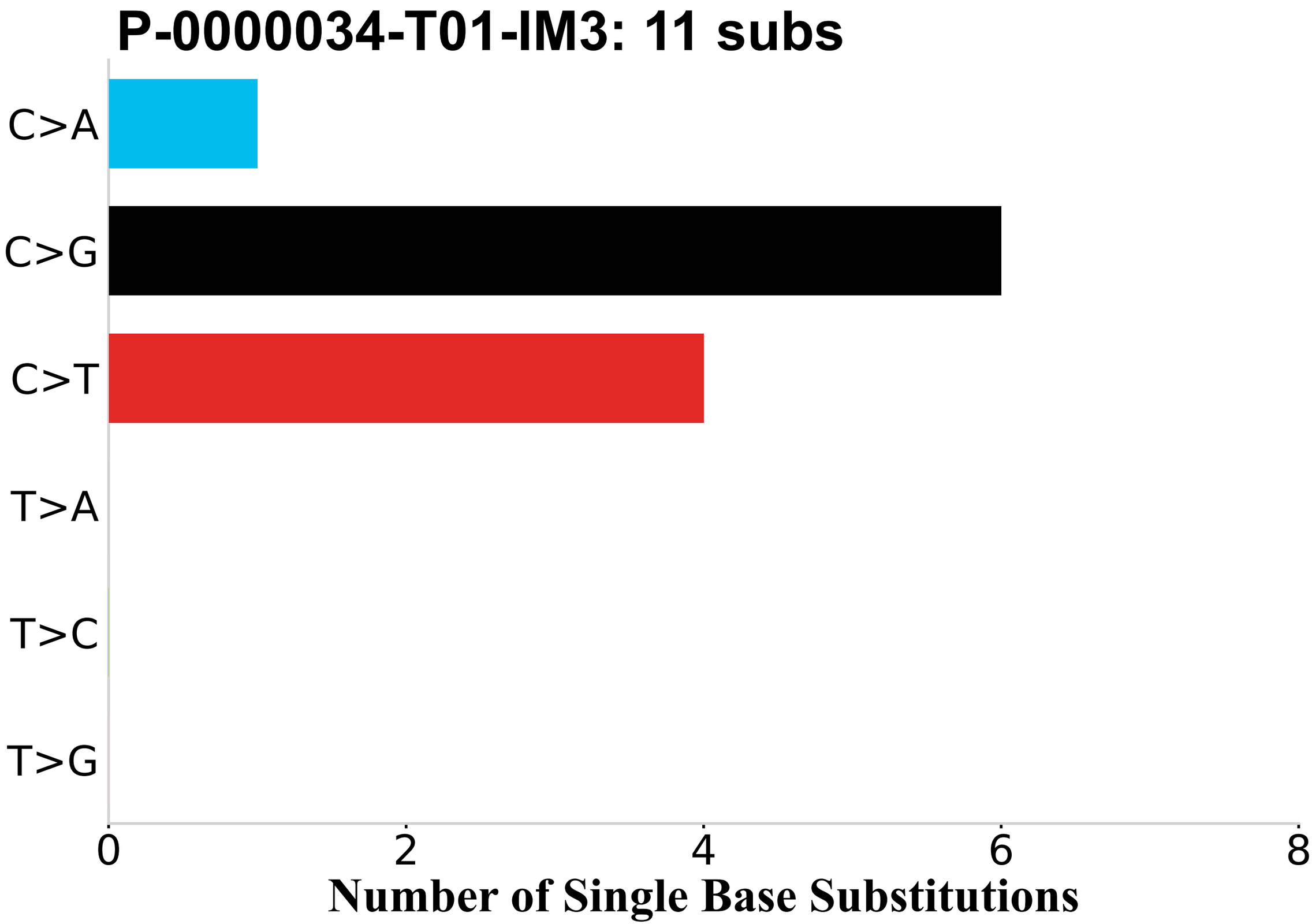
P-0000034-T01-IM3: 11 subs
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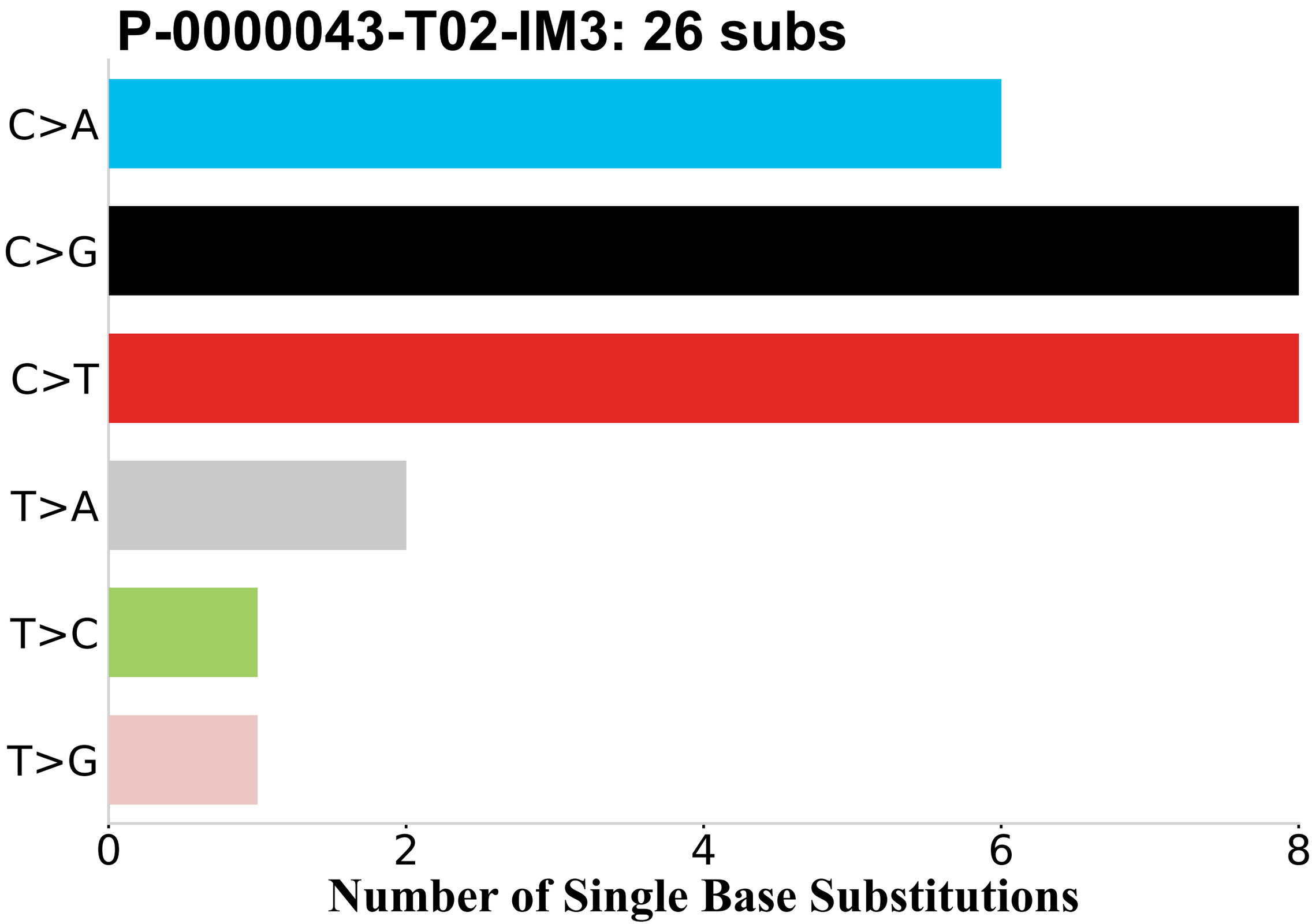
Number of Single Base Substitutions


