% All Mutated Positions   % Hotspots (nMut ≥ 10)   % Hotspots (nMut 5 ~ 9)

% All Mutated Positions — genomic regions

(N in k)	1.7	17	59	23	221	.4	125	
	Nonstop	5'Flank	5'UTR	3'Flank	3'UTR	IGR	Intron	RNA
TTT	3.6	2.2	2.3	5.1	6.2	2.9	3.8	2.7
TTG	1.8	1.1	1.1	1.6	1.6	0.8	1.4	1.3
TTC	2.7	1.4	1.6	1.7	2.1	1.6	1.8	1.7
TTA	7.6	1	0.9	2.1	2.8	0.5	1.8	1
TCT	5.8	10.8	10.4	12.3	13.2	11.2	11.9	11.5
TCG	0	5.6	5.9	4.5	3.6	3.7	3.7	5
TCC	0	7.7	7.8	5.5	5.3	9	6.9	7.6
TCA	25.3	6.2	5.8	6.1	6	6.6	6.5	7.3
GTT	0.8	1.6	1.4	2.1	2.4	1.3	1.9	1.7
GTG	3.3	1.7	1.4	1.5	1.5	1.9	1.7	1.6
GTC	4.6	1.4	1.4	1.3	1.2	1.4	1.4	1.4
GTA	4.2	1.1	0.9	1.4	1.6	1.3	1.3	1.2
GCT	1.8	4.3	4.3	3.9	3.6	4.8	4	4.2
GCG	0	6.4	7.1	4.8	3.8	3.7	4	4.7
GCC	0	5.1	5.5	4	3.5	4	4.4	4.1
GCA	0	2.8	2.7	2.6	2.5	1.1	2.7	2.8
CTT	2.7	2.1	2.1	2.7	2.9	3.2	2.5	2.5
CTG	6	2.3	2.4	1.9	1.8	2.7	2.2	2.4
CTC	4.2	1.4	1.7	1.2	1.1	1.5	1.4	1.2
CTA	10.9	0.7	0.8	0.8	0.9	1.6	1	0.7
CCT	2.7	6.1	5.7	5.2	5.2	6.6	6	5.6
CCG	0	5.4	6.1	3.6	2.7	1.9	3.1	3.7
CCC	0.1	4.7	5.1	3.6	3.4	4.8	5	4
CCA	0	3.4	3.3	2.9	2.6	5.3	3.3	4
ATT	1.8	1.3	1.3	3.1	3.6	2.1	2.4	1.6
ATG	2.2	1.1	0.8	1.4	1.5	0.8	1.5	1.6
ATC	2.6	0.9	0.7	1	1.1	0.5	1.2	1
ATA	4.3	0.8	0.7	1.6	2	1.1	1.5	1.1
ACT	1.2	1.9	1.8	2.5	2.6	3.7	2.3	2.3
ACG	0	3.5	3.1	3.3	3.1	2.1	2.8	3.7
ACC	0.1	2.5	2.3	2.2	1.9	3.2	2.3	2.4
ACA	0	1.9	1.7	2.4	2.5	2.4	2.3	2.4

