POLARIS-101™

Next Gen Muscle Tropic AAV

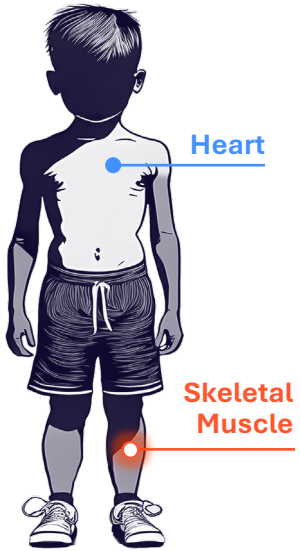
Solid Bio, Shaping the Future of Gene Therapy

SOLID BIOSCIENCES

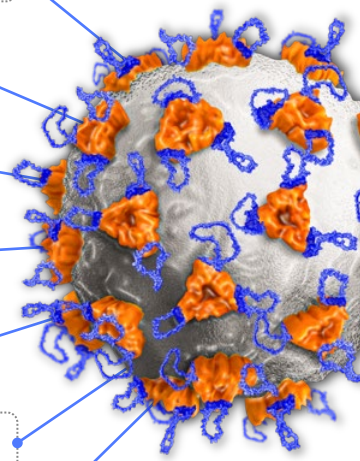
© 2026 Solid Biosciences – Non-Confidential

POLARIS-101™ is a Next-Generation Capsid With Improved Muscle Tropism, Enabling Safe and Effective Systemic Administration

POLARIS-101™ offers potential for transformative efficiency with effective skeletal muscle and cardiac tissue targeting and lower toxicity risks



- High-efficiency transduction enables use of lower doses
- Reduced liver biodistribution and off-target effects improve safety
- Greater skeletal and cardiac muscle uptake improve biodistribution
- Optimized transduction kinetics drive rapid and robust expression
- Maximized yields and percentage of full capsids improve COGS
- Optimal clearance timing supports shorter, safer systemic exposure
- Minimal cross-reactivity offers potential for redosing after first-generation capsids (e.g., AAVrh74)



POLARIS-101™ formerly known as AAV-SLB101. Data on file. Solid Biosciences. 2025.

© 2026 Solid Biosciences – Non-Confidential

Accelerating Innovation: Solid's AAV Gene Therapy Development Kit Available for Partnership

GROWING BODY OF CLINICAL DATA

Muscle biopsies at Day 90 and Day 360 in ambulatory boys with Duchenne*

- Safety reported in 39 pts as of February 23, 2026
- Transduction
- Expression
- Distribution
- Disease biomarkers

ROBUST PRECLINICAL DATA

Mouse: Biodistribution and expression in multiple models

NHP: GLP biodistribution and toxicology (Cambodian and Mauritian cynos)

Pig: Ex vivo heart

Human: Cardiomyocytes

LEADING-EDGE CMC TECHNOLOGY

POLARIS-101™ RepCap plasmid provided free of charge. Vector available for cost

Dual plasmid design to increase yield, improve full-empty capsid ratio

Manufacturing
Fee for service: research supply & platform access available for partnership

50+ agreements, including licenses, executed with corporations, institutions, and academic labs for use of POLARIS-101™

*Phase 1/2 INSPIRE DUCHENNE clinical trial (NCT06138639)

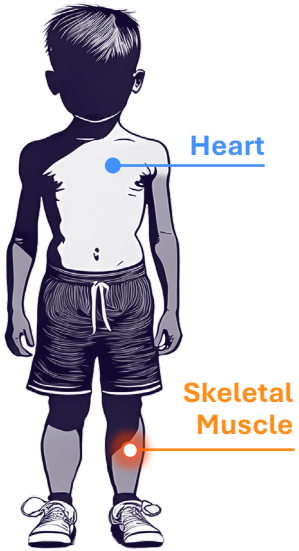
Pts=participants; Cap=capsid; CMC=clinical manufacturing capabilities; GLP=good laboratory practice; Rep=replication.