P-0000043-T02-IM3: 26 subs
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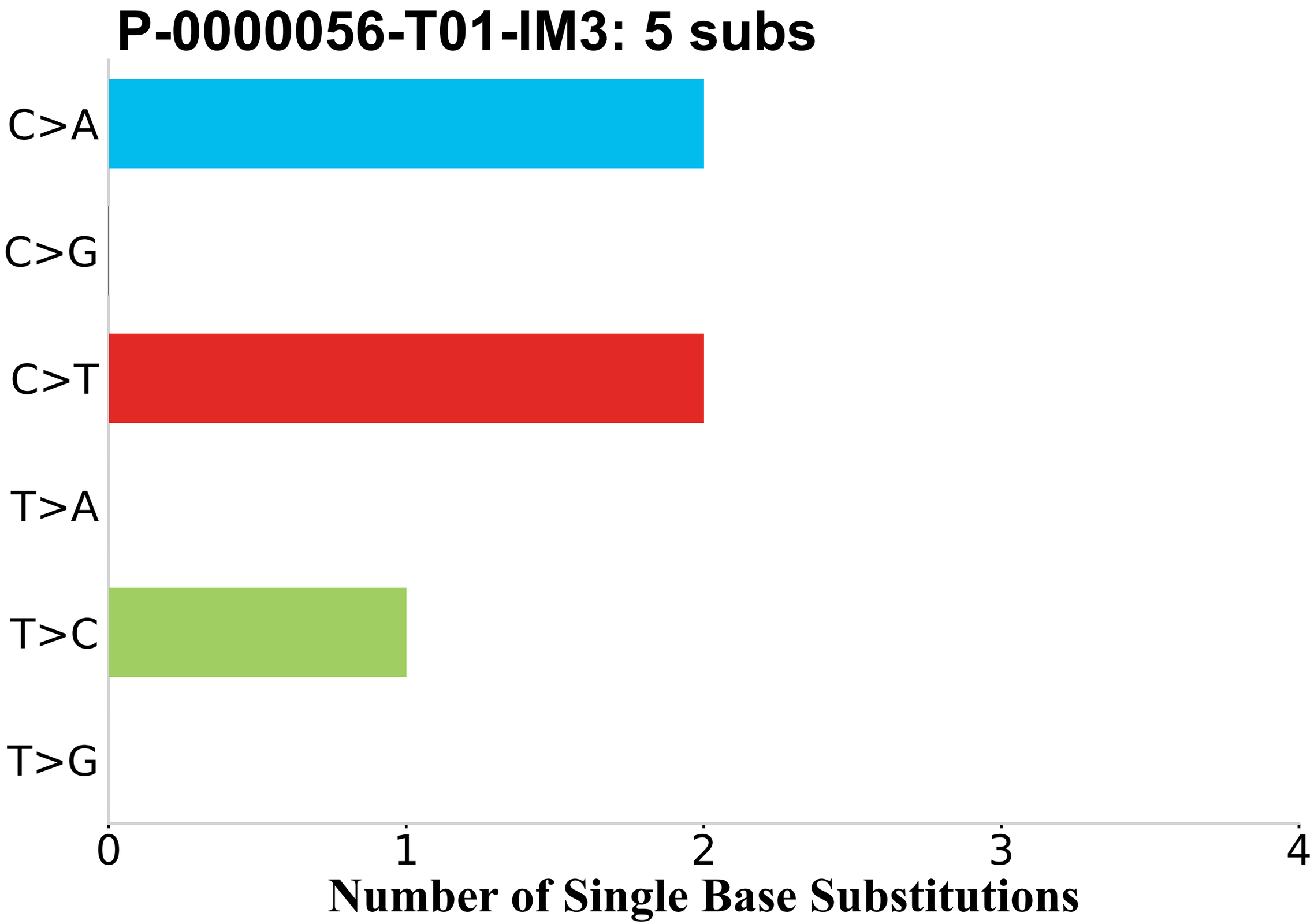
Number of Single Base Substitutions


P-0000056-T01-IM3: 5 subs
