2             | 53.7797+ | 71.69 | 13.09 | 2.10E-02 | 2.14E-03 | 24549 | 5367  | 34245 | 41000 | 0.00E+00  |
| +1 AP-2             | 49.5005+ | 70.06 | 13.05 | 1.98E-02 | 2.15E-03 | 23991 | 5350  | 34245 | 41000 | 0.00E+00  |
| -1 AP-2gamma        | 47.3290+ | 46.9  | 7.77  | 6.63E-03 | 8.45E-04 | 16062 | 3185  | 34245 | 41000 | 0.00E+00  |
| +1 AP-2gamma        | 44.6164+ | 46.11 | 7.81  | 6.39E-03 | 8.46E-04 | 15791 | 3202  | 34245 | 41000 | 0.00E+00  |
| -1 Elk-1            | 44.1571+ | 18.25 | 3.03  | 2.54E-03 | 3.47E-04 | 6250  | 1242  | 34245 | 41000 | 0.00E+00  |
| +1 PCF2             | 38.1039+ | 13.54 | 2.31  | 1.54E-03 | 2.37E-04 | 4637  | 947   | 34245 | 41000 | 0.00E+00  |
| -1 Sp1              | 37.7827+ | 53.67 | 11.93 | 1.62E-02 | 1.93E-03 | 18379 | 4893  | 34245 | 41000 | 0.00E+00  |
| -1 Muscle initiator | 36.6129+ | 20.5  | 3.55  | 2.43E-03 | 3.84E-04 | 7019  | 1455  | 34245 | 41000 | 0.00E+00  |
| +1 Sp3              | 28.6658+ | 10.89 | 2.05  | 1.20E-03 | 2.22E-04 | 3729  | 839   | 34245 | 41000 | 0.00E+00  |
| +1 LBP-1            | 24.3291+ | 14.65 | 2.99  | 1.65E-03 | 3.33E-04 | 5018  | 1224  | 34245 | 41000 | 0.00E+00  |
| -1 c-Myc:Max        | 22.3925+ | 10.07 | 2.22  | 1.24E-03 | 2.51E-04 | 3449  | 910   | 34245 | 41000 | 0.00E+00  |
| -1 LBP-1            | 20.7995+ | 13.83 | 3.08  | 1.55E-03 | 3.34E-04 | 4735  | 1261  | 34245 | 41000 | 0.00E+00  |
| +1 Spz1             | 18.5734+ | 74.71 | 25.13 | 2.66E-02 | 4.26E-03 | 25583 | 10304 | 34245 | 41000 | 0.00E+00  |
| +1 Muscle initiator | 17.9697+ | 15.47 | 3.79  | 1.79E-03 | 4.07E-04 | 5299  | 1553  | 34245 | 41000 | 0.00E+00  |
| +1 VDR              | 14.8226+ | 30    | 8.8   | 5.58E-03 | 1.29E-03 | 10273 | 3606  | 34245 | 41000 | 0.00E+00  |
| +1 ADR1             | 13.6571+ | 31.43 | 9.15  | 5.95E-03 | 1.50E-03 | 10763 | 3750  | 34245 | 41000 | 0.00E+00  |
| +1 Alfin1           | 13.1533+ | 11.9  | 3.3   | 1.39E-03 | 3.81E-04 | 4075  | 1355  | 34245 | 41000 | 0.00E+00  |
| -1 Dde box          | 13.1278+ | 18.52 | 5.34  | 2.13E-03 | 5.62E-04 | 6343  | 2189  | 34245 | 41000 | 0.00E+00  |
| -1 Spz1             | 11.9676+ | 65.42 | 25.81 | 2.09E-02 | 4.42E-03 | 22404 | 10583 | 34245 | 41000 | 0.00E+00  |
| +1 Zic3             | 11.8691+ | 33.48 | 10.45 | 4.52E-03 | 1.22E-03 | 11466 | 4283  | 34245 | 41000 | 0.00E+00  |
| -1 VDR              | 10.5111+ | 25.42 | 8.9   | 4.81E-03 | 1.31E-03 | 8705  | 3647  | 34245 | 41000 | 0.00E+00  |
| -1 USF2             | 9.8459+  | 12.31 | 4.02  | 1.36E-03 | 4.22E-04 | 4214  | 1649  | 34245 | 41000 | 0.00E+00  |
| +1 Dde box          | 9.5729+  | 15.73 | 5.19  | 1.75E-03 | 5.53E-04 | 5388  | 2127  | 34245 | 41000 | 0.00E+00  |
| +1 USF2             | 9.1175+  | 11.91 | 4.07  | 1.32E-03 | 4.25E-04 | 4078  | 1667  | 34245 | 41000 | 0.00E+00  |
| -1 Eve              | 8.9965+  | 44.18 | 16.07 | 6.02E-03 | 1.84E-03 | 15130 | 6587  | 34245 | 41000 | 0.00E+00  |
| +1 Zic1             | 8.8254+  | 42.79 | 15.94 | 6.27E-03 | 1.91E-03 | 14653 | 6534  | 34245 | 41000 | 0.00E+00  |
| -1 ADR1             | 8.4784+  | 26.21 | 9.74  | 5.02E-03 | 1.59E-03 | 8977  | 3992  | 34245 | 41000 | 0.00E+00  |
| +1 TFII-I           | 7.9267+  | 15.9  | 5.83  | 2.03E-03 | 6.97E-04 | 5444  | 2390  | 34245 | 41000 | 0.00E+00  |
| +1 Eve              | 7.7492+  | 41.5  | 15.99 | 5.49E-03 | 1.84E-03 | 14213 | 6554  | 34245 | 41000 | 0.00E+00  |
| -1 Zic3             | 7.0795+  | 27.55 | 10.95 | 3.63E-03 | 1.29E-03 | 9435  | 4489  | 34245 | 41000 | 0.00E+00  |
| +1 c-Ets-1(p54)     | 6.7418+  | 19.23 | 8.94  | 3.39E-03 | 1.08E-03 | 6586  | 3665  | 34245 | 41000 | 0.00E+00  |
| +1 CP2/LBP-1c/LSF   | 6.2566+  | 14.3  | 5.84  | 1.57E-03 | 6.15E-04 | 4897  | 2393  | 34245 | 41000 | 0.00E+00  |
| -1 TFII-I           | 5.9889+  | 13.13 | 5.62  | 1.70E-03 | 6.63E-04 | 4495  | 2304  | 34245 | 41000 | 3.65E-278 |
| -1 c-Ets-1(p54)     | 5.8507+  | 18.23 | 9     | 3.12E-03 | 1.08E-03 | 6242  | 3688  | 34245 | 41000 | 7.81E-301 |
| -1 Zic1             | 5.0687+  | 34.22 | 16.05 | 4.65E-03 | 1.96E-03 | 11717 | 6580  | 34245 | 41000 | 0.00E+00  |
| -1 CP2/LBP-1c/LSF   | 4.5748+  | 11.91 | 5.65  | 1.31E-03 | 6.01E-04 | 4077  | 2317  | 34245 | 41000 | 3.12E-203 |

|                |         |       |       |          |          |       |       |       |       |           |
|----------------|---------|-------|-------|----------|----------|-------|-------|-------|-------|-----------|
| +1 MZF1        | 4.4604+ | 30.38 | 14.63 | 5.01E-03 | 2.33E-03 | 10405 | 5998  | 34245 | 41000 | 0.00E+00  |
| +1 LF-A1       | 4.3382+ | 14.23 | 6.94  | 1.54E-03 | 7.29E-04 | 4873  | 2846  | 34245 | 41000 | 4.20E-233 |
| -1 Ets         | 4.0902+ | 21.47 | 10.94 | 2.62E-03 | 1.26E-03 | 7351  | 4484  | 34245 | 41000 | 0.00E+00  |
| -1 MZF1        | 4.0184+ | 28.74 | 14.63 | 4.94E-03 | 2.42E-03 | 9842  | 6000  | 34245 | 41000 | 0.00E+00  |
| +1 Zic2        | 3.9227+ | 13.83 | 7.02  | 1.55E-03 | 7.80E-04 | 4735  | 2878  | 34245 | 41000 | 1.48E-205 |
| +1 PU.1        | 3.8378+ | 10.57 | 5.51  | 1.18E-03 | 5.88E-04 | 3619  | 2259  | 34245 | 41000 | 6.33E-143 |
| +1 AP-4        | 3.8249+ | 20.81 | 10.24 | 3.71E-03 | 1.97E-03 | 7127  | 4199  | 34245 | 41000 | 0.00E+00  |
| -1 AP-4        | 3.7018+ | 20.13 | 10.1  | 3.64E-03 | 1.96E-03 | 6894  | 4139  | 34245 | 41000 | 0.00E+00  |
| +1 CF1 / USP   | 3.4177+ | 10.27 | 5.63  | 1.12E-03 | 6.00E-04 | 3518  | 2308  | 34245 | 41000 | 3.48E-121 |
| -1 LF-A1       | 3.2628+ | 12.4  | 6.95  | 1.34E-03 | 7.31E-04 | 4246  | 2850  | 34245 | 41000 | 1.35E-139 |
| +1 GAGA factor | 3.2231+ | 35.26 | 18.27 | 5.56E-03 | 3.33E-03 | 12074 | 7489  | 34245 | 41000 | 0.00E+00  |
| -1 FACB        | 3.1366+ | 14.17 | 7.97  | 1.76E-03 | 9.95E-04 | 4851  | 3268  | 34245 | 41000 | 2.52E-160 |
| -1 NF-1        | 3.1297+ | 18.46 | 10.7  | 2.07E-03 | 1.14E-03 | 6323  | 4388  | 34245 | 41000 | 1.22E-198 |
| +1 Ets         | 3.1014+ | 18.77 | 10.86 | 2.23E-03 | 1.24E-03 | 6427  | 4454  | 34245 | 41000 | 2.33E-203 |
| +1 FACB        | 2.9777+ | 13.77 | 8.03  | 1.74E-03 | 1.00E-03 | 4716  | 3293  | 34245 | 41000 | 4.27E-139 |
| +1 Knox3       | 2.8721+ | 16.94 | 10.17 | 1.88E-03 | 1.09E-03 | 5801  | 4168  | 34245 | 41000 | 1.86E-160 |
| -1 GAGA factor | 2.8412+ | 32.86 | 18.67 | 5.19E-03 | 3.22E-03 | 11253 | 7655  | 34245 | 41000 | 0.00E+00  |
| +1 p300        | 2.8239+ | 18.55 | 11.23 | 2.10E-03 | 1.23E-03 | 6352  | 4606  | 34245 | 41000 | 6.60E-173 |
| +1 NF-1        | 2.7171+ | 17.3  | 10.7  | 1.92E-03 | 1.14E-03 | 5924  | 4385  | 34245 | 41000 | 3.89E-148 |
| -1 Knox3       | 2.5263+ | 16.27 | 10.31 | 1.77E-03 | 1.11E-03 | 5571  | 4229  | 34245 | 41000 | 1.73E-125 |
| +1 p53 decamer | 2.2345+ | 35.76 | 24.56 | 4.61E-03 | 3.00E-03 | 12246 | 10068 | 34245 | 41000 | 1.11E-242 |
| -1 p53 decamer | 2.2124+ | 35.77 | 24.51 | 4.57E-03 | 3.01E-03 | 12251 | 10050 | 34245 | 41000 | 2.57E-245 |
| -1 RAV1        | 2.1250+ | 22.92 | 15.96 | 2.62E-03 | 1.77E-03 | 7848  | 6545  | 34245 | 41000 | 2.04E-125 |
| -1 LIM1        | 1.7239+ | 37.7  | 29.29 | 5.38E-03 | 4.02E-03 | 12912 | 12010 | 34245 | 41000 | 1.81E-128 |
| -1 p300        | 1.6172+ | 14.86 | 11.71 | 1.62E-03 | 1.27E-03 | 5088  | 4801  | 34245 | 41000 | 4.91E-34  |
| -1 COUP        | 1.5727+ | 14.91 | 11.92 | 1.64E-03 | 1.31E-03 | 5107  | 4887  | 34245 | 41000 | 2.19E-30  |
| -1 RAR         | 1.5727+ | 14.91 | 11.92 | 1.64E-03 | 1.31E-03 | 5107  | 4887  | 34245 | 41000 | 2.19E-30  |
| +1 RAV1        | 1.5476+ | 19.83 | 16.02 | 2.23E-03 | 1.78E-03 | 6792  | 6569  | 34245 | 41000 | 3.31E-39  |

