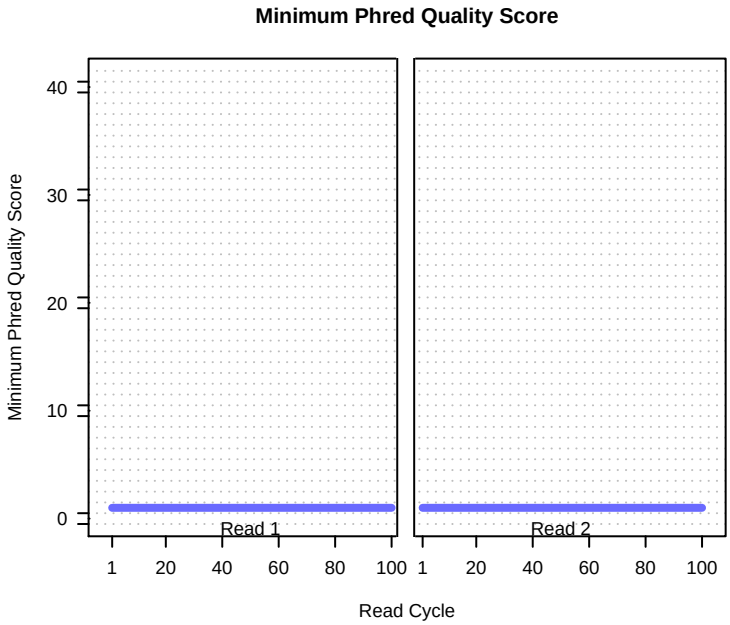
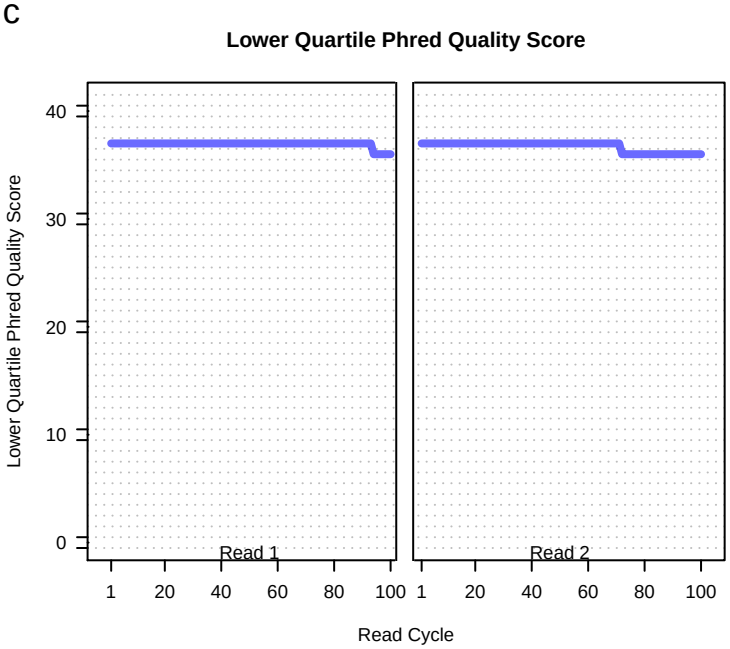
a

