



B

<i>POL3</i> allele	Mutant Frequency ^a		<i>POL3</i> allele	Mutant Frequency	
	<i>MSH6</i>	<i>msh6Δ</i>		<i>MSH6</i>	<i>msh6Δ</i>
Wild type	-	+	<u>Exo II motif (continued)</u>		
<u>Exo I motif</u>			<i>P409A</i>	-	+
<i>R316A</i>	-	+	<i>Y410A</i>	-/+	++/+++
<i>D321A</i>	++	ND ^b	<i>L411A</i>	-	+
<i>D321A,E323A</i> ^c	++	no growth	<i>L412A</i>	-	+
<i>G329A</i>	-	+	<i>N413A</i>	-	+
<u>Exo II motif</u>			<u>Exo III motif</u>		
<i>P395A</i>	-	+	<i>D506A/N</i> ^{f,h}	-	+
<i>D396A</i> ^d	+	++/+++ ^e	<i>S507A/N</i> ^{f,h}	-	+
<i>V397A</i>	-	+	<i>E508A/N</i> ^{f,h}	-	+
<i>I398A</i>	-	+	<i>R511A/H</i> ^{f,h}	-	+
<i>I399A</i>	-	+	<i>R512A</i>	-	+
<i>G400A</i>	-/+	+++	<i>Y516F/T/S/I</i> ^f	++	no growth ⁱ
<i>Y401A</i>	+/++	+++ ^e	<i>D520A/T/V</i> ^f	+/++	ND ^{e,j}
<i>N402A</i>	-	+	<u>Other</u>		
<i>T403A</i>	-	+	<i>G447S</i>	-	+
<i>T404A</i>	-	+	<i>R459A</i> ^d	-/+	+++
<i>N405A</i>	-	+	<i>D463A</i>	+/++	+++ ^e
<i>F406A</i>	++	no growth	<i>S476A</i>	-	+
<i>D407A/E/N/G</i> ^f	++	no growth ^g	<i>K491R</i>	+	++/+++ ^e
<i>I408A</i>	-	+			

^a Representative examples of —, +, ++ and +++ mutant frequencies are shown in panel A. Assayed in the isogenic *MSH6* and *msh6Δ* strains YP6 and MP4, respectively.

^b ND, not determined.

^c *pol3-01* allele (Morrison *et al.*, 1993).

^d Temperature-sensitive: normal growth at 30°C; no growth at 37°C.

^e Slow growth.

^f Slash (/) separates different individual *POL3* alleles assayed at this codon.

^g Only the *D407A* allele was examined in *msh6Δ* cells.

^h Mutator phenotypes assessed by fluctuation assays. — and + correspond to ≤3-fold and 10- to 20-fold increases in Can^r mutation rate relative to the wild-type strain, respectively. The mutation rates for wild type and *msh6Δ* were 2.0 × 10⁻⁷ and 2.5 × 10⁻⁶, respectively, in these experiments.

ⁱ Only the *Y516F* allele was examined in *msh6Δ* cells.

^j Only the *D520A* allele was examined for growth in *msh6Δ* cells.