% All Mutated Positions — variant classes

	Silent	Missense	Nonsense	Frame Shift Del	In Frame Del	Splice Region	Trans Start	In Frame Ins	Frame Shift Ins	Splice Site
(N)	565	1444	116	61			29		66	37
TTT	0.9	2.5	0.9	0.5	2.9	1.5	0	5.2	2.6	0.3
TTG	1.2	0.9	1.6	6	2.8	1.1	0	3.8	2.5	0.2
TTC	0.8	1.4	1.1	7	2.7	1.1	0	3.8	2.2	0.2
TTA	0.8	0.6	1.7	4.5	2.1	5	0	2.6	2.3	0.2
TCT	7.9	10.3	15.4	1.7	6.5	4.6	0	4	6.7	16.7
TCG	7.2	6.4	9	0.8	1.5	3.5	0	0.9	1.2	0
TCC	7.2	7.7	7.5	7	3.4	5.4	0	3.4	3.7	0.2
TCA	8.6	5.8	19	1.8	4.5	17	23.6	3.9	5.2	0.2
GTT	1.2	1.6	0.2	4.5	1.8	1.4	0	2.7	1.7	0.7
GTG	1.4	1.3	0.4	1.1	2.4	1.3	0	3.3	3	4
GTC	0.7	1.6	0.2	1	2.5	0.9	0	2.1	2.3	0.5
GTA	0.8	1.3	0.2	1	1.3	2.1	0	1.9	1.8	10.1
GCT	4.1	3.9	0.9	1.5	3.7	2.4	0.1	3.9	4.2	4.3
GCG	7.1	6.5	4.6	0.7	1.4	3.1	0	1.3	1.7	0.1
GCC	3.2	4.8	1.9	8.5	3.3	2.6	0	3	2.5	0.4
GCA	3	2.5	4.6	1.5	3	3.8	5.2	2.9	4.5	0.2
CTT	1.6	2.2	0.6	7.4	3.7	1.7	0	4.5	2.6	1
CTG	2.8	2	0.5	2.5	5.9	2.8	0	5	4.8	8.8
CTC	1.1	1.4	0.3	1.4	5.4	1.3	0	3.3	3.3	0.2
CTA	0.9	0.5	0.2	1	2	1.9	0	2	1.6	3.9
CCT	6.1	5.1	2.7	6.6	8.2	7.8	0	4.3	4.3	18.1
CCG	7.3	5.1	4.7	4.8	1.7	5.1	0	1.6	1.5	0.1
CCC	4.8	4.2	2.3	0.5	3.3	3.7	0.1	2.6	1.8	0.2
CCA	5.3	2.8	9.1	9	4.2	6.2	23.1	3.7	4.7	0.2
ATT	0.6	1.7	0.6	5.5	2.2	0.7	5.3	4.3	3.1	0.2
ATG	1.5	1.7	0.5	1.4	3	1	30.5	3.6	4.4	0.2
ATC	0.4	1.4	0.4	1.1	2.9	0.6	4.8	3.2	3.2	0.1
ATA	0.7	1.2	0.4	0.7	1.7	2	2.6	2.2	3.5	0.2
ACT	1.5	2.2	1.1	1.3	3	0.9	0	3.7	4.1	5.1
ACG	6.1	4.5	3.5	0.9	1.9	3.4	0	1.1	1.2	3.7
ACC	1.6	2.5	1.4	5.5	2.2	1.7	0	2.9	2.5	17.9
ACA	1.7	2.1	2.6	1.6	3.4	2.6	4.2	3.8	5.1	1.7

% Hotspots (nMut ≥ 10)

	Silent	Missense	Nonsense	Frame Shift Del	In Frame Del	Splice Region	Trans Start	In Frame Ins	Frame Shift Ins	Splice Site
(N)	143	759	171	142	29	7	2	20	32	59
TTT	2.1	2.7	2.3	0	6.9	0	0	0	0.3	0
TTG	0.7	1.3	0.6	9.3	3.4	0	0	5	0.9	0
TTC	4.9	3.6	0	8.4	6.9	0	0	0	0.9	0
TTA	1.4	0.8	4.1	9.2	6.9	0	0	0	3.1	0
TCT	0	4.9	2.9	0.4	3.4	0	0	15	8	5.1
TCG	23.8	19.5	40.9	0.9	6.9	0	0	0	3.4	0
TCC	12.6	6.8	4.7	6.6	0	0	0	5	2.1	0
TCA	2.8	1.9	4.7	0.3	6.9	14.3	0	5	3.4	3.4
GTT	3.5	0.7	0	5	0	14.3	0	0	1.2	0
GTG	0.7	1.3	0.6	0.3	0	0	0	10	5.5	3.4
GTC	2.8	1.7	0.6	0.4	0	0	0	5	4.9	6.8
GTA	0	1.5	0.6	0	0	0	0	5	3.1	8.5
GCT	2.8	0.7	0.6	0.3	0	0	0	5	4	5.1
GCG	7.7	4.9	7	1.1	13.8	0	0	5	3.1	0
GCC	4.2	4.1	2.9	5.9	0	0	0	10	2.1	0
GCA	2.1	1.3	2.1	0.1	0	0	0	10	2.8	1.7
CTT	0.7	2.8	0.6	12	0	0	0	0	0.6	0
CTG	0	2.1	0.6	0.3	0	0	0	0	8.6	13.6
CTC	0.7	1.3	0.6	0.3	0	0	0	0	3.4	0
CTA	0	1.1	0	0.1	6.9	0	0	5	1.2	5.1
CCT	3.5	2.8	0	5.5	6.9	57.1	0	5	5.2	11.9
CCG	4.9	7.1	4.1	5.5	3.4	14.3	0	5	4.3	1.7
CCC	10.5	5.7	2.3	0.1	6.9	0	0	5	0	1.7
CCA	1.4	2.8	6.4	9.4	3.4	0	0	0	4.3	0
ATT	0	1.2	0.6	6.6	0	0	0	0	0	0
ATG	0	1.7	0.6	0.3	6.9	0	0	0	4.9	0
ATC	0.7	1.6	0.6	0.1	0	0	50	0	4.3	0
ATA	0	1.1	0.6	0.1	0	0	0	0	3.4	0
ACT	0	1.1	0	0.3	3.4	0	0	0	4	10.2
ACG	3.5	5.6	6.4	0.5	6.9	0	0	0	0.9	1.7
ACC	1.4	2.9	0.6	10.1	0	0	0	0	2.8	16.9
ACA	0	1.7	2.9	0.5	0	0	50	0	3.1	1.7

