Figure S1. Map of pLJM1-EGFP vector. EGFP, enhanced green fluorescent protein.

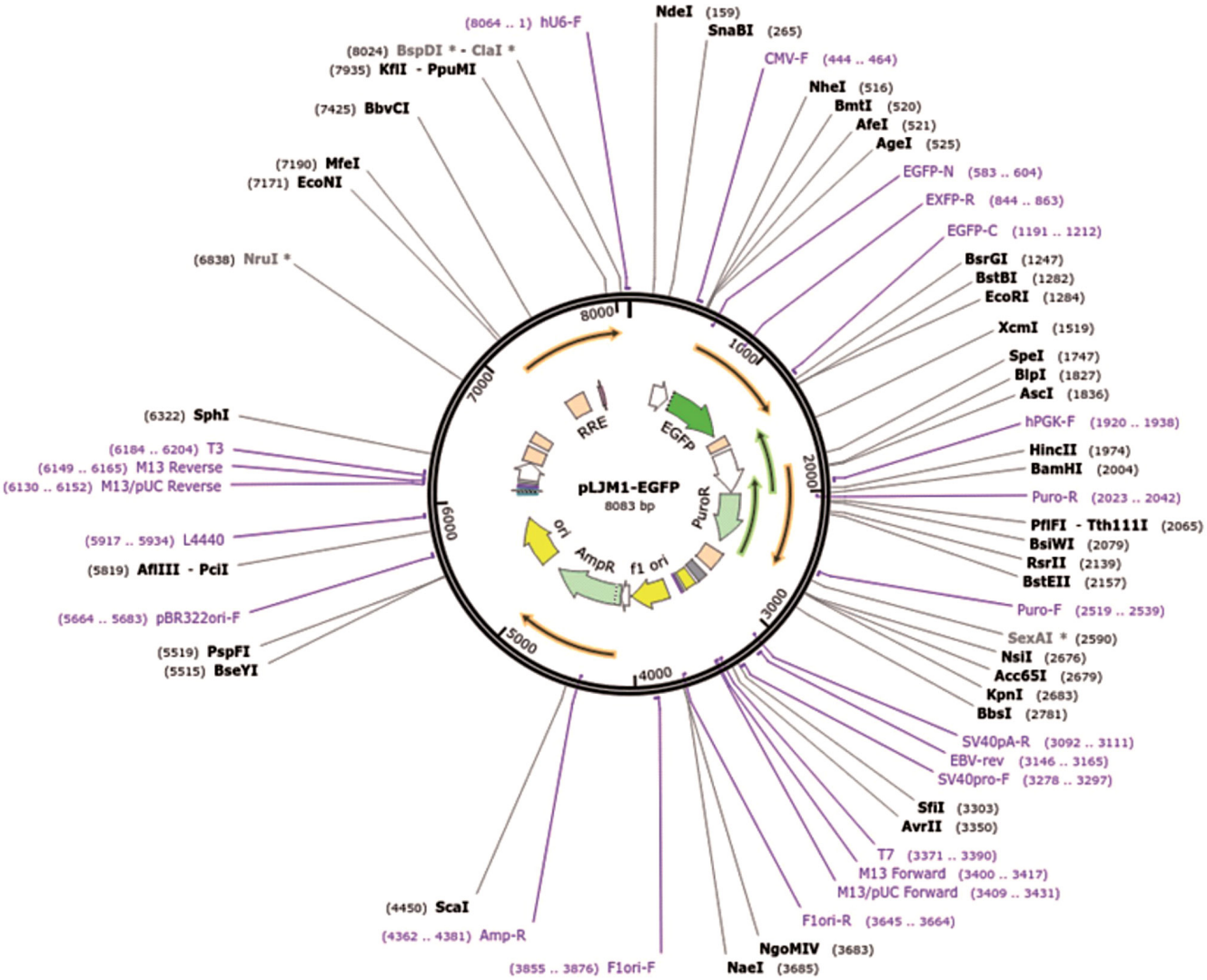

Figure S2. Map of pLKO.1-TRC cloning vector. TRC, The RNAi Consortium.