#### TSS GROUP A (DOWNSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern | ORI         | % TAR | % BCG | Prob TARGET | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value  |
|--------------|-------------|-------|-------|-------------|------------|-------|-------|---------|---------|----------|
| =====        | =====       | ===== | ===== | =====       | =====      | ===== | ===== | =====   | =====   | =====    |
| +1 Adf-1     | 10910.6022+ | 13.75 | 0.14  | 2.99E-03    | 2.66E-05   | 4708  | 58    | 34245   | 41000   | 0.00E+00 |

|                     |            |       |       |          |          |       |       |       |       |          |
|---------------------|------------|-------|-------|----------|----------|-------|-------|-------|-------|----------|
| -1 Adf-1            | 9671.4262+ | 12.66 | 0.15  | 3.01E-03 | 2.56E-05 | 4337  | 63    | 34245 | 41000 | 0.00E+00 |
| +1 Churchill        | 260.7750+  | 53.97 | 4.06  | 8.72E-03 | 4.45E-04 | 18482 | 1663  | 34245 | 41000 | 0.00E+00 |
| +1 E2F              | 159.7316+  | 38.41 | 3.44  | 6.80E-03 | 4.76E-04 | 13155 | 1409  | 34245 | 41000 | 0.00E+00 |
| -1 Churchill        | 152.3703+  | 44.49 | 4.17  | 6.66E-03 | 4.67E-04 | 15234 | 1708  | 34245 | 41000 | 0.00E+00 |
| +1 ETF              | 148.9839+  | 30.82 | 2.9   | 5.43E-03 | 3.87E-04 | 10554 | 1190  | 34245 | 41000 | 0.00E+00 |
| +1 ZF5              | 132.8648+  | 68.95 | 8.61  | 1.80E-02 | 1.09E-03 | 23611 | 3530  | 34245 | 41000 | 0.00E+00 |
| -1 ZF5              | 100.8378+  | 61.96 | 8.37  | 1.49E-02 | 1.09E-03 | 21219 | 3430  | 34245 | 41000 | 0.00E+00 |
| -1 E2F              | 81.0920+   | 28.33 | 3.38  | 4.49E-03 | 4.64E-04 | 9703  | 1385  | 34245 | 41000 | 0.00E+00 |
| +1 E2F-1            | 77.7542+   | 72.81 | 11.17 | 1.68E-02 | 1.41E-03 | 24935 | 4579  | 34245 | 41000 | 0.00E+00 |
| +1 LBP-1            | 73.0613+   | 24.15 | 3.05  | 3.01E-03 | 3.26E-04 | 8270  | 1250  | 34245 | 41000 | 0.00E+00 |
| -1 AP-2alpha        | 68.2823+   | 43.07 | 6.03  | 6.18E-03 | 6.47E-04 | 14749 | 2471  | 34245 | 41000 | 0.00E+00 |
| +1 AP-2alpha        | 64.8571+   | 42.48 | 6     | 5.90E-03 | 6.43E-04 | 14548 | 2462  | 34245 | 41000 | 0.00E+00 |
| -1 ETF              | 60.2040+   | 19.07 | 2.7   | 3.07E-03 | 3.60E-04 | 6529  | 1107  | 34245 | 41000 | 0.00E+00 |
| -1 E2F-1            | 57.4390+   | 65.66 | 10.94 | 1.31E-02 | 1.37E-03 | 22484 | 4484  | 34245 | 41000 | 0.00E+00 |
| -1 AP-2             | 50.6707+   | 70.38 | 13.05 | 2.01E-02 | 2.14E-03 | 24103 | 5352  | 34245 | 41000 | 0.00E+00 |
| -1 LBP-1            | 47.1801+   | 20.21 | 3.14  | 2.53E-03 | 3.44E-04 | 6920  | 1289  | 34245 | 41000 | 0.00E+00 |
| -1 Muscle initiator | 45.7502+   | 23.26 | 3.61  | 2.76E-03 | 3.89E-04 | 7965  | 1479  | 34245 | 41000 | 0.00E+00 |
| +1 AP-2gamma        | 41.5720+   | 46.39 | 8.07  | 6.33E-03 | 8.75E-04 | 15885 | 3308  | 34245 | 41000 | 0.00E+00 |
| +1 AP-2             | 41.3918+   | 65.06 | 13.1  | 1.76E-02 | 2.12E-03 | 22279 | 5369  | 34245 | 41000 | 0.00E+00 |
| -1 AP-2gamma        | 39.4382+   | 43.54 | 7.83  | 6.00E-03 | 8.45E-04 | 14910 | 3211  | 34245 | 41000 | 0.00E+00 |
| -1 PCF2             | 33.9787+   | 12.93 | 2.28  | 1.39E-03 | 2.33E-04 | 4427  | 933   | 34245 | 41000 | 0.00E+00 |
| +1 EGR              | 27.0683+   | 11.25 | 2.02  | 1.32E-03 | 2.71E-04 | 3852  | 829   | 34245 | 41000 | 0.00E+00 |
| +1 GC box           | 25.4350+   | 24.84 | 4.58  | 3.43E-03 | 7.32E-04 | 8505  | 1876  | 34245 | 41000 | 0.00E+00 |
| +1 Sp1              | 23.2821+   | 50.53 | 11.74 | 1.03E-02 | 1.91E-03 | 17304 | 4814  | 34245 | 41000 | 0.00E+00 |
| -1 Dde box          | 16.2390+   | 19.63 | 5.06  | 2.25E-03 | 5.37E-04 | 6721  | 2074  | 34245 | 41000 | 0.00E+00 |
| +1 Sp-1             | 15.6513+   | 28.15 | 6.45  | 5.73E-03 | 1.60E-03 | 9641  | 2645  | 34245 | 41000 | 0.00E+00 |
| +1 Spz1             | 14.5387+   | 74.5  | 25.19 | 2.12E-02 | 4.32E-03 | 25511 | 10327 | 34245 | 41000 | 0.00E+00 |
| +1 Muscle initiator | 11.9368+   | 12.51 | 3.69  | 1.39E-03 | 3.96E-04 | 4285  | 1511  | 34245 | 41000 | 0.00E+00 |
| -1 Sp-1             | 11.6156+   | 25.88 | 6.44  | 4.66E-03 | 1.61E-03 | 8861  | 2641  | 34245 | 41000 | 0.00E+00 |
| -1 Eve              | 11.1058+   | 48.26 | 16.11 | 6.83E-03 | 1.84E-03 | 16527 | 6607  | 34245 | 41000 | 0.00E+00 |
| -1 Sp1              | 10.0638+   | 35.11 | 11.7  | 6.40E-03 | 1.91E-03 | 12022 | 4797  | 34245 | 41000 | 0.00E+00 |
| -1 AP-4             | 9.6254+    | 32.24 | 10.2  | 5.97E-03 | 1.96E-03 | 11042 | 4181  | 34245 | 41000 | 0.00E+00 |
| +1 Zic3             | 9.3166+    | 30.35 | 10.32 | 3.84E-03 | 1.21E-03 | 10394 | 4230  | 34245 | 41000 | 0.00E+00 |
| -1 GC box           | 9.2345+    | 15.63 | 4.73  | 2.09E-03 | 7.47E-04 | 5353  | 1938  | 34245 | 41000 | 0.00E+00 |
| +1 VDR              | 9.2097+    | 27.13 | 9     | 4.02E-03 | 1.32E-03 | 9292  | 3688  | 34245 | 41000 | 0.00E+00 |
| +1 Eve              | 8.9909+    | 43.1  | 15.62 | 5.84E-03 | 1.79E-03 | 14760 | 6404  | 34245 | 41000 | 0.00E+00 |

|                   |         |       |       |          |          |       |       |       |       |            |
|-------------------|---------|-------|-------|----------|----------|-------|-------|-------|-------|------------|
| +1 AP-4           | 8.6336+ | 30.77 | 10.17 | 5.61E-03 | 1.97E-03 | 10537 | 4171  | 34245 | 41000 | 0.00E+00   |
| +1 Alfin1         | 8.0970+ | 10.5  | 3.71  | 1.21E-03 | 4.23E-04 | 3597  | 1523  | 34245 | 41000 | 3.18E-297  |
| +1 CP2/LBP-1c/LSF | 7.9882+ | 16.17 | 5.85  | 1.80E-03 | 6.22E-04 | 5536  | 2397  | 34245 | 41000 | 0.00E+00   |
| +1 Zic1           | 7.5085+ | 40.1  | 15.72 | 5.52E-03 | 1.88E-03 | 13731 | 6446  | 34245 | 41000 | 0.00E+00   |
| +1 Dde box        | 6.8462+ | 13.36 | 5.25  | 1.47E-03 | 5.48E-04 | 4575  | 2153  | 34245 | 41000 | 0.00E+00   |
| +1 LF-A1          | 6.7865+ | 18    | 7.09  | 1.99E-03 | 7.44E-04 | 6163  | 2907  | 34245 | 41000 | 0.00E+00   |
| -1 Spz1           | 6.1335+ | 54.21 | 25.15 | 1.23E-02 | 4.31E-03 | 18564 | 10312 | 34245 | 41000 | 0.00E+00   |
| +1 ADR1           | 5.4788+ | 23.06 | 9.43  | 3.56E-03 | 1.59E-03 | 7897  | 3868  | 34245 | 41000 | 0.00E+00   |
| +1 TFII-I         | 5.2088+ | 13.26 | 5.65  | 1.49E-03 | 6.73E-04 | 4542  | 2316  | 34245 | 41000 | 4.48E-284  |
| -1 CP2/LBP-1c/LSF | 5.0003+ | 12.55 | 5.74  | 1.38E-03 | 6.05E-04 | 4298  | 2352  | 34245 | 41000 | 3.22E-233  |
| +1 Zic2           | 4.5488+ | 14.93 | 7.16  | 1.72E-03 | 7.86E-04 | 5112  | 2934  | 34245 | 41000 | 1.03E-255  |
| -1 LF-A1          | 4.4801+ | 14.78 | 7.14  | 1.62E-03 | 7.50E-04 | 5062  | 2927  | 34245 | 41000 | 8.84E-249  |
| +1 GAGA factor    | 4.3748+ | 40.4  | 18.48 | 6.43E-03 | 3.21E-03 | 13836 | 7575  | 34245 | 41000 | 0.00E+00   |
| +1 CF1 / USP      | 3.9783+ | 11.37 | 5.78  | 1.24E-03 | 6.12E-04 | 3892  | 2370  | 34245 | 41000 | 1.09E-164  |
| -1 Zic3           | 3.8978+ | 20.49 | 10.49 | 2.47E-03 | 1.24E-03 | 7017  | 4300  | 34245 | 41000 | 2.017e-316 |
| -1 VDR            | 3.4373+ | 17.01 | 9.08  | 2.41E-03 | 1.32E-03 | 5826  | 3722  | 34245 | 41000 | 3.71E-229  |
| +1 MZF1           | 3.2912+ | 27.66 | 14.52 | 4.01E-03 | 2.32E-03 | 9472  | 5954  | 34245 | 41000 | 0.00E+00   |
| +1 FACB           | 3.2126+ | 14.33 | 8.04  | 1.80E-03 | 9.98E-04 | 4908  | 3295  | 34245 | 41000 | 4.08E-164  |
| -1 FACB           | 3.0156+ | 14.05 | 8.1   | 1.75E-03 | 1.01E-03 | 4813  | 3322  | 34245 | 41000 | 1.25E-147  |
| -1 LIM1           | 2.9966+ | 47.53 | 28.98 | 7.26E-03 | 3.98E-03 | 16276 | 11883 | 34245 | 41000 | 0.00E+00   |
| -1 Zic1           | 2.8129+ | 26.15 | 15.97 | 3.33E-03 | 1.94E-03 | 8955  | 6546  | 34245 | 41000 | 1.46E-255  |
| -1 ADR1           | 2.6332+ | 16.02 | 9.41  | 2.41E-03 | 1.56E-03 | 5486  | 3857  | 34245 | 41000 | 1.24E-161  |
| -1 P              | 2.3573+ | 10.46 | 6.71  | 1.13E-03 | 7.44E-04 | 3582  | 2753  | 34245 | 41000 | 1.71E-72   |
| +1 p300           | 2.1817+ | 16.25 | 11.16 | 1.81E-03 | 1.21E-03 | 5564  | 4577  | 34245 | 41000 | 1.35E-88   |
| -1 GAGA factor    | 2.1716+ | 29.74 | 18.55 | 4.52E-03 | 3.34E-03 | 10185 | 7605  | 34245 | 41000 | 7.26E-280  |
| -1 RAV1           | 2.0579+ | 22.21 | 15.7  | 2.53E-03 | 1.74E-03 | 7606  | 6439  | 34245 | 41000 | 9.63E-112  |
| +1 p53 decamer    | 2.0459+ | 34.7  | 24.57 | 4.36E-03 | 3.01E-03 | 11883 | 10074 | 34245 | 41000 | 4.86E-200  |
| +1 AP-2rep        | 2.0103+ | 42.58 | 30.97 | 5.52E-03 | 3.78E-03 | 14582 | 12698 | 34245 | 41000 | 1.66E-235  |
| -1 p53 decamer    | 1.9398+ | 33.57 | 24.44 | 4.22E-03 | 2.99E-03 | 11495 | 10021 | 34245 | 41000 | 3.84E-164  |
| -1 COUP           | 1.8113+ | 16.01 | 11.89 | 1.77E-03 | 1.32E-03 | 5483  | 4876  | 34245 | 41000 | 9.79E-57   |
| -1 RAR            | 1.8113+ | 16.01 | 11.89 | 1.77E-03 | 1.32E-03 | 5483  | 4876  | 34245 | 41000 | 9.79E-57   |
| -1 MZF1           | 1.7264+ | 19.77 | 14.24 | 2.85E-03 | 2.29E-03 | 6771  | 5840  | 34245 | 41000 | 1.41E-87   |
| +1 RFX            | 1.7227+ | 15.43 | 11.84 | 1.69E-03 | 1.28E-03 | 5285  | 4856  | 34245 | 41000 | 1.28E-43   |

