

Description

Adeno-Associated Virus-DJ (AAV-DJ) is a synthetic serotype made from eight different wild-type AAV serotypes (AAV2, 4, 5, 8, 9, avian, bovine, and goat AAV) using DNA shuffling. These modifications give the AAV-DJ serotype improved transduction efficiency *in vitro* and *in vivo* compared to wild-type serotypes. Consequently, AAV-DJ can infect a broad range of cell types.

These AAV-DJ particles constitutively express the firefly (*Photinus pyralis*) luciferase under the control of a CMV promoter.

Application(s)

- Use as a positive control for transduction
- Optimize transduction assays and track protein expression over time

Serotype

AAV-DJ

Formulation

AAV-DJ was produced in HEK293-AAV cells and is supplied in PBS-MK (PBS Magnesium-Potassium) buffer containing 0.01% Pluronic F68.

Purification

The purity of the AAV particles was confirmed to be greater than 90% by staining with One-Step Lumitein™ UV Protein Gel Stain (Biotium #21005-1L). The purity will vary with each lot; the exact value is provided with each shipment.

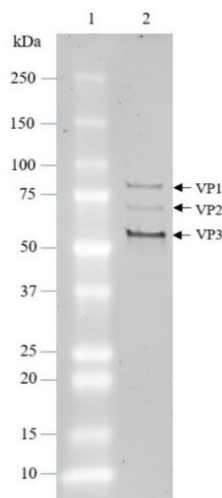


Figure 1. Purified AAV-DJ Luciferase particles.

Staining of a 4-20% SDS-PAGE gel. The protein ladder is in lane 1, and 2×10^9 VG (vector genome) of AAV-DJ was loaded in lane 2. AAV viral proteins VP1, VP2, and VP3 are labeled.

Titer

Two vials (50 μ l x 2) of AAV at a titer $\geq 1 \times 10^{12}$ vector genomes/ml. The titer is determined by qPCR and will vary with each lot; the exact value is provided with each shipment.

Storage

AAV is shipped with dry ice. For long-term storage, it is recommended to store AAV at -80°C . Avoid repeated freeze-thaw cycles. Titers can drop significantly with each freeze-thaw cycle.

Biosafety

Recombinant AAV is inherently replication-deficient and not known to cause any human diseases. Additionally, following transduction, AAV vectors exist episomally and do not integrate into or disrupt the host cell's genome. AAV requires the use of a Biosafety Level 1 facility. BPS Bioscience recommends following all local, federal, state, and institutional regulations and using all appropriate safety precautions.

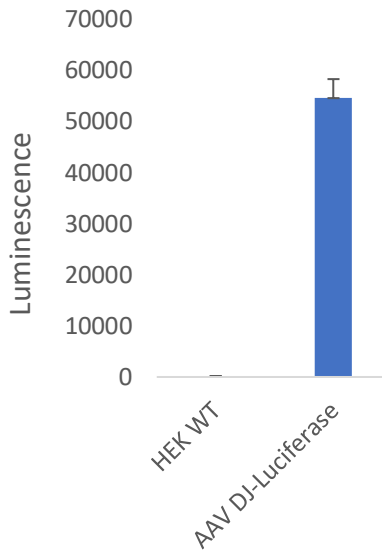
Validation Data

Figure 2. Luciferase activity of HEK293 cells transduced by AAV-DJ Luciferase particles. 1×10^5 cells/well were transduced in a 6-well plate with AAV-DJ Luciferase at an MOI of 2×10^4 . After 72 hours of transduction, transduced cells or parental HEK293 cells were seeded in a 96-well plate at a density of 2×10^4 cells/well, and luciferase activity was measured using the ONE-Step™ Luciferase Assay System (BPS Bioscience #60690)

Notes

The AAV-DJ viruses are covered under several patents, including U.S. Patent Nos. 7,588,772, 8,067,014, 8,574,583, and 8,906,387, as well as corresponding foreign patents applications and patent rights. AAV-DJ is used under a license agreement.

Troubleshooting Guide

Visit bpsbioscience.com/lentivirus-faq for detailed troubleshooting instructions. For all further questions, please email support@bpsbioscience.com.

Related Products

Products	Catalog #	Size
AAV1 ZsGreen	78443	50 μl x 2
AAV2 Luciferase-mCherry	78472	50 μl x 2
AAV-9 SaCas9	78486	50 μl x 2
AAV-DJ Luciferase-eGFP	78460	50 μl x 2