

Supplementary Figure 1. The 3'UTR of human *HPSE* mRNA contains putative hsamiR-20b-5p and hsa-miR-1252-5p binding sites. The sequences for miR-20b-5p and miR-1252-5p was obtained from TargetScan database.



Supplementary Figure 2. **Curves of dose response for BTZ treatment.** Cell viability assays, based on PrestoBlue, were conducted to determine cell sensitivity to BTZ in MM WT cell lines (RPMI-8226 and U266). Each data point represents the average of three cell culture experiments per cell line per drug treatment.



Supplementary Figure 3. Characterization of EVs present in the Vesicular Secretome Fraction (VSF) of HEK-293T. (A) Transmission electron microscopy of EVs present in the Vesicular Secretome Fraction (VSF) of HEK293T. (B) Expression of CD81 (22 kDa) and ALIX (95 kDa) was verified by western blot. The grouping of blots was cropped from different parts of the same gel. (C) The size of nanoparticles was measured through NTA for both VSF and eVSF (electroporated with miR-1252-5p).



Supplementary Figure 4. miR-1252-5p expression in HEK293T cells. The level of miR-1252-5p was evaluated in RPMI-8226 and HEK293T cell lines by RT-qPCR. All the relative expression levels were calculated using the $2^{-\Delta\Delta Ct}$ method, based on RPMI-8226 levels. The standard deviation observed in three independent experiments was indicated.