

**S12 Table. List of ChIP-Seq peak data sets used in this study.**

| #  | Factor    | Number of peaks | Source lab     | Reference |
|----|-----------|-----------------|----------------|-----------|
| 1  | ARID3A    | 9026            | Snyder         | ENCODE    |
| 2  | ATF1      | 14864           | Struhl/Snyder  | ENCODE    |
| 3  | ATF3      | 1233            | Struhl/Snyder  | ENCODE    |
| 4  | BACH1     | 3806            | Snyder         | ENCODE    |
| 5  | BCL3      | 1603            | Myers          | ENCODE    |
| 6  | BCLAF1    | 4444            | Myers          | ENCODE    |
| 7  | BDP1      | 570             | Struhl/Snyder  | ENCODE    |
| 8  | BHLHE40   | 22497           | Snyder         | ENCODE    |
| 9  | BRF1      | 221             | Struhl/Snyder  | ENCODE    |
| 10 | BRF2      | 1087            | Struhl/Snyder  | ENCODE    |
| 11 | BRG1      | 2463            | Snyder         | ENCODE    |
| 12 | c-FOS     | 7646            | Snyder         | ENCODE    |
| 13 | c-JUN     | 9848            | Snyder         | ENCODE    |
| 14 | CBX3      | 20723           | Myers          | ENCODE    |
| 15 | CCNT2     | 20057           | Struhl/Snyder  | ENCODE    |
| 16 | CEBP      | 38715           | Snyder         | ENCODE    |
| 17 | CHD1      | 9350            | Bernstein      | ENCODE    |
| 18 | CHD2      | 7797            | Snyder         | ENCODE    |
| 19 | CHD4      | 13735           | Bernstein      | ENCODE    |
| 20 | CHD7      | 30660           | Bernstein      | ENCODE    |
| 21 | COREST    | 35741           | Snyder         | ENCODE    |
| 22 | CTCFL     | 54387           | Myers          | ENCODE    |
| 23 | CTCFL     | 11533           | Myers          | ENCODE    |
| 24 | E2F4      | 8181            | Farnham/Snyder | ENCODE    |
| 25 | E2F6      | 16312           | Farnham/Snyder | ENCODE    |
| 26 | eGFP-FOS  | 10256           | White          | ENCODE    |
| 27 | eGFP-JUNB | 12287           | White          | ENCODE    |
| 28 | EGR1      | 36997           | Myers          | ENCODE    |
| 29 | ELF1      | 27780           | Myers          | ENCODE    |
| 30 | ELK1      | 2961            | Snyder         | ENCODE    |
| 31 | ETS1      | 10726           | Myers          | ENCODE    |
| 32 | EZH2      | 1685            | Bernstein      | ENCODE    |
| 33 | FOSL1     | 11174           | Myers          | ENCODE    |
| 34 | GABP      | 14393           | Myers          | ENCODE    |
| 35 | GATA1     | 4074            | Farnham/Snyder | ENCODE    |
| 36 | GATA2     | 10648           | Farnham/Snyder | ENCODE    |
| 37 | GTF2B     | 2928            | Struhl/Snyder  | ENCODE    |
| 38 | GTF2F1    | 3621            | Snyder         | ENCODE    |
| 39 | HCFC1     | 42132           | Snyder         | ENCODE    |
| 40 | HDAC1     | 11833           | Bernstein      | ENCODE    |
| 41 | HDAC2     | 5247            | Bernstein      | ENCODE    |
| 42 | HDAC6     | 1114            | Bernstein      | ENCODE    |

