



**Figure S2.** Assessment of CellTag barcode diversity. **(A)** Correlation plot with pairwise correlation scores and hierarchal clustering of CellTag Library 1 barcodes in RB028<sup>Naive</sup> demonstrates diverse barcoding combinations (left). Clones form “blocks” representing high correlation. Lack of these blocks in RB028<sup>Naive</sup> demonstrates uniquely tagged clones. UMAP of RB028<sup>Naive</sup> demonstrates high percentage of tagged cells with no separation from untagged cells (right). **(B)** Correlation plots of CellTag Library 1-3 barcodes after integrating RB028<sup>Naive</sup>, RB028<sup>2xC</sup>, and RB028<sup>3xC</sup>. Larger “blocks” formed by CellTag Library 1 barcodes represent cells sharing the same clonal origin.