© 2026 Solid Biosciences – Non-Confidential

SOLID BIOSCIENCES

POLARIS-101™: A Novel Capsid Showing Promising Clinical Signals in Duchenne Muscular Dystrophy

SGT-003 Solid's next-gen, investigational microdystrophin gene transfer therapy that uses POLARIS-101™



INSPIRE DUCHENNE Phase 1/2 Clinical Study Overview

- Single 1.0×10^{14} vg/kg IV dose of SGT-003

Overall Safety Summary

- **41 participants (aged 1-10 years; maximum weight of 39.7 kg) dosed as of March 18, 2026**
- **No evidence of drug-induced liver injury, myocarditis or TMA/aHUS**

POLARIS-101™ is the first systemically delivered, muscle- and cardiac-tropic next-generation capsid tested in the clinic

AAV=adeno-associated virus; aHUS=atypical hemolytic uremic syndrome; IV=intravenous; TMA=thrombotic microangiopathy.

Data on file. Solid Biosciences. 2025.

© 2026 Solid Biosciences – Non-Confidential

SOLID BIOSCIENCES

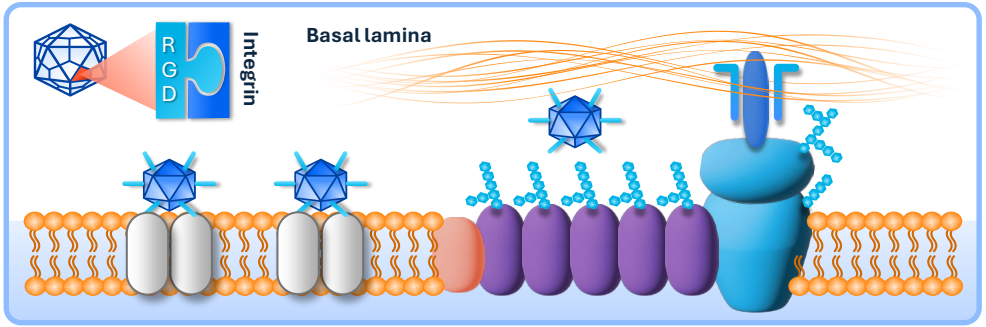
POLARIS-101™ Enhances Muscle Targeting Through Novel Integration of a Multivalent RGD Motif[1,2]

POLARIS-101™ was engineered to include an RGD motif inserted into the VR-VIII loop of AAV9, resulting in up to 60 copies of the peptide displayed across the capsid surface[3,4]

The RGD motif enables interaction with integrin receptors expressed in specific tissue microenvironments

- These interactions bias capsid uptake toward skeletal and cardiac muscle

POLARIS-101™ Proposed Mechanism of Action



POLARIS-101™ acts via an entry pathway regulated by integrins, resulting in

- Increased binding and uptake in muscle
- Increased protein expression

RGD–integrin–mediated uptake preferentially targets skeletal and cardiac muscle due to integrin upregulation, especially in diseased tissue, limiting off-target uptake

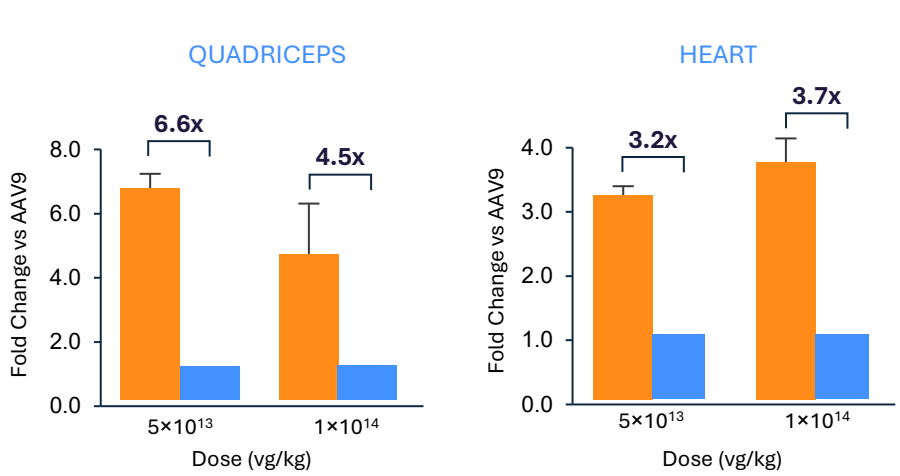
RGD=arginylglycylaspartic acid.