TSS GROUP B (UPSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern           | ORI      | % TAR | % BCG | Prob TARGET | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value   |
|------------------------|----------|-------|-------|-------------|------------|-------|-------|---------|---------|-----------|
| =====                  | =====    | ===== | ===== | =====       | =====      | ===== | ===== | =====   | =====   | =====     |
| +1 E2F                 | 88.1874+ | 26.32 | 3.24  | 4.76E-03    | 4.38E-04   | 379   | 1330  | 1440    | 41000   | 2.21E-201 |
| +1 ETF                 | 82.7492+ | 24.38 | 2.91  | 3.88E-03    | 3.92E-04   | 351   | 1194  | 1440    | 41000   | 9.47E-189 |
| +1 GC box              | 78.4738+ | 36.32 | 4.58  | 7.13E-03    | 7.20E-04   | 523   | 1879  | 1440    | 41000   | 1.87E-285 |
| +1 EGR                 | 76.5309+ | 15.69 | 1.9   | 2.38E-03    | 2.56E-04   | 226   | 779   | 1440    | 41000   | 2.77E-116 |
| +1 MAZ                 | 68.7659+ | 18.82 | 2.46  | 2.95E-03    | 3.29E-04   | 271   | 1008  | 1440    | 41000   | 2.68E-134 |
| +1 Sp-1                | 67.4470+ | 47.01 | 6.5   | 1.47E-02    | 1.58E-03   | 677   | 2663  | 1440    | 41000   | 0.00E+00  |
| +1 Churchill           | 61.1214+ | 27.92 | 4.07  | 4.00E-03    | 4.49E-04   | 402   | 1670  | 1440    | 41000   | 9.09E-192 |
| +1 CAC-binding protein | 54.7367+ | 11.88 | 1.8   | 1.93E-03    | 2.33E-04   | 171   | 738   | 1440    | 41000   | 1.21E-73  |
| -1 CREB                | 53.8446+ | 11.25 | 1.81  | 2.60E-03    | 3.00E-04   | 162   | 743   | 1440    | 41000   | 2.91E-66  |
| -1 Sp-1                | 53.8425+ | 45.83 | 6.49  | 1.22E-02    | 1.60E-03   | 660   | 2659  | 1440    | 41000   | 0.00E+00  |
| +1 ZF5                 | 49.5788+ | 44.86 | 8.04  | 9.45E-03    | 1.06E-03   | 646   | 3298  | 1440    | 41000   | 2.29E-286 |
| +1 CREB                | 45.3181+ | 10.07 | 1.9   | 2.66E-03    | 3.10E-04   | 145   | 781   | 1440    | 41000   | 2.94E-51  |
| -1 ETF                 | 41.4587+ | 17.57 | 2.82  | 2.49E-03    | 3.74E-04   | 253   | 1157  | 1440    | 41000   | 3.98E-107 |
| -1 E2F                 | 39.6705+ | 18.89 | 3.33  | 3.15E-03    | 4.50E-04   | 272   | 1367  | 1440    | 41000   | 2.59E-107 |
| -1 Churchill           | 37.1160+ | 23.61 | 4.17  | 3.04E-03    | 4.63E-04   | 340   | 1708  | 1440    | 41000   | 2.66E-137 |
| +1 Elk-1               | 35.5745+ | 16.39 | 3     | 2.26E-03    | 3.47E-04   | 236   | 1230  | 1440    | 41000   | 4.05E-89  |
| +1 Sp1                 | 34.9204+ | 51.81 | 11.46 | 1.42E-02    | 1.84E-03   | 746   | 4697  | 1440    | 41000   | 3.12E-288 |
| -1 ZF5                 | 34.4765+ | 40.14 | 8.3   | 7.83E-03    | 1.10E-03   | 578   | 3403  | 1440    | 41000   | 1.71E-221 |
| +1 Sp3                 | 30.3551+ | 11.04 | 2.05  | 1.25E-03    | 2.22E-04   | 159   | 839   | 1440    | 41000   | 1.24E-57  |
| -1 EGR                 | 28.8156+ | 10.69 | 2.17  | 1.65E-03    | 2.82E-04   | 154   | 889   | 1440    | 41000   | 3.24E-51  |
| -1 GC box              | 28.6393+ | 24.79 | 4.85  | 4.22E-03    | 7.53E-04   | 357   | 1989  | 1440    | 41000   | 1.33E-132 |
| +1 E2F-1               | 26.9589+ | 45.49 | 10.93 | 8.81E-03    | 1.36E-03   | 655   | 4483  | 1440    | 41000   | 1.17E-224 |
| -1 MAZ                 | 26.0793+ | 11.81 | 2.3   | 1.59E-03    | 3.14E-04   | 170   | 941   | 1440    | 41000   | 2.91E-59  |
| -1 Muscle initiator    | 23.6173+ | 16.67 | 3.55  | 1.93E-03    | 3.84E-04   | 240   | 1455  | 1440    | 41000   | 6.84E-79  |
| -1 Elk-1               | 21.8149+ | 12.36 | 3.03  | 1.85E-03    | 3.47E-04   | 178   | 1242  | 1440    | 41000   | 4.02E-49  |
| +1 Alfin1              | 21.7230+ | 13.82 | 3.3   | 1.98E-03    | 3.81E-04   | 199   | 1355  | 1440    | 41000   | 5.43E-57  |
| -1 E2F-1               | 18.6089+ | 39.72 | 10.91 | 6.94E-03    | 1.36E-03   | 572   | 4474  | 1440    | 41000   | 5.64E-164 |
| +1 AP-2alpha           | 15.6778+ | 21.94 | 5.81  | 2.58E-03    | 6.21E-04   | 316   | 2381  | 1440    | 41000   | 8.09E-85  |
| -1 AP-2alpha           | 14.9949+ | 21.46 | 5.8   | 2.55E-03    | 6.28E-04   | 309   | 2380  | 1440    | 41000   | 1.43E-80  |
| -1 AP-2                | 14.2907+ | 43.75 | 13.09 | 9.14E-03    | 2.14E-03   | 630   | 5367  | 1440    | 41000   | 1.25E-167 |
| +1 VDR                 | 13.8281+ | 27.64 | 8.8   | 5.65E-03    | 1.29E-03   | 398   | 3606  | 1440    | 41000   | 1.27E-87  |
| +1 TFII-I              | 13.5629+ | 18.89 | 5.83  | 2.92E-03    | 6.97E-04   | 272   | 2390  | 1440    | 41000   | 6.66E-59  |

|                     |          |       |       |          |          |     |       |      |       |           |
|---------------------|----------|-------|-------|----------|----------|-----|-------|------|-------|-----------|
| +1 ADR1             | 13.4548+ | 27.92 | 9.15  | 6.60E-03 | 1.50E-03 | 402 | 3750  | 1440 | 41000 | 4.08E-85  |
| -1 Sp1              | 13.3930+ | 35.97 | 11.93 | 8.56E-03 | 1.93E-03 | 518 | 4893  | 1440 | 41000 | 6.32E-114 |
| +1 AP-2             | 12.5242+ | 41.88 | 13.05 | 8.39E-03 | 2.15E-03 | 603 | 5350  | 1440 | 41000 | 1.93E-150 |
| -1 AP-2gamma        | 12.2772+ | 26.88 | 7.77  | 3.00E-03 | 8.45E-04 | 387 | 3185  | 1440 | 41000 | 3.24E-96  |
| +1 AP-2gamma        | 11.8077+ | 25.35 | 7.81  | 3.08E-03 | 8.46E-04 | 365 | 3202  | 1440 | 41000 | 1.05E-82  |
| +1 Spz1             | 11.3353+ | 62.85 | 25.13 | 1.93E-02 | 4.26E-03 | 905 | 10304 | 1440 | 41000 | 1.28E-188 |
| +1 Zic3             | 10.5244+ | 30.69 | 10.45 | 4.37E-03 | 1.22E-03 | 442 | 4283  | 1440 | 41000 | 2.74E-90  |
| +1 Muscle initiator | 9.0432+  | 10.97 | 3.79  | 1.27E-03 | 4.07E-04 | 158 | 1553  | 1440 | 41000 | 3.84E-27  |
| -1 Dde box          | 7.2563+  | 13.75 | 5.34  | 1.58E-03 | 5.62E-04 | 198 | 2189  | 1440 | 41000 | 1.47E-28  |
| +1 Zic1             | 7.0889+  | 37.64 | 15.94 | 5.73E-03 | 1.91E-03 | 542 | 6534  | 1440 | 41000 | 3.45E-81  |
| -1 VDR              | 6.0083+  | 18.61 | 8.9   | 3.76E-03 | 1.31E-03 | 268 | 3647  | 1440 | 41000 | 3.57E-26  |
| -1 TFII-I           | 5.9799+  | 12.64 | 5.62  | 1.76E-03 | 6.63E-04 | 182 | 2304  | 1440 | 41000 | 1.11E-19  |
| +1 PU.1             | 5.9676+  | 13.26 | 5.51  | 1.46E-03 | 5.88E-04 | 191 | 2259  | 1440 | 41000 | 4.63E-24  |
| -1 Spz1             | 5.9131+  | 51.18 | 25.81 | 1.32E-02 | 4.42E-03 | 737 | 10583 | 1440 | 41000 | 7.73E-87  |
| -1 Eve              | 5.4034+  | 35.49 | 16.07 | 4.50E-03 | 1.84E-03 | 511 | 6587  | 1440 | 41000 | 9.03E-66  |
| +1 CP2/LBP-1c/LSF   | 5.2557+  | 12.57 | 5.84  | 1.50E-03 | 6.15E-04 | 181 | 2393  | 1440 | 41000 | 1.14E-17  |
| +1 MZF1             | 5.1802+  | 30.28 | 14.63 | 5.84E-03 | 2.33E-03 | 436 | 5998  | 1440 | 41000 | 2.38E-46  |
| +1 c-Ets-1(p54)     | 5.0900+  | 16.53 | 8.94  | 2.98E-03 | 1.08E-03 | 238 | 3665  | 1440 | 41000 | 3.71E-16  |
| -1 ADR1             | 4.9670+  | 18.82 | 9.74  | 4.10E-03 | 1.59E-03 | 271 | 3992  | 1440 | 41000 | 1.42E-21  |
| -1 Ets              | 4.9005+  | 23.47 | 10.94 | 2.87E-03 | 1.26E-03 | 338 | 4484  | 1440 | 41000 | 9.72E-37  |
| -1 c-Ets-1(p54)     | 4.4081+  | 16.25 | 9     | 2.64E-03 | 1.08E-03 | 234 | 3688  | 1440 | 41000 | 1.07E-14  |
| -1 Zic3             | 4.3366+  | 21.67 | 10.95 | 2.83E-03 | 1.29E-03 | 312 | 4489  | 1440 | 41000 | 2.63E-27  |
| +1 Zic2             | 4.3335+  | 13.4  | 7.02  | 1.77E-03 | 7.80E-04 | 193 | 2878  | 1440 | 41000 | 8.35E-14  |
| -1 CP2/LBP-1c/LSF   | 4.0751+  | 11.46 | 5.65  | 1.21E-03 | 6.01E-04 | 165 | 2317  | 1440 | 41000 | 1.44E-13  |
| -1 AP-4             | 3.9309+  | 19.38 | 10.1  | 4.01E-03 | 1.96E-03 | 279 | 4139  | 1440 | 41000 | 6.53E-22  |
| +1 Eve              | 3.9023+  | 30.97 | 15.99 | 3.70E-03 | 1.84E-03 | 446 | 6554  | 1440 | 41000 | 1.75E-40  |
| +1 GAGA factor      | 3.6679+  | 33.82 | 18.27 | 6.60E-03 | 3.33E-03 | 487 | 7489  | 1440 | 41000 | 3.66E-40  |
| -1 MZF1             | 3.5704+  | 26.46 | 14.63 | 4.77E-03 | 2.42E-03 | 381 | 6000  | 1440 | 41000 | 3.96E-27  |
| -1 Zic1             | 3.5624+  | 28.61 | 16.05 | 3.91E-03 | 1.96E-03 | 412 | 6580  | 1440 | 41000 | 9.55E-29  |
| -1 NF-1             | 3.4708+  | 19.24 | 10.7  | 2.20E-03 | 1.14E-03 | 277 | 4388  | 1440 | 41000 | 8.14E-18  |
| +1 AP-4             | 3.4638+  | 18.26 | 10.24 | 3.83E-03 | 1.97E-03 | 263 | 4199  | 1440 | 41000 | 2.80E-16  |
| -1 PU.1             | 3.2984+  | 10    | 5.61  | 1.11E-03 | 6.01E-04 | 144 | 2300  | 1440 | 41000 | 1.23E-07  |
| +1 NF-1             | 3.2388+  | 18.4  | 10.7  | 2.15E-03 | 1.14E-03 | 265 | 4385  | 1440 | 41000 | 1.57E-14  |
| -1 ETS              | 3.2039+  | 14.58 | 8.15  | 1.67E-03 | 9.31E-04 | 210 | 3341  | 1440 | 41000 | 1.86E-12  |
| -1 P                | 3.1002+  | 11.74 | 6.81  | 1.37E-03 | 7.60E-04 | 169 | 2793  | 1440 | 41000 | 3.02E-08  |
| +1 Ets              | 3.0047+  | 18.26 | 10.86 | 2.22E-03 | 1.24E-03 | 263 | 4454  | 1440 | 41000 | 3.28E-13  |

