

Figure S1

Blot 1

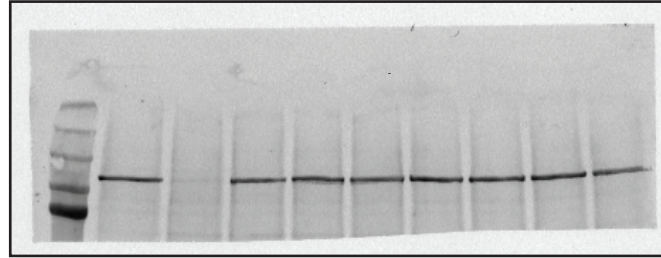
MLH1
PMS2 wt

wt	S477A	S87A	S446A	S456A
+	+	+	+	+

IP MLH1

*

WB p-MLH1 ▶



Blot 2

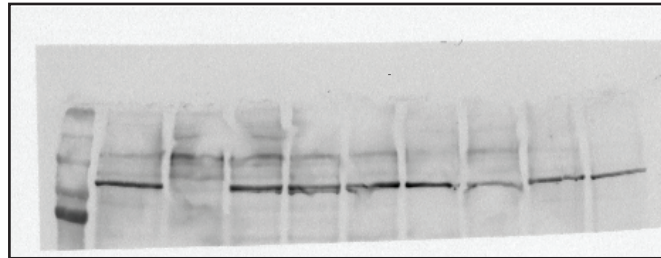
MLH1
PMS2 wt

wt	S477A	S87A	S446A	S456A
+	+	+	+	+

IP MLH1

*

WB p-MLH1 ▶



Blot 3

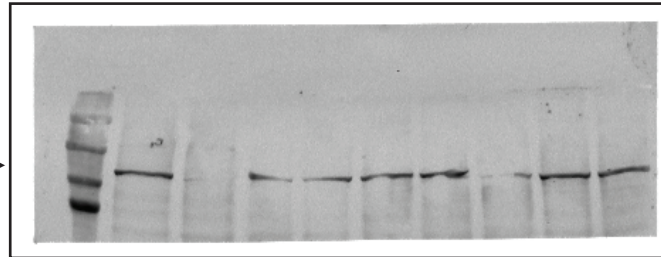
MLH1
PMS2 wt

