



# CUSTOM OLIGO MANUFACTURING

High quality and purity, custom synthesized oligonucleotides, using solid phase manufacturing.



Ajinomoto Bio-Pharma Services offers the capacity and quality to scale your process through clinical development and commercialization.

## CUSTOM OLIGONUCLEOTIDES

- Solid phase synthesis
- High quality & purity
- Research to commercial scale:  $\mu\text{g}$  to 10 kg
- Process development / scale-up

⋮



### RNA

- Long chain RNA (up to 100 mer: aptamer, pre-miRNA)
- siRNA
- miRNA
- Various modifications (special bases, terminal labeling, and more)

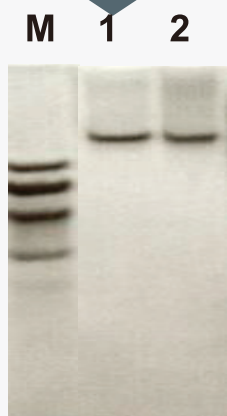


### BNA & LNA

- Antisense therapeutics
- Structural reinforcement for siRNA & aptamers
- Functional inhibition of miRNA
- *in situ* hybridization for miRNA probe

# CUSTOM OLIGO MANUFACTURING

LONG CHAIN RNA – OVER 100 MER POSSIBLE



## 140 mer RNA with TBDMS RNA amidite

Denatured PAGE Analysis

**M:** Single Strand Marker (60, 80, 100, 120)

**1:** Purified 140 mer RNA type 1

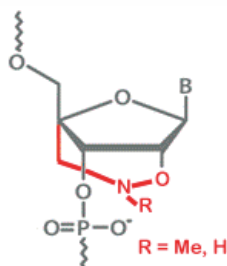
**2:** Purified 140 mer RNA type 2

## Various Types of Modified Bases Available

- 2'-Ome RNA
- 2'-F RNA
- LNA
- BNA
- Contact us for additional options

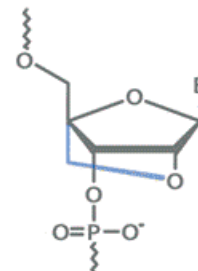
## BNA (BRIDGED NUCLEIC ACID)

- High binding affinity to RNA & DNA
- Improved resistance to enzymatic degradation
- Low *in vivo* toxicity

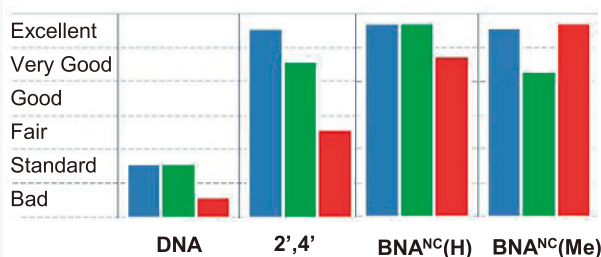


## LNA (LOCKED NUCLEIC ACID)

- Improved thermo-stability for DNA & RNA
- Sequence specific conjugation
- Low cytotoxicity



### BNA PROPERTIES

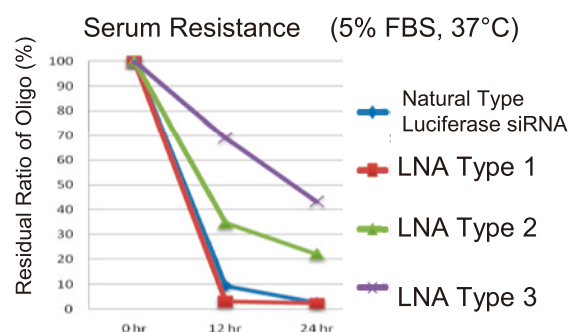
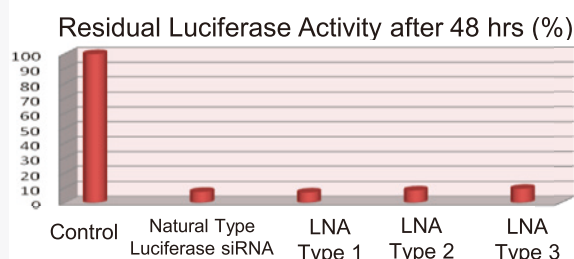


- Binding affinity - complementary single stranded RNA
- Binding affinity - double stranded DNA
- Enzymatic stability against exo-nuclease (SVPDE)

	LNA	BNA <sup>NC</sup>
Binding Capacity	◎	◎
Enzyme Resistance	●	◎

Ranking: ◎ > ● >> Natural Type

### LNA PROPERTIES



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