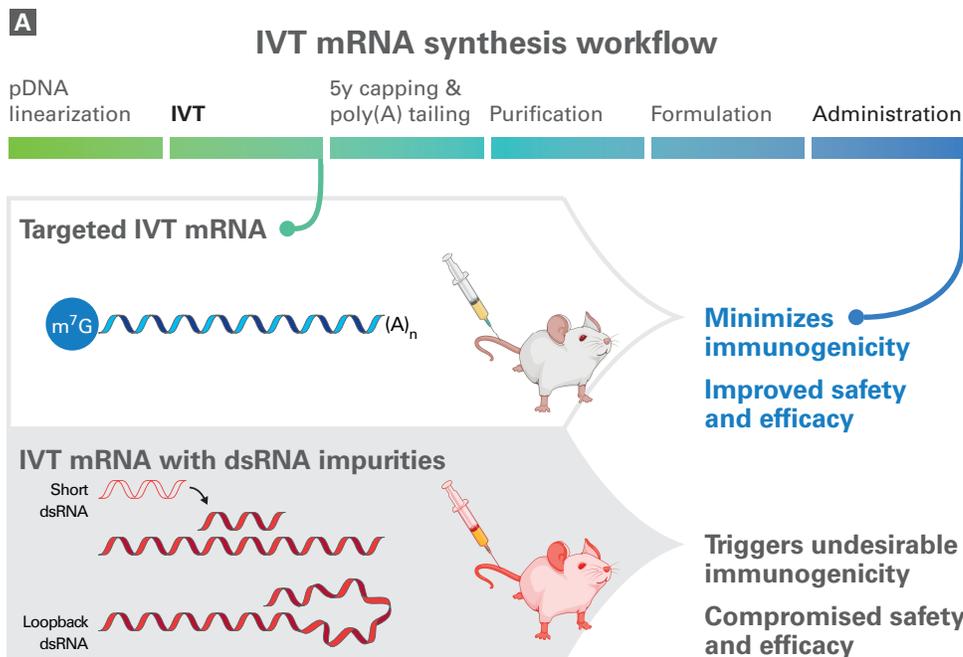


## Minimize double-stranded RNA (dsRNA) byproducts

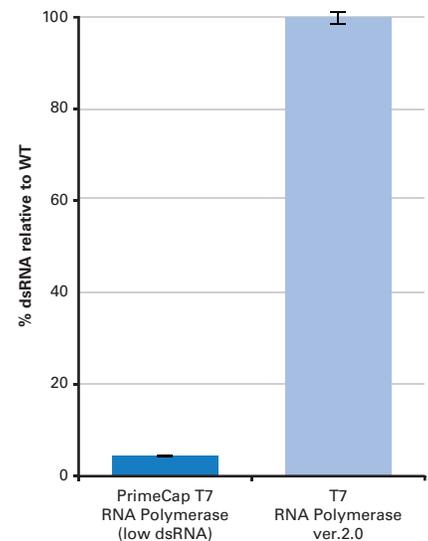
PrimeCap T7 RNA Polymerase (low dsRNA) was engineered to reduce dsRNA byproducts while maintaining high yields of mRNA. PrimeCap T7 RNA Polymerase can help you:

- Achieve exceptionally high yields of mRNA (>160 µg/20 µl reaction)
- Reduce dsRNA byproducts (>90%)
- Confidently use high reaction temperatures (up to 52°C)

## Reduce extensive in vitro transcription (IVT) optimization and downstream RNA purification



**B** dsRNA production



**Generation of dsRNA during IVT. Panel A.** A schematic illustration of mRNA synthesized by PrimeCap T7 RNA Polymerase (low dsRNA) during mRNA synthesis (top) and IVT mRNA with dsRNA byproduct (bottom). **Panel B.** PrimeCap T7 RNA Polymerase (low dsRNA) produces significantly less dsRNA compared to T7 RNA Polymerase ver.2.0 (WT: Cat. # 2541A) using FLuc control template. Percentage of dsRNA generated by PrimeCap T7 RNA Polymerase (low dsDNA) as compared to T7 RNA Polymerase ver.2.0 was determined by a dsRNA ELISA kit.



## PRODUCT

Cat. #	Product	Package Size
2560A	PrimeCap T7 RNA Polymerase (low dsRNA)	20,000 U

## RELATED PRODUCTS

### Template preparation

6146	Template Vector (BspQ I) for T7 mRNA Synthesis	10 uL
1227A/B	BspQ I	500 U/2,500 U
638947	In-Fusion® Snap Assembly Master Mix	10 Rxns
636763	Stellar™ Competent Cells	10 x 100 uL



### RNA synthesis

2450A/B	Pyrophosphatase (inorganic)	10/50 U
2315A/B	Recombinant RNase Inhibitor ver.2.0	5,000/25,000 U
4041-4044	Ribonucleoside triphosphates (ATP, GTP, CTP, UTP)	25 umol each



### 5' Capping

2480A/B	Faustovirus Capping Enzyme (S17)	500/2,000 U
2460A/B	Vaccinia Capping Enzyme	500/2,000 U
2470A/B	mRNA Cap 2'-O-Methyltransferase	2,500/10,000 U



Visit [takarabio.com/learn-IVT](https://www.takarabio.com/learn-IVT)

that's  
**GOOD**  
science!®

Takara Bio USA, Inc.  
United States/Canada: +1.800.662.2566 • Asia Pacific: +1.650.919.7300 • Europe: +33.(0)1.3904.6880 • Japan: +81.(0)77.565.6999

For Research Use Only. Not for use in diagnostic procedures.

© 2024 Takara Bio Inc. All Rights Reserved. All trademarks are the property of Takara Bio Inc. or its affiliate(s) in the U.S. and/or other countries or their respective owners. Certain trademarks may not be registered in all jurisdictions. Additional product, intellectual property, and restricted use information is available at [takarabio.com](https://www.takarabio.com).

9.24 US (634020)