All Quality Control Summary Plots

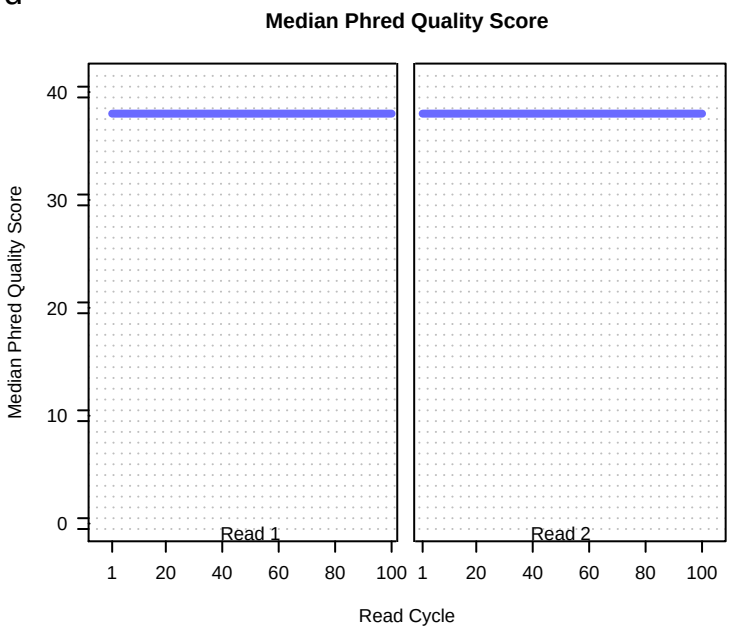
b



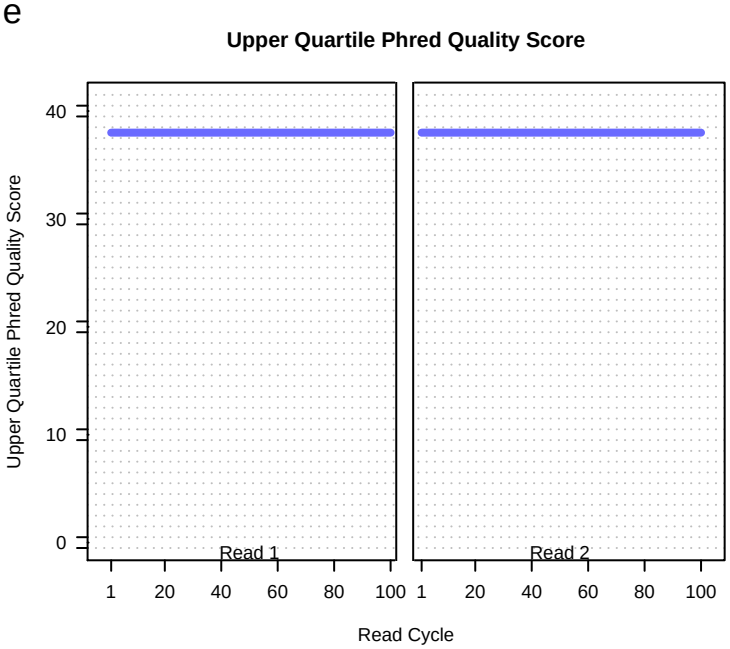
c



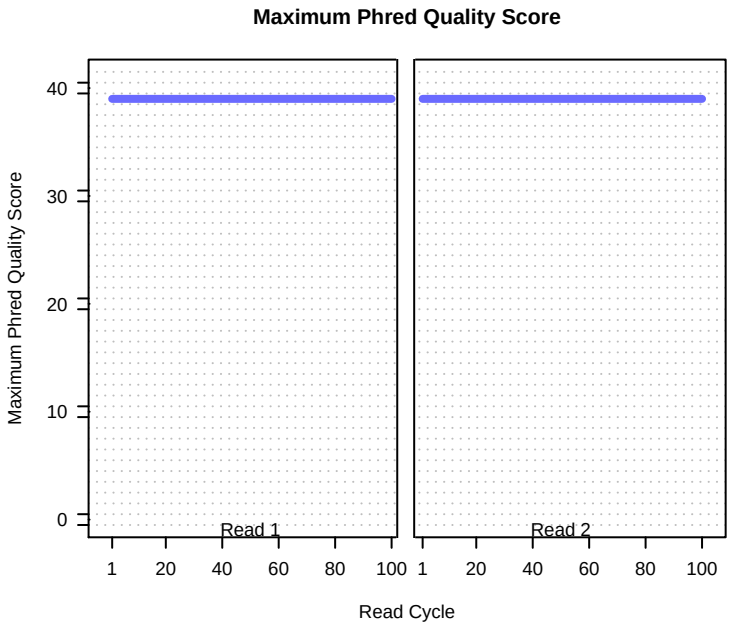
d



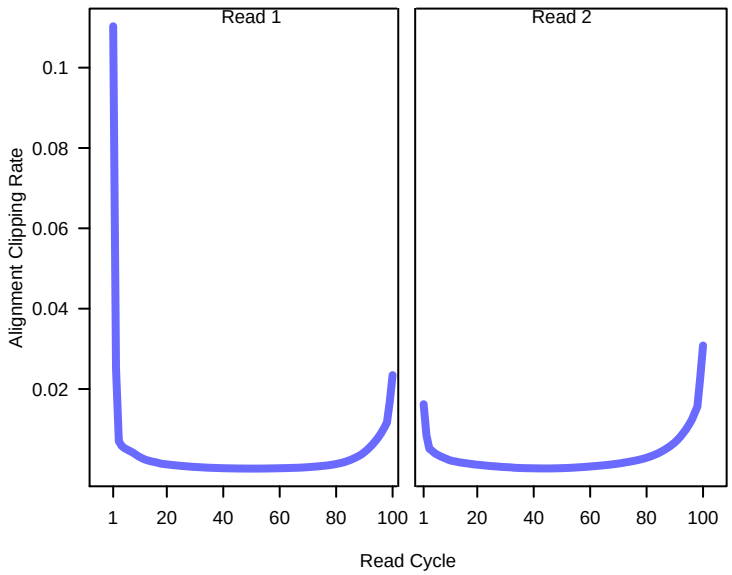
e



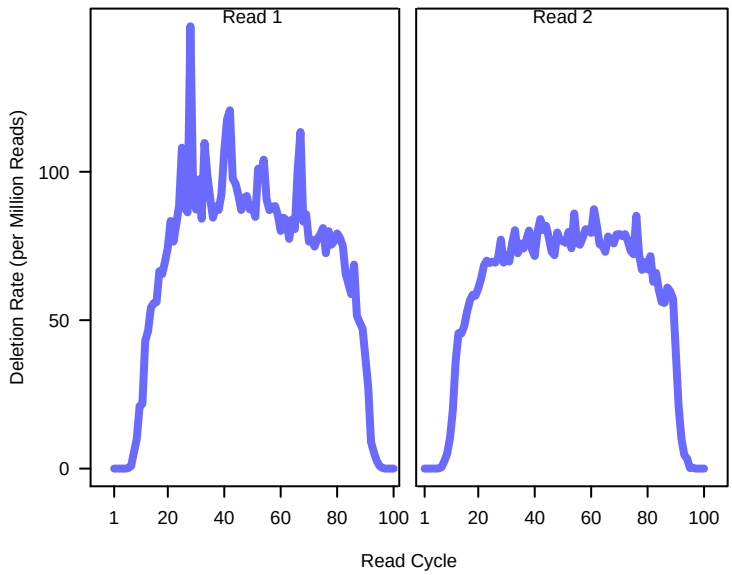
f



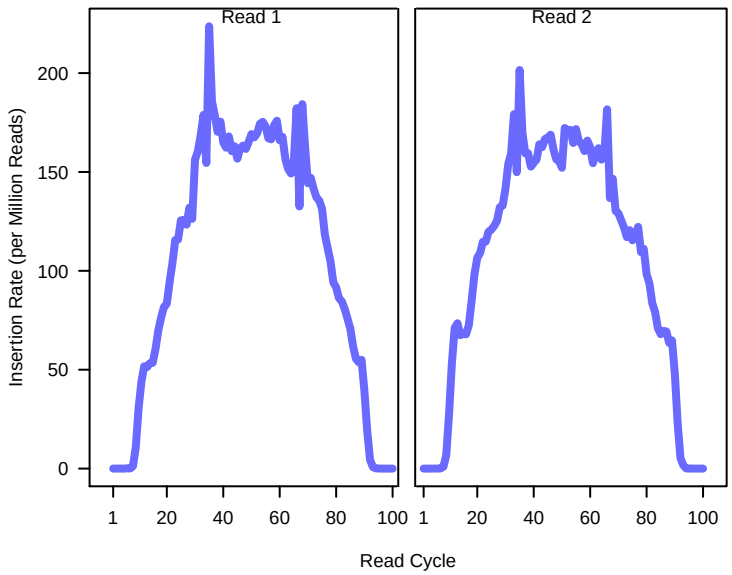
g


Alignment Clipping Rate, by read cycle
Read 1
Read 2
Alignment Clipping Rate
0.1
0.08
0.06
0.04
0.02
1
20
40
60
80
100
Read Cycle

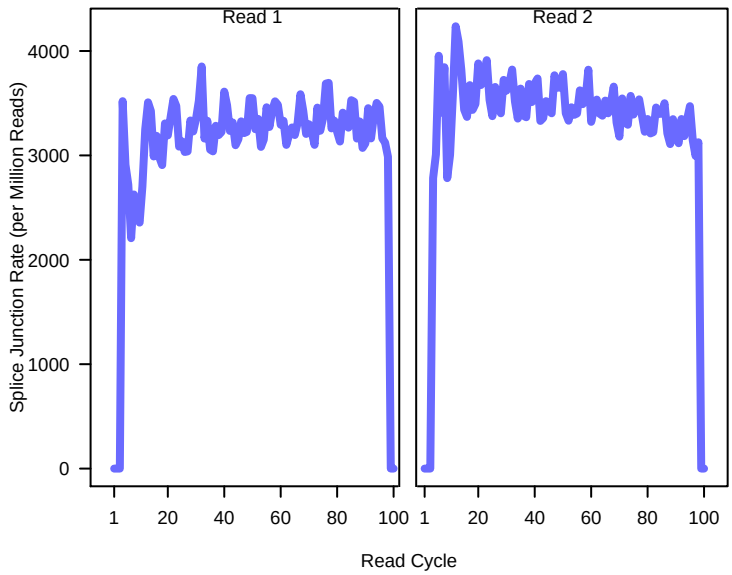
h


Deletion Rate, by read cycle
Read 1
Read 2
Deletion Rate (per Million Reads)
100
50
0
1
20
40
60
80
100
Read Cycle

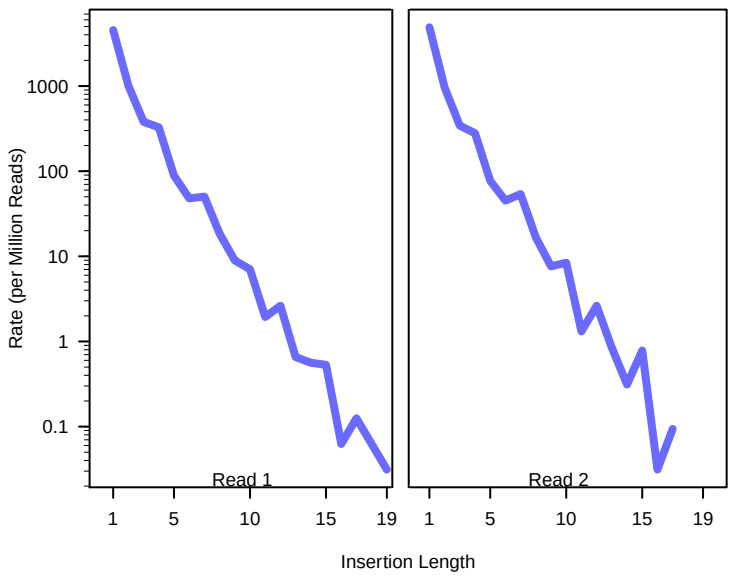
i


Insertion Rate, by read cycle
Read 1
Read 2
Insertion Rate (per Million Reads)
200
150
100
50
0
1
20
40
60
80
100
Read Cycle