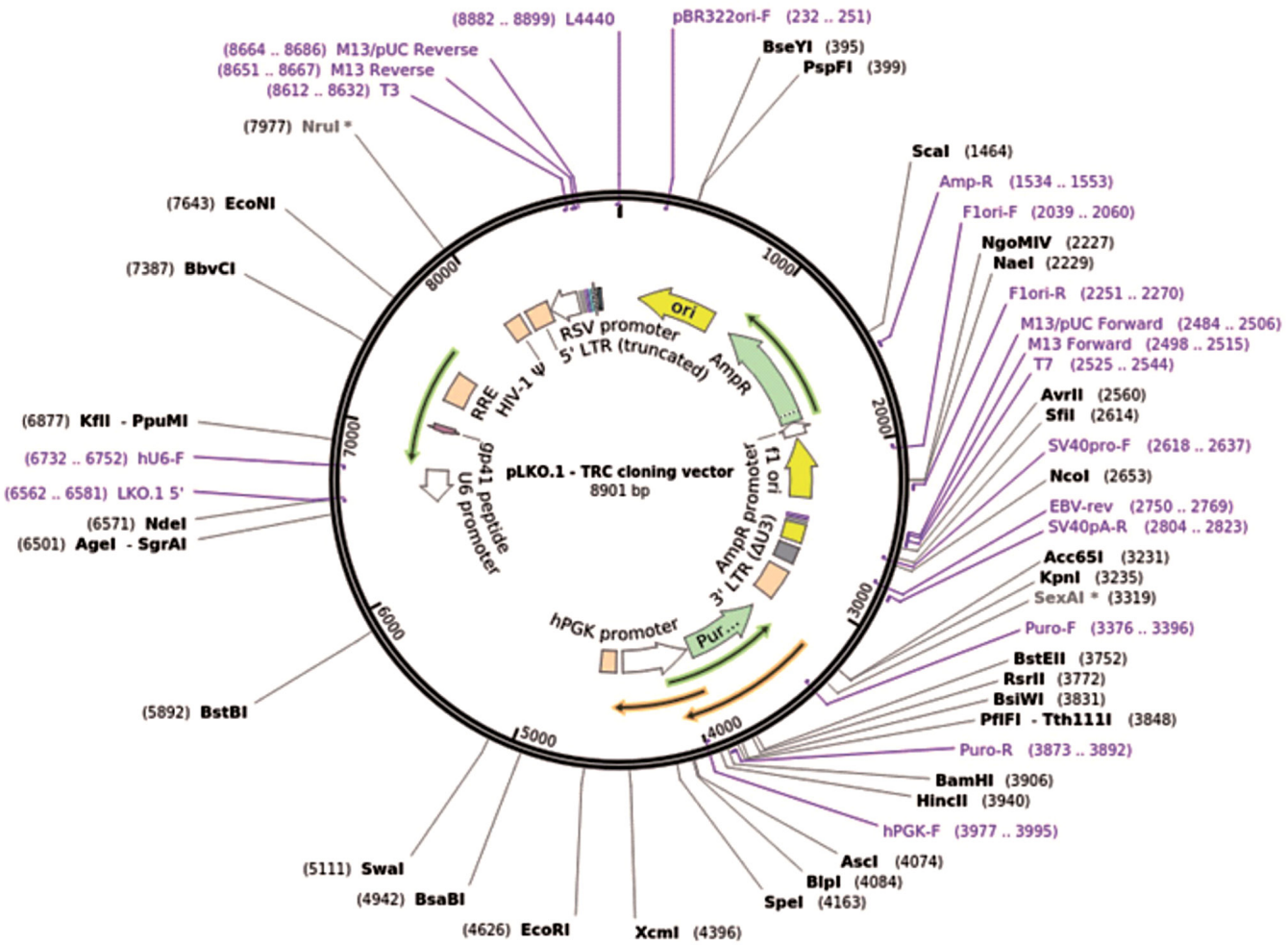

Figure S3. Lentivirus containing IDO-modifying plasmids was successfully constructed and transfected into 293FT cells. The IDO (A) overexpression or (B) knockdown recombinant plasmids were transformed into active *Escherichia coli* and amplified. The positive colonies were identified by bacterial PCR. Lanes 1-4 were all PCR products from individual colonies of *Escherichia coli* transformed with IDO-overexpressing recombinant plasmid (1,224 bp). Lanes 5-8 were the PCR products from individual colonies of *Escherichia coli* transformed with IDO-knockdown recombinant plasmid (258 bp). IDO, indoleamine 2,3-dioxygenase; sh, short hairpin RNA.