wt	S477A	S87A	S446A	S456A
+	+	+	+	+

IP MLH1

*

WB p-MLH1 ▶



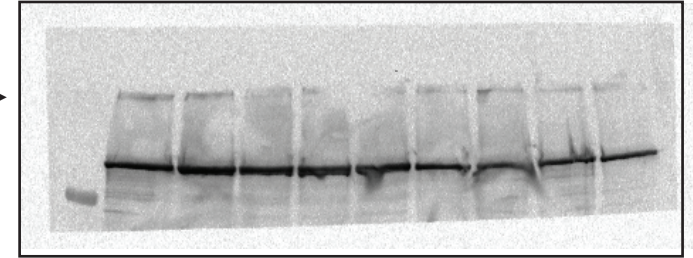
MLH1
PMS2 wt

wt	S477A	S87A	S446A	S456A
+	+	+	+	+

IP MLH1

*

WB MLH1 ▶



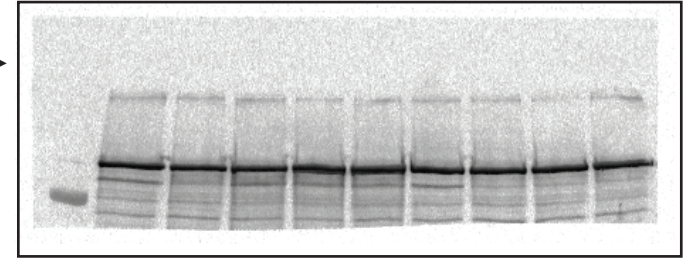
MLH1
PMS2 wt

wt	S477A	S87A	S446A	S456A
+	+	+	+	+

IP MLH1

*

WB MLH1 ▶



MLH1
PMS2 wt

wt	S477A	S87A	S446A	S456A
