

Supplemental Table S2. List of damaged DNA probes prepared from ligation of synthesized

DNA fragments

Damaged DNA probes	Ligation of DNA fragments
Ligation of oligos	$\begin{array}{ccc} 1 & 3 & 5 \\ \hline 2 & 4 & 6 \end{array}$
5'TMR-ds90mer	1- TMR-oligo 1, 2- Oligo 2, 3- Oligo 3, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-25 th (-)-trans-BPDE-ds50mer	1- TMR-oligo 1A, 2- Oligo 2A, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5A, 6- Oligo 6A
5'TMR-26 th (-)-trans-BPDE-ds70mer	1- TMR-oligo 1A, 2- Oligo 2A, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-36 th (-)-trans-BPDE-ds80mer	1- TMR-oligo 1B, 2- Oligo 2B, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-46 th (-)-trans-BPDE-ds90mer	1- TMR-oligo 1, 2- Oligo 2, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-61 th (-)-trans-BPDE-ds105mer	1- TMR-oligo 1C, 2- Oligo 2C, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-46 th (+)-trans-BPDE- ds 90mer	1- TMR-oligo 1, 2- Oligo 2, 3- (+)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
45 th -intTMR-ds90mer	1- Oligo 1, 2- Oligo 2, 3- intTMR-oligo 3, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-25 th intFAM-ds70mer	1- TMR-oligo 1A, 2- Oligo 2A, 3- intFAM-oligo 3, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-35 th intFAM-ds80mer	1- TMR-oligo 1B, 2- Oligo 2B, 3- intFAM-oligo 3, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-45 th intFAM-ds90mer	1- TMR-oligo 1, 2- Oligo 2, 3- intFAM-oligo 3, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-60 th intFAM-ds105mer	1- TMR-oligo 1C, 2- Oligo 2C, 3- intFAM-oligo 3, 4- Oligo 4, 5- Oligo 5, 6- Oligo 6
5'TMR-bubble-45 th FAM-ds90mer (6 base bubble)	1- TMR-oligo 1, 2- Oligo 2, 3- intFAM-oligo 3, 4- Bubble-oligo 4, 5- Oligo 5, 6- Oligo 6
FRET-45 th (-)-trans-BPDE-ds90mer	1- TMR-oligo 1, 2- Oligo 2, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5, 6- FAM-Oligo 6
FRET-25 th (-)-trans-BPDE-ds50mer	1- TMR-oligo 1A, 2- Oligo 2A, 3- (-)-trans-BPDE-16mer, 4- Oligo 4, 5- Oligo 5A, 6- FAM-Oligo 6A
5'TMR-GAP-ds90mer	$\begin{array}{ccc} 1 & & 5 \\ \hline 2 & 4 & 6 \end{array}$