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<b>IDT enquiries</b>	<b>Integrated DNA Technologies</b> Lynette Brown – Advertising and Product Manager t: +1 319-665-7208 e: lbrown@idtdna.com		
<b>Media enquiries</b>	<b>Alto Marketing Limited</b> Carolyn Butchers – Science Writer t: +44 (0)1489 557672 e: carolynb@alto-marketing.com		

## **IDT launches Double-Quenched Probes™ to increase qPCR sensitivity and precision**

*New ZEN™ quencher reduces background fluorescence and improves performance*

**CORALVILLE, IA** – 4 May 2010. Integrated DNA Technologies (IDT), the world leader in oligonucleotide synthesis, has introduced a new double-quenched probe, which increases the accuracy and reliability of 5' nuclease qPCR experiments. While traditional probes have 20-30 bases between the dye and quencher, this novel proprietary probe design positions an internal ZEN quencher only 9 bases from the 5' fluorophore. This shortened distance, particularly when combined with the standard 3' quencher, significantly decreases background fluorescence and increases sensitivity. The chemical structure of the ZEN quencher stabilizes duplex formation which allows for its use in previously validated sequences. The improved functionality significantly increases qPCR accuracy and sensitivity when compared to traditional probes.

Due to the incorporation of ZEN at fixed position 9 bases from the 5' end, the quencher is always within close proximity of the probe. As such, the initial background fluorescence signal is much lower. This makes subsequent changes easily detectable and functionally increases assay sensitivity. In addition, while traditional probes do not remain well quenched over 30 base pairs, the double-quenched probes maintain a consistently low background even at 40 base pairs or longer. Thus, double-quenched probes result in lower  $C_q$  values when compared to traditional probes. This leads to an increase in specificity without any loss in sensitivity or quenching efficiency. This is particularly useful for targets that are AT-rich and require longer probes.

IDT offers a complete range of standard and custom qPCR products including a free online RealTime PCR design tool which optimizes primer and probe sequence for specific user requirements. For further information, please visit [www.idtdna.com](http://www.idtdna.com).

### **About IDT**

Integrated DNA Technologies (IDT) is the largest supplier of custom nucleic acids in the United States, serving academic, government, and commercial researchers in biotechnology, clinical diagnostics, and pharmaceutical development. IDT's primary business is the manufacture of custom, synthetic DNA and RNA oligonucleotides. Today, IDT synthesizes and ships an average of 36,000 custom oligos per day to more than 86,000 customers worldwide. IDT manufacturing locations include facilities in Coralville, Iowa; San Diego, Calif.; and Leuven, Belgium. For more information, visit [www.idtdna.com](http://www.idtdna.com).

### **Integrated DNA Technologies**

800-328-2661 (US & Canada)  
+1 319-626-8400 (outside US)  
[productinfo@idtdna.com](mailto:productinfo@idtdna.com)  
[www.idtdna.com](http://www.idtdna.com)