1. Tabebordbar M, et al. *Cell*. 2021;184(19):4919-4938.e22. 2. Weinmann J, et al. *Nat Commun*. 2020;11(1):5432. 3. DiMattia MA, et al. *J Virol*. 2012;86(12):6947-6958. 4. Drouin LM, Agbandje-McKenna M. *Future Virol*. 2013;8(12):1183-1199

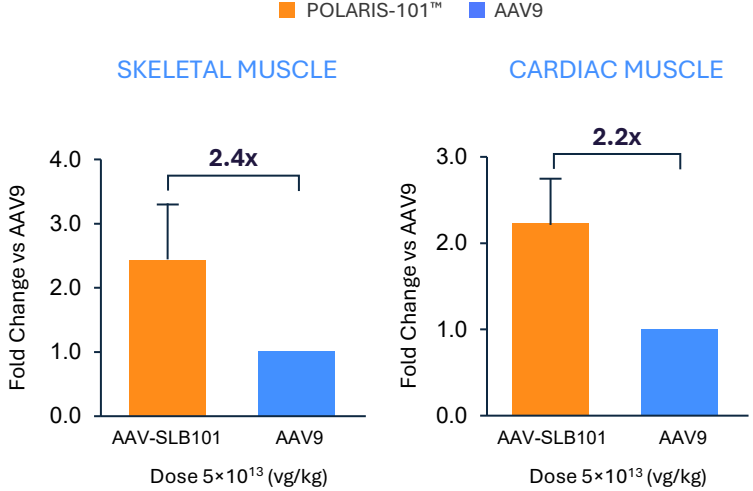
© 2026 Solid Biosciences – Non-Confidential

POLARIS-101™ Shows Higher Skeletal and Cardiac Muscle Biodistribution vs AAV9 in Mouse and NHPs

Biodistribution in Isolated Tissues (Day 28 Post-dose)[a]



Biodistribution in Isolated Tissues (Day 28 Post-dose)[b]



Efficient vector delivery to muscle at lower doses supports dose optimization while limiting total systemic viral load, consistent across multiple species.

[a]Average fold differences calculated from the 5 skeletal muscle tissues and 3 regions of cardiac tissue sampled.
Data on file. Solid Biosciences. 2025.

© 2026 Solid Biosciences – Non-Confidential

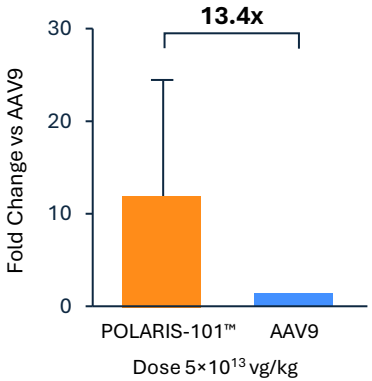
SOLID BIOSCIENCES

POLARIS-101™ Demonstrates High-Efficiency Expression vs AAV9 in NHPs and Human Cardiomyocytes

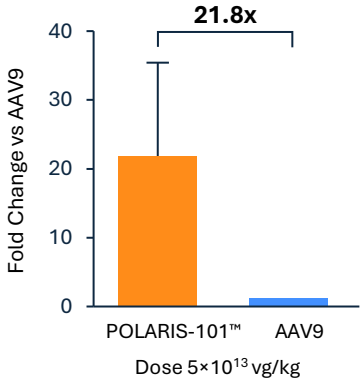
Expression Efficiency (Luciferase Activity in NHPs)[a,b]

POLARIS-101™ AAV9

SKELETAL MUSCLE



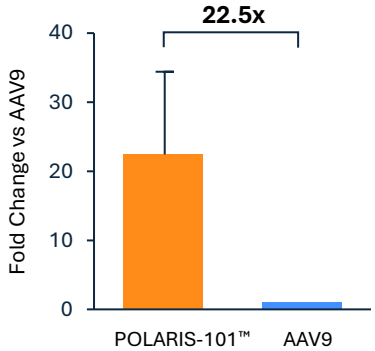
CARDIAC MUSCLE



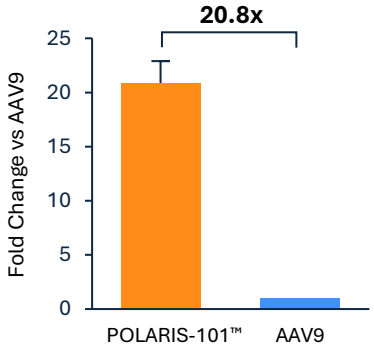
Expression Efficiency (Luciferase Activity In Vitro)

