



Certificate of Thermodynamic Analysis

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Oligo Information

Customer: **Your company name**
 Sample name: lot #1, lot #2, lot #3
 Sequence: 5' ---- 3'
 5' ---- 3'
 Comments: Each sample is an oligonucleotide duplex of the same sequence

Analysis Information: For each duplex thermodynamic parameters were derived using two methods: 1) averages of the fits of six melting curves, and 2) the 1/T_m vs Ln(Ct) van't Hoff plot. The results of both methods and their error-weighted average are summarized below.

| I.D | Sequence | | DH°(kcal/mol) | | D | DS°(cal/K*mol) | | D | DG° ₃₇ (kcal/mol) | | D | Tm |
|--------|----------|------------------|---------------|---|-----|----------------|---|------|------------------------------|---|------|------|
| Lot #1 | | <i>Exp. Fits</i> | -64.5 | ± | 1.1 | -177.0 | ± | 2.9 | -9.48 | ± | 0.07 | 52.3 |
| | | <i>1/Tm</i> | -67.0 | ± | 4.9 | -184.9 | ± | 14.9 | -9.50 | ± | 0.13 | 52.2 |
| | | <i>Ave.</i> | -64.6 | ± | 2.3 | -177.3 | ± | 2.8 | -9.48 | ± | 0.06 | 52.4 |
| Lot #2 | | <i>Exp. Fits</i> | -65.6 | ± | 2.6 | -180.5 | ± | 6.1 | -9.51 | ± | 0.12 | 52.3 |
| | | <i>1/Tm</i> | -66.7 | ± | 4.1 | -184.0 | ± | 9.7 | -9.56 | ± | 0.15 | 52.1 |
| | | <i>Ave.</i> | -65.9 | ± | 2.2 | -181.5 | ± | 5.2 | -9.53 | ± | 0.09 | 52.3 |
| Lot #3 | | <i>Exp. Fits</i> | -63.5 | ± | 3.1 | -174.1 | ± | 6.1 | -9.45 | ± | 0.10 | 52.2 |
| | | <i>1/Tm</i> | -67.2 | ± | 5.6 | -185.2 | ± | 11.4 | -9.58 | ± | 0.13 | 52.7 |
| | | <i>Ave.</i> | -64.4 | ± | 2.7 | -176.6 | ± | 5.4 | -9.50 | ± | 0.08 | 52.6 |

* T_m is calculated for 10⁻⁴ M total strand concentration. All experiments were conducted in 1xPBS buffer, pH=7.3.