

**Supplementary Table S3. Mechanisms of inactivation of ORFans and HOPs**

	ORFans*								HOPs*							
	Total	F	IS	SC	T	>=2	D	I	Total	F	IS	SC	T	>=2	D	I
<i>S. flexneri</i> 301	60	5	5	14	27	8	0	1	26	1	8	4	8	5	0	0
<i>S. flexneri</i> 2457	70	8	7	18	30	6	0	1	32	2	12	7	6	5	0	0
<i>S. flexneri</i> 8401	91	20	6	29	26	7	2	1	22	2	7	6	5	2	0	0
<i>S. boydii</i>	55	4	10	7	29	4	0	1	17	1	10	2	3	1	0	0
<i>S. sonnei</i>	47	4	10	7	21	5	0	0	28	2	13	1	5	4	3	0
<i>S. dysenteriae</i>	62	2	22	4	29	3	2	0	16	2	8	2	1	3	0	0
<i>E. coli</i> K-12	39	2	3	8	19	7	0	0	9	0	0	1	5	3	0	0
<i>E. coli</i> W3110	37	1	1	9	20	6	0	0	9	0	0	1	5	3	0	0
<i>E. coli</i> EDL933	33	3	2	4	19	5	0	0	1	0	0	0	0	1	0	0
<i>E. coli</i> Sakai	27	1	0	4	18	4	0	0	3	0	0	0	2	1	0	0
<i>E. coli</i> UTI89	28	2	0	4	16	6	0	0	2	1	0	0	1	0	0	0
<i>E. coli</i> CFT073	37	4	2	6	21	4	0	0	10	6	0	1	2	0	1	0
<i>E. coli</i> 536	50	11	0	11	16	9	2	1	8	0	0	1	3	2	1	1

\*Abbreviations are as follows:

F: Frameshift

IS: Insertion sequence

SC: Stop codon

T: Truncation

>=2: More than 1 type of mutation

D: Deletion

I: Insertion