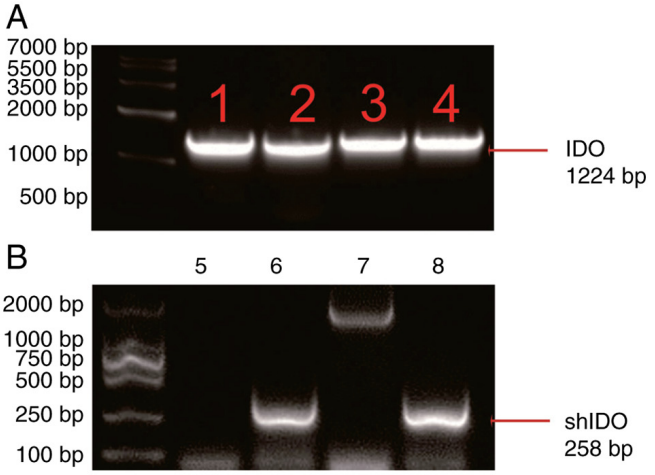

Figure S4. Sequence alignment and transfection 293FT cells. (A) Sequences inserted into vector were confirmed by comparing with the theoretical sequence of *shIDO*. (B) In the presence of liposome transfection reagent, the confirmed EGFP-IDO overexpression construct and two packaging plasmids were co-transfected into 293FT cells to produce effective lentivirus particles. The transfection efficiency in 293FT cells was observed under a fluorescence microscope (magnification, x10; scale bar, 230.5 μm). EGFP, enhanced green fluorescent protein; IDO, indoleamine 2,3-dioxygenase; shRNA/sh, short hairpin RNA.

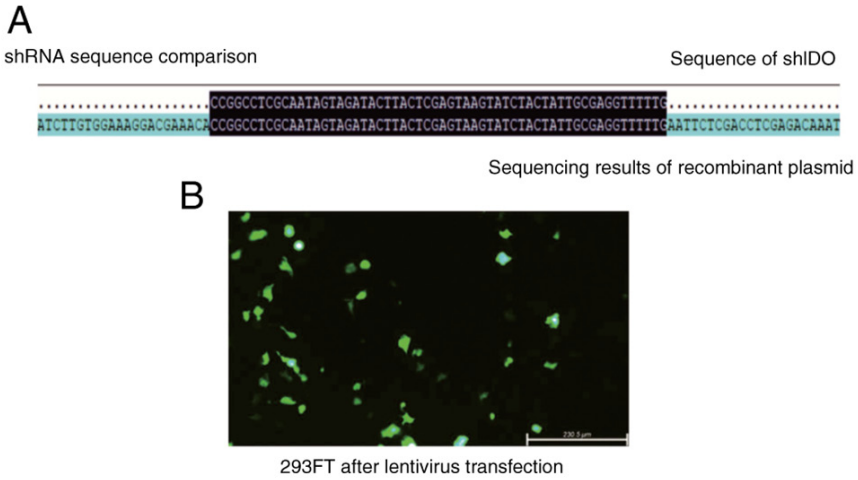

Figure S5. Chromatogram demonstration of Trp and Kyn in genetically modified DCs. Detection of Trp and Kyn concentrations in the culture medium samples of (A) IDO^{oe}DCs or (B) IDO^{kd}DCs with their controls and standard was performed by high-performance liquid chromatography. DC, dendritic cell; IDO, indoleamine 2,3-dioxygenase; Kyn, kynurenine; Trp, tryptophan; Vector^{Ctrl}DCs, DCs infected with control vector of pLJM1-EGFP; IDO^{oe}DCs, IDO-overexpressing DCs; vector^{ctrl}DCs, DCs infected with control vector of pLKO.1; IDO^{kd}DCs, IDO-knockdown DCs.