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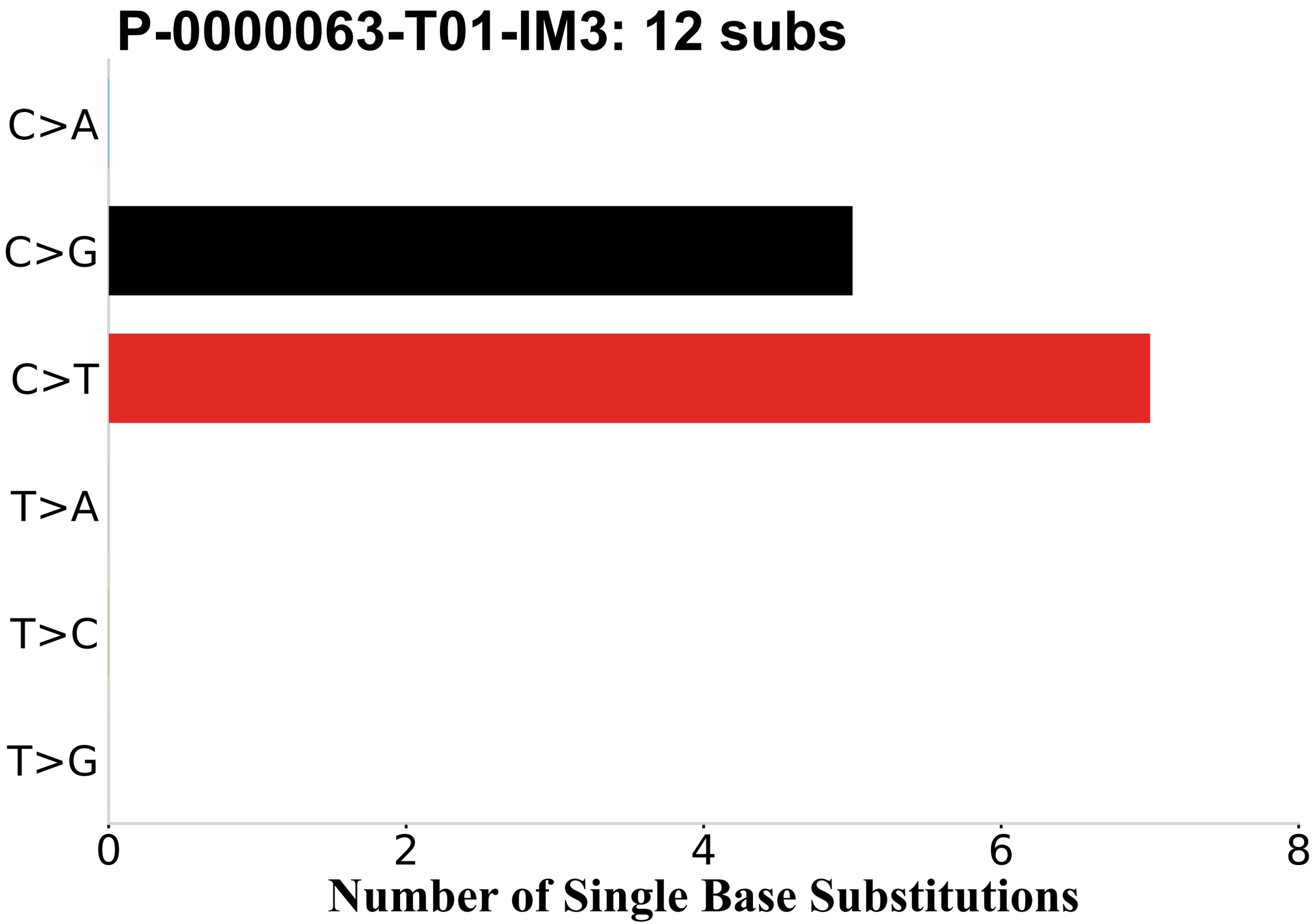
Number of Single Base Substitutions


P-0000063-T01-IM3: 12 subs
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T>C
