Supplemental Table 1. Sequences of DNA Oligonucleotides

| 1B, 1C, 1D, 1E, and 1F B1S and \$460T 2B, 2C, 2D, 2E, and 2F B1S and \$460T 3A 5' biotin and 3' tail: B1S and \$460T 5' tail and 3' biotin: 60T1S and \$48B Fork: 60T1S and \$460T 3C and 3E 3tail and no 5' tail: \$460T and 1S 3D and 3F 1and mode duples with 3' Tail: 1A, 60T1B, and 460T 3A, 3B, 3C, 3D, 3F B1S and \$460T 5A and 5B 60T 6B and 6C M135PT M135PB M135PB Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' 5'-460T 5'- AT GTC CTA GCA AGC CAG AAT TCC GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TT | Fig. | Name of Oligonucleotide Used (see bottom of page for sequence) |
|--|------------------------|--|
| Solution | 1B, 1C, 1D, 1E, and 1F | |
| S' tail and 3' biotin: 60T1S and S4B Fork: 60T1S and S460T 3' tail and no 5' tail: 5460T and 1S 5' tail and no 5' tail: 5460T and 1S 5' tail and no 6' tail: 5460T and S4 3C and 3E | 2B, 2C, 2D, 2E, and 2F | $\overline{B1S}$ and $\overline{S460T}$ |
| S' tail and 3' biotin: 60T1S and S4B Fork: 60T1S and S460T 3' tail and no 5' tail: 5460T and 1S 5' tail and no 5' tail: 5460T and 1S 5' tail and no 6' tail: 5460T and S4 3C and 3E | 3A | 5' biotin and 3' tail: B1S and S460T |
| 3' tail and no 5' tail: \$\frac{5460T}{60TIS}\$ and \$\frac{1S}{5}\$ tail and no 3' tail: \$\frac{60TIS}{60TIS}\$ and \$\frac{54}{54}\$ 3C and 3E 3D and 3F Tandem duplex with 3' Tail: \$\frac{1A}{1A}\$, \$\frac{60TIB}{60TIB}\$, and \$\frac{460T}{460T}\$ 3A, 3B, 3C, 3D, 3F \$\frac{8B}{1S}\$ and \$\frac{5460T}{60T}\$ 6B and 6C M135PB Name Sequence B1S \$\frac{5}{5}\$ - biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T - 3' \$\frac{5}{5}\$ - AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | | |
| S' tail and no 3' tail: 60T1S and 44 3A, 3B | | Fork: 60T1S and S460T |
| 3C and 3E 3D and 3F Tandem duplex with 3' Tail: 1A, 60T1B, and 460T Tandem duplex with no 3' Tail: 1A, 60T1B, and 4 3A, 3B, 3C, 3D, 3F 5A and 5B 60T 6B and 6C M135PB Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' S460T 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT TTT | | 3' tail and no 5' tail: <u>S460T</u> and <u>1S</u> |
| 3D and 3F Tandem duplex with 3' Tail: 1A, 60T1B, and 460T Tandem duplex with no 3' Tail: 1A, 60T1B, and 4 3A, 3B, 3C, 3D, 3F 5A and 5B 60T 6B and 6C M135PT 6D and 6E M135PB Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' S460T 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT TTT | | 5' tail and no 3' tail: <u>60T1S</u> and <u>S4</u> |
| Tandem duplex with no 3' Tail: 1A, 60T1B, and 4 3A, 3B, 3C, 3D, 3F | 3C and 3E | <u>1A</u> , <u>60T1B</u> , and <u>460T</u> |
| 3A, 3B, 3C, 3D, 3F 5A and 5B 60T 6B and 6C M135PB Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T-3' S460T 5'- AT GTC CTA GCA AGC CAG AAT TCT TTT TTT TTT TTT TTT TTT TTT TTT | 3D and 3F | Tandem duplex with 3' Tail: 1A, 60T1B, and 460T |
| 5A and 5B 60T 6B and 6C M135PT 6D and 6E M135PB Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' \$460T 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | | Tandem duplex with no 3' Tail: <u>1A</u> , <u>60T1B</u> , and <u>4</u> |
| 6B and 6C M135PB Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' \$\frac{5}{2}-AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | 3A, 3B, 3C, 3D, 3F | <u>B1S</u> and <u>S460T</u> |
| Name Sequence B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' \$460T 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | 5A and 5B | <u>60T</u> |
| Name Sequence | 6B and 6C | M <u>135PT</u> |
| B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' \$2460T 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | 6D and 6E | <u>M135PB</u> |
