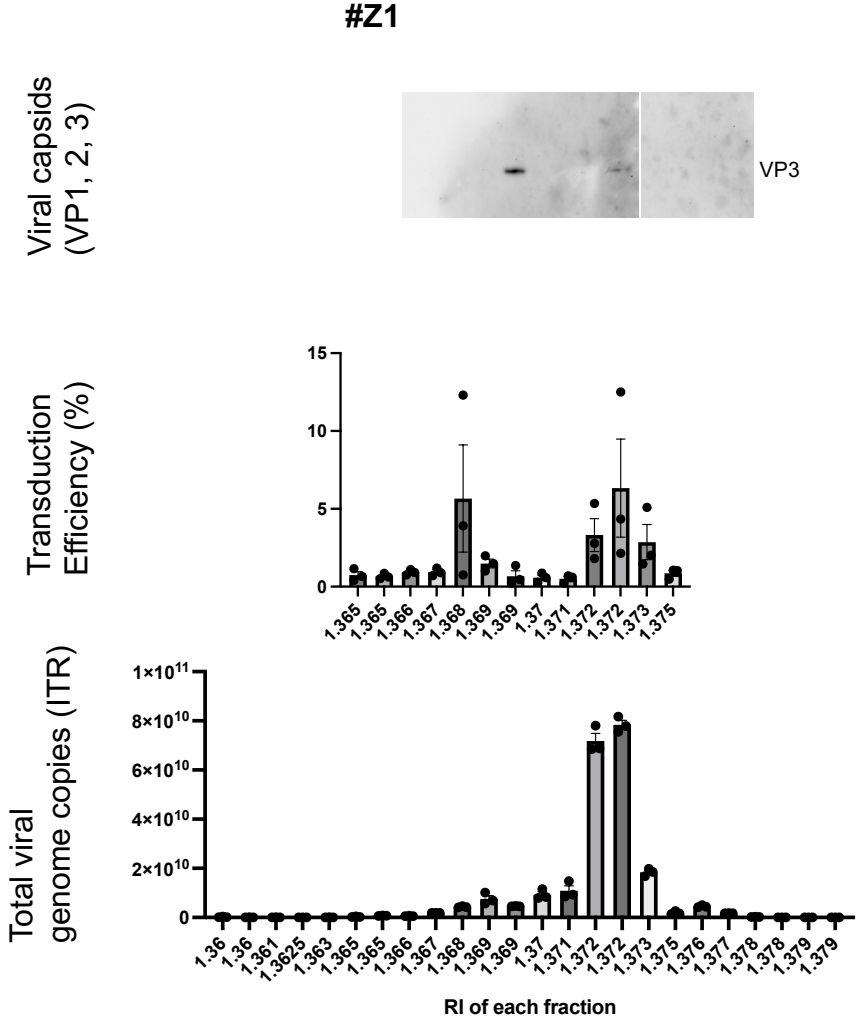
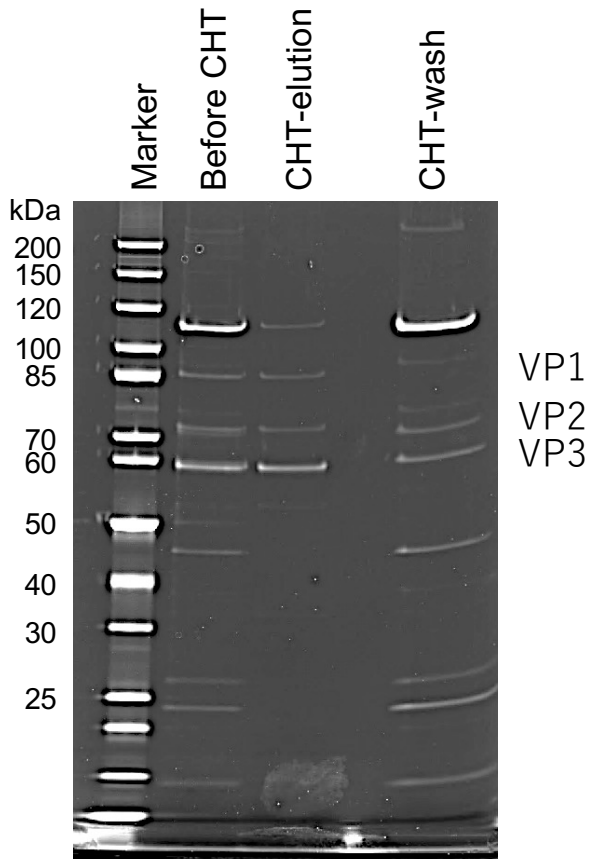
# Supplementary Figure1



