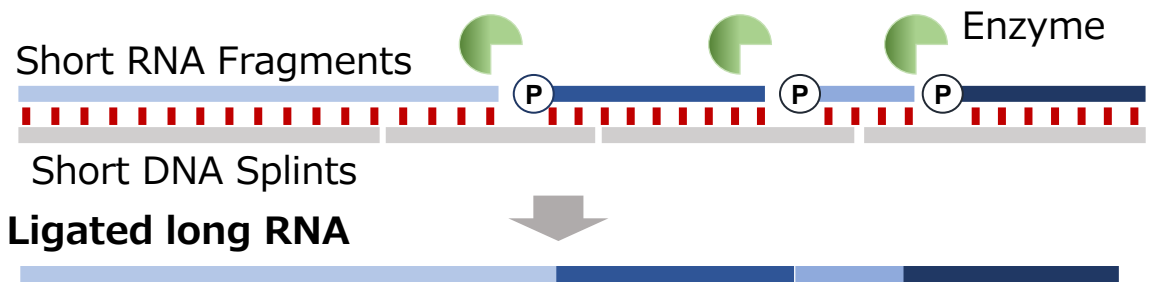


LONG CHAIN RNA PRODUCTION

Over 600 mer RNA production
with chemical modification

Summary of Production



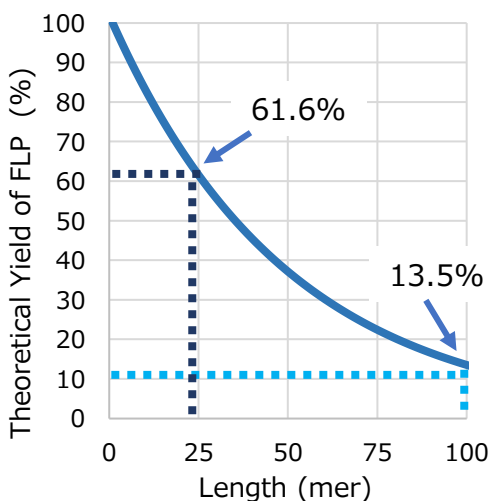
WO2024048684 Method For Producing Nucleic Acid Molecule

Providing long RNAs such as sgRNA and pre-miRNA

- ✓ With chemical modification (2'-F, 2'-MOE, LNA etc.)
- ✓ For analytical standard etc.

Concept: To obtain long chain RNAs in high yield & quality

■ Theoretical yield of chemically synthesized full-length product (FLP)

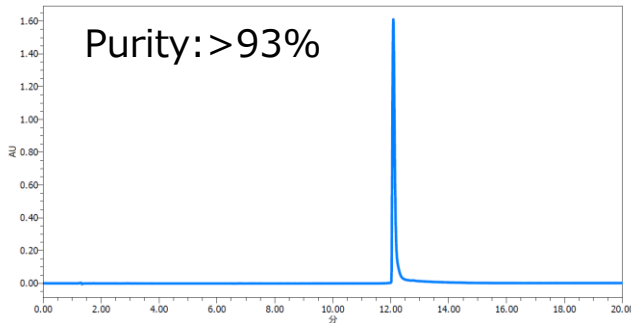


100 mer synthesis	
Solid Phase	13.5% yield
Enzymatic Ligation	Solid phase synthesis of 25 mer fragments 61.6%
	90%
$61.6\% \times 90\% \times 90\% \times 90\% = 44.9\%$	

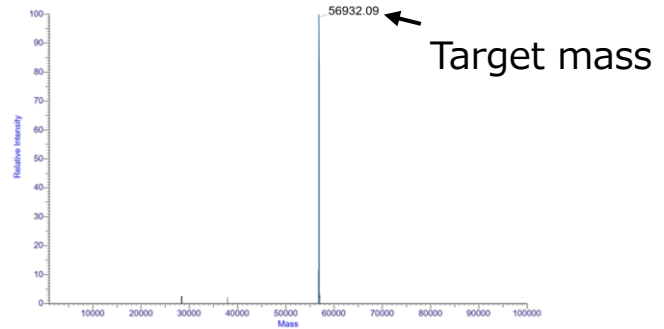
Case study 1: More than 150 mer RNA

Analysis of the produced 178 mer RNA with chemical modification

■ Purity by HPLC

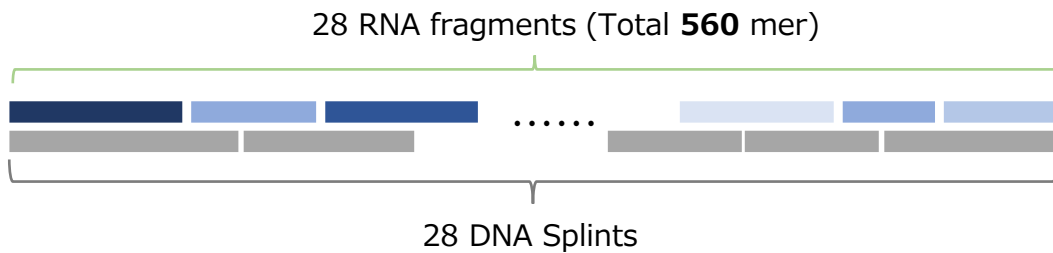


■ Identification by LC-MS

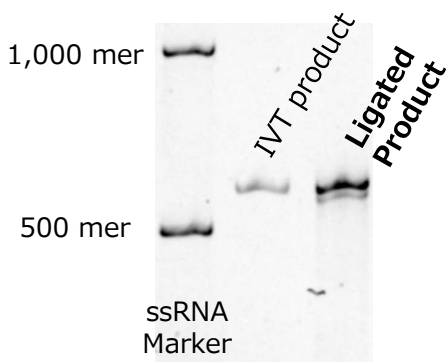


Case study 2: mRNA of NanoLuc®

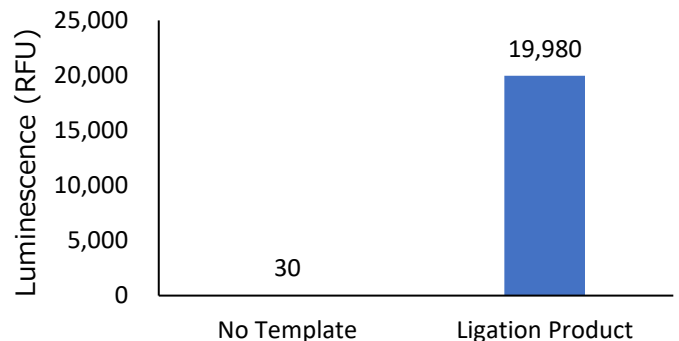
Assay of the produced 560 mer of NanoLuc® mRNA by using this enzymatic method



■ Final product



■ The result of cell-free translation luciferase assay



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