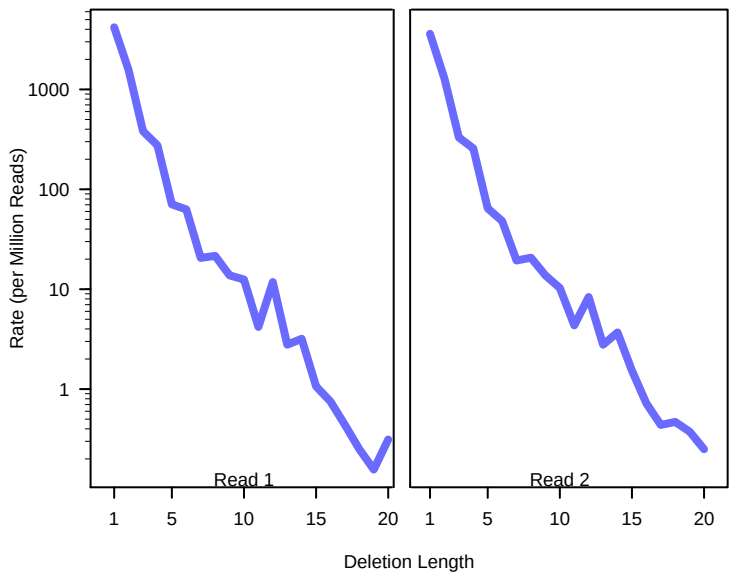
j


Splice Junction Rate, by read cycle
Read 1
Read 2
Splice Junction Rate (per Million Reads)
4000
3000
2000
1000
0
1
20
40
60
80
100
Read Cycle

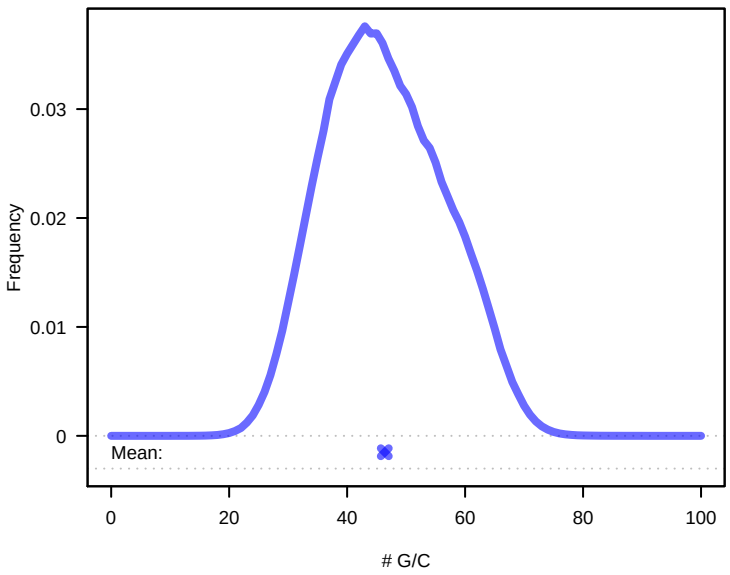
k


Insertion Length Distribution
Read 1
Read 2
Rate (per Million Reads)
1000
100
10
1
0.1
1
5
10
15
19
Insertion Length

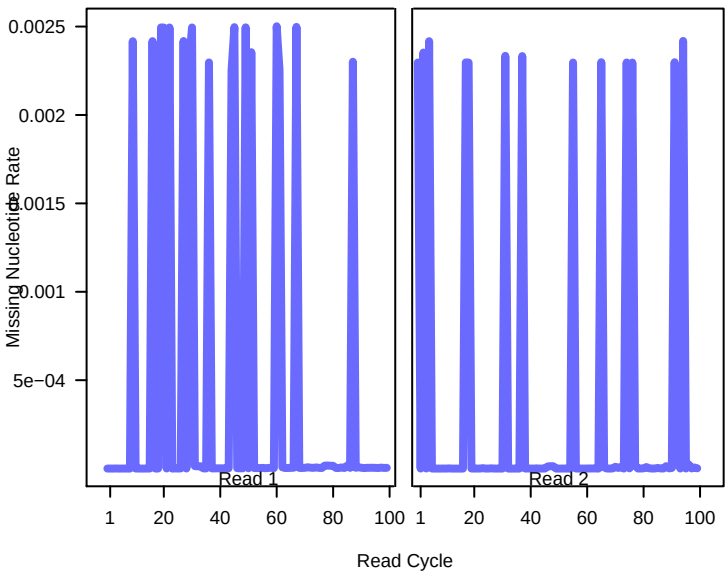
l


Deletion Length Distribution
Read 1
Read 2
Rate (per Million Reads)
1000
100
10
1
1
5
10
15
20
Deletion Length

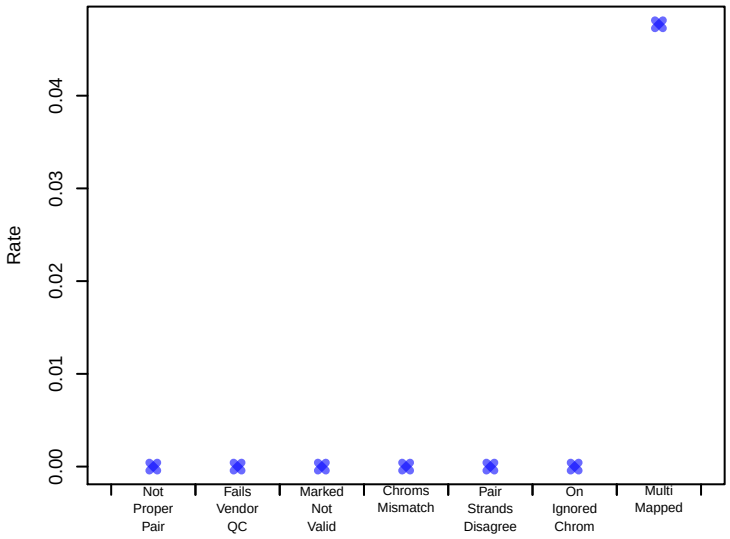
m


GC Content
Frequency
0
0.01
0.02
0.03
Mean:
0
20
40
60
80
100
G/C

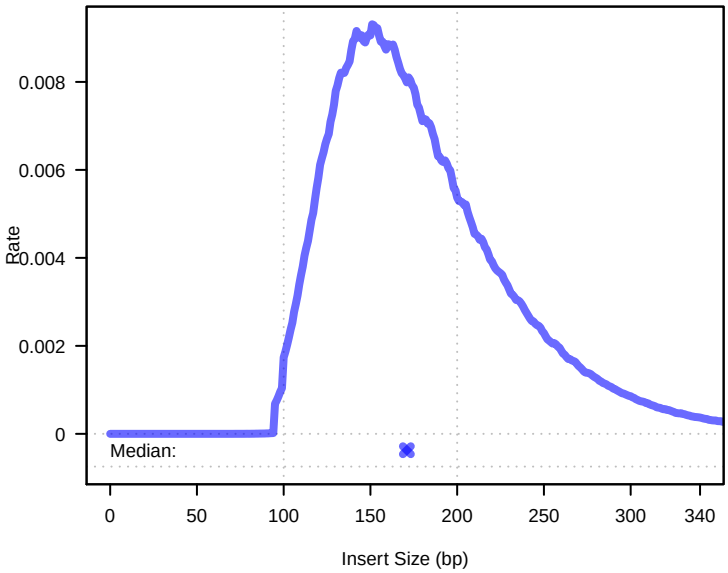
n


'N' Rate, by Read Cycle
Missing Nucleotide Rate
5e−04
0.001
0.0015
0.002
0.0025
Read 1
Read 2
1
20
40
60
80
100
Read Cycle

