

Table 4. Comparison of MMS-induced mutation frequency as a function of β -pol status

Mutation type	Wild type			β -pol null			Fold β -pol-dependent change
	No.	%	Mutation frequency, $\times 10^{-5}$	No.	%	Mutation frequency, $\times 10^{-5}$	
G:C to A:T	46 (20)	29.1	3.2	29 (11)	19.6	10.4	3.2
A:T to G:C	12 (0)	7.6	0.8	20 (2)	13.5	7.2	9.0
G:C to T:A	45 (2)	28.5	3.1	39 (0)	26.4	14	4.5
G:C to C:G	18 (2)	11.4	1.2	24 (8)	16.2	8.6	7.1
A:T to T:A	22 (2)	13.9	1.5	21 (1)	14.2	7.5	5.0
A:T to C:G	15 (0)	9.5	1.1	15 (2)	10.1	5.4	4.9
Total	158			148			

The mutant frequencies used in the calculation of MMS-induced mutation frequencies were 1.1×10^{-4} and 5.3×10^{-4} for wild-type and β -pol nulls cells, respectively. These values are graphically represented in Fig. 2. Mutation frequencies were calculated by multiplying the fraction of each class of mutations observed by the average spontaneous mutant frequency. For example, the frequency of MMS-induced A:T to G:C mutations in wild-type cells was calculated as follows: $(0.076)(1.1 \times 10^{-4}) = 0.8 \times 10^{-5}$. Fold change is calculated by dividing the mutation frequency of a given type of mutation in β -pol null cells by the frequency of the same type of mutation in wild-type cells. The numbers in parenthesis are the numbers of mutants at the six hotspots shown in the spectrum (Fig. 5).