|    |        |       |                |        |
|----|--------|-------|----------------|--------|
| 43 | HDAC8  | 1718  | White          | ENCODE |
| 44 | HMG3   | 14587 | Struhl/Snyder  | ENCODE |
| 45 | INI1   | 1942  | Snyder         | ENCODE |
| 46 | JUND   | 40052 | Snyder         | ENCODE |
| 47 | KAP1   | 5489  | Farnham/Snyder | ENCODE |
| 48 | KDM5B  | 15520 | Bernstein      | ENCODE |
| 49 | MAFF   | 25074 | Snyder         | ENCODE |
| 50 | MAFK   | 19317 | Snyder         | ENCODE |
| 51 | MAX    | 31436 | Snyder         | ENCODE |
| 52 | MAZ    | 33323 | Snyder         | ENCODE |
| 53 | MEF2   | 5631  | Myers          | ENCODE |
| 54 | MXI1   | 6711  | Snyder         | ENCODE |
| 55 | MYC    | 5023  | Snyder         | ENCODE |
| 56 | MYC    | 24153 | Snyder         | ENCODE |
| 57 | NELFE  | 458   | Struhl/Snyder  | ENCODE |
| 58 | NFE2   | 2637  | Myers          | ENCODE |
| 59 | NFYA   | 4286  | Snyder         | ENCODE |
| 60 | NFYB   | 10096 | Snyder         | ENCODE |
| 61 | NR2C2  | 587   | Farnham/Snyder | ENCODE |
| 62 | NR2F2  | 16678 | Myers          | ENCODE |
| 63 | NR4A1  | 7883  | White          | ENCODE |
| 64 | NRF1   | 4211  | Snyder         | ENCODE |
| 65 | NRSF   | 15849 | Myers          | ENCODE |
| 66 | P300   | 76018 | Snyder         | ENCODE |
| 67 | P300   | 25881 | Snyder         | ENCODE |
| 68 | PCAF   | 16253 | Bernstein      | ENCODE |
| 69 | PHF8   | 22302 | Bernstein      | ENCODE |
| 70 | PML    | 15895 | Myers          | ENCODE |
| 71 | POL2   | 18081 | Snyder         | ENCODE |
| 72 | POL2S2 | 5397  | Snyder         | ENCODE |
| 73 | POL3   | 207   | Snyder         | ENCODE |
| 74 | RAD21  | 17627 | Snyder         | ENCODE |
| 75 | RBBP5  | 14258 | Bernstein      | ENCODE |
| 76 | RFX5   | 2201  | Snyder         | ENCODE |
| 77 | RPC155 | 131   | Struhl/Snyder  | ENCODE |
| 78 | SAP30  | 9753  | Bernstein      | ENCODE |
| 79 | SETDB1 | 3882  | Farnham/Snyder | ENCODE |
| 80 | SIN3A  | 12700 | Myers          | ENCODE |
| 81 | SIRT6  | 2305  | Struhl/Snyder  | ENCODE |
| 82 | SIX5   | 4194  | Myers          | ENCODE |
| 83 | SMC3   | 23598 | Snyder         | ENCODE |
| 84 | SP1    | 7206  | Myers          | ENCODE |
| 85 | SP2    | 3124  | Myers          | ENCODE |
| 86 | SPI1   | 28677 | Myers          | ENCODE |
| 87 | SRF    | 4717  | Myers          | ENCODE |

|          |                             |                        |                   |                  |
|----------|-----------------------------|------------------------|-------------------|------------------|
| 88       | STAT5A                      | 9811                   | Myers             | ENCODE           |
| 89       | TAF1                        | 15246                  | Myers             | ENCODE           |
| 90       | TAF7                        | 3422                   | Myers             | ENCODE           |
| 91       | TAL1                        | 26260                  | Snyder            | ENCODE           |
| 92       | TBL1XR1                     | 5086                   | Snyder            | ENCODE           |
| 93       | TBP                         | 17558                  | Snyder            | ENCODE           |
| 94       | TEAD4                       | 31030                  | Myers             | ENCODE           |
| 95       | TFIIIC                      | 1858                   | Struhl/Snyder     | ENCODE           |
| 96       | THAP1                       | 3506                   | Myers             | ENCODE           |
| 97       | TRIM28                      | 12137                  | Myers             | ENCODE           |
| 98       | UBTF                        | 6002                   | Snyder            | ENCODE           |
| 99       | UBTF                        | 13692                  | Snyder            | ENCODE           |
| 100      | USF1                        | 18521                  | Myers             | ENCODE           |
| 101      | USF2                        | 3083                   | Snyder            | ENCODE           |
| 102      | YY1                         | 4948                   | Farnham/Snyder    | ENCODE           |
| 103      | ZBTB33                      | 3285                   | Myers             | ENCODE           |
| 104      | ZBTB7A                      | 21711                  | Myers             | ENCODE           |
| 105      | ZNF143                      | 29069                  | Snyder            | ENCODE           |
| 106      | ZNF263                      | 3081                   | Farnham/Snyder    | ENCODE           |
| 107      | ZNF274                      | 1997                   | Farnham/Snyder    | ENCODE           |
| <b>#</b> | <b>Histone modification</b> | <b>Number of peaks</b> | <b>Source lab</b> | <b>Reference</b> |
| 1        | H3K4me3                     | 18662                  | Farnham/Snyder    | ENCODE           |
| 2        | H3K4me1                     | 108851                 | Farnham/Snyder    | ENCODE           |
| 3        | H3K9ac                      | 36409                  | Farnham/Snyder    | ENCODE           |
| 4        | H3K27me3                    | 134768                 | Farnham/Snyder    | ENCODE           |