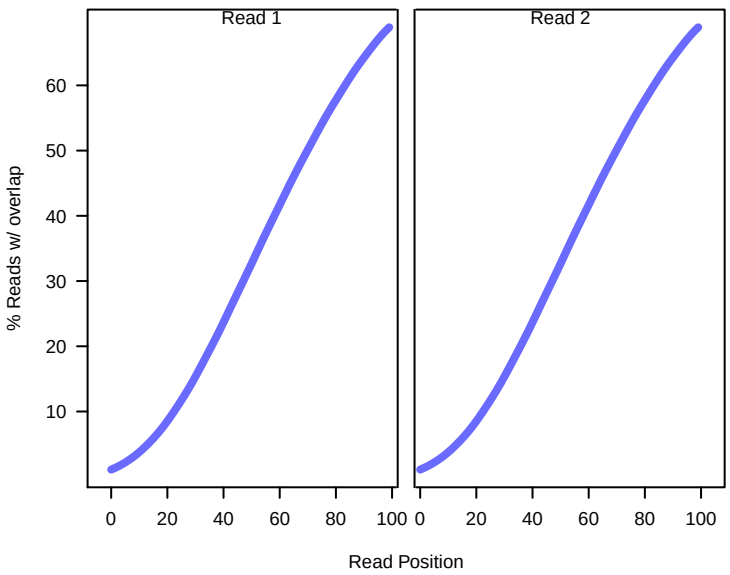
o


Read Drop Rate, by Reason
Rate
0.00
0.01
0.02
0.03
0.04
Not Proper Pair
Fails Vendor QC
Marked Not Valid
Chroms Mismatch
Pair Strands Disagree
On Ignored Chrom
Multi Mapped

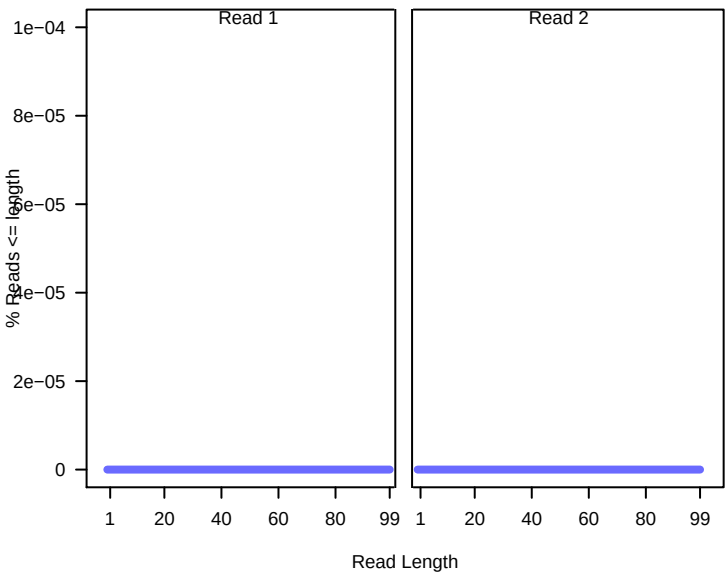
p


Insert Size
Rate
0
0.002
0.004
0.006
0.008
Median:
0
50
100
150
200
250
300
340
Insert Size (bp)

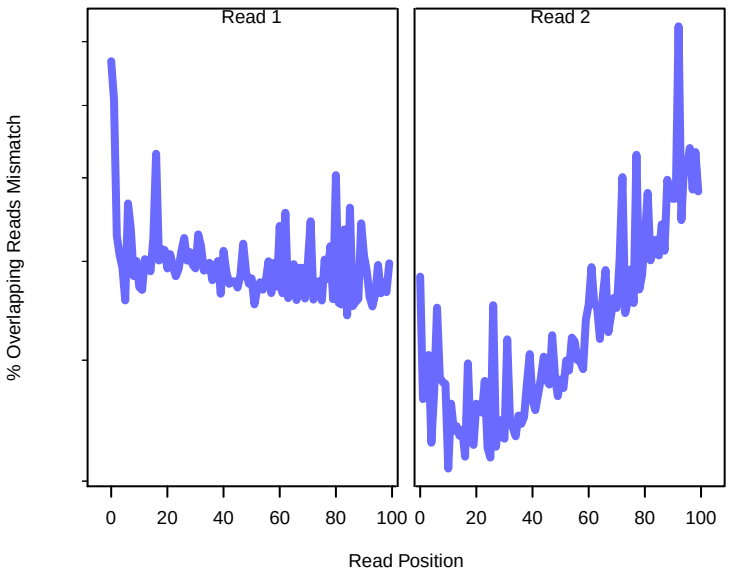
q


Overlapping Coverage
% Reads w/ overlap
10
20
30
40
50
60
Read 1
Read 2
0
20
40
60
80
100
Read Position

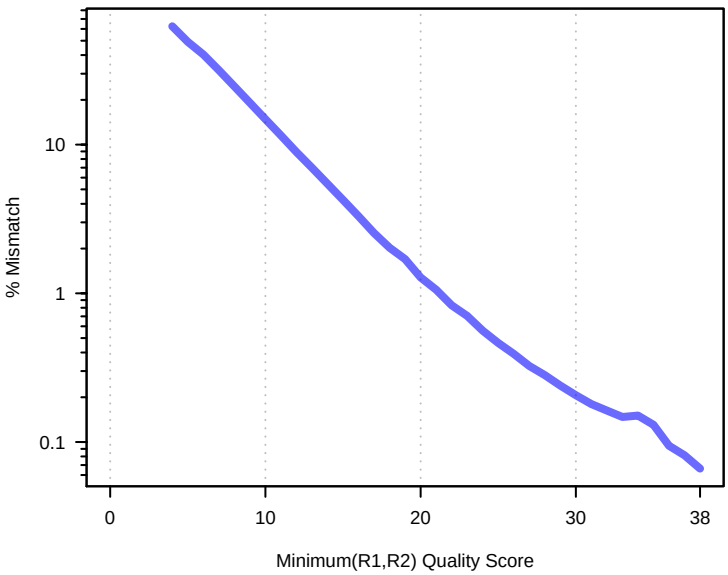
r


Read Length Distribution
% Reads <= length
0
2e−05
4e−05
6e−05
8e−05
1e−04
Read 1
Read 2
1
20
40
60
80
99
Read Length

