

## **Supplementary Figure Legends**

**Supplementary Figure 1: A;** Immunoblot analysis of MEC-1 cells showing expression of total and phospho-ERK-1/2 and AKT in control (NA), ibrutinib or dasatinib-pre-treated cells (both at 500 nM for 60 minutes). Actin was analyzed as an additional loading control. **B;** Venn diagrams showing overlap of kinases isolated by the different KI used to create kinobeads during this study.

**Supplementary Figure 2: A;** Graph comparing kinases identified at either mRNA level, protein (by kinobead isolation) or both in our patient cohort. **B;** Correlation of kinase mRNA expression determined by Nanostring between Treatment Naïve (TN) and Previously Treated (PT) patients.

**Supplementary Figure 3: A;** Flow cytometric analysis of inhibitory coreceptors and **B;** immunoblot analysis of phosphatases in three samples from untreated (UT) patients and three samples from previously treated (PT) patients. In **A**, graph shows results for individual samples and mean ( $\pm$ error). In **B**, GAPDH was analyzed as an additional loading control.

**Supplementary List:** Kinase fingerprints for cells obtained either using Nanostring mRNA analysis or kinobead-MS protein experiments involving MEC-1 cells or primary CLL cells.