% Hotspots (nMut 5 ~ 9)

	Silent	Missense	Nonsense	Frame Shift Del	In Frame Del	Splice Region	In Frame Ins	Frame Shift Ins	Splice Site	Nonstop
(N)	578	1701	339	312	17	17	13	151	69	2
TTT	0.3	1.6	0.3	0	0	5.9	7.7	1.3	0	0
TTG	0.2	0.6	0.3	5.7	0	0	0	0	1.4	0
TTC	2.8	1.7	0.3	10.4	5.9	0	7.7	2	0	0
TTA	0.3	0.5	0.9	5.4	5.9	0	0	2.6	0	0
TCT	3.5	5.3	7.7	0.6	5.9	0	7.7	6.6	13	0
TCG	27.3	27.1	37.2	1.9	5.9	5.9	7.7	1.3	0	0
TCC	7.6	7.2	2.9	5.7	0	17.6	0	6.6	2.9	0
TCA	2.8	2	7.1	0.6	17.6	0	7.7	6	0	0
GTT	0.5	0.5	0	7.6	5.9	0	0	1.3	0	0
GTG	0.3	0.6	0	0.6	5.9	0	0	4	4.3	0
GTC	1.2	0.8	0	0	0	0	0	0.7	0	0
GTA	0.3	0.5	0	0.6	5.9	0	7.7	2.6	15.9	0
GCT	1	0.7	0	0	0	0	0	0.7	0	0
GCG	15.9	14.5	10.3	0.6	0	5.9	0	6.6	0	0
GCC	2.1	2.6	0.3	8.9	5.9	0	7.7	4	0	0
GCA	0.7	0.9	0	0	0	0	0	0	5.3	0
CTT	1.9	1.8	0	10.8	0	5.9	0	0.7	0	0
CTG	0.3	1.1	0	0.3	5.9	0	7.7	5.3	11.6	0
CTC	1	0.9	0.6	1.3	0	0	0	0	0	0
CTA	0.2	0.1	0	0	0	0	0	0.7	5.8	0
CCT	2.2	2.5	0.9	5.1	5.9	17.6	7.7	2	11.6	0
CCG	10.4	9.3	11.5	7.6	0	17.6	0	2	0	0
CCC	4.3	3.1	0.3	0	0	0	15.4	0.7	0	0
CCA	2.1	1.4	3.5	7	0	5.9	7.7	3.3	0	0
ATT	0.5	1	0.6	8.9	0	0	0	3.3	0	0
ATG	0.2	0.4	0.3	0.6	5.9	0	0	4	0	50
ATC	1	1.5	0.6	0.3	5.9	0	0	4.6	0	0
ATA	0.2	0.6	0.6	0	0	0	0	5.3	0	50
ACT	0.2	0.5	0.3	0	0	0	0	2.6	2.9	0
ACG	7.6	7.9	11.5	0	0	0	5.9	0	2	7.2
ACC	0.7	1	0.3	6.6	0	11.8	7.7	3.3	21.7	0
ACA	0.2	0.5	0.9	0.9	5.9	0	0	0	6	1.4

Low ◼◼◼◼◼◼◼◼◼ High