Figure Legends

Supplementary Figure 1. Expression of Co-inhibitory Molecules and Their Ligands. **(A)** The expression levels of CTLA4, LAG3, NRP1, PD-1, TIGIT, TIM3, VISTA, CD80, CD86, CD112, CD155, FGL1, HMGB1, LGALS9, PD-L1, PD-L2, SEMA4A, and VEGFA in granulocytes, monocytes, T cells, B cells, dendritic cells, NK cells, and progenitor cells. **(B)** The relative expression levels of CD80, CD86, CD112, CD274, PDCD1LG2, FGL1, HMGB1, LGALS9, PVR, PVRL2, SEMA4A, and VEGFA in various cancer types and their corresponding normal tissues.

Supplementary Figure 2. Correlation analysis of the expression of co-inhibitory molecules and pan-cancer immune cell infiltration. Data with P-values greater than the threshold (P > 0.05, not significant) were cross-labeled. Panels **(A)**-**(E)** represent the correlation between 18 molecules and the infiltration of CD4+ T cells, B cells, neutrophils, macrophages, and myeloid dendritic cells in different tumor types, based on the Spearman method.

Supplementary Figure 3. Correlation analysis between VISTA expression and DNA/RNA methylation regulatory genes. **(A)** Circular graph of the relationships between VISTA expression and DNA methylation regulatory genes (DNMT1, DNMT3A, DNMT3B, DNMT3L). **(B)** Circular graph of the relationships between VISTA expression and RNA methylation regulatory genes (ALKBH5, FTO, METTL3, METTL14, WTAP). The peripheral circle

indicated the type of cancer; the different colors of the second circle represented DNA/RNA methylation regulatory genes; the third circle showed the Pearson correlation coefficient; the depth of the fourth ring's color indicated the P-value, and the innermost part was the specific numbers of correlation coefficients and the P-value.

Supplementary Figure 4. Analysis of the correlation between co-inhibitory molecules and their ligands with the drug sensitivity of anticancer agents. These drugs include Lxazomib citrate, Vincristine, Tepotinib, MG − 132, Tamoxifen, SB − 590885, Bortezomib, Geldanamycin analog, EGF − 816, Methylprednisolone, BMS − 690514, Sapitinib, Erlotinib, SW − 044248, Dexamethasone, and Gefitinib. The results for **(A)-(E)** represent the analysis of CTLA4, LAG3, NRP1, PD-1, TIGIT, TIM3, VISTA, CD80, CD86, CD112, CD155, FGL1, HMGB1, LGALS9, PD-L1, PD-L2, SEMA4A, and VEGFA, respectively.