

Table 1: **Biologically Conserved Position Variant Comparisons.** Cause of false positive variant calls for biologically conserved positions.

Org	Plat	Lab	Map	Var	Contaminant	End of read	End of reference	Homopolymer	Non-target region	Strand bias
Ecoli	454	LGC	bwa	gatk	0	5	0	0	2	0
Ecoli	454	LGC	bwa	sam	0	1	0	1	0	0
Ecoli	454	LGC	TMAP	gatk	0	0	0	0	2	1
Ecoli	454	LGC	TMAP	sam	0	1	0	1	0	0
Ecoli	454	NMIA	TMAP	gatk	0	4	0	0	6	1
Ecoli	454	NMIA	TMAP	sam	0	1	0	0	3	0
Ecoli	ION	NIMC	TMAP	sam	0	0	1	0	0	0
Ecoli	Sanger	NIST	TMAP	sam	0	0	2	0	0	0
Lmono	454	LGC	bwa	gatk	58	0	0	0	2	2
Lmono	454	LGC	bwa	sam	41	0	0	0	0	0
Lmono	454	LGC	TMAP	gatk	18	0	0	0	2	2
Lmono	454	LGC	TMAP	sam	44	0	0	0	0	0
Lmono	454	NMIA	bwa	gatk	0	1	0	0	0	0
Lmono	454	NMIA	TMAP	gatk	0	1	0	0	7	3
Lmono	ION	NIST	TMAP	gatk	0	0	0	0	0	1
Lmono	Sanger	LGC	bwa	sam	0	2	0	0	0	0
Lmono	Sanger	LGC	TMAP	sam	0	0	2	0	0	0