

Master AAV design and overcome production challenges

Gene therapy research has reached a critical point, where novel therapies demand the highest level of precision. PacBio® long-read sequencing technology and Form Bio's streamlined data analysis now offer an all-in-one solution to optimize your AAV vector designs. This workflow can help enable desired gene therapy outcomes, providing you with the confidence and assurance to take your gene therapy research to new heights and stay ahead of the curve.

**FORM
BIO**



Profile packaged genomes as a single intact molecule



Assess vector integrity without extensive preparation



Reveal the relative distribution of truncated genomes vs full-length genomes in vector preparation



Detect reverse-packaged genomes that encompass sequences originating from plasmid backbone



Identify sequences from packaging helper plasmids

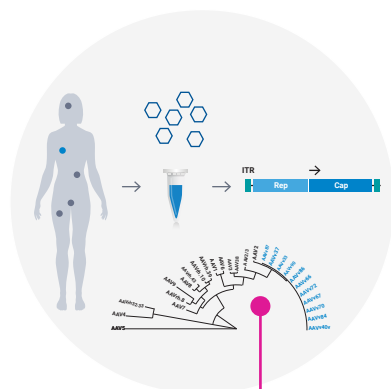


Find host-cell genomics sequences that are chimeric with inverted terminal repeat-containing vector sequences

Leverage HiFi sequencing and Form Bio to accurately characterize your AAV product

Phase 1: Discovery

Use HiFi reads to sequence tissues for novel AAV vector discovery

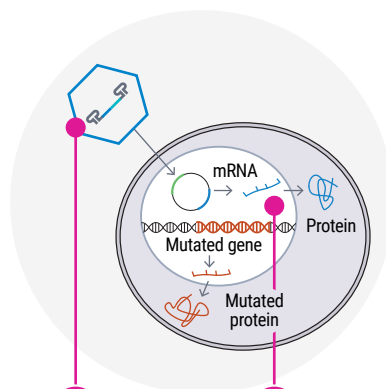


1

Identify novel AAV vectors

Phase 2: Design

Use HiFi reads to improve vector design



2

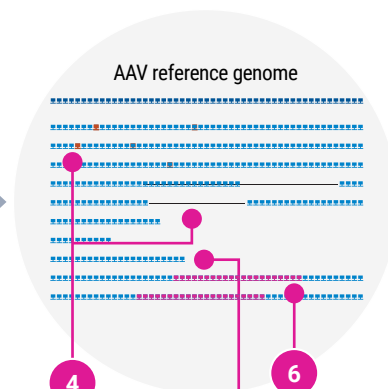
Identify fragmentation + truncation issues in vector design

3

Verify desired transcript is expressed

Phase 3: Evaluate

Use HiFi reads to identify truncation, impurity, and host integration events



4

Identify impurities, including mismatches + structural variations

5

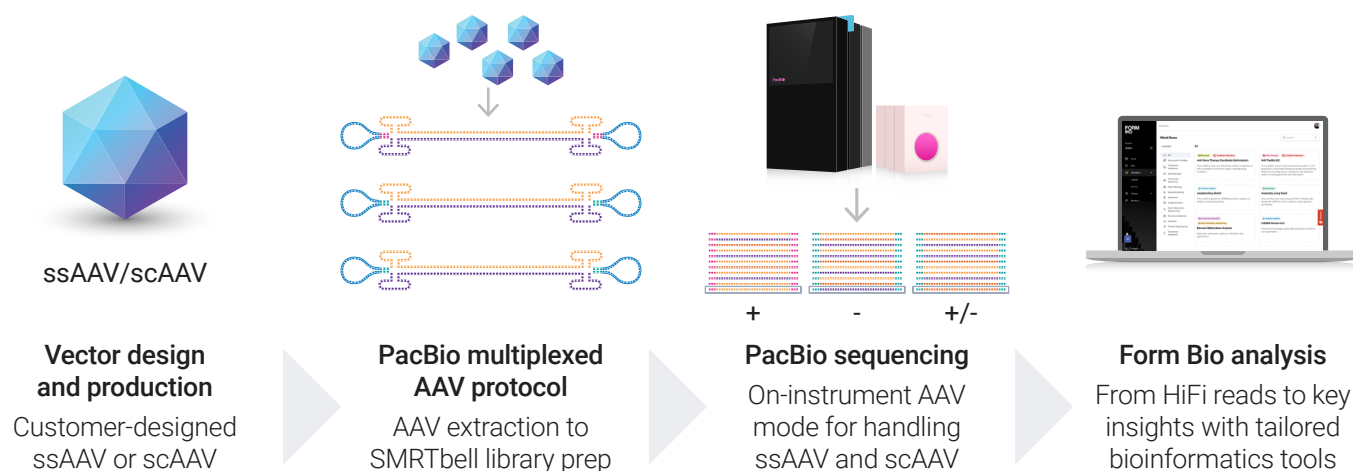
Identify truncation events

6

Identify host integration events

An end-to-end workflow with PacBio and Form Bio

Save time and resources using established PacBio protocols and automated analysis with Form Bio



Form Bio provides software and AI-based solutions that empower cell and gene therapy researchers to address their toughest challenges

A complete, easy-to-use, and fully serviced bioinformatics solution for secondary analysis of PacBio HiFi reads



PacBio verified and compatible



Easy-to-use, point-and-click experience



PacBio-specific workflows for frequently performed analysis



Built-in toolbox for common, lower-level analysis tasks



Hands-on assistance from our experts when you need it

Form Bio makes it easy to:

- ✓ **Assess quality** of AAV production
- ✓ **Optimize** the nucleotide sequence of an AAV construct
- ✓ **Design guide RNA sequences** for genome-editing experiments
- ✓ **Assemble high-quality genomes** from whole genome sequencing data
- ✓ **Collaborate, visualize, and share results** in a secure, cloud-based platform



Add long-read AAV sequencing to your research:
pacb.com/gene-therapy



Analyze PacBio data with Form Bio tools:
formbio.com/pacbio

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