T>G
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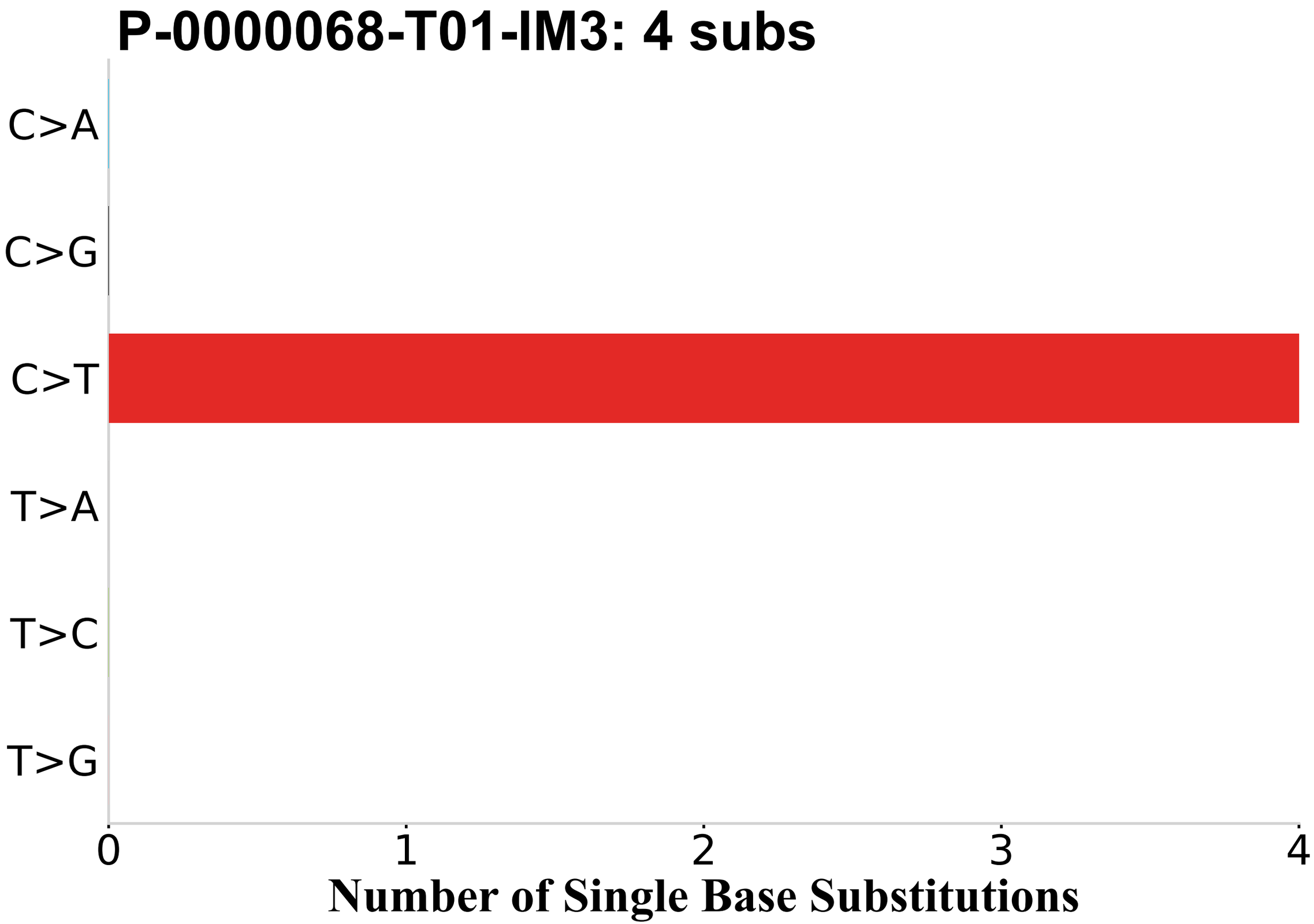
4
6
8
Number of Single Base Substitutions


P-0000068-T01-IM3: 4 subs