POLARIS-101™ AAV9

HUMAN DUCHENNE MYOTUBES[c]



HEALTHY iPSC-DERIVED CARDIOMYOCYTES



These results reflect strong preclinical-to-clinical translation, supporting higher expression at lower doses and limited off-target exposure

iPSC=induced pluripotent stem cell; NHP=nonhuman primate. CMV-Luciferase

[a]n=2 per group. [b]Average fold differences calculated from the 5 skeletal muscle tissues sampled and 3 regions of cardiac tissue sampled.[c]n=3 cell lines per treatment, Dose 3×10^6. [d]Dose 3×10^5.

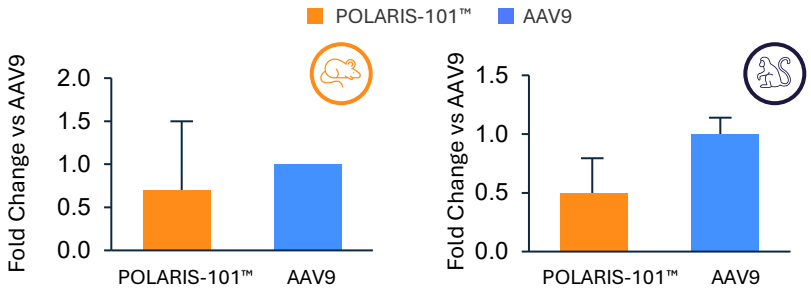
Data on file. Solid Biosciences. 2025.

© 2026 Solid Biosciences – Non-Confidential

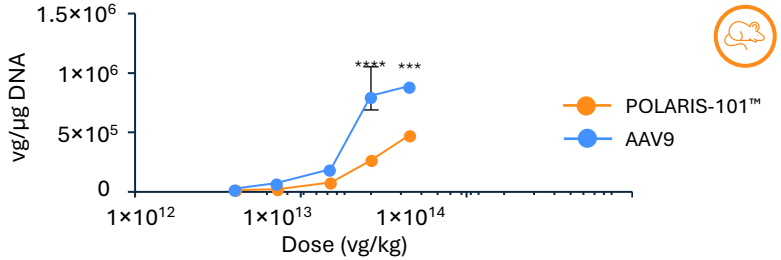
SOLID BIOSCIENCES

Human Phase 1/2 INSPIRE DUCHENNE Trial Supports Preclinical Data Showing Reduced Liver Biodistribution of POLARIS-101™

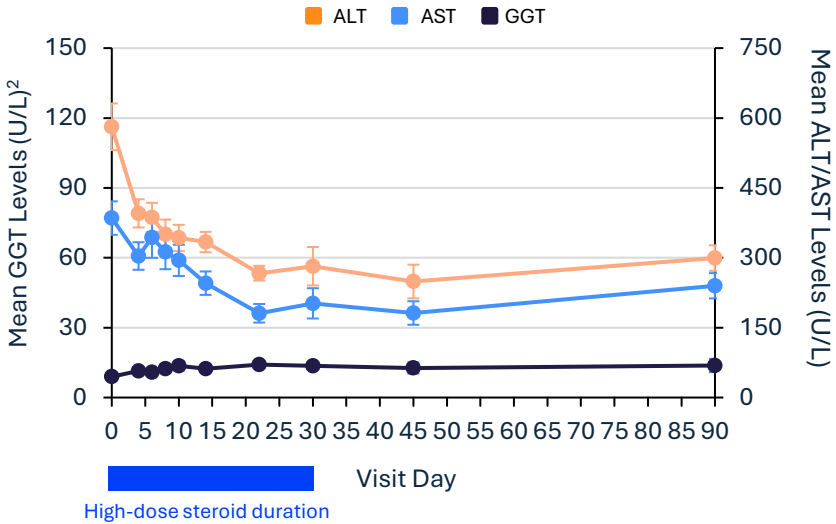
AAV Biodistribution to Liver



Dose-Dependent Reduction in Liver Transduction[a]