| B1S 5'-biotin- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' \$2460T 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | | |
| \$\frac{5}{460T}\$ \$\frac{5}{4}\$ AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC TTT TTT TTT TTT TTT TTT TTT TTT | Name | * |
| ### TITH TITH TITH TITH TITH TITH TITH T | <u>B1S</u> | |
| 60T1S 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T | <u>S460T</u> | |
| S'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T | | |
| TTT TTT TTT TTT TTT TTT TTT TTT TTT TT | | TTT TTT TTT -3' |
| $\frac{\text{S4B}}{\text{S}^{2}} = \begin{array}{c} \text{CTT GCT AGG ACA T - 3'} \\ \text{S4B} \\ \text{5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC biotin - 3'} \\ \text{1S} \\ \text{5'- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T - 3'} \\ \text{54} \\ \text{5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC - 3'} \\ \text{1A} \\ \text{5'- GAC GCT GCC GAA TTC TGG CTT GCT A - 3'} \\ \text{60T1B} \\ 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T$ | <u>60T1S</u> | |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | TTT TTT TTT TTT TTT TTT GAC GCT GCC GAA TTC TGG |
| IS 5'- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' \$\frac{1}{2}\$ 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC -3' \$\frac{1}{2}\$ 60T GCC GAA TTC TGG CTT GCT A -3' \$\frac{60T1B}{2}\$ 5'- GAC GCT GCC GAA TTC TTG TTT TTT TTT TTT TTT TTT TTT TTT | | CTT GCT AGG ACA T -3' |
| $\frac{S4}{1A} \hspace{1cm} 5' \cdot AT \ GTC \ CTA \ GCA \ AGC \ CAG \ AAT \ TCG \ GCA \ GCG \ TC \ -3'$ $\frac{1A}{60T1B} \hspace{1cm} 5' \cdot GAC \ GCT \ GCC \ GAA \ TTC \ TGG \ CTT \ GCT \ A \ -3'$ $\frac{60T1B}{5' \cdot TTT \ T$ | <u>S4B</u> | 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC biotin -3' |
| $\frac{1A}{60T1B} \hspace{1.5em} \begin{array}{c} 5\text{'-} \text{ GAC GCT GCC GAA TTC TGG CTT GCT A -3'} \\ 5\text{'-} TTT TTT TTT TTT TTT TTT TTT TTT TTT $ | <u>1S</u> | 5'- GAC GCT GCC GAA TTC TGG CTT GCT AGG ACA T -3' |
| 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T | <u>\$4</u> | 5'- AT GTC CTA GCA AGC CAG AAT TCG GCA GCG TC -3' |
| TTT TTT TTT TTT TTT TTT TTT TTT TTT TT | <u>1A</u> | 5'- GAC GCT GCC GAA TTC TGG CTT GCT A -3' |
| $\frac{460T}{460T} \qquad \begin{array}{c} \text{GAC GTC GG -3'} \\ \text{5'- CC GAC GTC ATA TTA CGA CGA CAT GAT AGC AAG CCA} \\ GAA TTC GGC AGC GTC TTT TTT TTT TTT TTT TTT TTT TTT T$ | <u>60T1B</u> | 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T |
| 5'- CC GAC GTC ATA TTA CGA CGA CAT GAT AGC AAG CCA GAA TTC GGC AGC GTC TTT TTT TTT TTT TTT TTT TTT TTT T | | |
| GAA TTC GGC AGC GTC TTT TTT TTT TTT TTT TTT TTT TTT T | | |
| TTT TTT TTT TTT TTT TTT TTT TTT TTT TT | <u>460T</u> | 5'- CC GAC GTC ATA TTA CGA CGA CAT GAT AGC AAG CCA |
| 4 5'- CC GAC GTC ATA TTA CGA CGA CAT GAT AGC AAG CCA GAA TTC GGC AGC GTC -3' 60T 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T | | GAA TTC GGC AGC GTC TTT TTT TTT TTT TTT TTT TTT TTT |
| GAA TTC GGC AGC GTC -3' 60T 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T | | TTT TTT TTT TTT TTT TTT TTT TTT TTT TT |
| 60T 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T | <u>4</u> | 5'- CC GAC GTC ATA TTA CGA CGA CAT GAT AGC AAG CCA |
| TTT TTT TTT TTT TTT TTT -3' M135PT 5' – TTT TTT TTT TTT TTT TTT TTT TTT TTT | | GAA TTC GGC AGC GTC -3' |
| M135PT 5' – TTT TTT TTT TTT TTT TTT TTT TTT TTT | <u>60T</u> | 5'- TTT TTT TTT TTT TTT TTT TTT TTT TTT T |
| ACG CTC AAC AGT AGG GCT T – 3' | | |
| | <u>M135PT</u> | 5' – TTT TTT TTT TTT TTT TTT TTT TTT TTT |
| M135PB 5' – Biotin-AAG CCA ACG CTC AAC AGT AGG GCT T – 3' | | ACG CTC AAC AGT AGG GCT T – 3' |
| | <u>M135PB</u> | 5' – Biotin-AAG CCA ACG CTC AAC AGT AGG GCT T – 3' |