

## DNA oligos and Ultramer DNA Oligos

Generate consistently reliable data from the highest fidelity oligos available

All single-stranded and duplexed sequences are produced with industry leading coupling efficiencies, resulting in higher quality DNA products. Our proprietary technologies allow us to produce high quality Ultramer DNA Oligos, long oligos up to 200 bases. (Figures 1–2).

To push the limits of oligo synthesis, we developed specialized platforms that allow us to deliver the highest quality PCR primers, dual-labelled probes for qPCR, indexed adapters for NGS, long biotinylated oligos for NGS target capture, and other advanced and custom products.

100% QC—each oligo undergoes extensive quality analysis, including evaluation by ESI-mass spectrometry to ensure sequence composition.

Our manufacturing processes are standardized at all production sites around the world, so you consistently receive the highest quality oligos.

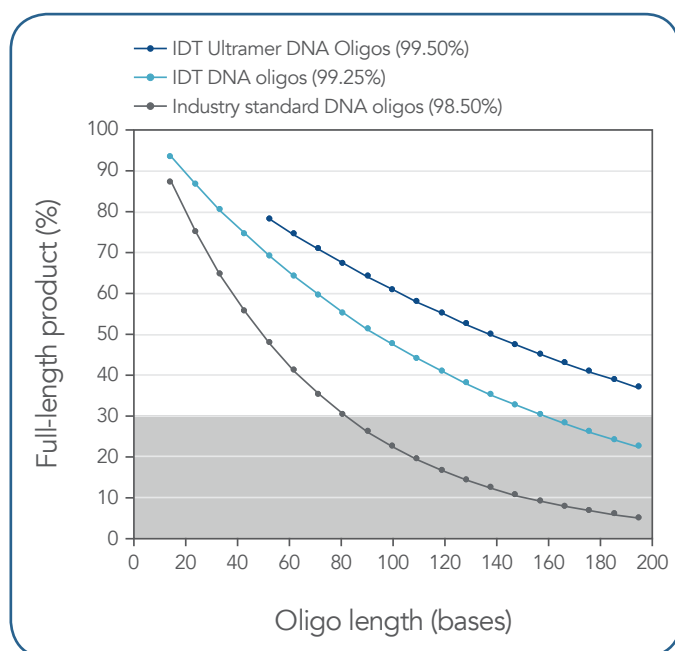
### benefits

**Complete confidence** in oligos that are verified by ESI-mass spectrometry

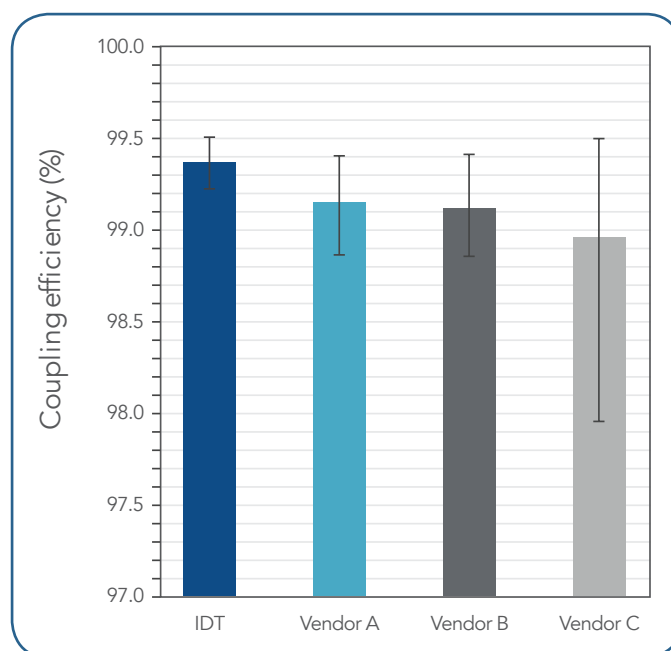
**Quick delivery** with >90% of orders shipped within 24 hours

**Unrivalled control of oligo specifications** with custom formulation and mixing options

Discover more at [www.idtdna.com/DNA](http://www.idtdna.com/DNA)



**Figure 1. Coupling efficiency determines oligo purity.** Oligos are synthesized by adding one nucleotide per cycle in the 3' to 5' direction. The success rate of the nucleotide attachment reaction is referred to as coupling efficiency. Because the amount of full-length product decreases as oligo length increases, coupling efficiency provides a good indication of oligo quality. Percent full-length product = (Coupling efficiency)<sup>(Total bases - 1)</sup>