Liver Biomarkers in Participants Dosed Using POLARIS-101™[b,c]



POLARIS-101™ has been generally well tolerated in the INSPIRE DUCHENNE trial with no drug-induced liver injury observed as of the safety cutoff date[c]

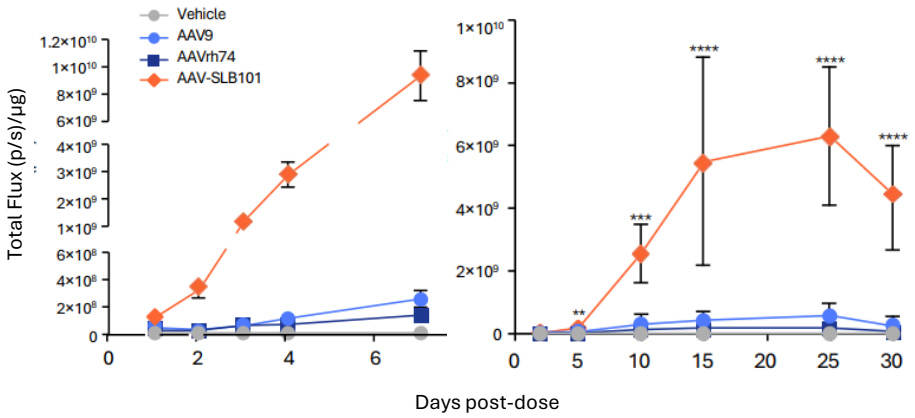
ALT=alanine aminotransferase; AST=aspartate aminotransferase; GGT=gamma-glutamyl transferase.

[a]Asterisks indicate statistical significance between groups (***P<0.001, ****P<0.0001). [b]n=24[includes only participants with data to Day 90]. [c]Data cutoff of March 11, 2026. 1. Values are means ± standard error of the mean. 2. Error bars for GGT data are present but obscured by their associated data points due to the small range for standard error. Data on file. Solid Biosciences. 2026.

© 2026 Solid Biosciences – Non-Confidential

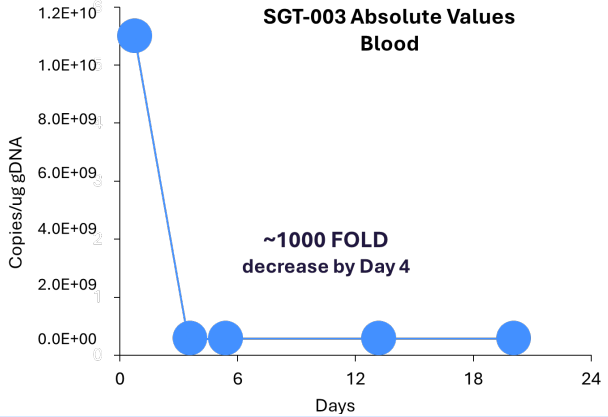
POLARIS-101™ Exhibits Enhanced Kinetics Enabling Rapid Expression vs AAV9 and AAVrh74 and Optimal Clearance Timing

Luciferase Activity (Whole Body IVIS)



POLARIS-101™ expression detected 2 days post-dose, remaining significantly higher than AAV9 or AAVrh74

Mean Clearance of POLARIS-101™[1]



Rapid clearance of POLARIS-101™ seen despite higher viral load in whole blood[2]

POLARIS-101™ clearance is optimized to maximize transduction, but clear before adaptive immunity is mounted

IVIS=in vivo imaging system.

