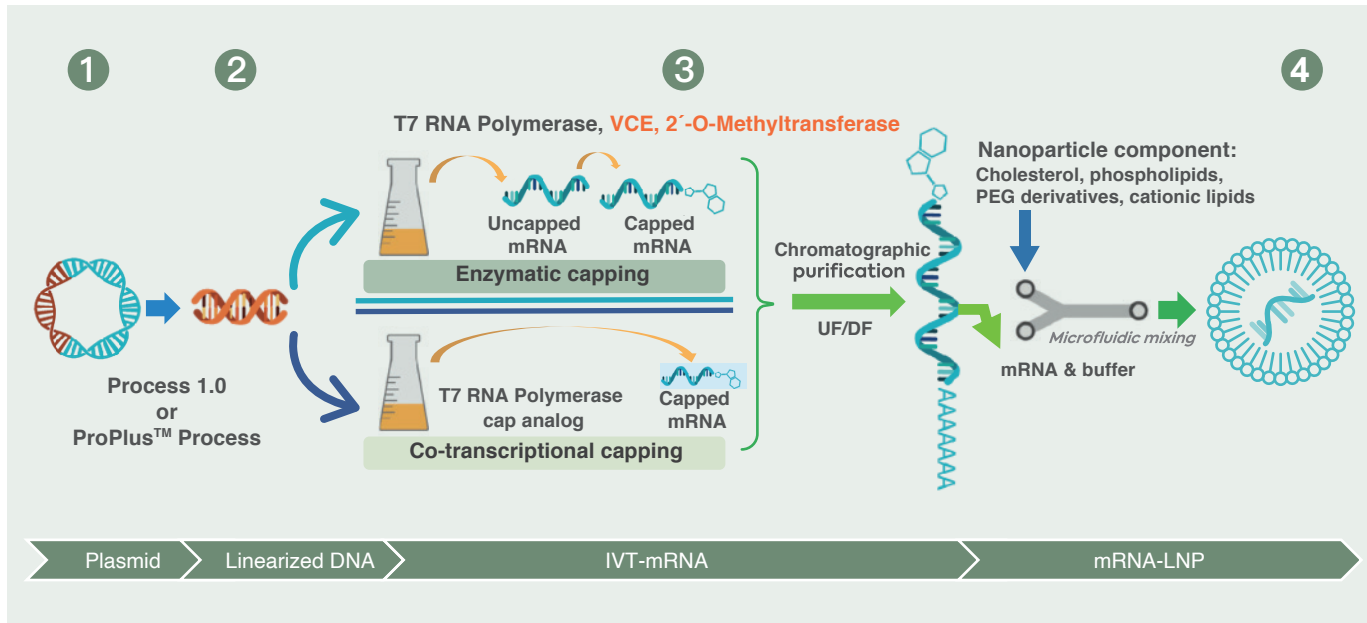


mRNA Vaccine Manufacturing Process



mRNA Plasmid Platform

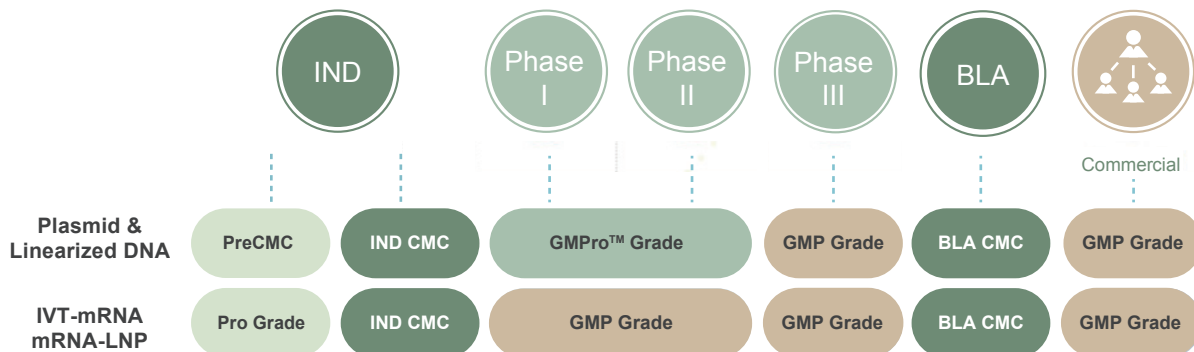
- Process 1.0 and ProPlus™ process: provide best solution for clients
- Leading linearized DNA platform
- 50+ ongoing projects
- 10+ IND approved globally (US, China, Japan, Korea, etc.)
- 1st BLA & commercial project in China

6-Month One-stop Solution for IND Filing

mRNA Platform

- IVT-mRNA: enzymatic and co-transcriptional capping
- LNP encapsulation: microfluidic technology
- mRNA QC: comprehensive, in-house, compliant with the requirement in US, EU and CN

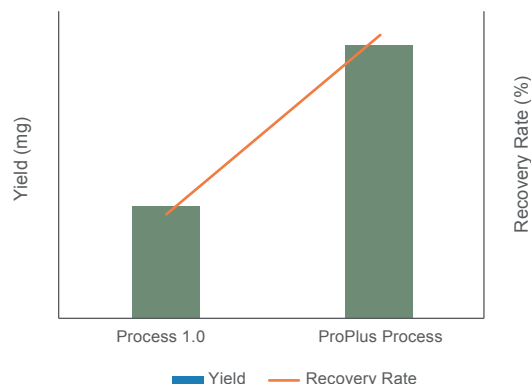
ProBio Service Overview – from Plasmid to mRNA



Plasmid ProPlus™ Process

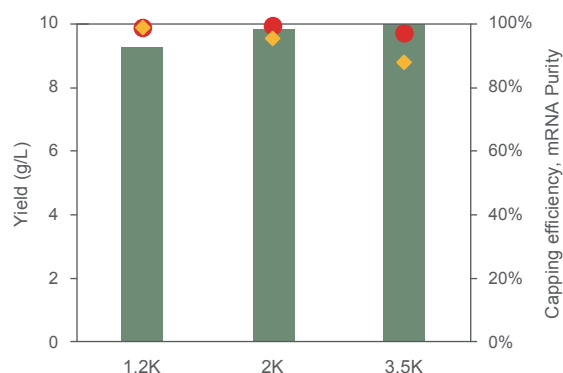
Process 1.0 vs ProPlus™ process

- **Plasmid + Linearized DNA vs Linearized DNA**
 - Plasmid purification: **3 steps to 1 step** (GF+AC+AEX → Capture)
 - Optimization: **Purification for linearized DNA**
- Compared to process 1.0, the newly developed ProPlus™ process has **2~3 times increase on yield and recovery rate**



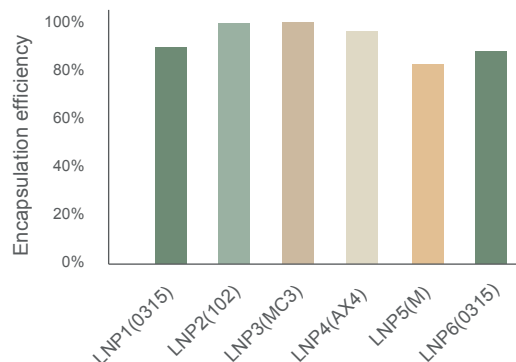
IVT-mRNA Platform

- **Suitable for mRNA with different lengths** 1.2K ~ 3.5K
- Two capping methods (co-transcriptional and enzymatic capping methods): capping efficiency **>90%, up to 99%**



mRNA-LNP Platform

- **Universal LNP platform with excellent critical quality attributes**
- Encapsulation efficiency **up to 99.7%**



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