|                |         |       |       |          |          |     |       |      |       |          |
|----------------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| -1 FACB        | 2.8859+ | 13.4  | 7.97  | 1.71E-03 | 9.95E-04 | 193 | 3268  | 1440 | 41000 | 6.82E-09 |
| +1 p300        | 2.8693+ | 18.89 | 11.23 | 2.09E-03 | 1.23E-03 | 272 | 4606  | 1440 | 41000 | 8.53E-14 |
| -1 Zic2        | 2.6427+ | 12.43 | 7.5   | 1.35E-03 | 8.44E-04 | 179 | 3077  | 1440 | 41000 | 1.43E-07 |
| -1 LIM1        | 2.5984+ | 44.93 | 29.29 | 6.81E-03 | 4.02E-03 | 647 | 12010 | 1440 | 41000 | 8.74E-32 |
| +1 LF-A1       | 2.5303+ | 11.11 | 6.94  | 1.15E-03 | 7.29E-04 | 160 | 2846  | 1440 | 41000 | 1.48E-05 |
| -1 Knox3       | 2.4816+ | 16.25 | 10.31 | 1.74E-03 | 1.11E-03 | 234 | 4229  | 1440 | 41000 | 1.24E-08 |
| +1 Lyf-1       | 2.4473+ | 14.38 | 9.27  | 1.56E-03 | 9.86E-04 | 207 | 3799  | 1440 | 41000 | 8.70E-07 |
| -1 GAGA factor | 2.4423+ | 29.17 | 18.67 | 5.03E-03 | 3.22E-03 | 420 | 7655  | 1440 | 41000 | 3.21E-18 |
| -1 LF-A1       | 2.4117+ | 10.69 | 6.95  | 1.15E-03 | 7.31E-04 | 154 | 2850  | 1440 | 41000 | 2.97E-04 |
| -1 STAT6       | 2.3046+ | 28.68 | 19.18 | 3.60E-03 | 2.33E-03 | 413 | 7865  | 1440 | 41000 | 1.47E-14 |
| +1 ETS         | 2.2908+ | 12.08 | 8.06  | 1.40E-03 | 9.14E-04 | 174 | 3304  | 1440 | 41000 | 2.23E-04 |
| -1 STAT3       | 2.2794+ | 48.47 | 33.68 | 6.89E-03 | 4.35E-03 | 698 | 13809 | 1440 | 41000 | 6.81E-27 |
| +1 Knox3       | 2.2075+ | 15.07 | 10.17 | 1.63E-03 | 1.09E-03 | 217 | 4168  | 1440 | 41000 | 1.19E-05 |
| +1 RFX         | 2.1644+ | 16.88 | 11.79 | 1.90E-03 | 1.26E-03 | 243 | 4833  | 1440 | 41000 | 2.31E-05 |
| +1 PPAR        | 2.0879+ | 13.12 | 9.31  | 1.69E-03 | 1.14E-03 | 189 | 3816  | 1440 | 41000 | 3.07E-03 |
| -1 COUP        | 2.0427+ | 17.01 | 11.92 | 1.87E-03 | 1.31E-03 | 245 | 4887  | 1440 | 41000 | 2.53E-05 |
| -1 RAR         | 2.0427+ | 17.01 | 11.92 | 1.87E-03 | 1.31E-03 | 245 | 4887  | 1440 | 41000 | 2.53E-05 |
| +1 p53 decamer | 1.9694+ | 34.58 | 24.56 | 4.20E-03 | 3.00E-03 | 498 | 10068 | 1440 | 41000 | 6.26E-14 |
| +1 COUP        | 1.9275+ | 15.9  | 11.73 | 1.83E-03 | 1.28E-03 | 229 | 4811  | 1440 | 41000 | 3.46E-03 |
| +1 RAR         | 1.9275+ | 15.9  | 11.73 | 1.83E-03 | 1.28E-03 | 229 | 4811  | 1440 | 41000 | 3.46E-03 |
| -1 p53 decamer | 1.9143+ | 32.85 | 24.51 | 4.31E-03 | 3.01E-03 | 473 | 10050 | 1440 | 41000 | 2.53E-09 |
| -1 PPAR        | 1.8234+ | 13.06 | 9.58  | 1.56E-03 | 1.17E-03 | 188 | 3927  | 1440 | 41000 | 2.34E-02 |
| +1 FACB        | 1.7691  | 10.14 | 8.03  | 1.40E-03 | 1.00E-03 | 146 | 3293  | 1440 | 41000 | 1.00E+00 |
| +1 Pax         | 1.7425  | 11.25 | 8.65  | 1.23E-03 | 9.18E-04 | 162 | 3545  | 1440 | 41000 | 7.74E-01 |
| -1 MYBAS1      | 1.7112+ | 15.83 | 12.16 | 1.72E-03 | 1.31E-03 | 228 | 4985  | 1440 | 41000 | 4.73E-02 |
| +1 AP-2rep     | 1.6929+ | 40.07 | 31.22 | 4.99E-03 | 3.78E-03 | 577 | 12799 | 1440 | 41000 | 2.88E-09 |
| -1 Pax         | 1.6782  | 11.04 | 8.43  | 1.15E-03 | 8.95E-04 | 159 | 3455  | 1440 | 41000 | 6.51E-01 |
| +1 HNF-4       | 1.6692+ | 18.61 | 14.53 | 2.64E-03 | 2.02E-03 | 268 | 5959  | 1440 | 41000 | 2.66E-02 |
| -1 RAV1        | 1.6614+ | 20.69 | 15.96 | 2.27E-03 | 1.77E-03 | 298 | 6545  | 1440 | 41000 | 2.92E-03 |
| +1 Ik-2        | 1.6118  | 13.33 | 10.58 | 1.44E-03 | 1.12E-03 | 192 | 4336  | 1440 | 41000 | 1.00E+00 |
| +1 STAT3       | 1.5983+ | 41.11 | 33.77 | 5.72E-03 | 4.35E-03 | 592 | 13844 | 1440 | 41000 | 1.02E-05 |
| +1 STAT6       | 1.5924+ | 23.68 | 19.11 | 2.98E-03 | 2.32E-03 | 341 | 7836  | 1440 | 41000 | 2.12E-02 |
| -1 p300        | 1.5906  | 14.65 | 11.71 | 1.62E-03 | 1.27E-03 | 211 | 4801  | 1440 | 41000 | 8.02E-01 |
| -1 USF         | 1.5636  | 24.93 | 21.83 | 5.86E-03 | 4.28E-03 | 359 | 8950  | 1440 | 41000 | 1.00E+00 |
| +1 USF         | 1.5578  | 24.65 | 21.79 | 5.88E-03 | 4.27E-03 | 355 | 8934  | 1440 | 41000 | 1.00E+00 |

# TSS GROUP B (DOWNSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern    | ORI     | % TAR | % BCG | Prob TARGE | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value  |
|-----------------|---------|-------|-------|------------|------------|-------|-------|---------|---------|----------|
| =====           | =====   | ===== | ===== | =====      | =====      | ===== | ===== | =====   | =====   | =====    |
| +1 E2F          | 9.7494+ | 10.07 | 3.44  | 1.58E-03   | 4.76E-04   | 145   | 1409  | 1440    | 41000   | 4.00E-25 |
| +1 Churchill    | 8.8958+ | 12.36 | 4.06  | 1.30E-03   | 4.45E-04   | 178   | 1663  | 1440    | 41000   | 1.48E-33 |
| +1 E2F-1        | 7.9020+ | 28.82 | 11.17 | 4.31E-03   | 1.41E-03   | 415   | 4579  | 1440    | 41000   | 5.66E-68 |
| +1 ZF5          | 5.4836+ | 18.89 | 8.61  | 2.72E-03   | 1.09E-03   | 272   | 3530  | 1440    | 41000   | 9.13E-30 |
| -1 E2F-1        | 5.3958+ | 24.03 | 10.94 | 3.36E-03   | 1.37E-03   | 346   | 4484  | 1440    | 41000   | 7.85E-40 |
| -1 IRF          | 4.1656+ | 12.78 | 6.82  | 1.76E-03   | 7.90E-04   | 184   | 2797  | 1440    | 41000   | 2.80E-12 |
| -1 ZF5          | 4.0033+ | 16.88 | 8.37  | 2.17E-03   | 1.09E-03   | 243   | 3430  | 1440    | 41000   | 3.13E-21 |
| +1 IRF          | 3.7328+ | 12.15 | 6.77  | 1.65E-03   | 7.92E-04   | 175   | 2774  | 1440    | 41000   | 4.75E-10 |
| -1 Hb           | 3.0340+ | 13.19 | 9.46  | 4.92E-03   | 2.26E-03   | 190   | 3879  | 1440    | 41000   | 5.59E-03 |
| -1 PBF          | 2.7324+ | 13.4  | 9.01  | 1.82E-03   | 9.90E-04   | 193   | 3696  | 1440    | 41000   | 7.54E-05 |
| +1 GAGA factor  | 2.6019+ | 29.31 | 18.48 | 5.27E-03   | 3.21E-03   | 422   | 7575  | 1440    | 41000   | 1.50E-19 |
| -1 AP-4         | 2.4519+ | 15.97 | 10.2  | 3.07E-03   | 1.96E-03   | 230   | 4181  | 1440    | 41000   | 3.30E-08 |
| -1 Ets          | 2.4336+ | 17.08 | 11.04 | 2.02E-03   | 1.29E-03   | 246   | 4525  | 1440    | 41000   | 1.73E-08 |
| +1 Spz1         | 2.2982+ | 39.79 | 25.19 | 6.28E-03   | 4.32E-03   | 573   | 10327 | 1440    | 41000   | 9.75E-30 |
| -1 Eve          | 2.2521+ | 23.89 | 16.11 | 2.80E-03   | 1.84E-03   | 344   | 6607  | 1440    | 41000   | 8.47E-11 |
| +1 c-Ets-1(p54) | 2.1649+ | 12.85 | 9.07  | 1.68E-03   | 1.10E-03   | 185   | 3718  | 1440    | 41000   | 3.04E-03 |
| +1 Hb           | 2.1553  | 10.62 | 9.22  | 4.15E-03   | 2.22E-03   | 153   | 3782  | 1440    | 41000   | 1.00E+00 |
| -1 Dof3         | 2.0130+ | 26.94 | 20.28 | 3.82E-03   | 2.52E-03   | 388   | 8316  | 1440    | 41000   | 2.28E-06 |
| -1 BR-C Z4      | 2.0089  | 11.39 | 9.73  | 2.74E-03   | 1.59E-03   | 164   | 3990  | 1440    | 41000   | 1.00E+00 |
| -1 STAT6        | 1.8957+ | 26.04 | 19.18 | 3.29E-03   | 2.36E-03   | 375   | 7863  | 1440    | 41000   | 3.82E-07 |
| +1 p300         | 1.8938+ | 15.35 | 11.16 | 1.66E-03   | 1.21E-03   | 221   | 4577  | 1440    | 41000   | 2.09E-03 |
| -1 c-Ets-1(p54) | 1.8866+ | 12.57 | 9.17  | 1.54E-03   | 1.12E-03   | 181   | 3760  | 1440    | 41000   | 2.55E-02 |
| -1 ETS          | 1.8747  | 11.25 | 8.2   | 1.31E-03   | 9.55E-04   | 162   | 3364  | 1440    | 41000   | 7.23E-02 |
| +1 AP-4         | 1.8676+ | 13.82 | 10.17 | 2.70E-03   | 1.97E-03   | 199   | 4171  | 1440    | 41000   | 1.56E-02 |
| -1 AP-2         | 1.8400+ | 17.99 | 13.05 | 2.85E-03   | 2.14E-03   | 259   | 5352  | 1440    | 41000   | 1.71E-04 |
| -1 c-Myb        | 1.8094+ | 28.33 | 21.43 | 3.31E-03   | 2.42E-03   | 408   | 8787  | 1440    | 41000   | 1.22E-06 |
| +1 Helios A     | 1.7913+ | 24.38 | 18.54 | 2.98E-03   | 2.19E-03   | 351   | 7602  | 1440    | 41000   | 5.91E-05 |
| -1 C1           | 1.7750+ | 15.14 | 11.52 | 1.79E-03   | 1.32E-03   | 218   | 4722  | 1440    | 41000   | 4.20E-02 |
| -1 STAT3        | 1.7633+ | 43.68 | 33.65 | 5.90E-03   | 4.35E-03   | 629   | 13796 | 1440    | 41000   | 7.87E-12 |
| +1 Eve          | 1.7539+ | 21.04 | 15.62 | 2.33E-03   | 1.79E-03   | 303   | 6404  | 1440    | 41000   | 8.21E-05 |