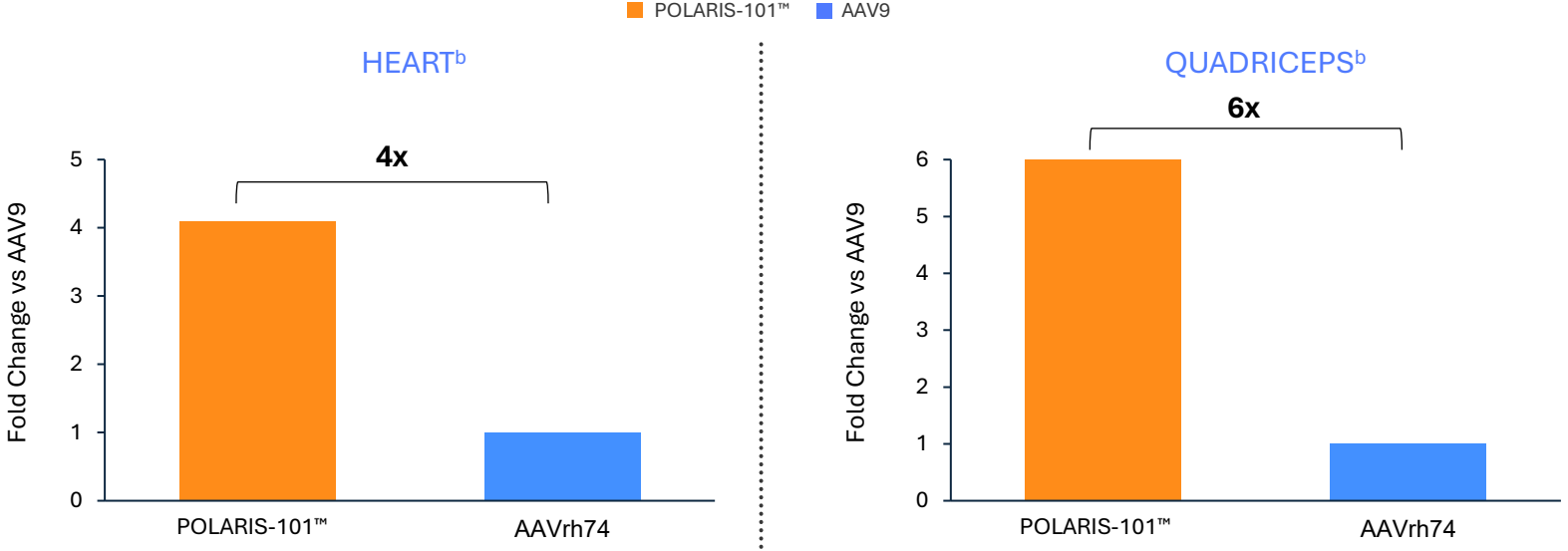
1. Data on file. Solid Biosciences. 2025. 2. Agarwal S, et al. Blood Adv. 2024;8(17):4606-4615.

© 2026 Solid Biosciences – Non-Confidential

POLARIS-101™ Leads to Greater Protein Expression vs AAVrh74 in NHPs

Expression Efficiency (LCMS - CK8-Microdystrophin in NHPs)

Dose 1.0×10^{14} vg/kg[1,a]



POLARIS-101™ leads to greater protein expression vs AAVrh74 in skeletal and cardiac muscle[2]

LCMS=liquid chromatography mass spectrometry.

[a]N=5 for each tissue/capsid. [b]N=3 for POLARIS-101™. N=2 for AAVrh74.

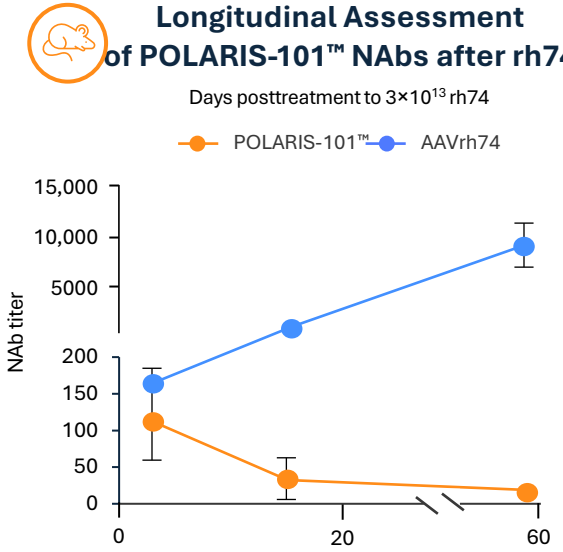
1. Data on file. Solid Biosciences. 2025. 2. Chan C, et al. *Viruses*. 2023;15(11):2168.