+	+	+	+	+

IP MLH1

*

WB MLH1 ▶

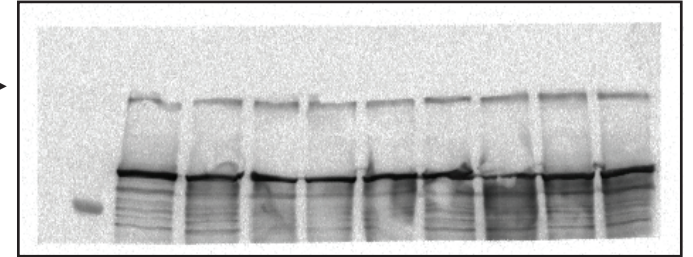
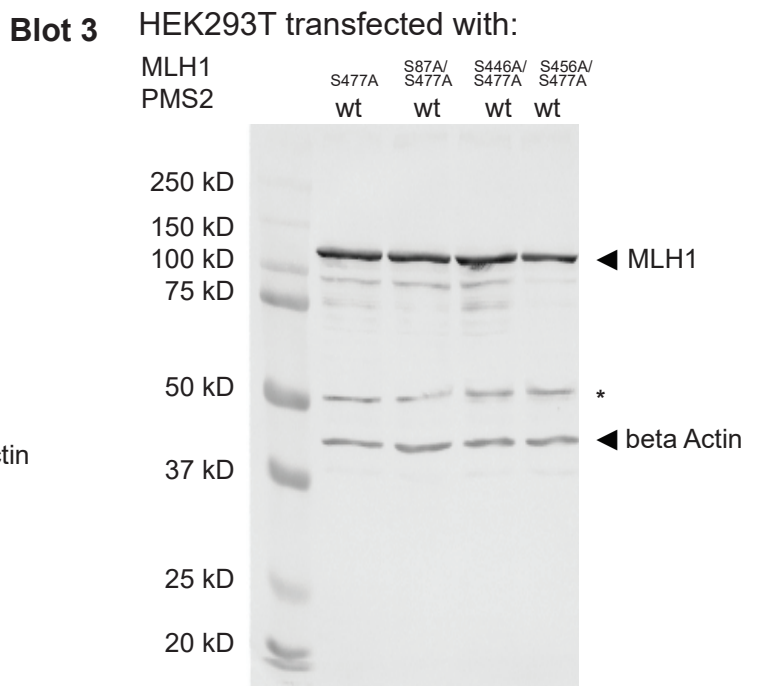
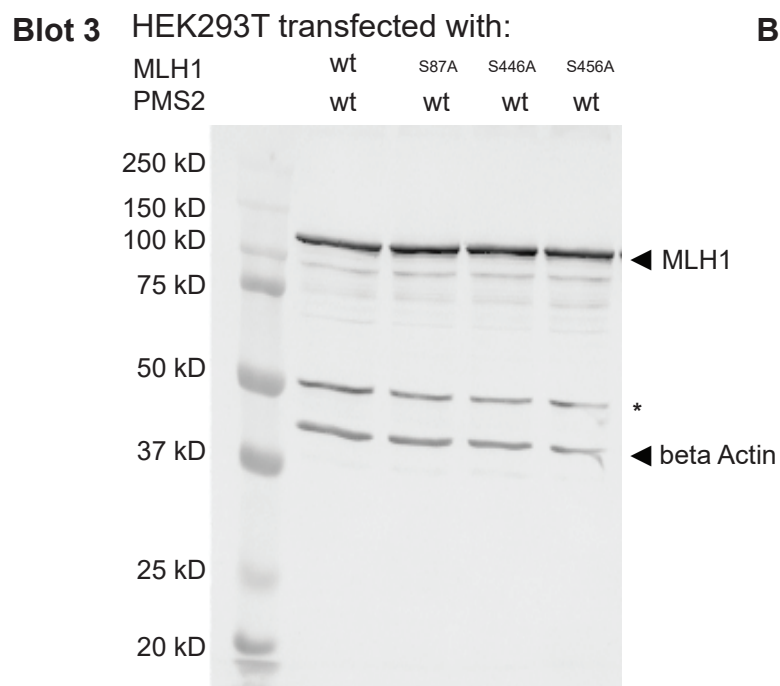
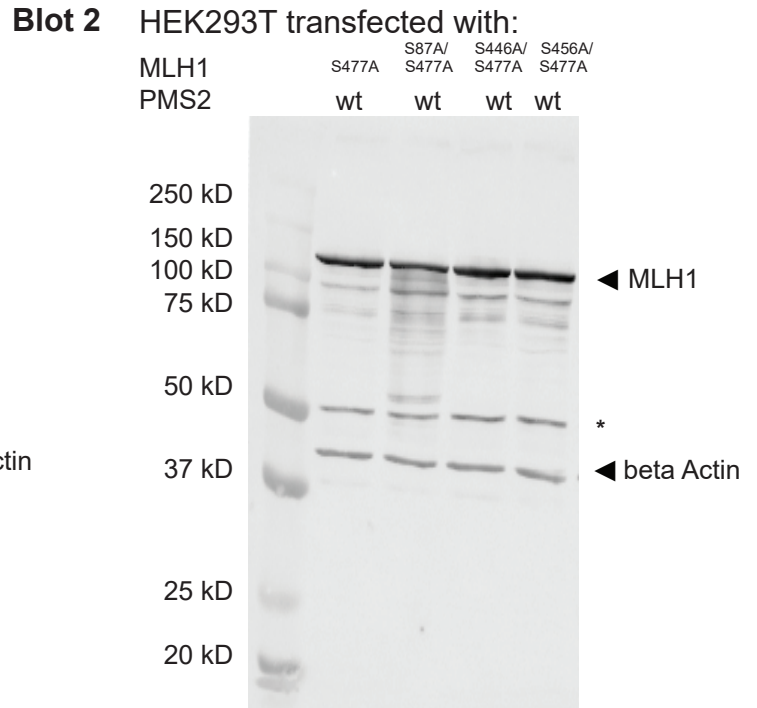
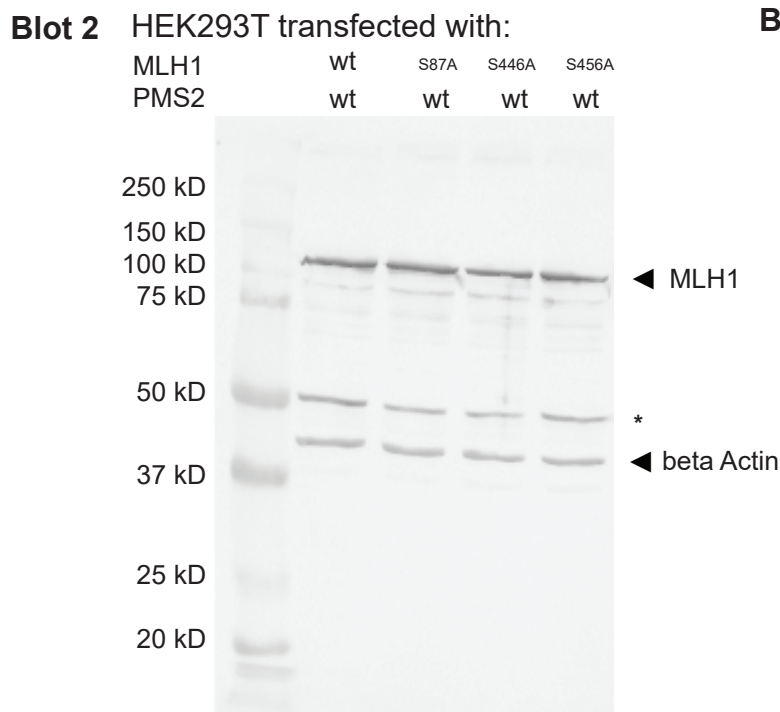
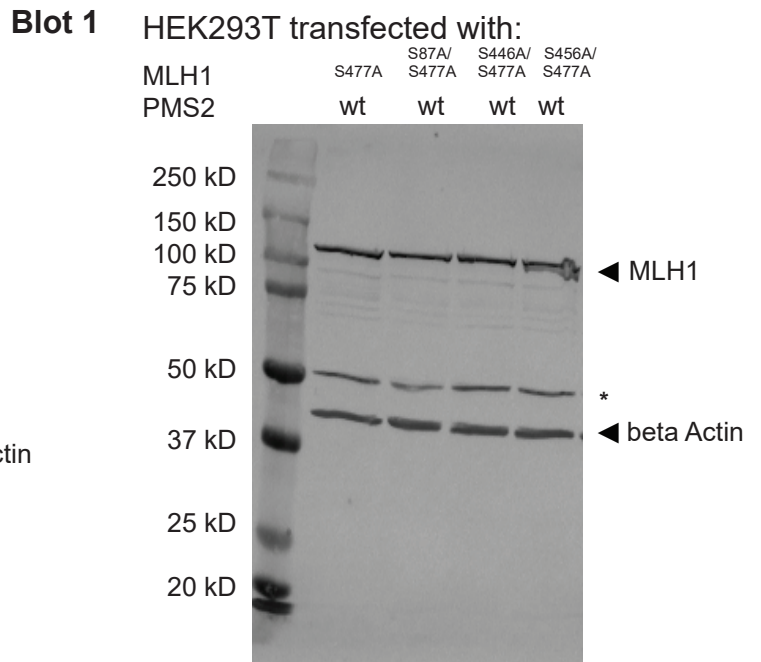
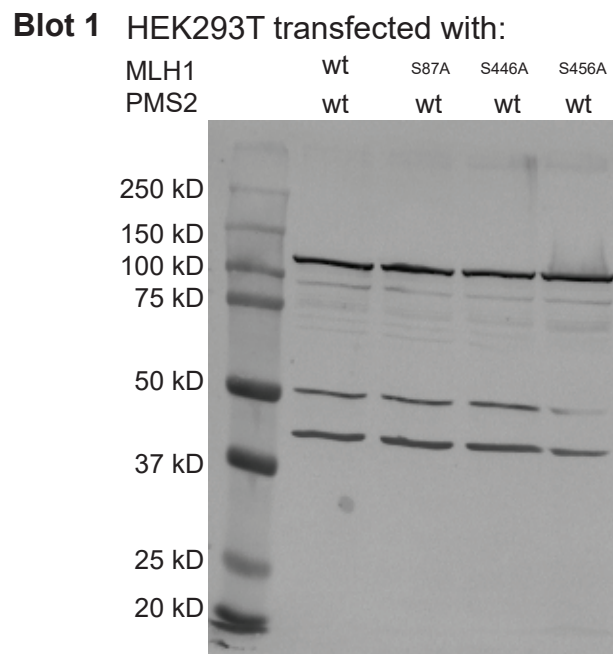


