

## Supporting Table I

*In vivo mismatch repair activity of MutS variants*

Variant	<i>In vivo activity</i>		
	Median <sup>a</sup>	Average <sup>b</sup>	n <sup>c</sup>
Vector ( <i>mutS</i> null)	267	290 (243-338)	27
MutS <sup>wt</sup>	2.5	4.1 (2.1-6.2)	16
MutS <sup>CF</sup>	3	5.6 (3.0-8.3)	31
MutS <sup>CF/D835R</sup>	19.5	24 (18-30)	23
MutS800 <sup>CF</sup>	30	49 (26-73)	23
MutS-CTD	223	244 (157-331)	11

For *in vivo* activity *rpoB* mutation assay was used (see Materials and Methods for details).

<sup>a</sup>Median number of rifampicin-resistant clones that arise by spontaneous mutation.

<sup>b</sup>average number of rifampicin-resistant clones (95 % confidence limits in parenthesis).

<sup>c</sup>number of independent cultures