

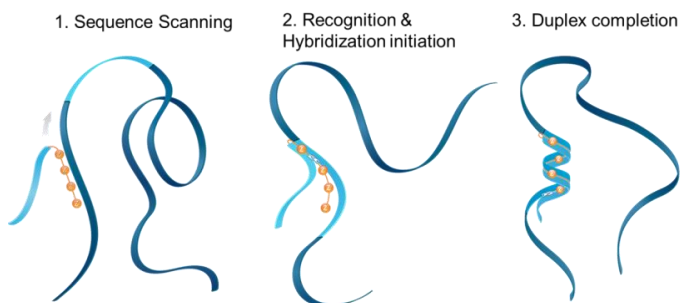
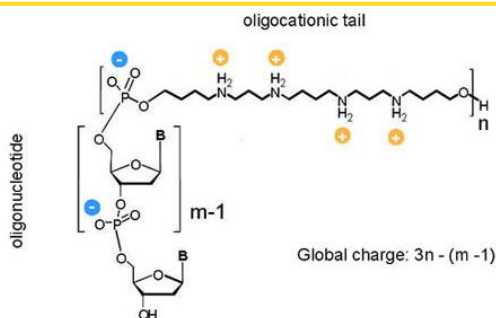
# Modified oligonucleotides

## Zip Nucleic Acids: ZNA<sup>®</sup>



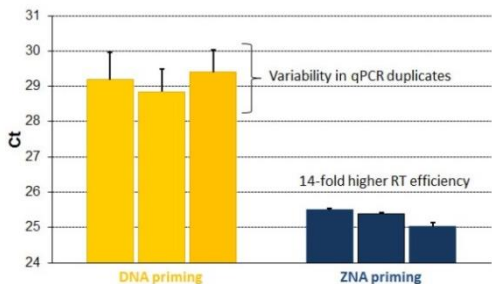
Improve your nucleic acids interaction with positively charged oligonucleotides

- High affinity oligonucleotides
- Adjustable and predictable T<sub>m</sub>
- Fast binding to target sequence
- Efficient as PCR primers or probes
- Easy to design
- Improved RNA to cDNA conversion during Reverse Transcription



**ZNA<sup>®</sup> structure.** ZNA<sup>®</sup> are formed by conjugating spermine derivatives, as cationic moieties (Z units), to oligonucleotides. ZNA<sup>®</sup> show increased affinity for their targets by reducing the electrostatic repulsion between nucleic acid strands. These properties make ZNA<sup>®</sup> promising powerful tools for molecular biology and diagnostic applications.

**3 steps mechanism to improve binding, affinity and kinetics.** ZNA<sup>®</sup> enhance the affinity for their target by accelerating the complementary sequence recognition. ZNA<sup>®</sup> increase the binding and stabilize the formed duplex by reducing electrostatic repulsion, thereby increasing the T<sub>m</sub>.



**ZNA<sup>®</sup> primers improve the conversion of RNA to DNA.** Conversion comparison of HMGA-2 transcripts to DNA obtained by RT of 200 ng of total RNA extracted from HeLa cells using 100 nM of standard DNA primer and ZNA<sup>®</sup> primer.

ZNA<sup>®</sup> is a licensing opportunity

For more information, contact our specialists at:  
[support@polyplus-transfection.com](mailto:support@polyplus-transfection.com)

**Intellectual Property:** ZNA<sup>®</sup> and their use are the subject matter of (i) U.S. Patent No. 9090648, U.S. Divisional Patent Application No. 14/745,871, European Patent No. 1 973 927 and foreign equivalents entitled "Cationic oligonucleotides, automated methods for preparing same and their uses" and (ii) U.S. Patent No. 8,465,920, European Patent No. 2 225 393 and foreign equivalents entitled "Methods for hybridizing nucleic acids".