Figure S2

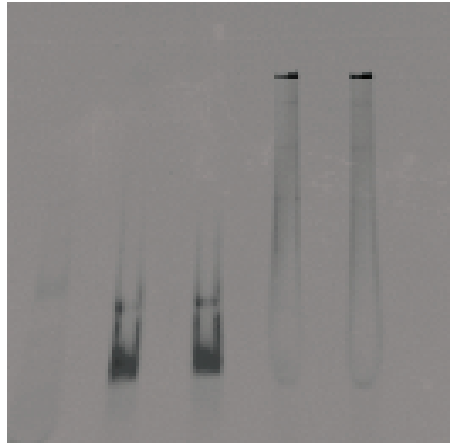


* = unspecific binding

Figure S3

A

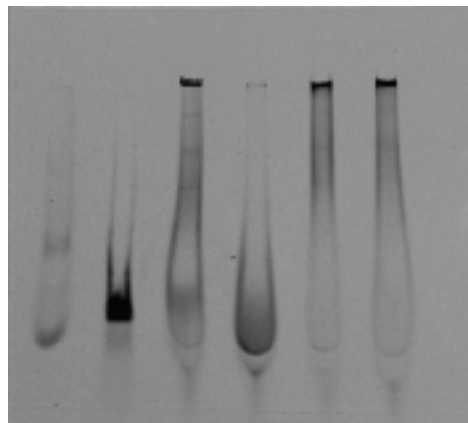
MutLa wt



Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose	-	-	+	-	-
Recombinant protein	-	-	-	+	-
Sepharose-bound protein	-	-	-	-	+

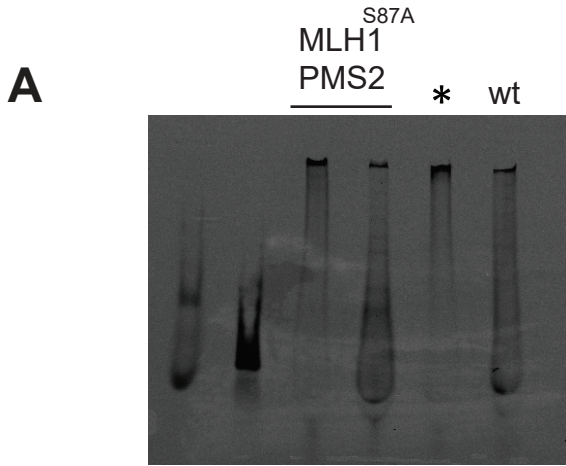
B

MutLa wt

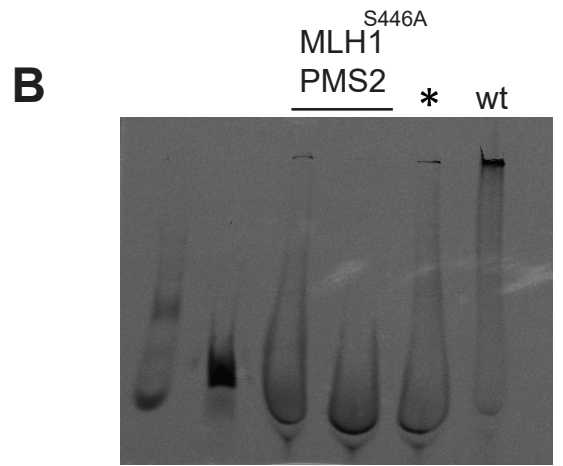


Marker	+	-	-	-	-	-
DNA substrate	-	+	+	+	+	+
Sepharose-bound protein	-	-	+	+	+	+
37°C	-	-	+	-	+	-
CIP	-	-	+	-	-	-
Calyculin	-	-	-	+	-	-