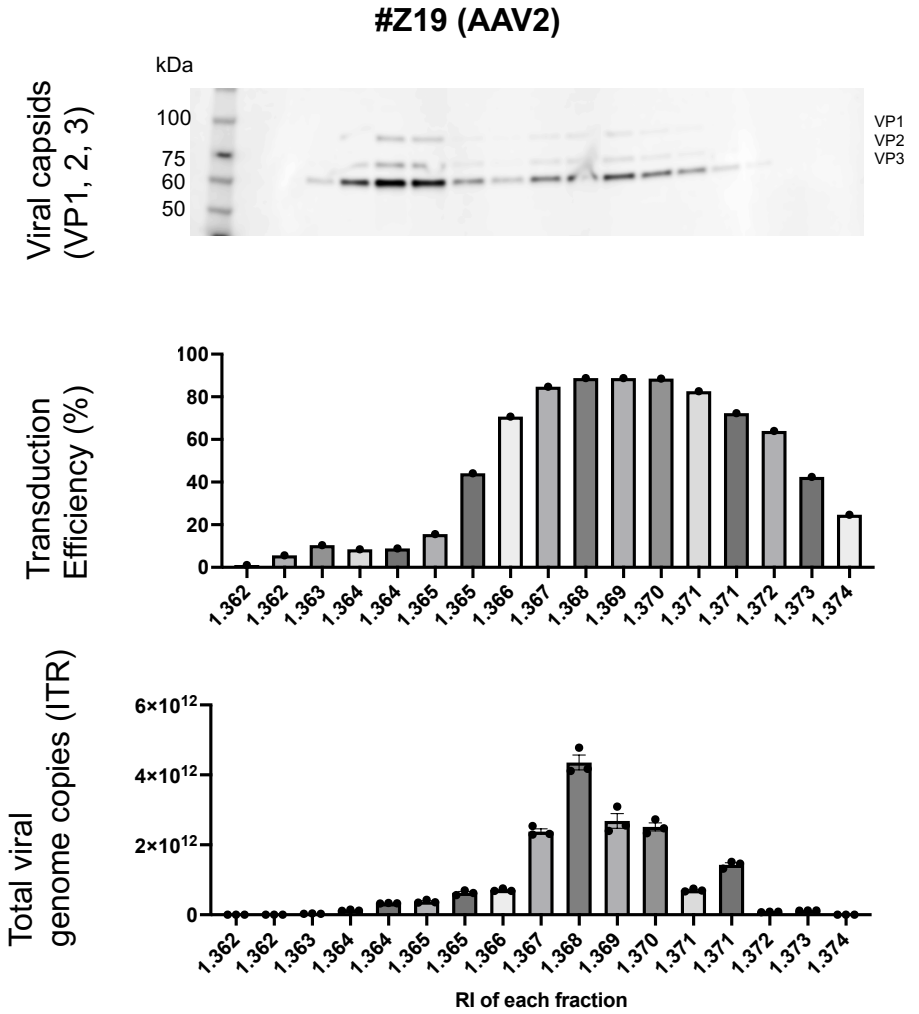

**Supplementary Figure 1. AAV vectors purified with four-step CsCl density-gradient ultracentrifugation separated for full-genome, intermediate, and empty particles were analyzed by genome copies, transduction efficiency, and AAV capsid proteins.** (Top) AAV capsids were detected by western blotting using anti-VP1 (82kDa), VP2 (67kDa), and VP3 (60kDa) antibodies. (Middle) AAV transduction efficiency was evaluated using ZsGreen1 expression in transduced 293EB cells (n=3, means±SEM). (Bottom) AAV genome copies were measured by quantitative polymerase chain reaction (qPCR) using inverted terminal repeat (ITR)-targeting primers (n=3, means±SEM).

# Supplementary Figure2




**Supplementary Figure 2. Polishing of AAV vectors with CHT remove HCPs.**
Each step of polishing by a hydroxyapatite column was analyzed by 4–15% (v/v) gradient gel SDS-PAGE and Oriole fluorescent gel stain.

# Supplementary Figure3




**Supplementary Figure 3. AAV vectors purified with two-step CsCl density-gradient ultracentrifugation separated for full-genome, intermediate, and empty particles were analyzed by genome copies, transduction efficiency, and AAV capsid proteins.** (Top) AAV capsids were detected by western blotting using anti-VP1 (82kDa), VP2 (67kDa), and VP3 (60kDa) antibodies. (Middle) AAV transduction efficiency was evaluated using ZsGreen1 expression in transduced 293EB cells (n=1, means±SEM). (Bottom) AAV genome copies were measured by quantitative polymerase chain reaction (qPCR) using inverted terminal repeat (ITR)-targeting primers (n=3, means±SEM).