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T>G
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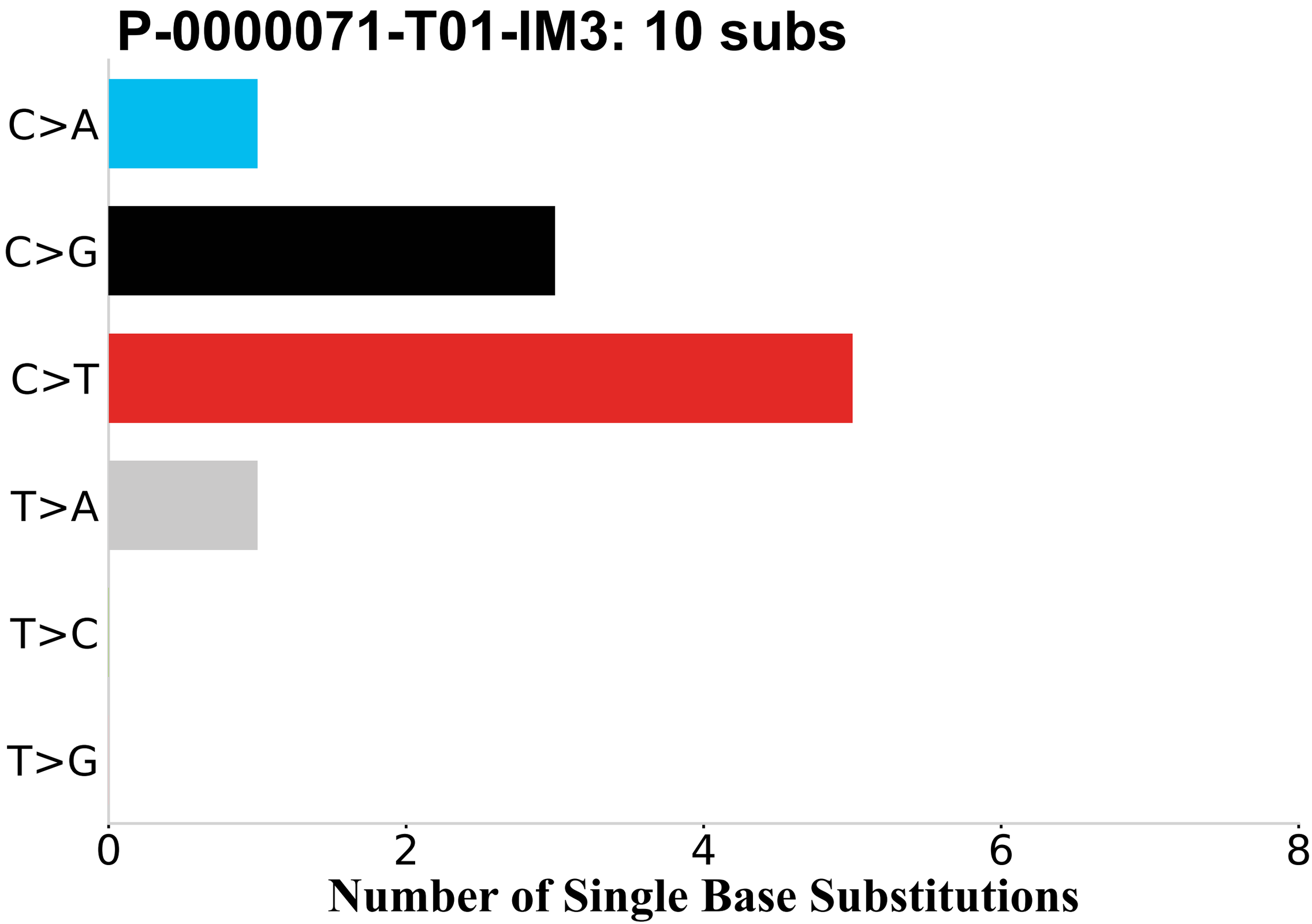
Number of Single Base Substitutions


P-0000071-T01-IM3: 10 subs