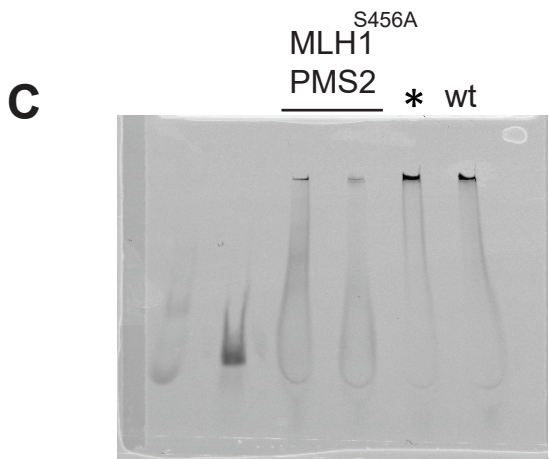
Figure S4



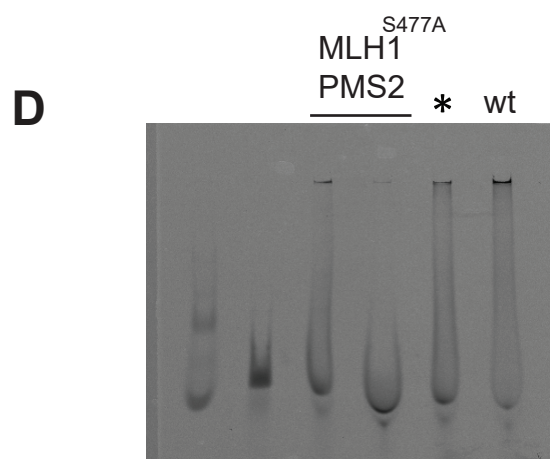
Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-



Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-



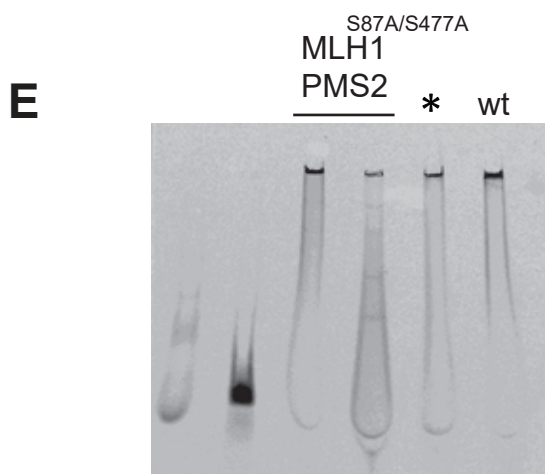
Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-



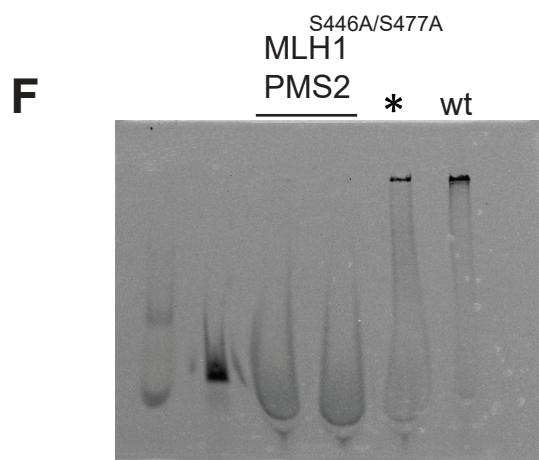
Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-

*Data not used.

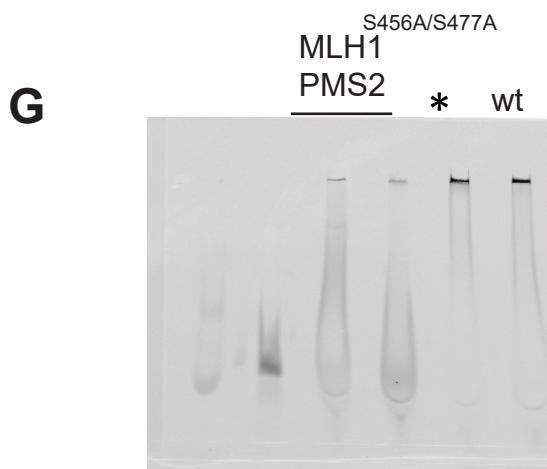
Figure S4



Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-



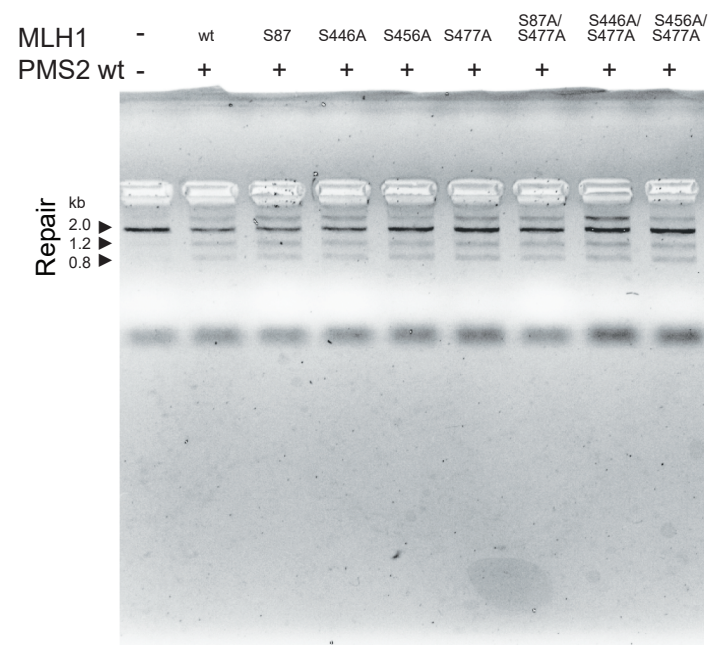
Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-