|              |         |       |       |          |          |     |       |      |       |          |
|--------------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| +1 AP-2gamma | 1.7369  | 10.97 | 8.07  | 1.12E-03 | 8.75E-04 | 158 | 3308  | 1440 | 41000 | 1.32E-01 |
| +1 AP-2      | 1.6601+ | 17.08 | 13.1  | 2.69E-03 | 2.12E-03 | 246 | 5369  | 1440 | 41000 | 1.92E-02 |
| +1 STAT4     | 1.6444+ | 43.89 | 35.12 | 5.86E-03 | 4.46E-03 | 632 | 14398 | 1440 | 41000 | 1.37E-08 |
| -1 AP-2gamma | 1.6391  | 10.28 | 7.83  | 1.06E-03 | 8.45E-04 | 148 | 3211  | 1440 | 41000 | 9.71E-01 |
| +1 FOXD3     | 1.6389  | 13.26 | 12.14 | 3.29E-03 | 2.19E-03 | 191 | 4978  | 1440 | 41000 | 1.00E+00 |
| +1 Zic1      | 1.6349+ | 20.07 | 15.72 | 2.40E-03 | 1.88E-03 | 289 | 6446  | 1440 | 41000 | 1.43E-02 |
| +1 FACB      | 1.6182  | 10.21 | 8.04  | 1.27E-03 | 9.98E-04 | 147 | 3295  | 1440 | 41000 | 1.00E+00 |
| -1 MYB       | 1.6131+ | 46.11 | 37.78 | 6.47E-03 | 4.89E-03 | 664 | 15488 | 1440 | 41000 | 2.07E-07 |
| +1 HSF1      | 1.5977  | 15.9  | 12.83 | 1.76E-03 | 1.37E-03 | 229 | 5260  | 1440 | 41000 | 7.44E-01 |
| +1 Ik-2      | 1.5721  | 12.99 | 10.46 | 1.40E-03 | 1.10E-03 | 187 | 4290  | 1440 | 41000 | 1.00E+00 |
| +1 Lyf-1     | 1.5689  | 11.67 | 9.38  | 1.26E-03 | 1.00E-03 | 168 | 3846  | 1440 | 41000 | 1.00E+00 |
| -1 HSF1      | 1.5642  | 15.42 | 12.78 | 1.76E-03 | 1.36E-03 | 222 | 5240  | 1440 | 41000 | 1.00E+00 |
| -1 Pax       | 1.5595  | 10.83 | 8.5   | 1.11E-03 | 9.08E-04 | 156 | 3487  | 1440 | 41000 | 1.00E+00 |
| +1 RFX       | 1.555   | 14.51 | 11.84 | 1.62E-03 | 1.28E-03 | 209 | 4856  | 1440 | 41000 | 1.00E+00 |
| -1 FAC1      | 1.5464  | 38.89 | 36.86 | 1.13E-02 | 7.70E-03 | 560 | 15111 | 1440 | 41000 | 1.00E+00 |
| -1 LIM1      | 1.5401+ | 35    | 28.98 | 5.07E-03 | 3.98E-03 | 504 | 11883 | 1440 | 41000 | 1.02E-03 |
| -1 HNF-3     | 1.5394  | 22.57 | 20.47 | 4.79E-03 | 3.43E-03 | 325 | 8393  | 1440 | 41000 | 1.00E+00 |
| -1 HSF       | 1.5215+ | 61.39 | 52.61 | 1.31E-02 | 1.01E-02 | 884 | 21569 | 1440 | 41000 | 3.72E-08 |
| +1 ETS       | 1.5168  | 10.56 | 8.26  | 1.14E-03 | 9.60E-04 | 152 | 3385  | 1440 | 41000 | 1.00E+00 |
| +1 VDR       | 1.5127+ | 12.78 | 9     | 1.40E-03 | 1.32E-03 | 184 | 3688  | 1440 | 41000 | 2.77E-03 |

# TSS GROUP C (UPSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern    | ORI      | % TAR | % BCG | Prob TARGET | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value   |
|-----------------|----------|-------|-------|-------------|------------|-------|-------|---------|---------|-----------|
| =====           | =====    | ===== | ===== | =====       | =====      | ===== | ===== | =====   | =====   | =====     |
| -1 Elk-1        | 34.1280+ | 15.08 | 3.03  | 2.38E-03    | 3.47E-04   | 293   | 1242  | 1943    | 41000   | 3.06E-99  |
| +1 Elk-1        | 24.8751+ | 13.33 | 3     | 1.94E-03    | 3.47E-04   | 259   | 1230  | 1943    | 41000   | 1.01E-77  |
| +1 E2F          | 18.8670+ | 12.71 | 3.24  | 2.11E-03    | 4.38E-04   | 247   | 1330  | 1943    | 41000   | 2.15E-64  |
| +1 E2F-1        | 11.1893+ | 32.01 | 10.93 | 5.19E-03    | 1.36E-03   | 622   | 4483  | 1943    | 41000   | 7.19E-126 |
| +1 Churchill    | 9.8952+  | 12.87 | 4.07  | 1.41E-03    | 4.49E-04   | 250   | 1670  | 1943    | 41000   | 1.79E-49  |
| -1 Churchill    | 9.5052+  | 12.92 | 4.17  | 1.42E-03    | 4.63E-04   | 251   | 1708  | 1943    | 41000   | 2.22E-48  |
| -1 c-Ets-1(p54) | 8.1625+  | 21.82 | 9     | 3.64E-03    | 1.08E-03   | 424   | 3688  | 1943    | 41000   | 3.30E-58  |
| +1 c-Ets-1(p54) | 6.7556+  | 20.12 | 8.94  | 3.25E-03    | 1.08E-03   | 391   | 3665  | 1943    | 41000   | 1.51E-45  |
| +1 GC box       | 6.2593+  | 12.87 | 4.58  | 1.61E-03    | 7.20E-04   | 250   | 1879  | 1943    | 41000   | 2.59E-41  |

|            |         |       |       |          |          |     |       |      |       |          |
|------------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| +1 ZF5     | 5.8517+ | 18.99 | 8.04  | 2.64E-03 | 1.06E-03 | 369 | 3298  | 1943 | 41000 | 5.91E-47 |
| -1 E2F-1   | 5.7182+ | 23.57 | 10.91 | 3.59E-03 | 1.36E-03 | 458 | 4474  | 1943 | 41000 | 3.12E-50 |
| +1 Ets     | 4.9496+ | 23.42 | 10.86 | 2.85E-03 | 1.24E-03 | 455 | 4454  | 1943 | 41000 | 1.33E-49 |
| +1 Sp-1    | 4.9017+ | 16.47 | 6.5   | 3.06E-03 | 1.58E-03 | 320 | 2663  | 1943 | 41000 | 1.07E-45 |
| -1 Sp-1    | 4.7691+ | 17.04 | 6.49  | 2.90E-03 | 1.60E-03 | 331 | 2659  | 1943 | 41000 | 1.43E-50 |
| -1 ZF5     | 4.6168+ | 17.81 | 8.3   | 2.36E-03 | 1.10E-03 | 346 | 3403  | 1943 | 41000 | 1.74E-35 |
| -1 Hb      | 4.5443+ | 12.2  | 9.09  | 7.63E-03 | 2.25E-03 | 237 | 3725  | 1943 | 41000 | 7.42E-03 |
| -1 GC box  | 4.4770+ | 12.04 | 4.85  | 1.36E-03 | 7.53E-04 | 234 | 1989  | 1943 | 41000 | 7.31E-31 |
| +1 PU.1    | 4.3886+ | 11.37 | 5.51  | 1.25E-03 | 5.88E-04 | 221 | 2259  | 1943 | 41000 | 3.14E-19 |
| -1 Ets     | 4.3481+ | 22.23 | 10.94 | 2.69E-03 | 1.26E-03 | 432 | 4484  | 1943 | 41000 | 1.37E-40 |
| -1 ETS     | 4.2229+ | 16.78 | 8.15  | 1.91E-03 | 9.31E-04 | 326 | 3341  | 1943 | 41000 | 5.38E-30 |
| +1 ETS     | 4.2065+ | 16.62 | 8.06  | 1.86E-03 | 9.14E-04 | 323 | 3304  | 1943 | 41000 | 8.20E-30 |
| -1 IRF     | 4.1326+ | 12.87 | 6.68  | 1.66E-03 | 7.73E-04 | 250 | 2737  | 1943 | 41000 | 1.95E-18 |
| -1 PU.1    | 3.9192+ | 10.96 | 5.61  | 1.20E-03 | 6.01E-04 | 213 | 2300  | 1943 | 41000 | 6.92E-16 |
| +1 Hb      | 3.6042  | 11.68 | 9.13  | 6.33E-03 | 2.25E-03 | 227 | 3742  | 1943 | 41000 | 1.99E-01 |
| +1 IRF     | 3.4338+ | 12.2  | 6.9   | 1.54E-03 | 7.95E-04 | 237 | 2829  | 1943 | 41000 | 3.53E-13 |
| +1 Sp1     | 3.3726+ | 21.31 | 11.46 | 3.33E-03 | 1.84E-03 | 414 | 4697  | 1943 | 41000 | 2.35E-30 |
| +1 PBF     | 3.2646+ | 15.59 | 8.67  | 1.72E-03 | 9.48E-04 | 303 | 3553  | 1943 | 41000 | 8.25E-19 |
| -1 BR-C Z4 | 3.0737  | 10.14 | 9.39  | 4.61E-03 | 1.62E-03 | 197 | 3851  | 1943 | 41000 | 1.00E+00 |
| -1 NF-1    | 3.0358+ | 18.22 | 10.7  | 2.03E-03 | 1.14E-03 | 354 | 4388  | 1943 | 41000 | 7.90E-19 |
| +1 NF-1    | 2.8805+ | 17.91 | 10.7  | 1.96E-03 | 1.14E-03 | 348 | 4385  | 1943 | 41000 | 2.32E-17 |
| -1 Sp1     | 2.6593+ | 20.17 | 11.93 | 3.03E-03 | 1.93E-03 | 392 | 4893  | 1943 | 41000 | 7.71E-21 |
| +1 STAT6   | 2.5898+ | 30.62 | 19.11 | 3.75E-03 | 2.32E-03 | 595 | 7836  | 1943 | 41000 | 3.04E-29 |
| -1 STAT6   | 2.5641+ | 30.47 | 19.18 | 3.77E-03 | 2.33E-03 | 592 | 7865  | 1943 | 41000 | 4.66E-28 |
| +1 TFIIA   | 2.4522+ | 16.83 | 10.76 | 1.78E-03 | 1.13E-03 | 327 | 4410  | 1943 | 41000 | 3.76E-12 |
| +1 FOXD3   | 2.3239  | 11.99 | 12.07 | 5.26E-03 | 2.25E-03 | 233 | 4949  | 1943 | 41000 | 1.00E+00 |
| -1 STAT3   | 2.2908+ | 48.84 | 33.68 | 6.87E-03 | 4.35E-03 | 949 | 13809 | 1943 | 41000 | 3.94E-38 |
| -1 FACB    | 2.2715+ | 11.99 | 7.97  | 1.50E-03 | 9.95E-04 | 233 | 3268  | 1943 | 41000 | 2.11E-06 |
| +1 Spz1    | 2.2373+ | 37.93 | 25.13 | 6.32E-03 | 4.26E-03 | 737 | 10304 | 1943 | 41000 | 7.83E-31 |
| +1 AP-2    | 2.2222+ | 19.66 | 13.05 | 3.17E-03 | 2.15E-03 | 382 | 5350  | 1943 | 41000 | 1.95E-12 |
| +1 p300    | 2.1779+ | 16.83 | 11.23 | 1.78E-03 | 1.23E-03 | 327 | 4606  | 1943 | 41000 | 7.59E-10 |
| +1 STAT3   | 2.1547+ | 47.71 | 33.77 | 6.64E-03 | 4.35E-03 | 927 | 13844 | 1943 | 41000 | 3.83E-32 |
| -1 p300    | 2.1180+ | 17.09 | 11.71 | 1.85E-03 | 1.27E-03 | 332 | 4801  | 1943 | 41000 | 1.03E-08 |
| -1 AP-4    | 2.0707+ | 14.82 | 10.1  | 2.76E-03 | 1.96E-03 | 288 | 4139  | 1943 | 41000 | 1.91E-07 |
| -1 HNF-3   | 2.0138  | 20.84 | 20.37 | 6.89E-03 | 3.50E-03 | 405 | 8350  | 1943 | 41000 | 1.00E+00 |
| -1 FOXD3   | 1.9566  | 12.4  | 11.97 | 4.09E-03 | 2.17E-03 | 241 | 4909  | 1943 | 41000 | 1.00E+00 |