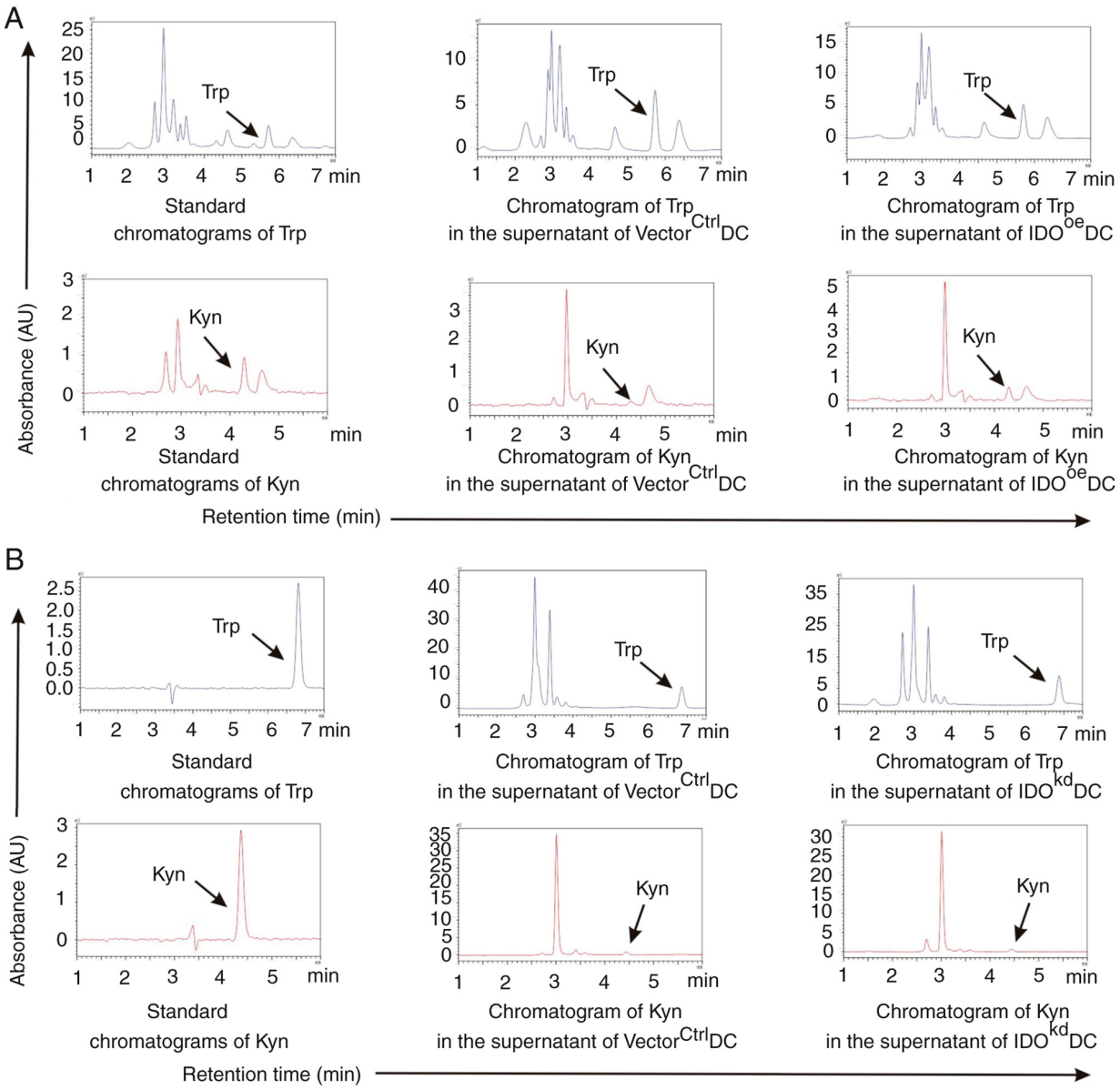

Figure S6. Effects of IDO on the survival and migration of DCs. (A) Flow cytometric analyses of viable cells stained with FITC-Annexin V and PI to detect the effect of IDO on the viability of DCs. The cells negative for both Annexin V and PI were considered alive. Representative scatter plots (left) and statistics (right) are shown. (B) After CFSE staining (37˚C for 10 min), both $10x10^6$ $vector^{ctrl}$DCs and IDO^{kd}DCs were subcutaneously injected into mice (n=3 mice per group). After 24 h, the popliteal lymph nodes of mice were extracted to make a single cell suspension. The $CFSE^+$DCs were detected by flow cytometry. Representative scatter plots (left) and statistics (right) are shown. The results are presented as the mean ± SEM (n=3). DC, dendritic cell; CFSE, carboxyfluorescein diacetate succinimidyl ester; IDO, indoleamine 2,3-dioxygenase; ns, not significant; FSC-A, forward scatter area; $vector^{ctrl}$DCs, DCs infected with control vector of pLKO.1; IDO^{kd}DCs, IDO-knockdown DCs.