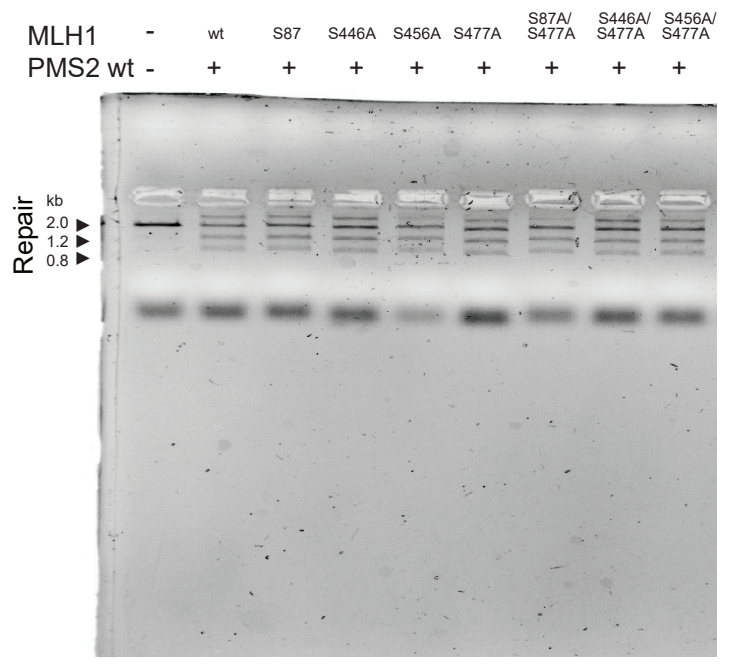
Marker	+	-	-	-	-
DNA substrate	-	+	+	+	+
Sepharose-bound protein	-	-	+	+	+
CIP	-	-	+	-	-
Calyculin	-	-	-	+	-

* Data not used.

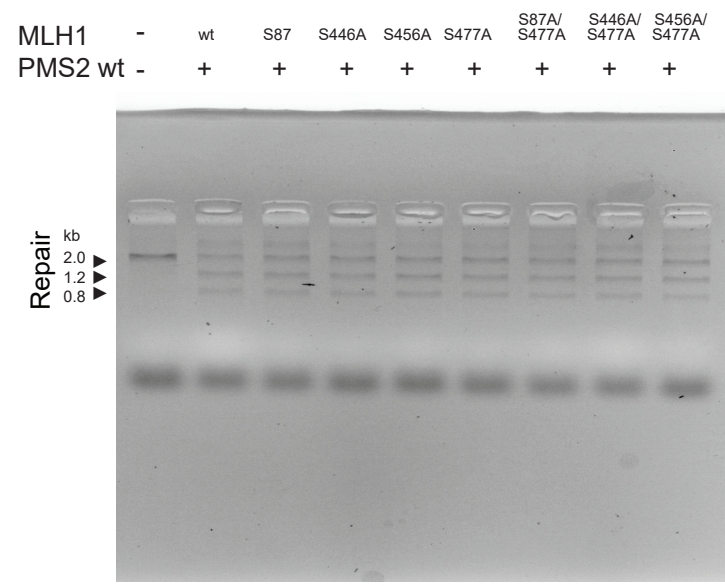
Figure S5A



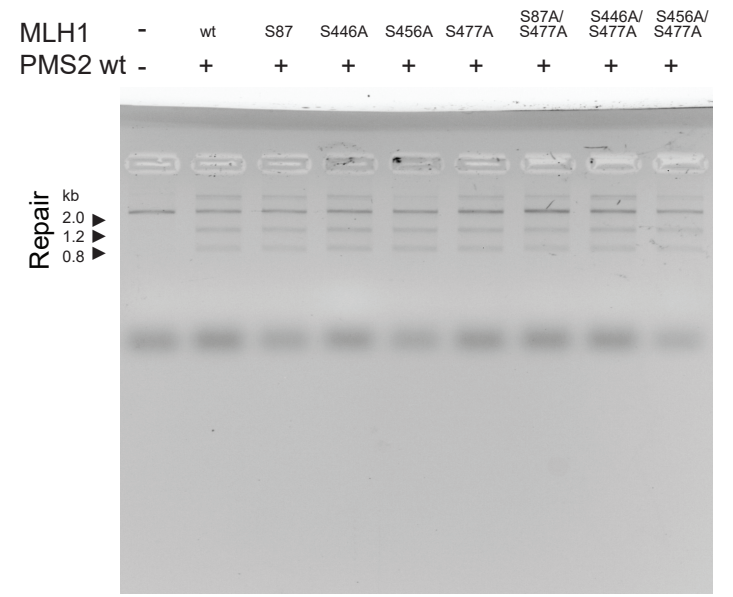
MMR activity									
absolute	4.75	39.72	39.26	40.36	28.87	32.62	19.42	29.25	29.84
relative	11.97	100.00	98.85	101.63	72.70	82.14	48.90	73.64	75.13