|              |         |       |       |          |          |     |       |      |       |          |
|--------------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| +1 TATA      | 1.9287+ | 16.57 | 11    | 2.10E-03 | 1.64E-03 | 322 | 4512  | 1943 | 41000 | 6.55E-10 |
| -1 AP-2      | 1.9087+ | 18.53 | 13.09 | 2.88E-03 | 2.14E-03 | 360 | 5367  | 1943 | 41000 | 4.08E-08 |
| +1 Dof3      | 1.8981+ | 27.74 | 20.34 | 3.45E-03 | 2.48E-03 | 539 | 8340  | 1943 | 41000 | 2.64E-11 |
| -1 Knox3     | 1.8885+ | 14.1  | 10.31 | 1.53E-03 | 1.11E-03 | 274 | 4229  | 1943 | 41000 | 2.90E-04 |
| +1 AP-4      | 1.8752+ | 13.9  | 10.24 | 2.72E-03 | 1.97E-03 | 270 | 4199  | 1943 | 41000 | 6.55E-04 |
| +1 FACB      | 1.8551  | 10.65 | 8.03  | 1.40E-03 | 1.00E-03 | 207 | 3293  | 1943 | 41000 | 6.15E-02 |
| +1 HNF-3     | 1.8527  | 22.49 | 20.39 | 5.83E-03 | 3.47E-03 | 437 | 8358  | 1943 | 41000 | 1.00E+00 |
| -1 AP-2gamma | 1.8102+ | 10.5  | 7.77  | 1.13E-03 | 8.45E-04 | 204 | 3185  | 1943 | 41000 | 2.47E-02 |
| -1 Spz1      | 1.7800+ | 35.25 | 25.81 | 5.75E-03 | 4.42E-03 | 685 | 10583 | 1943 | 41000 | 2.63E-16 |
| +1 HNF-4     | 1.7582+ | 18.58 | 14.53 | 2.78E-03 | 2.02E-03 | 361 | 5959  | 1943 | 41000 | 1.57E-03 |
| +1 Knox3     | 1.7244+ | 13.23 | 10.17 | 1.45E-03 | 1.09E-03 | 257 | 4168  | 1943 | 41000 | 2.40E-02 |
| -1 NF-AT     | 1.7078+ | 15.29 | 11.53 | 2.46E-03 | 1.91E-03 | 297 | 4727  | 1943 | 41000 | 1.06E-03 |
| -1 C/EBPbeta | 1.6498+ | 16.47 | 13.13 | 1.87E-03 | 1.42E-03 | 320 | 5383  | 1943 | 41000 | 3.19E-02 |
| +1 Ik-2      | 1.6470+ | 13.64 | 10.58 | 1.44E-03 | 1.12E-03 | 265 | 4336  | 1943 | 41000 | 3.15E-02 |
| +1 MYB       | 1.6366+ | 46.89 | 37.66 | 6.42E-03 | 4.89E-03 | 911 | 15442 | 1943 | 41000 | 5.35E-13 |
| +1 Eve       | 1.6229+ | 20.23 | 15.99 | 2.36E-03 | 1.84E-03 | 393 | 6554  | 1943 | 41000 | 1.21E-03 |
| +1 Zic1      | 1.6121+ | 20.54 | 15.94 | 2.39E-03 | 1.91E-03 | 399 | 6534  | 1943 | 41000 | 1.54E-04 |
| -1 Zic3      | 1.5977+ | 14.05 | 10.95 | 1.61E-03 | 1.29E-03 | 273 | 4489  | 1943 | 41000 | 3.25E-02 |
| +1 RFX       | 1.5775  | 14.67 | 11.79 | 1.60E-03 | 1.26E-03 | 285 | 4833  | 1943 | 41000 | 1.65E-01 |
| -1 Eve       | 1.5731+ | 20.48 | 16.07 | 2.27E-03 | 1.84E-03 | 398 | 6587  | 1943 | 41000 | 4.73E-04 |
| -1 PBF       | 1.5478  | 10.65 | 8.52  | 1.16E-03 | 9.40E-04 | 207 | 3493  | 1943 | 41000 | 1.00E+00 |
| +1 PPAR      | 1.5351  | 11.22 | 9.31  | 1.45E-03 | 1.14E-03 | 218 | 3816  | 1943 | 41000 | 1.00E+00 |
| +1 Lyf-1     | 1.5322  | 11.48 | 9.27  | 1.22E-03 | 9.86E-04 | 223 | 3799  | 1943 | 41000 | 1.00E+00 |
| +1 Zic3      | 1.5195  | 12.97 | 10.45 | 1.49E-03 | 1.22E-03 | 252 | 4283  | 1943 | 41000 | 4.88E-01 |
| +1 MYBAS1    | 1.5093  | 14.67 | 12.18 | 1.64E-03 | 1.31E-03 | 285 | 4993  | 1943 | 41000 | 1.00E+00 |
| -1 MYB       | 1.5019+ | 44.57 | 37.66 | 6.19E-03 | 4.88E-03 | 866 | 15440 | 1943 | 41000 | 1.03E-06 |

# TSS GROUP C (DOWNSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern | ORI      | % TAR | % BCG | Prob TARGE | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value   |
|--------------|----------|-------|-------|------------|------------|-------|-------|---------|---------|-----------|
| =====        | =====    | ===== | ===== | =====      | =====      | ===== | ===== | =====   | =====   | =====     |
| +1 Churchill | 52.6898+ | 26.97 | 4.06  | 3.53E-03   | 4.45E-04   | 524   | 1663  | 1943    | 41000   | 3.29E-238 |
| -1 Churchill | 41.3513+ | 25.27 | 4.17  | 3.18E-03   | 4.67E-04   | 491   | 1708  | 1943    | 41000   | 8.88E-207 |
| +1 E2F       | 39.1052+ | 19.66 | 3.44  | 3.25E-03   | 4.76E-04   | 382   | 1409  | 1943    | 41000   | 1.56E-149 |

|                     |          |       |       |          |          |      |       |      |       |           |
|---------------------|----------|-------|-------|----------|----------|------|-------|------|-------|-----------|
| +1 LBP-1            | 28.2256+ | 15.95 | 3.05  | 1.76E-03 | 3.26E-04 | 310  | 1250  | 1943 | 41000 | 2.15E-110 |
| +1 E2F-1            | 26.7377+ | 48.12 | 11.17 | 8.74E-03 | 1.41E-03 | 935  | 4579  | 1943 | 41000 | 0.00E+00  |
| +1 ZF5              | 26.6602+ | 38.24 | 8.61  | 6.52E-03 | 1.09E-03 | 743  | 3530  | 1943 | 41000 | 1.10E-255 |
| -1 LBP-1            | 24.0387+ | 14.87 | 3.14  | 1.75E-03 | 3.44E-04 | 289  | 1289  | 1943 | 41000 | 3.70E-93  |
| -1 ZF5              | 22.7921+ | 35.67 | 8.37  | 5.84E-03 | 1.09E-03 | 693  | 3430  | 1943 | 41000 | 9.07E-226 |
| -1 E2F-1            | 18.9913+ | 40.4  | 10.94 | 7.04E-03 | 1.37E-03 | 785  | 4484  | 1943 | 41000 | 3.37E-226 |
| +1 ETF              | 18.7912+ | 12.87 | 2.9   | 1.64E-03 | 3.87E-04 | 250  | 1190  | 1943 | 41000 | 1.23E-74  |
| -1 AP-2alpha        | 18.2404+ | 24.86 | 6.03  | 2.86E-03 | 6.47E-04 | 483  | 2471  | 1943 | 41000 | 4.49E-143 |
| -1 E2F              | 17.7826+ | 13.12 | 3.38  | 2.13E-03 | 4.64E-04 | 255  | 1385  | 1943 | 41000 | 5.40E-66  |
| -1 AP-2             | 15.6925+ | 45.91 | 13.05 | 9.54E-03 | 2.14E-03 | 892  | 5352  | 1943 | 41000 | 4.03E-252 |
| +1 AP-2alpha        | 14.8915+ | 22.44 | 6     | 2.56E-03 | 6.43E-04 | 436  | 2462  | 1943 | 41000 | 4.16E-114 |
| -1 Muscle initiator | 14.7185+ | 13.59 | 3.61  | 1.52E-03 | 3.89E-04 | 264  | 1479  | 1943 | 41000 | 4.48E-66  |
| +1 AP-2gamma        | 14.5122+ | 29.9  | 8.07  | 3.43E-03 | 8.75E-04 | 581  | 3308  | 1943 | 41000 | 1.93E-157 |
| +1 AP-2             | 13.4353+ | 44.11 | 13.1  | 8.45E-03 | 2.12E-03 | 857  | 5369  | 1943 | 41000 | 2.59E-227 |
| -1 AP-2gamma        | 12.1571+ | 26.45 | 7.83  | 3.04E-03 | 8.45E-04 | 514  | 3211  | 1943 | 41000 | 7.44E-122 |
| -1 Dde box          | 11.1583+ | 16.62 | 5.06  | 1.82E-03 | 5.37E-04 | 323  | 2074  | 1943 | 41000 | 2.33E-69  |
| -1 Eve              | 8.1560+  | 42.31 | 16.11 | 5.72E-03 | 1.84E-03 | 822  | 6607  | 1943 | 41000 | 5.60E-152 |
| -1 AP-4             | 8.1464+  | 28.41 | 10.2  | 5.73E-03 | 1.96E-03 | 552  | 4181  | 1943 | 41000 | 4.99E-101 |
| +1 CP2/LBP-1c/LSF   | 7.6533+  | 15.9  | 5.85  | 1.75E-03 | 6.22E-04 | 309  | 2397  | 1943 | 41000 | 1.14E-49  |
| +1 Sp1              | 7.1730+  | 32.22 | 11.74 | 4.99E-03 | 1.91E-03 | 626  | 4814  | 1943 | 41000 | 5.49E-115 |
| +1 AP-4             | 6.7771+  | 26.97 | 10.17 | 5.02E-03 | 1.97E-03 | 524  | 4171  | 1943 | 41000 | 1.35E-87  |
| +1 Eve              | 6.7605+  | 38.34 | 15.62 | 4.94E-03 | 1.79E-03 | 745  | 6404  | 1943 | 41000 | 4.36E-119 |
| +1 GC box           | 6.4654+  | 13.43 | 4.58  | 1.61E-03 | 7.32E-04 | 261  | 1876  | 1943 | 41000 | 1.60E-46  |
| +1 Spz1             | 6.1932+  | 58    | 25.19 | 1.16E-02 | 4.32E-03 | 1127 | 10327 | 1943 | 41000 | 4.94E-192 |
| +1 VDR              | 5.3551+  | 21.82 | 9     | 2.91E-03 | 1.32E-03 | 424  | 3688  | 1943 | 41000 | 3.30E-58  |
| -1 LF-A1            | 5.1885+  | 16.26 | 7.14  | 1.71E-03 | 7.50E-04 | 316  | 2927  | 1943 | 41000 | 1.75E-36  |
| +1 Zic3             | 5.1117+  | 22.9  | 10.32 | 2.80E-03 | 1.21E-03 | 445  | 4230  | 1943 | 41000 | 1.62E-51  |
| +1 LF-A1            | 5.0993+  | 15.59 | 7.09  | 1.72E-03 | 7.44E-04 | 303  | 2907  | 1943 | 41000 | 3.41E-32  |
| +1 TFII-I           | 4.9632+  | 12.87 | 5.65  | 1.47E-03 | 6.73E-04 | 250  | 2316  | 1943 | 41000 | 6.59E-28  |
| +1 Dde box          | 4.6363+  | 11.12 | 5.25  | 1.20E-03 | 5.48E-04 | 216  | 2153  | 1943 | 41000 | 5.98E-20  |
| +1 Zic1             | 4.5507+  | 31.96 | 15.72 | 4.20E-03 | 1.88E-03 | 621  | 6446  | 1943 | 41000 | 9.95E-64  |
| -1 CP2/LBP-1c/LSF   | 4.2733+  | 11.58 | 5.74  | 1.28E-03 | 6.05E-04 | 225  | 2352  | 1943 | 41000 | 1.62E-18  |
| +1 Sp-1             | 4.2587+  | 15.9  | 6.45  | 2.76E-03 | 1.60E-03 | 309  | 2645  | 1943 | 41000 | 1.15E-41  |
| -1 FACB             | 3.8026+  | 15.9  | 8.1   | 1.95E-03 | 1.01E-03 | 309  | 3322  | 1943 | 41000 | 7.01E-25  |
| -1 Sp1              | 3.7196+  | 24.29 | 11.7  | 3.42E-03 | 1.91E-03 | 472  | 4797  | 1943 | 41000 | 1.48E-47  |
| +1 FACB             | 3.5330+  | 14.87 | 8.04  | 1.90E-03 | 9.98E-04 | 289  | 3295  | 1943 | 41000 | 2.07E-19  |

