

S1 Table. Chromatin, DNA methylation and gene expression datasets used in the study.

| Sample | H3K4me1 | | H3K4me3 | | H3K27me3 | | DNA methylation | | Gene expression | |
|-----------------------------|---------|---------|---------|---------|----------|---------|-----------------|------------|-----------------|----------|
| | # | Source | # | Source | # | Source | # | Source | # | Source |
| ES | 6 | Roadmap | 9 | Roadmap | 6 | Roadmap | 3 | GSE40909 | 3 | GSE7332 |
| HSC (CD34 ⁺) | 7 | Roadmap | 6 | Roadmap | 8 | Roadmap | 1 | GSM1032771 | 2 | GSE10325 |
| T-cell (CD4 ⁺) | 6 | Roadmap | 7 | Roadmap | 6 | Roadmap | 6 | GSE35069 | 9 | GSE10325 |
| T-cell (CD8 ⁺) | 5 | Roadmap | 5 | Roadmap | 5 | Roadmap | 6 | GSE35069 | | |
| B-cell (CD19 ⁺) | 1 | Roadmap | 2 | Roadmap | 1 | Roadmap | 6 | GSE35069 | 9 | GSE10325 |
| Jurkat | | | | | | | 1 | ENCODE | 1 | ENCODE |
| K562 | | | | | | | 1 | ENCODE | 1 | ENCODE |
| DLBCL | | | | | | | 28 | TCGA | 28 | TCGA |
| CRC | | | | | | | 290 | TCGA | 290 | TCGA |
| HCC | | | | | | | 207 | TCGA | 207 | TCGA |

Abbreviations: **ES:** Embryonic Stem Cells; **HSC:** Hematopoietic Stem Cells; **DLBCL:** Diffuse Large B-Cell Lymphoma; **CRC:** Colorectal Cancer; **HCC:** Hepatocellular Carcinoma; **Roadmap:** Roadmap Epigenomics Project; **GSE#:** Accession number in the Gene Expression Omnibus (GEO); **ENCODE:** Encyclopedia of DNA Elements.