**Table S8. Specificity of microsatellite interruptions created by DNA polymerases δ, β, and κ**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type of Interruption | Microsatellite Allelea | | | | | |
|  | **[A]8 or [T]8** | **[GT]10** | **[GT]13** | **[GT]19** | **[TC]11** | **[TC]14** |
| **Pol Delta (δ)** |  |  |  |  |  |  |
| Base Deletion | [A]8 N/A | [GT]8 T GT | n.a. | n.d. | [TC]3 T [TC]7 | n.a. |
|  | [T]8 N/A |  |  |  | [TC]6 T [TC]4 |  |
| Base Insertion | [A]8  n.a. | n.d. | n.a. | n.d. |  | n.a. |
|  | [T]8 n.d. |  |  |  |  |  |
| Base Subst. | [A]8  n.a. | GC [GT]9 | n.a. | [GT]3 GA [GT]15 | [TC]6 AC [TC]3b | n.a. |
|  | [T]8 n.d. | [GT]6 TT [GT]2 (2)b |  | [GT]15 GA [GT]3 | [TC]7 AC [TC]4c |  |
|  |  |  |  | [GT]15 AT [GT]3 | [TC]10 TA TCc |  |
|  |  |  |  |  | [TC]11 TAc |  |
|  |  |  |  |  |  |  |
| **Total** | **[A]8 n.a.** | **4** | **n.a.** | **3** | **6** | **n.a.** |
| **Eventsf** | **[T]8  0** |  |  |  |  |  |
| **Pol Beta (β)** |  |  |  |  |  |  |
| Base Deletion | [A]8 N/A | [GT]5 T [GT]4 | [GT]5 G [GT]7 | T [GT]18 | C [TC]10 | n.d. |
|  | [T]8 N/A | [GT]9 G (2) | [GT]10 T [GT]2 | [GT]9 G [GT]9 | T [TC]10 (3) |  |
|  |  |  |  | [GT]10 G [GT]8 | [TC] C [TC]9 |  |
|  |  |  |  | [GT]13 G [GT]5 | [TC]3 C [TC]7 |  |
|  |  |  |  |  | [TC]5 C [TC]5 |  |
| Base Insertion | [A]8 n.d. | [GT]3 T [GT]7 | n.d. | n.d. | [TC]3 C [TC]8 | [TC]2 T [TC]12 |
|  | [T]8 n.d. |  |  |  |  |  |
| Base Subst. | [A]8 n.d. | **GT GC [GT]6 GGb** | [GT]5 GC [GT]7 | GT GC [GT]18c | GC [TC]12e | n.d. |
|  | [T]8 n.d. | [GT]2 GC [GT]7 | [GT]11 GGb | [GT]16 AT [GT]3c | [TC]2 TA [TC]9c |  |
|  |  | [GT]4 TT [GT]4b | [GT]12 GG (2) | [GT]16 GG GTb |  |  |
|  |  | [GT]6 GA [GT]3 |  | [GT]17 GG (2)b |  |  |
|  |  | [GT]8 TT (2)b |  | [GT]18 GG (2) |  |  |
|  |  | [GT]8 GG (3)b |  |  |  |  |
|  |  | [GT]9 GA |  |  |  |  |
|  |  |  |  |  |  |  |
| **Total** | **[A]8 0** | **15** | **6** | **11** | **10** | **1** |
| **Events** | **[T]8 0** |  |  |  |  |  |
| **Pol Kappa (κ)** |  |  |  |  |  |  |
| Base Deletion | [A]8 N/A | T [GT]9 (4) | T [GT]12 | T [GT]18 | T [TC]10 | TC T [TC]12 (2) |
|  | [T]8 N/A | [GT]8 T GT | GT T [GT]11 | [GT]2 T [GT]16 | [TC]2 T [TC]8 | [TC]13 C |
|  |  | [GT]9 T | [GT]6 T [GT]6 | [GT]4 T [GT]14 | [TC]3 T [TC]7 |  |
|  |  | [GT]9 G | [GT]8 G [GT]4 | [GT]11 T [GT]7 |  |  |
|  |  |  |  | [GT]17 T GT |  |  |
|  |  |  |  | [GT]18 T |  |  |
| Base Insertion | [A]8 n.d. | [GT]2 T [GT]8 | [GT]3 GCT [GT]9 | [GT]3 T [GT]16 | TC TGC [TC]9 | [TC]3 C [TC]11 |
|  | [T]8 n.d. | [GT]5 T [GT]5 |  | [GT]8 T [GT]11 | [TC]6 TGC [TC]4 | [TC]7 T [TC]7 |
|  |  | [GT]8 T [GT]2 (2) |  | [GT]18 T GT | [TC]10 T [TC] | [TC]12 TGC TC |
|  |  | [GT]9 T GT |  |  |  |  |
| Base Subst. | [A]8 n.d. | [GT]6 GA [GT]3 | n.d. | [GT]6 GG [GT]12 | [TC] GC [TC]9 | TT [TC]13 |
|  | [T]8 n.d. | [GT]7 TT [GT]2 |  | [GT]11 CT [GT]7 (2) | [TC]3 TA [TC]7 | [TC]4 GC [TC]9 |
|  |  | [GT]9 CT |  | [GT]14 CT [GT]4 | [TC]6 GC [TC]3b | [TC]4 GC [TC]10c |
|  |  | [GT]10 TTc |  |  |  | **[TC]7 TT [TC]4 GC [TC]3e** |
|  |  |  |  |  |  | [TC]13 GC |
|  |  |  |  |  |  |  |
| Compound | [A]8 n.d. |  |  | **[GT]2 T [GT]15 TT GT** |  |  |
|  | [T]8 n.d. |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Total** | **[A]8 0** | **16** | **5** | **15** | **9** | **12** |
| **Events** | **[T]8 0** |  |  |  |  |  |

aSingle mutation occurrences, unless otherwise indicated in parentheses. Red, interrupting base(s); **Bold Blue**, new alleles which have 2 or more interruption events. N/A, not applicable for this microsatellite allele. n.a. = not analyzed; n.d. = none detected

bA substitution occurred with a 1 unit deletion

cA substitution occurred with a 1 unit insertion

dA substitution occurred with a 2 unit deletion

eA substitution occurred with a 2 unit insertion

fEach mutation shown in red was counted as an individual event