MMR activity									
absolute	1.94	45.72	51.43	57.24	58.72	47.82	43.13	58.07	51.32
relative	4.24	100.00	112.47	125.17	128.42	104.58	94.33	126.99	112.23



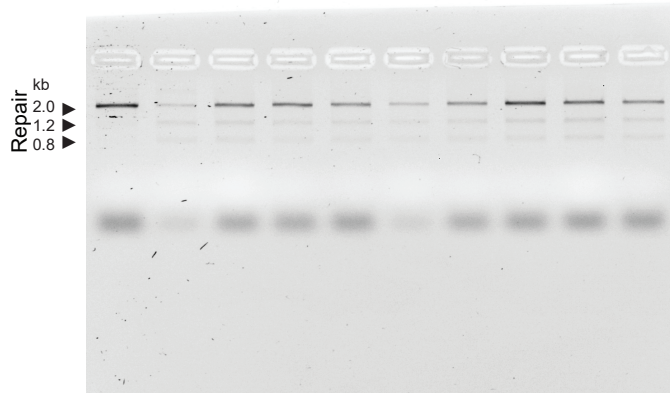
MMR activity									
absolute	3.30	83.20	45.27	73.12	55.67	43.58	75.42	66.44	64.97
relative	3.02	100.00	54.86	83.60	67.31	52.34	90.57	81.14	77.18



MMR activity									
absolute	1.89	39.09	34.07	33.44	35.69	31.69	24.17	33.04	34.78
relative	4.82	100.00	87.15	85.53	91.30	81.07	61.83	84.52	88.98

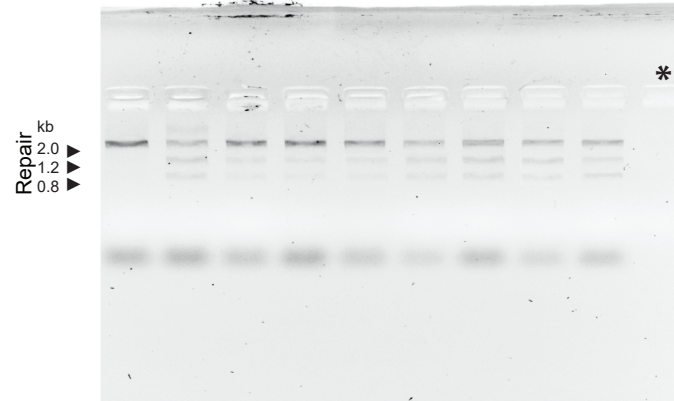
Figure S5B

MLH1	-	wt	wt	S87	S446A	S456A	S477A	S87A/ S477A	S446A/ S477A	S456A/ S477A
PMS2 wt	-	+	+	+	+	+	+	+	+	+
Calyculin	-	-	+	+	+	+	+	+	+	+



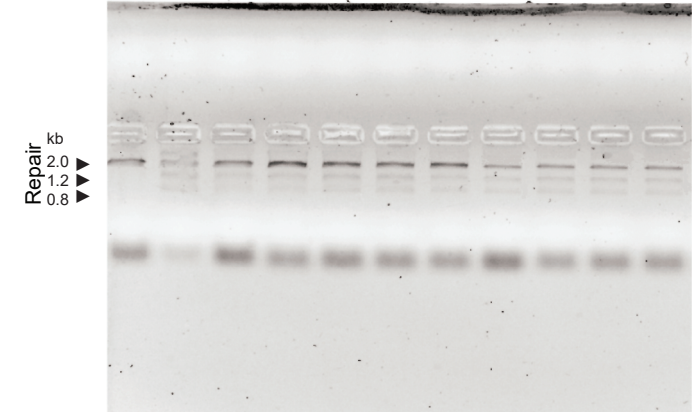
MMR activity											
absolute	4.70	25.53	11.86	4.09	8.23	16.18	15.77	12.84	20.03	14.81	
relative	9.19	100.00	46.47	16.02	32.24	63.40	61.80	50.30	78.46	58.02	

MLH1	-	wt	wt	S87	S446A	S456A	S477A	S87A/ S477A	S446A/ S477A	S456A/ S477A
PMS2 wt	-	+	+	+	+	+	+	+	+	+
Calyculin	-	-	+	+	+	+	+	+	+	+