© 2026 Solid Biosciences – Non-Confidential

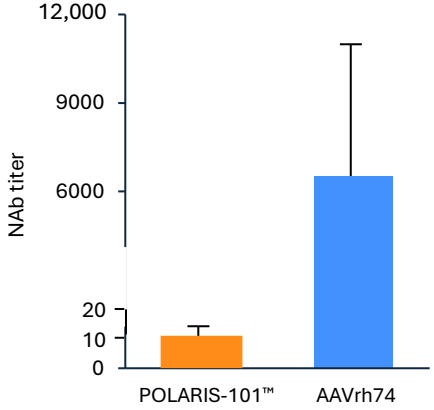
Redosing Potential: POLARIS-101™ Demonstrates Low NAb Titers After AAVrh74 Dosing in Multiple Species

Assessment of NAbs After AAVrh74 Dosing

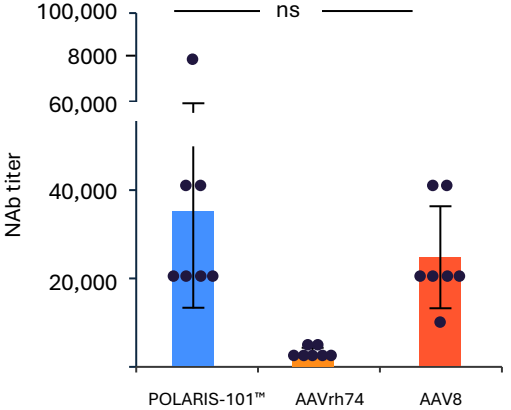
Longitudinal Assessment of POLARIS-101™ NAbs after rh74



Day 30 Assessment of POLARIS-101™ NAbs after rh74 (n=6)



NAb Titers in Humans Dosed With AAVrh74 (n=7)



Prior exposure to AAVrh74 does not lead to high NAb formation against POLARIS-101™, setting the stage for potential repeat or sequential dosing strategies

NAb=neutralizing antibody.
Data on file. Solid Biosciences. 2025.

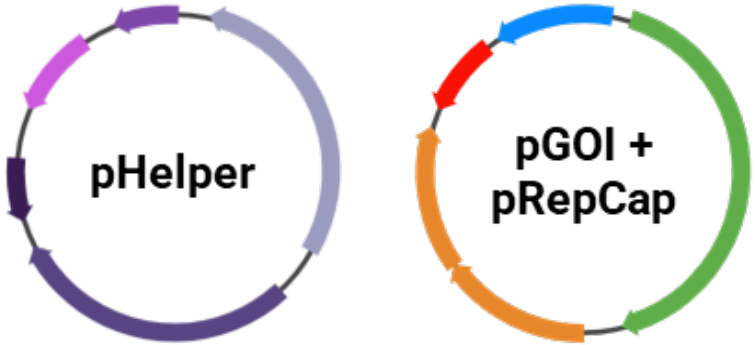
© 2026 Solid Biosciences – Non-Confidential

Solid's Manufacturing Platform

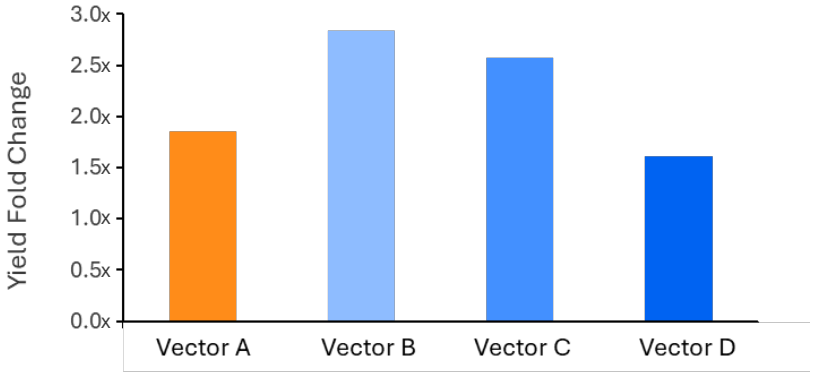
© 2026 Solid Biosciences – Non-Confidential

Solid's Dual Plasmid Design Delivers a Significant Yield Increase Compared to Standard Triple Plasmid Transfection

Solid Dual Plasmid Design



Relative Yield Improvement Using Solid Dual Plasmid vs 3 Plasmid System*



1.6-2.8x increase in upstream yields with Solid's dual plasmid independent of capsid/GOI combination

