

## **Supplemental Information**

*Bioreactor for adenoviral vector propagation.* Adenovirus propagation was performed in a hollow fiber bioreactor (4300-C2011 cartridge, FiberCell Systems Inc., Frederick, MD). Briefly, the reactor was seeded with  $1 \times 10^9$  Freestyle 293-F cells (Life Technologies, Grand Island, NY) in Freestyle 293 media (Life Technologies, Grand Island, NY) and simultaneously inoculated with  $1 \times 10^5$  plaque forming units (PFU) per ml of adenovirus. One liter of media was supplied to the bioreactor and the pump was set to the maximum setting. Cells were incubated for three days at 37 °C and 8% CO<sub>2</sub>. At the end of the 3 day culture, the cells were harvested via manufacturer's recommendations and flushed with 15-30 ml of sterile PBS to collect all cells. Harvested cells and media were frozen and thawed twice prior to purification. Adenovirus was purified by ultracentrifugation through a discontinuous cesium chloride (CsCl) gradient followed by dialyzation and purification through a continuous CsCl gradient. Purified adenovirus was titered using the Adeno-X rapid titration kit (Clontech Laboratories Inc., Mountain View, CA) following the manufacturer's recommended procedure. One run yielded approximately 30 ml of virus at a titer of  $3 \times 10^{10}$  PFU/ml.