|                         |         |       |       |          |          |     |       |      |       |          |
|-------------------------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| +1 Zic2                 | 3.3791+ | 12.92 | 7.16  | 1.47E-03 | 7.86E-04 | 251 | 2934  | 1943 | 41000 | 3.72E-15 |
| +1 ADR1                 | 3.3142+ | 18.68 | 9.43  | 2.66E-03 | 1.59E-03 | 363 | 3868  | 1943 | 41000 | 7.96E-31 |
| +1 GAGA factor          | 3.2926+ | 35.1  | 18.48 | 5.57E-03 | 3.21E-03 | 682 | 7575  | 1943 | 41000 | 9.58E-61 |
| -1 Spz1                 | 3.1677+ | 44.47 | 25.15 | 7.72E-03 | 4.31E-03 | 864 | 10312 | 1943 | 41000 | 3.09E-69 |
| +1 MZF1                 | 3.0329+ | 27.23 | 14.52 | 3.76E-03 | 2.32E-03 | 529 | 5954  | 1943 | 41000 | 4.22E-42 |
| -1 Sp-1                 | 2.8319+ | 13.43 | 6.44  | 2.19E-03 | 1.61E-03 | 261 | 2641  | 1943 | 41000 | 6.59E-24 |
| +1 XPF-1                | 2.7797+ | 12.04 | 7.14  | 1.22E-03 | 7.40E-04 | 234 | 2928  | 1943 | 41000 | 6.49E-11 |
| +1 p300                 | 2.7545+ | 18.27 | 11.16 | 2.03E-03 | 1.21E-03 | 355 | 4577  | 1943 | 41000 | 2.68E-16 |
| -1 XPF-1                | 2.6884+ | 11.73 | 7.07  | 1.18E-03 | 7.31E-04 | 228 | 2900  | 1943 | 41000 | 6.73E-10 |
| -1 COUP                 | 2.6036+ | 19.2  | 11.89 | 2.12E-03 | 1.32E-03 | 373 | 4876  | 1943 | 41000 | 2.06E-16 |
| -1 RAR                  | 2.6036+ | 19.2  | 11.89 | 2.12E-03 | 1.32E-03 | 373 | 4876  | 1943 | 41000 | 2.06E-16 |
| -1 Zic3                 | 2.5948+ | 17.19 | 10.49 | 1.96E-03 | 1.24E-03 | 334 | 4300  | 1943 | 41000 | 3.45E-15 |
| +1 MyoD                 | 2.5840+ | 10.96 | 7.26  | 1.61E-03 | 9.39E-04 | 213 | 2976  | 1943 | 41000 | 8.80E-06 |
| -1 RAV1                 | 2.5377+ | 24.81 | 15.7  | 2.80E-03 | 1.74E-03 | 482 | 6439  | 1943 | 41000 | 7.20E-21 |
| -1 LIM1                 | 2.4837+ | 44.16 | 28.98 | 6.48E-03 | 3.98E-03 | 858 | 11883 | 1943 | 41000 | 1.82E-40 |
| +1 RAV1                 | 2.3197+ | 24.14 | 15.97 | 2.73E-03 | 1.78E-03 | 469 | 6546  | 1943 | 41000 | 1.40E-16 |
| -1 p53 decamer          | 2.2685+ | 36.03 | 24.44 | 4.60E-03 | 2.99E-03 | 700 | 10021 | 1943 | 41000 | 1.29E-25 |
| +1 AP-2rep              | 2.2213+ | 45.24 | 30.97 | 5.74E-03 | 3.78E-03 | 879 | 12698 | 1943 | 41000 | 8.72E-35 |
| -1 GAGA factor          | 2.1385+ | 29.49 | 18.55 | 4.49E-03 | 3.34E-03 | 573 | 7605  | 1943 | 41000 | 5.91E-27 |
| -1 ADR1                 | 2.1248+ | 14.46 | 9.41  | 2.16E-03 | 1.56E-03 | 281 | 3857  | 1943 | 41000 | 3.40E-09 |
| -1 MZF1                 | 2.1026+ | 21.67 | 14.24 | 3.17E-03 | 2.29E-03 | 421 | 5840  | 1943 | 41000 | 8.48E-15 |
| +1 p53 decamer          | 2.0316+ | 34.38 | 24.57 | 4.36E-03 | 3.01E-03 | 668 | 10074 | 1943 | 41000 | 3.62E-18 |
| -1 PPAR                 | 2.0267+ | 13.95 | 9.62  | 1.65E-03 | 1.18E-03 | 271 | 3943  | 1943 | 41000 | 2.31E-06 |
| +1 Ik-2                 | 1.9689+ | 14.46 | 10.46 | 1.57E-03 | 1.10E-03 | 281 | 4290  | 1943 | 41000 | 7.90E-05 |
| -1 VDR                  | 1.9282+ | 13.12 | 9.08  | 1.76E-03 | 1.32E-03 | 255 | 3722  | 1943 | 41000 | 9.99E-06 |
| +1 COUP                 | 1.9173+ | 16.52 | 12.06 | 1.85E-03 | 1.32E-03 | 321 | 4946  | 1943 | 41000 | 1.72E-05 |
| +1 RAR                  | 1.9173+ | 16.52 | 12.06 | 1.85E-03 | 1.32E-03 | 321 | 4946  | 1943 | 41000 | 1.72E-05 |
| -1 Zic1                 | 1.8551+ | 21.72 | 15.97 | 2.64E-03 | 1.94E-03 | 422 | 6546  | 1943 | 41000 | 8.58E-08 |
| +1 RFX                  | 1.7989+ | 15.85 | 11.84 | 1.71E-03 | 1.28E-03 | 308 | 4856  | 1943 | 41000 | 2.82E-04 |
| -1 PPAR direct repeat 1 | 1.7464  | 10.09 | 7.78  | 1.11E-03 | 8.22E-04 | 196 | 3190  | 1943 | 41000 | 3.16E-01 |
| +1 Ets                  | 1.7294+ | 14.82 | 10.98 | 1.64E-03 | 1.28E-03 | 288 | 4503  | 1943 | 41000 | 3.90E-04 |
| -1 c-Ets-1(p54)         | 1.6967  | 11.07 | 9.17  | 1.58E-03 | 1.12E-03 | 215 | 3760  | 1943 | 41000 | 1.00E+00 |
| +1 Knox3                | 1.6792+ | 13.33 | 10.18 | 1.40E-03 | 1.09E-03 | 259 | 4174  | 1943 | 41000 | 1.45E-02 |
| -1 STAT3                | 1.6232+ | 42.82 | 33.65 | 5.54E-03 | 4.35E-03 | 832 | 13796 | 1943 | 41000 | 2.15E-13 |
| -1 Ets                  | 1.6155+ | 14.41 | 11.04 | 1.59E-03 | 1.29E-03 | 280 | 4525  | 1943 | 41000 | 7.32E-03 |
| -1 TTF-1                | 1.6016+ | 47.56 | 39.18 | 6.65E-03 | 5.04E-03 | 924 | 16065 | 1943 | 41000 | 2.34E-10 |

|                 |         |       |       |          |          |     |      |      |       |          |
|-----------------|---------|-------|-------|----------|----------|-----|------|------|-------|----------|
| +1 c-Ets-1(p54) | 1.5892  | 11.12 | 9.07  | 1.43E-03 | 1.10E-03 | 216 | 3718 | 1943 | 41000 | 1.00E+00 |
| +1 PPAR         | 1.5775  | 11.99 | 9.54  | 1.47E-03 | 1.17E-03 | 233 | 3912 | 1943 | 41000 | 4.40E-01 |
| +1 MAF          | 1.5581  | 22.23 | 18.56 | 2.73E-03 | 2.10E-03 | 432 | 7611 | 1943 | 41000 | 5.95E-02 |
| -1 STAT6        | 1.5549+ | 24.4  | 19.18 | 2.88E-03 | 2.36E-03 | 474 | 7863 | 1943 | 41000 | 2.79E-05 |
| -1 Knox3        | 1.5302  | 12.61 | 10.14 | 1.33E-03 | 1.08E-03 | 245 | 4156 | 1943 | 41000 | 5.36E-01 |
| -1 HNF-4        | 1.5176+ | 18.53 | 14.96 | 2.58E-03 | 2.11E-03 | 360 | 6134 | 1943 | 41000 | 2.47E-02 |