*detailed manufacturing data available under CDA

*Relative yield increase when using Solid Dual Plasmid transfection compared to triple plasmid transfection

© 2026 Solid Biosciences – Non-Confidential

By Increasing Yields and Purity, Solid's Manufacturing Platform Has The Potential to Further Enhance Safety and Reduce CoGS

Efficient full capsid enrichment → **Scalable to 500L with identical performance** → **High, consistent yield & recovery across sites and scales**

>200 operating parameters defined between the production bioreactor and drug substance step with deep process knowledge and robustness established around ~40 of these parameters to ensure consistent batch to batch yield & quality

Solid's manufacturing platform process is scalable and transferrable

ddPCR = digital droplet polymerase chain reaction, vg/mL = vector genome per milliliter, brx = bioreactor

**detailed manufacturing data available under CDA*

© 2026 Solid Biosciences – Non-Confidential

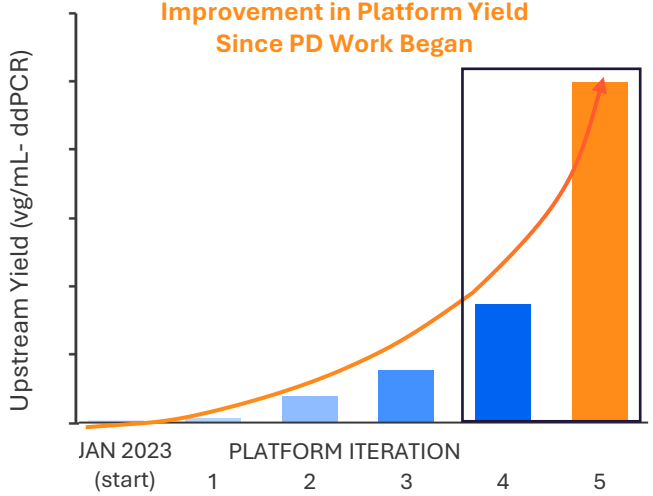
SOLID BIOSCIENCES

Pioneering Best Practices to Continuously Innovate and Stay at the Forefront of CMC Excellence

Solid Platform Improvements

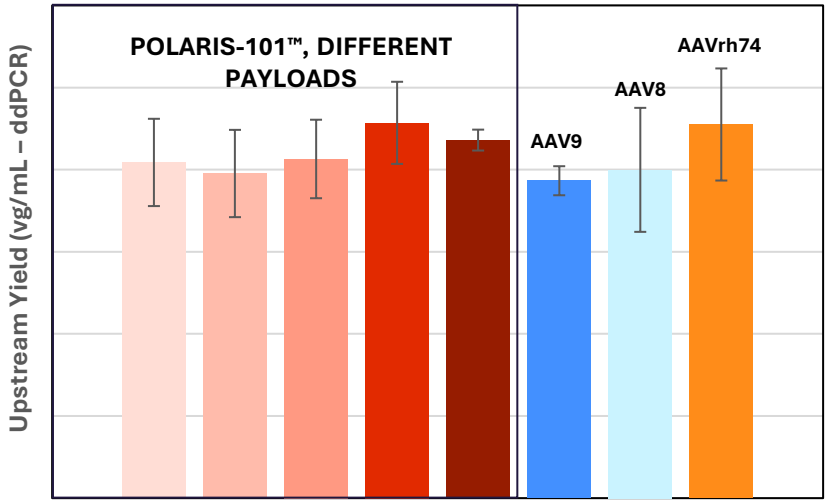
>Up to100x

Improvement in Platform Yield Since PD Work Began



Platform iteration 5 was designed to seamlessly scale and integrate into the 500L process established at Solid's CDMO partner

Platform yields are consistently high independent of capsid or GOI (Platform iteration 4)



**detailed manufacturing data available under CDA*

ddPCR = digital droplet polymerase chain reaction, vg/mL = vector genome per milliliter, brx = bioreactor

Error bars represent average of replicate runs +/- 1 SD, GOI = Gene of Interest

© 2026 Solid Biosciences – Non-Confidential

SOLID BIOSCIENCES

Thank you

Please Contact BusinessDevelopment@SolidBio.com For Additional Information

SOLID BIOSCIENCES