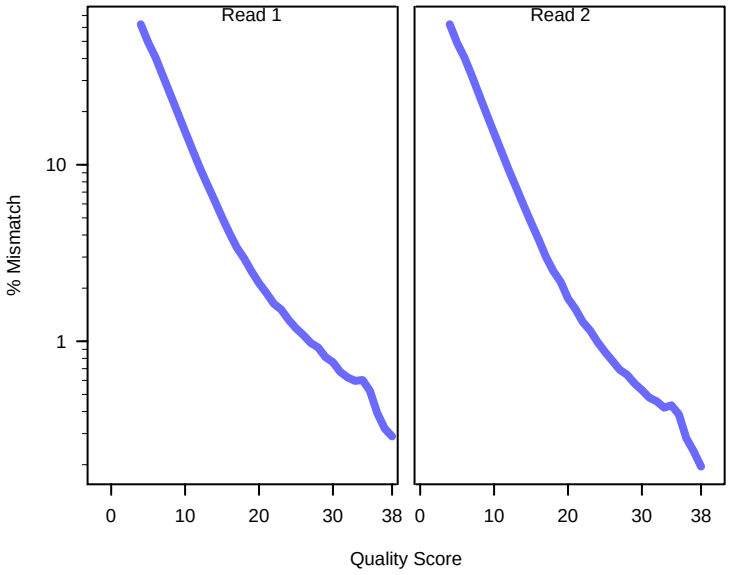
s


Overlap Mismatch by Read Cycle
Read 1
Read 2
% Overlapping Reads Mismatch
0
20
40
60
80
100
Read Position

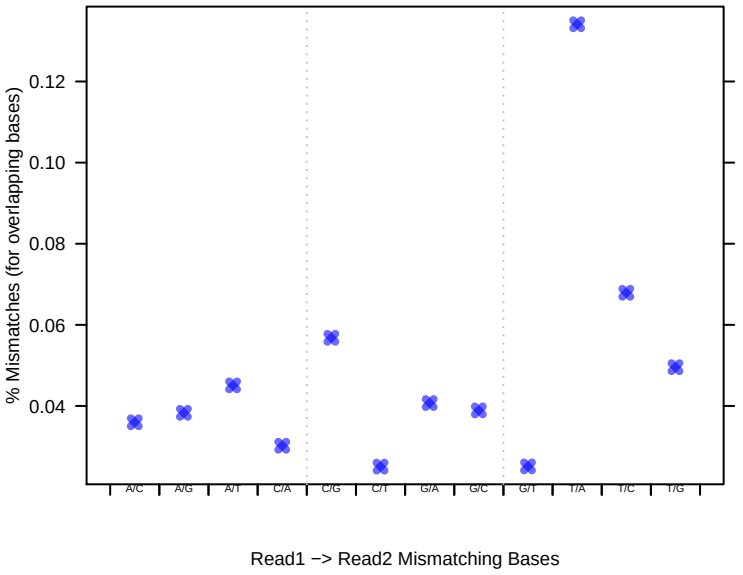
t


Overlapping Mismatch by Min Qual
% Mismatch
10
1
0.1
0
10
20
30
38
Minimum(R1,R2) Quality Score

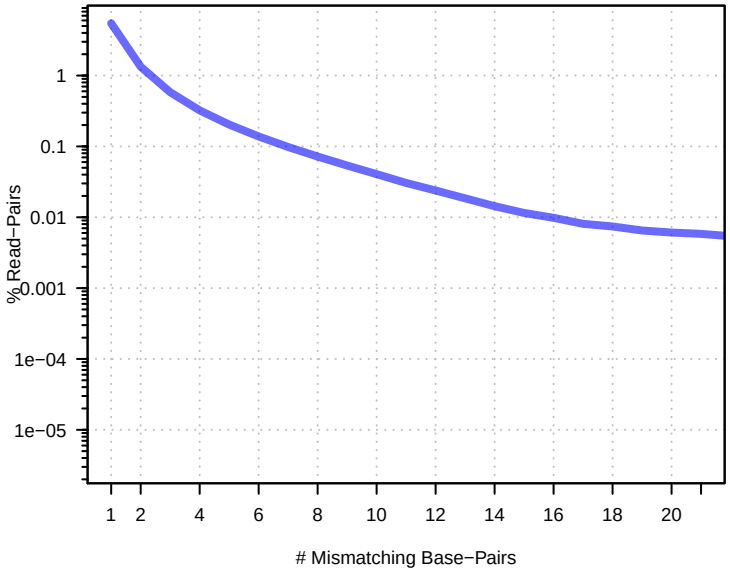
u


Overlap Mismatch by Read Qual
Read 1
Read 2
% Mismatch
10
1
0
10
20
30
38
Quality Score

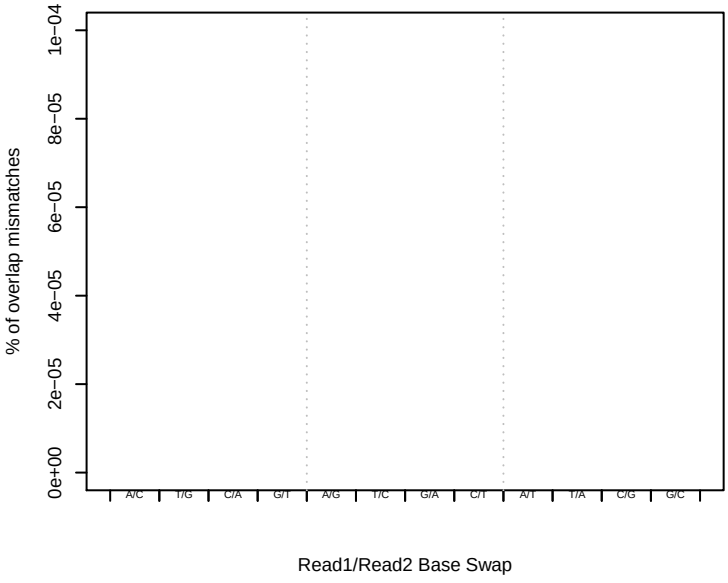
v


Overlap Mismatch Combinations
% Mismatches (for overlapping bases)
0.12
0.10
0.08
0.06
0.04
A/C
A/G
A/T
C/A
C/G
C/T
G/A
G/C
G/T
T/A
T/C
T/G
Read1 -> Read2 Mismatching Bases

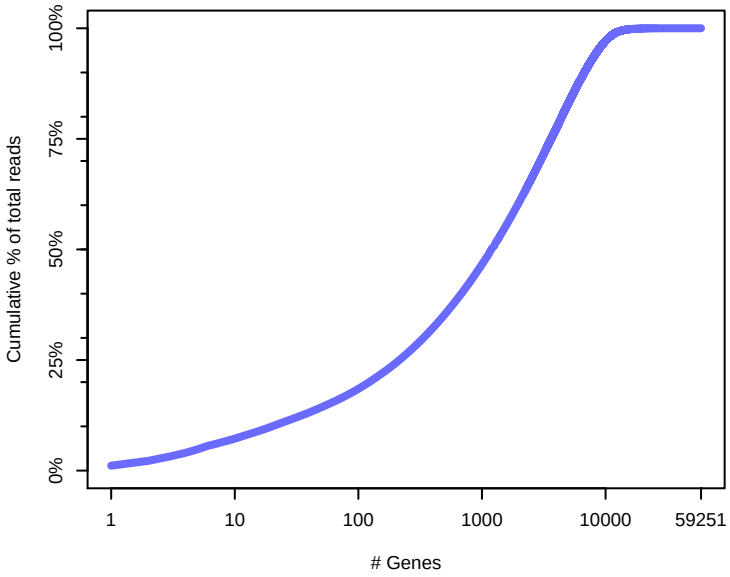
w


Overlap Mismatch Size Frequency
%Read-Pairs
1
0.1
0.01
0.001
1e-04
1e-05
1
2
4
6
8
10
12
14
16
18
20
Mismatching Base-Pairs

