



Supplementary Fig. S5

Supplementary Figure S5. Enrichment of the IL3R hexamer vs. dodecamer gene signature in primitive normal and leukemic stem cells. **A**, GSVA analysis demonstrating that the hexamer vs. dodecamer signature is enriched in M0/M1 AML FAB subtypes in TCGA, Beat AML and Leucegene cohorts (25,26,57). **B, C**, GSEA analysis showing enrichment of the hexamer gene signature in *FLT3*-ITD (**B**) and *RUNX1-T-7* (**C**) AML patients (58). **D**, Correlation of hexamer vs. dodecamer signature scores in the immunophenotypically characterized primary AML patient samples (red/low and blue/high IL3R α/β c ratio) with %IL3R $\alpha^{\text{hi}}/\beta^{\text{c}^{\text{lo}}}$ (left) and β^{c} (right) expression levels. **E**, Correlation plots of intersect hexamer (left panel), dodecamer (middle panel) and hexamer vs. dodecamer (right panel) signatures vs. IL3R α/β c cell surface protein ratio of 10 primary AML patient samples. **F**, GSVA plots of the intersect hexamer (left panel) and dodecamer (right panel) signatures in AML patient samples stratified based on their cellular hierarchy composition (32). **G**, GSVA plots of the intersect hexamer (left panel) and dodecamer (right panel) signatures in four cell fractions defined by CD34 and CD38 surface expression in primary AML patient samples (n=110 by RNA-seq, Ref (32)). **H**, GSVA plot of the intersect hexamer vs. dodecamer signature in four cell fractions defined by CD34 and CD38 surface expression in primary AML patient samples (n=221 by microarray (20)). **I**, GSVA plots of the intersect hexamer (left panel) and dodecamer (right panel) signatures in various sorted populations from CB (36,37). **J**, GSVA plot of the intersect hexamer vs. dodecamer signature in various populations of the cellular hierarchy in normal human bone marrow controls (35). **K**, GSVA analysis of the intersect hexamer vs. dodecamer signature in LSC⁺ (engrafting) and LSC⁻ (non-engrafting) fractions (n=221 by microarray (20)). **L**, GSVA analysis of the intersect hexamer vs. dodecamer signature in primary AML patient samples with various LSC frequencies (39).