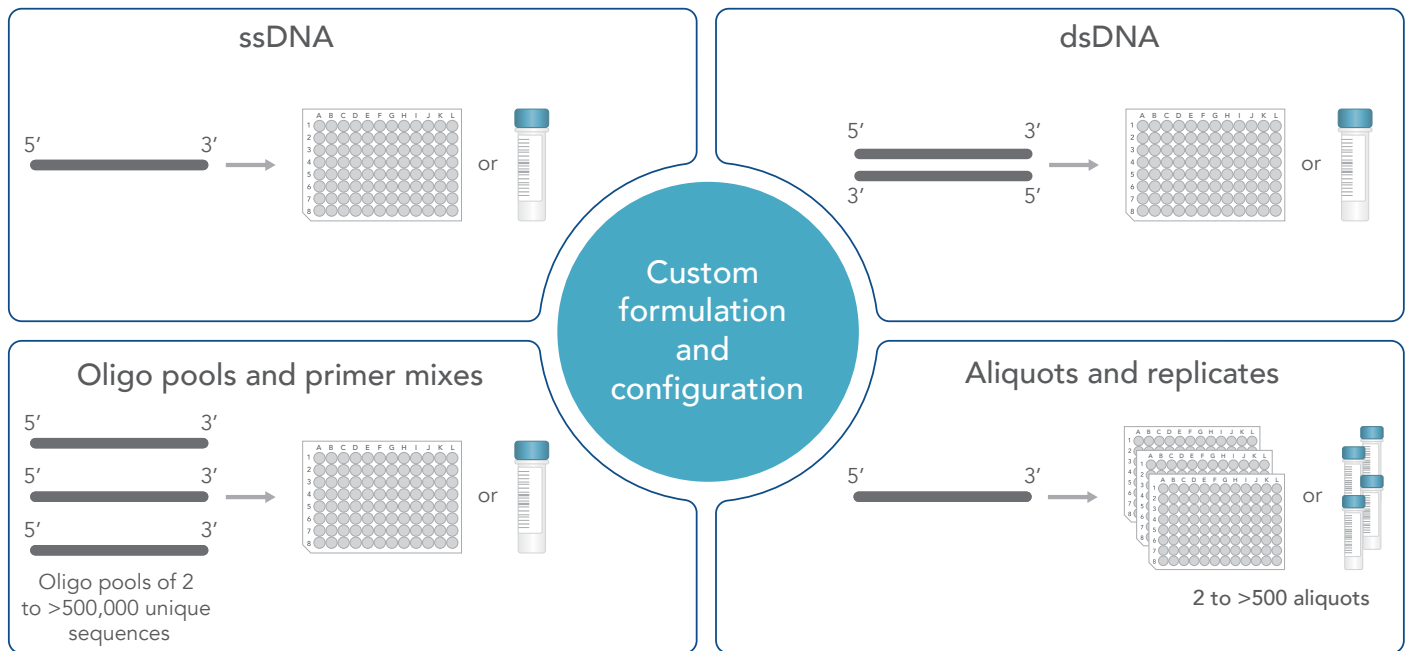
**Figure 2. Consistently high coupling efficiency from IDT synthesis.** Unmodified 30–45 base oligos (n = 64) were ordered from different suppliers over a 12-month period. IDT oligos had the highest coupling efficiency, and exhibited the least variation in coupling efficiency.

## Modifications and modified bases

Select from more than 400 modifications, including: quenchers, spacers, linkers, modified bases, fluorophores, and modifications for click chemistry. Our technical support team can provide guidance on which modifications are best suited to your specific application. Learn more at [www.idtdna.com/mods](http://www.idtdna.com/mods).

## Custom formulation and packaging

Customized services from primer mixes and oligo duplexes, to pools of tens of thousands of unique oligos in equal or varying quantities are available. Learn more at [www.idtdna.com/formulations](http://www.idtdna.com/formulations).



## SciTools web tools

Plan your experiments and design oligos that perform optimally for your conditions with our online software tools. The OligoAnalyzer and UNAFold tools allow you to determine GC content, sequence complement, and secondary structure characteristics such as melting temp and self-complementarity. The PrimerQuest tool can be used to design primers and probes for PCR-based applications. Learn more about these tools, and additional applications at [www.idtdna.com/SciTools](http://www.idtdna.com/SciTools).

For more information and to order, visit [www.idtdna.com/DNA](http://www.idtdna.com/DNA)

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

© 2019 Integrated DNA Technologies, Inc. All rights reserved. OligoAnalyzer, PrimerQuest, Ultramer, UNAFold, and SciTools are trademarks of Integrated DNA Technologies, Inc., and are registered in the USA. All other marks are the property of their respective owners. For specific trademark and licensing information, see [www.idtdna.com/trademarks](http://www.idtdna.com/trademarks). COR-10090-FL 07/19