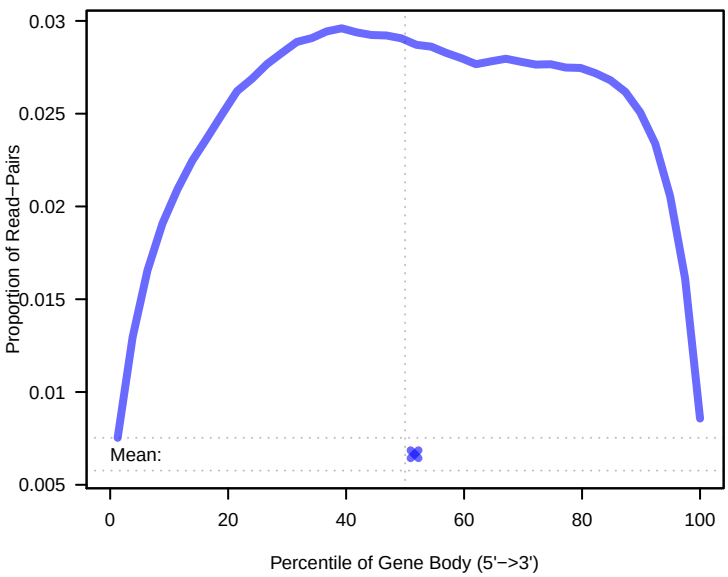
x


Overlap Mismatch Pairs At Phred == 41
% of overlap mismatches
0e+00
2e-05
4e-05
6e-05
8e-05
1e-04
A/C
T/G
C/A
G/T
A/G
T/C
G/A
C/T
A/T
T/A
C/G
G/C
Read1/Read2 Base Swap

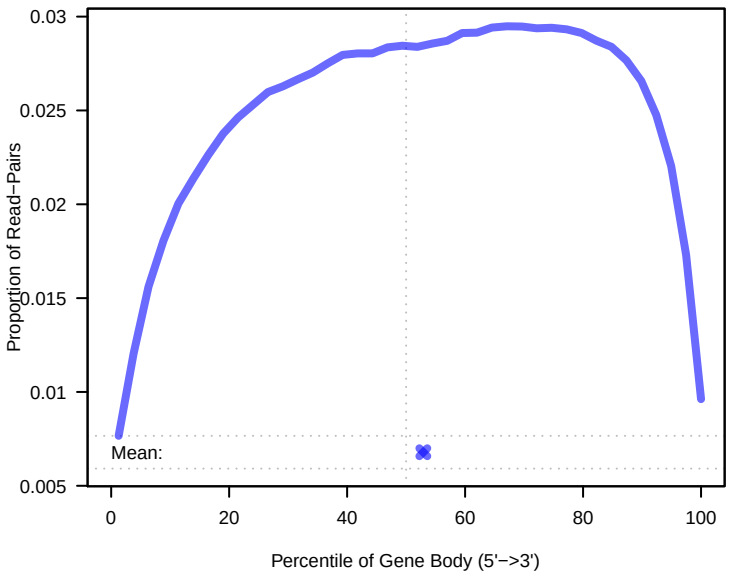
y


Cumulative Gene Assignment Diversity
Cumulative % of total reads
0%
25%
50%
75%
100%
1
10
100
1000
10000
59251
Genes

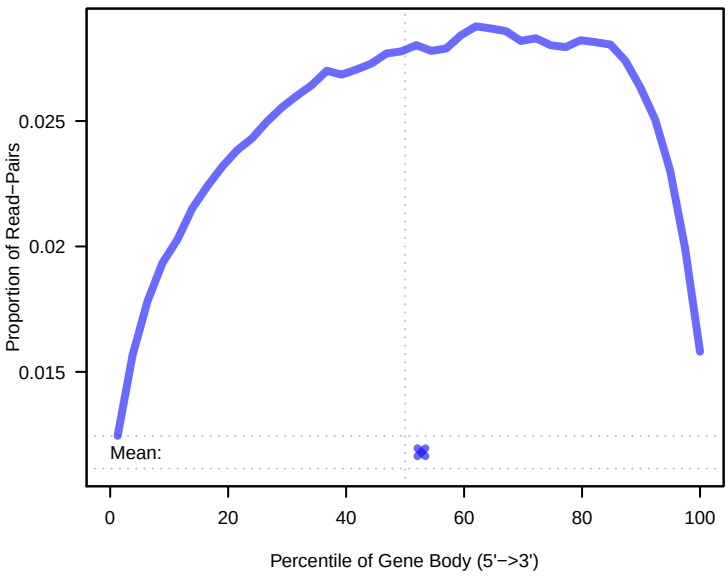
z


Gene−Body Coverage
Proportion of Read−Pairs
0.005
0.01
0.015
0.02
0.025
0.03
Mean:
0
20
40
60
80
100
Percentile of Gene Body (5'−>3')

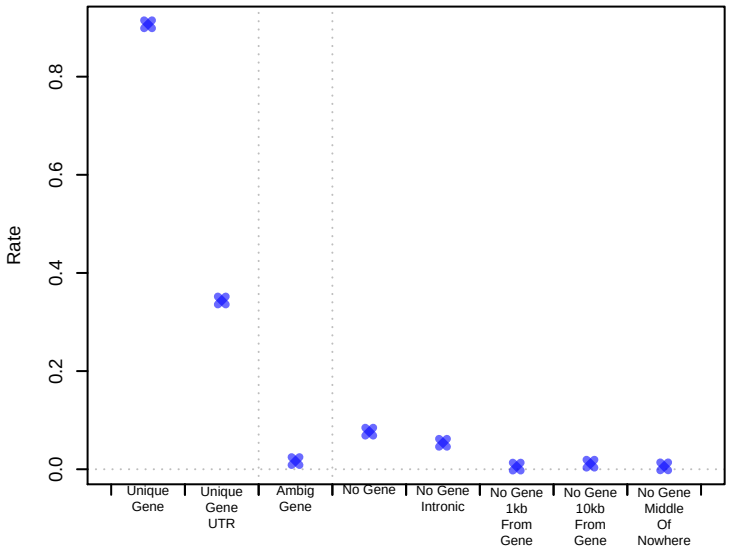
aa


Gene−Body Coverage, Upper Middle Quartile Genes
Proportion of Read−Pairs
0.005
0.01
0.015
0.02
0.025
0.03
Mean:
0
20
40
60
80
100
Percentile of Gene Body (5'−>3')

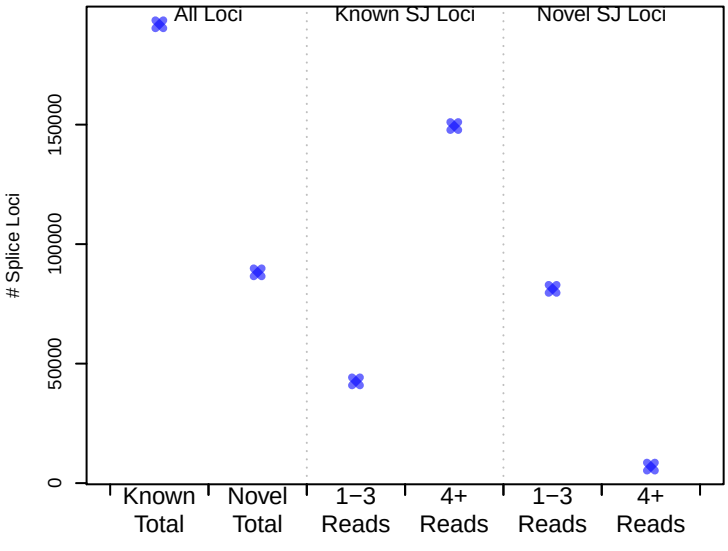
ab


Gene−Body Coverage, Low Expression Genes
Proportion of Read−Pairs
0.015
0.02
0.025
Mean:
0
20
40
60
80
100
Percentile of Gene Body (5'−>3')

