

Hep3B cell line (ATCC HB-8064) was maintained in EMEM with 10% FBS at 37 °C in a humidified atmosphere (air supplemented with 5% CO<sub>2</sub>) and passaged with 0.05% trypsin at a subcultivation ratio of 1:3.  $1 \times 10^6$  Hep3B cells were mixed with siRNA loaded SP94-targeted DOPC protocells and siRNA loaded SP94-targeted DOTAP lipid nanoparticles such that the final siRNA concentration was 125 pM. Loaded siRNA silenced expression of either cyclin A2, cyclin B1, cyclin D1, cyclin E. As controls cells were incubated with free siRNA silencing expression of either cyclin A2, cyclin B1, cyclin D1, or cyclin E, and SP94-targeted protocell loaded with Silencer Select negative control siRNA. After incubation at 37 °C for various periods of time cells were harvested by gentle shaking in 5 mM EDTA for 30 min at 37 °C, centrifuged (1000 rpm, 1 min) to remove excess particles, fixed with 3.7% formaldehyde (15 min at room temperature), and permeabilized with 0.2% Triton X-100 (5 min at room temperature); cells were then exposed to a 1:500 dilution of either anticyclin A2, anticyclin B1, anticyclin D1, or anticyclin E, labeled using an Alexa Fluor 488 antibody labeling kit, for 1 h at 37 °C. Cells were washed three times and resuspended in D-PBS for flow cytometry analysis performed by a FACSCalibur flow cytometer (Becton Dickinson; Franklin Lakes, NJ, USA) equipped with BD CellQuest software, version 5.2.1. Samples were acquired with the forward scatter channel in linear mode, and all other channels in log mode. Events were triggered on the basis of forward light scatter, and, a gate was placed on the forward scatter-side scatter plot that excluded cellular debris. The initial protein concentration was taken to be the mean fluorescence intensity of antibody-labeled cells prior to treatment with siRNA-loaded protocells.