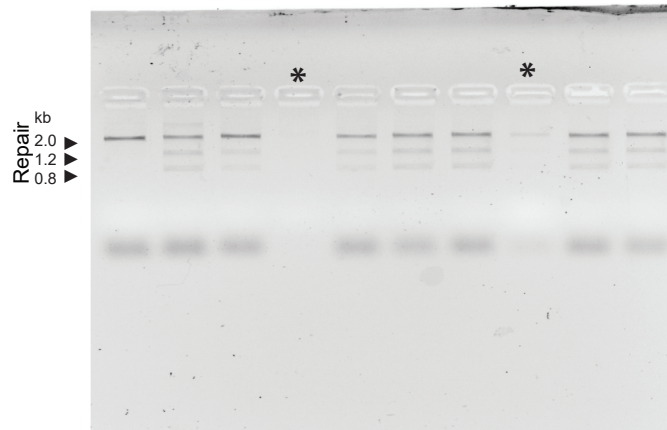
MMR activity											
absolute	1.31	39.40	22.01	8.13	14.92	27.18	25.68	20.07	27.12	0	
relative	3.32	100.00	55.88	20.64	37.87	68.99	65.20	50.95	68.84	0	

MLH1	-	wt	wt	S87	S446A	S456A	S477A	S87A/ S477A	S446A/ S477A	S456A/ S477A
PMS2 wt	-	+	+	+	+	+	+	+	+	+
Calyculin	-	-	+	+	+	+	+	+	+	+



MMR activity											
absolute	1.27	55.49	25.36	8.25	17.09	27.16	34.72	29.11	32.56	33.41	
relative	2.28	100.00	45.71	14.87	30.80	48.94	62.58	52.47	58.68	60.22	

MLH1	-	wt	wt	S87	S446A	S456A	S477A	S87A/ S477A	S446A/ S477A	S456A/ S477A
PMS2 wt	-	+	+	+	+	+	+	+	+	+
Calyculin	-	-	+	+	+	+	+	+	+	+



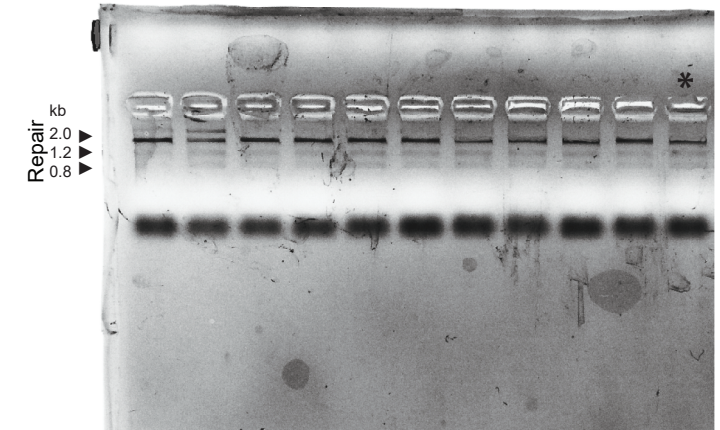
MMR activity											
absolute	1.29	31.47	10.26	0	8.25	16.38	19.59	53.33	17.65	16.98	
relative	4.09	100.00	32.62	0	26.21	52.07	62.28	169.45	56.07	53.97	

MLH1	-	wt	wt	S87	S446A	S456A	S477A	S87A/ S477A	S446A/ S477A	S456A/ S477A
PMS2 wt	-	+	+	+	+	+	+	+	+	+
Calyculin	-	-	+	+	+	+	+	+	+	+



MMR activity											
absolute	0.98	28.78	10.78	4.98	9.56	20.09	17.62	0	28.14	16.30	
relative	3.40	100.00	37.48	17.29	33.20	69.82	61.22	0	97.79	56.64	

MLH1	-	wt	wt	S87	S446A	S456A	S477A	S87A/ S477A	S446A/ S477A	S456A/ S477A
PMS2 wt	-	+	+	+	+	+	+	+	+	+
Calyculin	-	-	+	+	+	+	+	+	+	+

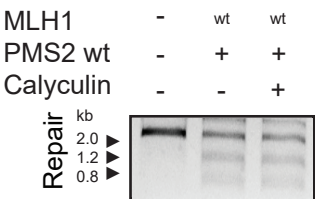


MMR activity											
absolute	2.61	37.63	17.24	9.85	11.68	19.52	21.49	17.41	18.87	47.79	
relative	6.93	100.00	45.82	26.18	31.04	51.90	57.13	46.28	50.16	127.02	

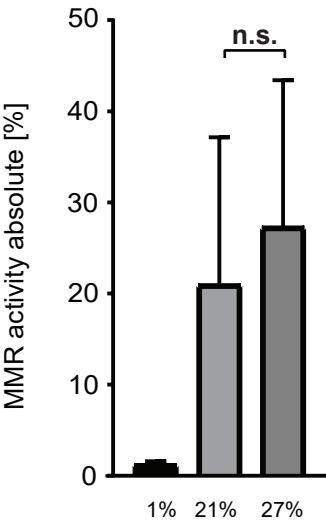
* Data not used for calculation.

Figure S6

A



B



MLH1	-	wt	wt
PMS2 wt	-	+	+
Calyculin	-	-	+