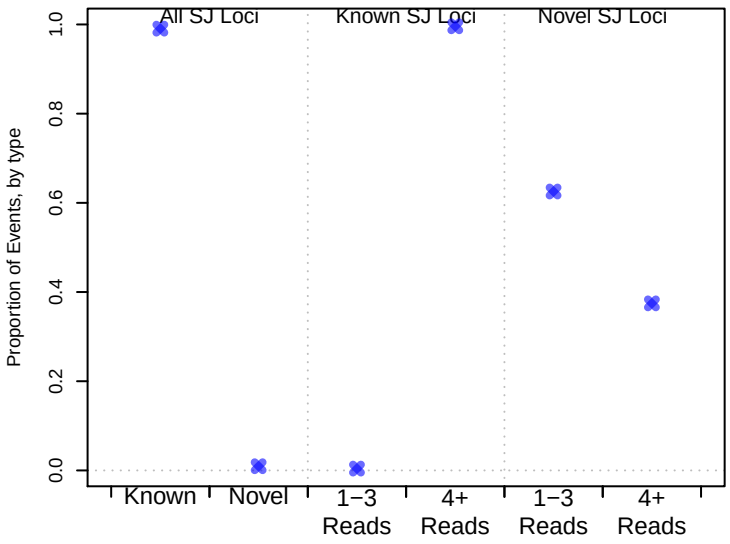
ac


Read Mapping Location Rates
Rate
0.0
0.2
0.4
0.6
0.8
Unique Gene
Unique Gene UTR
Ambig Gene
No Gene
No Gene Intronic
No Gene 1kb From Gene
No Gene 10kb From Gene
No Gene Middle Of Nowhere

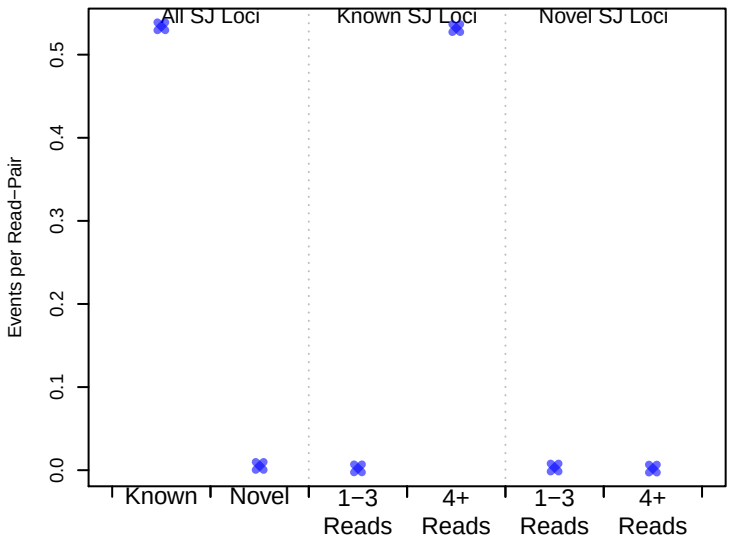
ad


Observed Splice Junction Loci, by type
Splice Loci
0
50000
100000
150000
All Loci
Known SJ Loci
Novel SJ Loci
Known Total
Novel Total
1−3 Reads
4+ Reads
1−3 Reads
4+ Reads