#### TSS GROUP D (UPSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern    | ORI     | % TAR | % BCG | Prob TARGET | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value  |
|-----------------|---------|-------|-------|-------------|------------|-------|-------|---------|---------|----------|
| =====           | =====   | ===== | ===== | =====       | =====      | ===== | ===== | =====   | =====   | =====    |
| +1 GC box       | 6.9508+ | 12.17 | 4.58  | 1.89E-03    | 7.20E-04   | 186   | 1879  | 1528    | 41000   | 6.42E-28 |
| +1 Sp-1         | 5.4266+ | 14.66 | 6.5   | 3.80E-03    | 1.58E-03   | 224   | 2663  | 1528    | 41000   | 5.14E-25 |
| -1 Sp-1         | 4.5916+ | 15.45 | 6.49  | 3.08E-03    | 1.60E-03   | 236   | 2659  | 1528    | 41000   | 9.42E-30 |
| -1 c-Ets-1(p54) | 4.2451+ | 17.15 | 9     | 2.41E-03    | 1.08E-03   | 262   | 3688  | 1528    | 41000   | 1.11E-19 |
| +1 ETS          | 3.8766+ | 16.03 | 8.06  | 1.78E-03    | 9.14E-04   | 245   | 3304  | 1528    | 41000   | 1.84E-20 |
| +1 Ets          | 3.6640+ | 20.16 | 10.86 | 2.45E-03    | 1.24E-03   | 308   | 4454  | 1528    | 41000   | 3.81E-22 |
| +1 Sp1          | 3.6156+ | 19.7  | 11.46 | 3.86E-03    | 1.84E-03   | 301   | 4697  | 1528    | 41000   | 8.33E-17 |
| +1 E2F-1        | 3.5988+ | 20.22 | 10.93 | 2.64E-03    | 1.36E-03   | 309   | 4483  | 1528    | 41000   | 5.11E-22 |
| +1 ADR1         | 3.3222+ | 14.66 | 9.15  | 3.10E-03    | 1.50E-03   | 224   | 3750  | 1528    | 41000   | 1.03E-08 |
| +1 c-Ets-1(p54) | 2.9495+ | 14.2  | 8.94  | 2.01E-03    | 1.08E-03   | 217   | 3665  | 1528    | 41000   | 5.02E-08 |
| -1 Hb           | 2.6994  | 12.24 | 9.09  | 4.52E-03    | 2.25E-03   | 187   | 3725  | 1528    | 41000   | 5.09E-02 |
| -1 C/EBPbeta    | 2.5446+ | 20.48 | 13.13 | 2.32E-03    | 1.42E-03   | 313   | 5383  | 1528    | 41000   | 5.51E-12 |
| +1 PBF          | 2.4855+ | 13.68 | 8.67  | 1.49E-03    | 9.48E-04   | 209   | 3553  | 1528    | 41000   | 2.11E-07 |
| -1 Ets          | 2.4400+ | 17.02 | 10.94 | 1.97E-03    | 1.26E-03   | 260   | 4484  | 1528    | 41000   | 2.99E-09 |
| +1 C/EBPbeta    | 2.4015+ | 20.16 | 13.18 | 2.24E-03    | 1.43E-03   | 308   | 5403  | 1528    | 41000   | 1.09E-10 |
| +1 IRF          | 2.3888+ | 10.54 | 6.9   | 1.24E-03    | 7.95E-04   | 161   | 2829  | 1528    | 41000   | 2.64E-04 |
| +1 STAT6        | 2.3400+ | 28.34 | 19.11 | 3.66E-03    | 2.32E-03   | 433   | 7836  | 1528    | 41000   | 1.27E-14 |
| +1 TATA         | 2.2222+ | 17.6  | 11    | 2.28E-03    | 1.64E-03   | 269   | 4512  | 1528    | 41000   | 5.63E-11 |
| -1 E2F-1        | 2.1636+ | 15.64 | 10.91 | 2.05E-03    | 1.36E-03   | 239   | 4474  | 1528    | 41000   | 3.35E-05 |
| +1 Zic3         | 2.1496+ | 14.53 | 10.45 | 1.89E-03    | 1.22E-03   | 222   | 4283  | 1528    | 41000   | 1.01E-03 |
| -1 ETS          | 2.1212+ | 12.17 | 8.15  | 1.32E-03    | 9.31E-04   | 186   | 3341  | 1528    | 41000   | 1.14E-04 |
| -1 ZF5          | 2.1098+ | 12.83 | 8.3   | 1.50E-03    | 1.10E-03   | 196   | 3403  | 1528    | 41000   | 4.22E-06 |
| +1 RFX          | 2.0943+ | 17.02 | 11.79 | 1.83E-03    | 1.26E-03   | 260   | 4833  | 1528    | 41000   | 3.72E-06 |

|            |         |       |       |          |          |     |       |      |       |          |
|------------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| -1 NF-1    | 2.0795+ | 15.45 | 10.7  | 1.64E-03 | 1.14E-03 | 236 | 4388  | 1528 | 41000 | 2.45E-05 |
| +1 ZF5     | 1.9688+ | 11.91 | 8.04  | 1.41E-03 | 1.06E-03 | 182 | 3298  | 1528 | 41000 | 2.80E-04 |
| +1 C_EBP   | 1.9335+ | 29.19 | 21.4  | 3.49E-03 | 2.46E-03 | 446 | 8773  | 1528 | 41000 | 2.14E-09 |
| +1 Zic1    | 1.9311+ | 21.27 | 15.94 | 2.76E-03 | 1.91E-03 | 325 | 6534  | 1528 | 41000 | 6.97E-05 |
| +1 TCF11   | 1.9300+ | 10.27 | 7.32  | 1.05E-03 | 7.66E-04 | 157 | 3002  | 1528 | 41000 | 3.37E-02 |
| +1 VDR     | 1.9286+ | 12.11 | 8.8   | 1.80E-03 | 1.29E-03 | 185 | 3606  | 1528 | 41000 | 1.74E-02 |
| +1 HNF-1   | 1.9263+ | 19.9  | 15.78 | 3.23E-03 | 2.11E-03 | 304 | 6470  | 1528 | 41000 | 2.32E-02 |
| +1 Lyf-1   | 1.9006+ | 12.7  | 9.27  | 1.37E-03 | 9.86E-04 | 194 | 3799  | 1528 | 41000 | 1.36E-02 |
| -1 PBF     | 1.8577+ | 11.71 | 8.52  | 1.27E-03 | 9.40E-04 | 179 | 3493  | 1528 | 41000 | 2.60E-02 |
| -1 STAT6   | 1.8462+ | 26.31 | 19.18 | 3.14E-03 | 2.33E-03 | 402 | 7865  | 1528 | 41000 | 2.47E-08 |
| +1 NF-1    | 1.8171+ | 14.53 | 10.7  | 1.53E-03 | 1.14E-03 | 222 | 4385  | 1528 | 41000 | 4.89E-03 |
| +1 Spz1    | 1.8087+ | 32.72 | 25.13 | 5.92E-03 | 4.26E-03 | 500 | 10304 | 1528 | 41000 | 6.29E-08 |
| -1 C1      | 1.8082+ | 15.97 | 11.7  | 1.78E-03 | 1.34E-03 | 244 | 4797  | 1528 | 41000 | 1.03E-03 |
| -1 c-Myb   | 1.7987+ | 28.01 | 21.42 | 3.31E-03 | 2.41E-03 | 428 | 8782  | 1528 | 41000 | 2.19E-06 |
| -1 MYBAS1  | 1.7725+ | 16.1  | 12.16 | 1.75E-03 | 1.31E-03 | 246 | 4985  | 1528 | 41000 | 7.88E-03 |
| -1 MYB     | 1.7706+ | 48.17 | 37.66 | 6.75E-03 | 4.88E-03 | 736 | 15440 | 1528 | 41000 | 2.13E-13 |
| -1 AP-4    | 1.7667  | 13.15 | 10.1  | 2.66E-03 | 1.96E-03 | 201 | 4139  | 1528 | 41000 | 1.56E-01 |
| +1 STAT3   | 1.7620+ | 43.78 | 33.77 | 5.92E-03 | 4.35E-03 | 669 | 13844 | 1528 | 41000 | 1.50E-12 |
| -1 C_EBP   | 1.6811+ | 27.75 | 21.29 | 3.14E-03 | 2.43E-03 | 424 | 8728  | 1528 | 41000 | 4.08E-06 |
| +1 AP-4    | 1.6771  | 12.96 | 10.24 | 2.61E-03 | 1.97E-03 | 198 | 4199  | 1528 | 41000 | 7.60E-01 |
| -1 AP-1    | 1.6672+ | 37.76 | 30.96 | 1.13E-02 | 8.23E-03 | 577 | 12695 | 1528 | 41000 | 2.57E-05 |
| +1 Knox3   | 1.6608  | 13.15 | 10.17 | 1.40E-03 | 1.09E-03 | 201 | 4168  | 1528 | 41000 | 2.24E-01 |
| +1 AP-1    | 1.5757+ | 38.02 | 31.14 | 1.05E-02 | 8.14E-03 | 581 | 12768 | 1528 | 41000 | 1.83E-05 |
| -1 BR-C Z4 | 1.5336  | 10.01 | 9.39  | 2.33E-03 | 1.62E-03 | 153 | 3851  | 1528 | 41000 | 1.00E+00 |
| +1 c-Myb   | 1.5215+ | 26.18 | 21.38 | 2.99E-03 | 2.41E-03 | 400 | 8764  | 1528 | 41000 | 9.79E-03 |
| +1 MYB     | 1.5211+ | 45.35 | 37.66 | 6.17E-03 | 4.89E-03 | 693 | 15442 | 1528 | 41000 | 1.49E-06 |
| -1 Dof3    | 1.5204+ | 25.65 | 20.2  | 3.01E-03 | 2.51E-03 | 392 | 8283  | 1528 | 41000 | 3.72E-04 |

#### TSS GROUP D (DOWNSTREAM)

Up to 150 top ranked promoter elements that appear with frequency >= 10% in the target set

| TFBS pattern | ORI     | % TAR | % BCG | Prob TARGE | Prob BACKG | # TAR | # BCG | TOT TAR | TOT BCG | p_value  |
|--------------|---------|-------|-------|------------|------------|-------|-------|---------|---------|----------|
| =====        | =====   | ===== | ===== | =====      | =====      | ===== | ===== | =====   | =====   | =====    |
| +1 E2F-1     | 2.9267+ | 18.13 | 11.17 | 2.54E-03   | 1.41E-03   | 277   | 4579  | 1528    | 41000   | 3.97E-12 |
| -1 E2F-1     | 2.2621+ | 16.69 | 10.94 | 2.03E-03   | 1.37E-03   | 255   | 4484  | 1528    | 41000   | 3.43E-08 |

|          |         |       |       |          |          |     |       |      |       |          |
|----------|---------|-------|-------|----------|----------|-----|-------|------|-------|----------|
| -1 AP-4  | 2.0636+ | 14.14 | 10.2  | 2.92E-03 | 1.96E-03 | 216 | 4181  | 1528 | 41000 | 1.82E-03 |
| +1 HSF1  | 1.8969+ | 17.67 | 12.83 | 1.89E-03 | 1.37E-03 | 270 | 5260  | 1528 | 41000 | 1.05E-04 |
| +1 AP-4  | 1.8641  | 13.09 | 10.17 | 2.85E-03 | 1.97E-03 | 200 | 4171  | 1528 | 41000 | 3.12E-01 |
| -1 Dof3  | 1.7689+ | 27.09 | 20.28 | 3.34E-03 | 2.52E-03 | 414 | 8316  | 1528 | 41000 | 3.37E-07 |
| -1 Hb    | 1.6937  | 12.37 | 9.46  | 2.93E-03 | 2.26E-03 | 189 | 3879  | 1528 | 41000 | 2.16E-01 |
| -1 DBP   | 1.6729+ | 26.77 | 20.97 | 3.15E-03 | 2.40E-03 | 409 | 8599  | 1528 | 41000 | 1.02E-04 |
| -1 Eve   | 1.6322+ | 20.68 | 16.11 | 2.34E-03 | 1.84E-03 | 316 | 6607  | 1528 | 41000 | 3.57E-03 |
| -1 HSF1  | 1.6157  | 15.84 | 12.78 | 1.77E-03 | 1.36E-03 | 242 | 5240  | 1528 | 41000 | 5.49E-01 |
| +1 STAT4 | 1.5972+ | 43.78 | 35.12 | 5.71E-03 | 4.46E-03 | 669 | 14398 | 1528 | 41000 | 6.25E-09 |
| -1 HSF   | 1.5867+ | 63.94 | 52.61 | 1.31E-02 | 1.01E-02 | 977 | 21569 | 1528 | 41000 | 1.45E-15 |
| -1 c-Myb | 1.5440+ | 26.37 | 21.43 | 3.03E-03 | 2.42E-03 | 403 | 8787  | 1528 | 41000 | 5.60E-03 |
| -1 PBF   | 1.5436  | 11.26 | 9.01  | 1.22E-03 | 9.90E-04 | 172 | 3696  | 1528 | 41000 | 1.00E+00 |
| +1 Ets   | 1.5236  | 13.48 | 10.98 | 1.59E-03 | 1.28E-03 | 206 | 4503  | 1528 | 41000 | 1.00E+00 |
| +1 Ncx   | 1.5156+ | 41.75 | 34.53 | 5.45E-03 | 4.34E-03 | 638 | 14157 | 1528 | 41000 | 7.78E-06 |