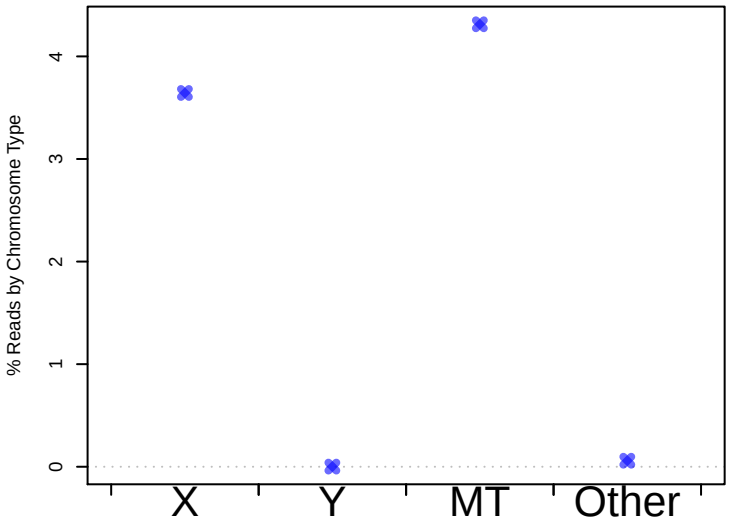
ae



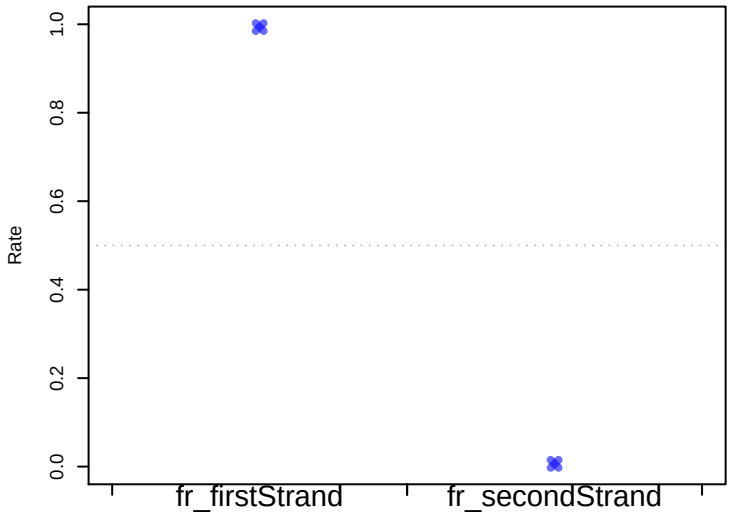
af



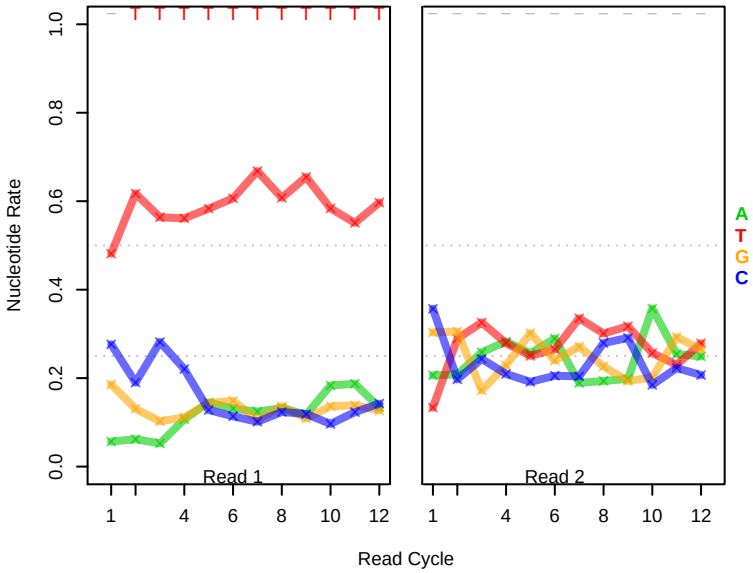
ag



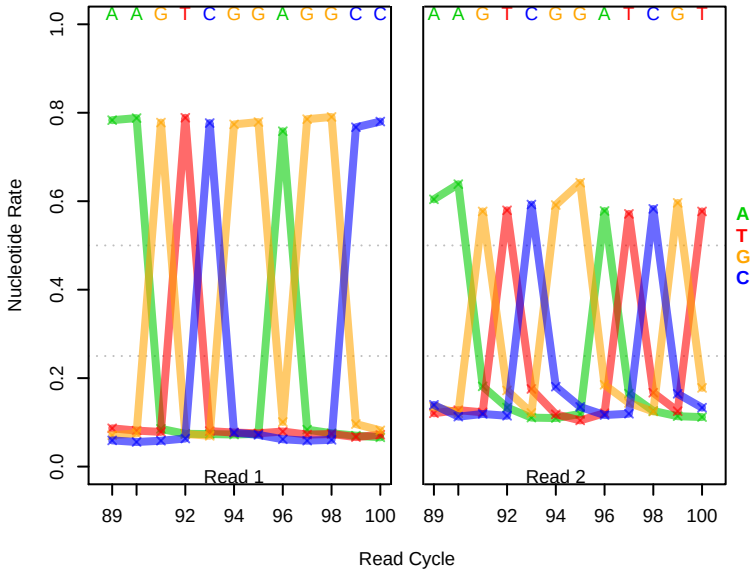
ah



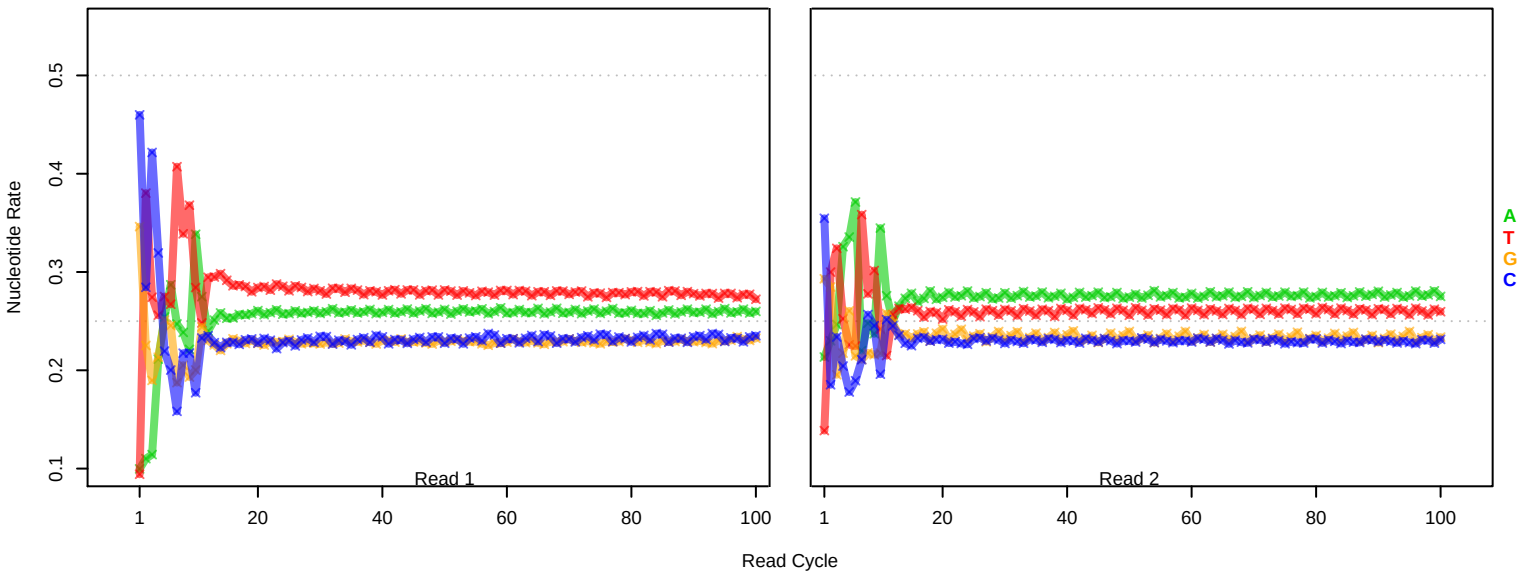
ai



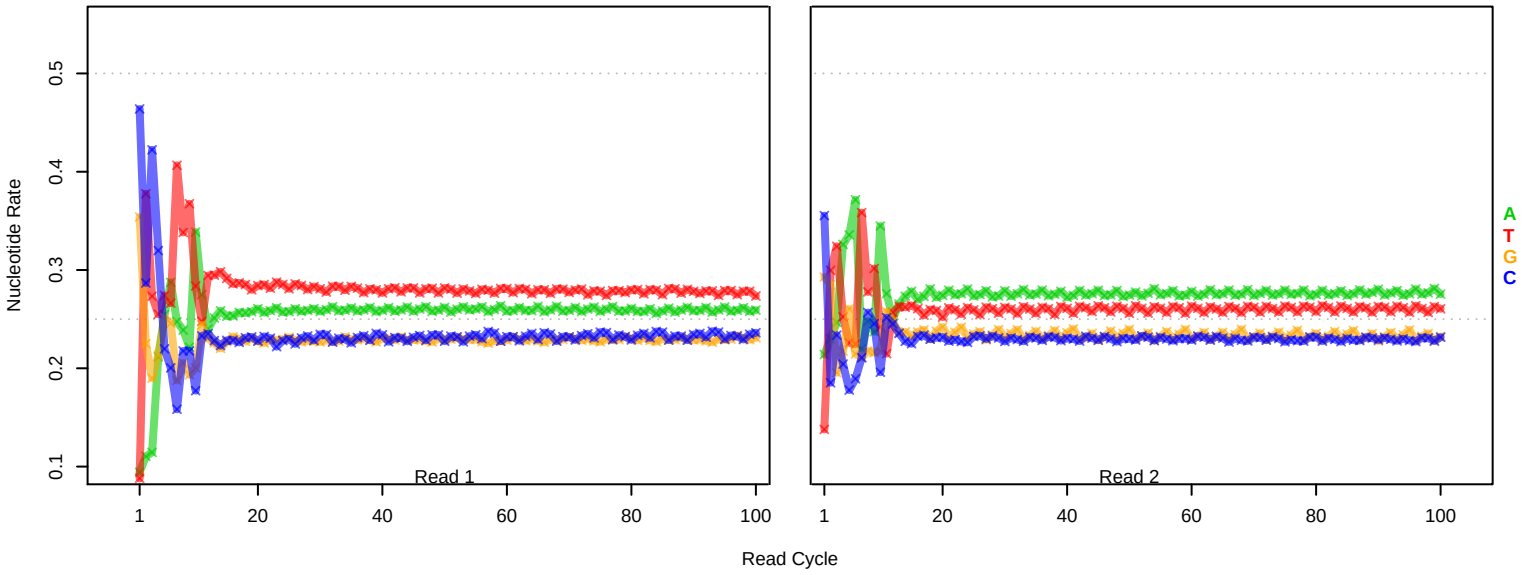
aj



ak


Raw Nucleotide Rate by Cycle
Nucleotide Rate
0.1
0.2
0.3
0.4
0.5
Read 1
Read 2
1
20
40
60
80
100
Read Cycle
A
T
G
C

al


Nucleotide Rate by Cycle, Aligned bases only
Nucleotide Rate
0.1
0.2
0.3
0.4
0.5
Read 1
Read 2
1
20
40
60
80
100
Read Cycle
A
T
G
C