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T>C
T>G
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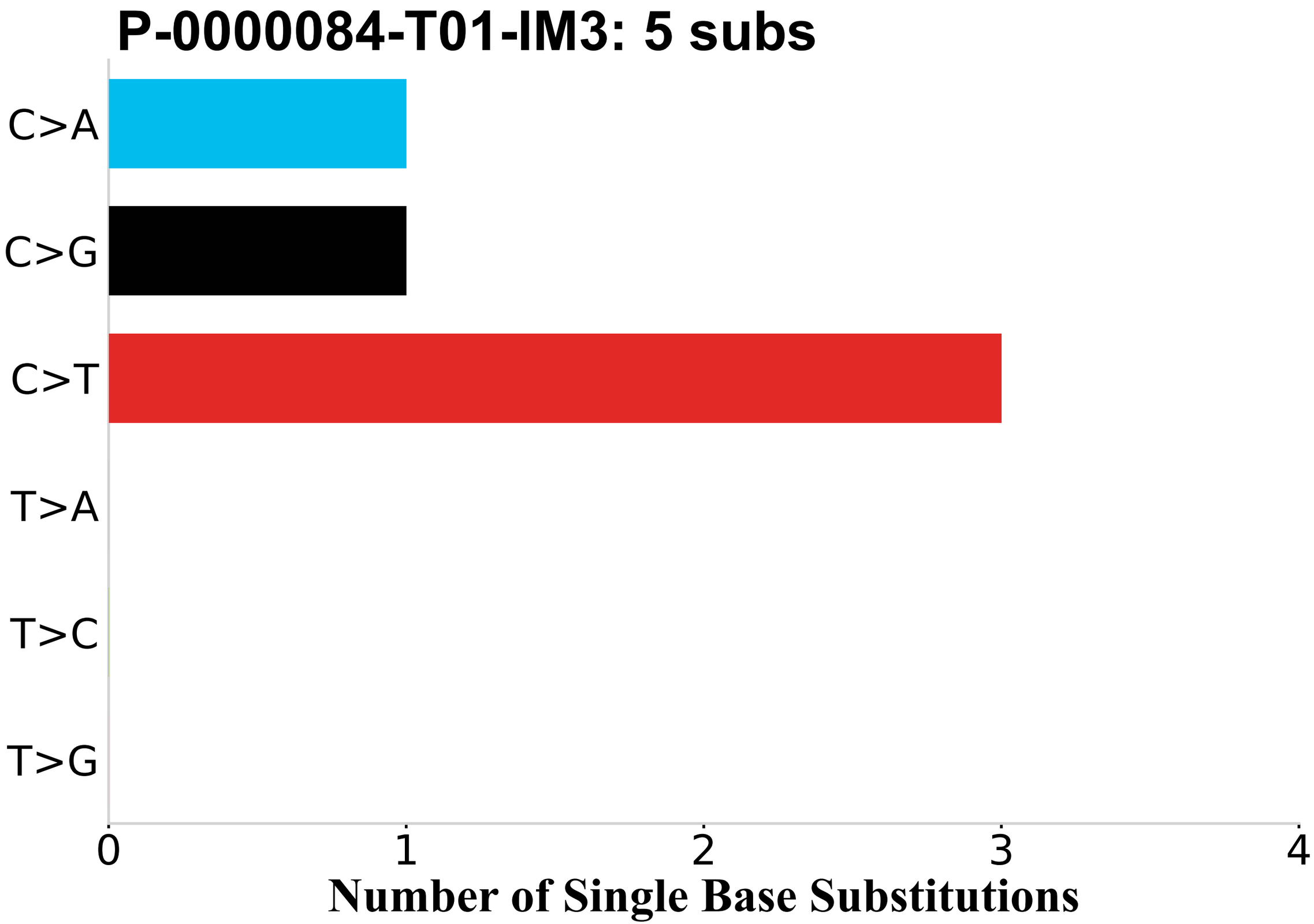
6
8
Number of Single Base Substitutions


P-0000084-T01-IM3: 5 subs
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C>T
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T>C
T>G
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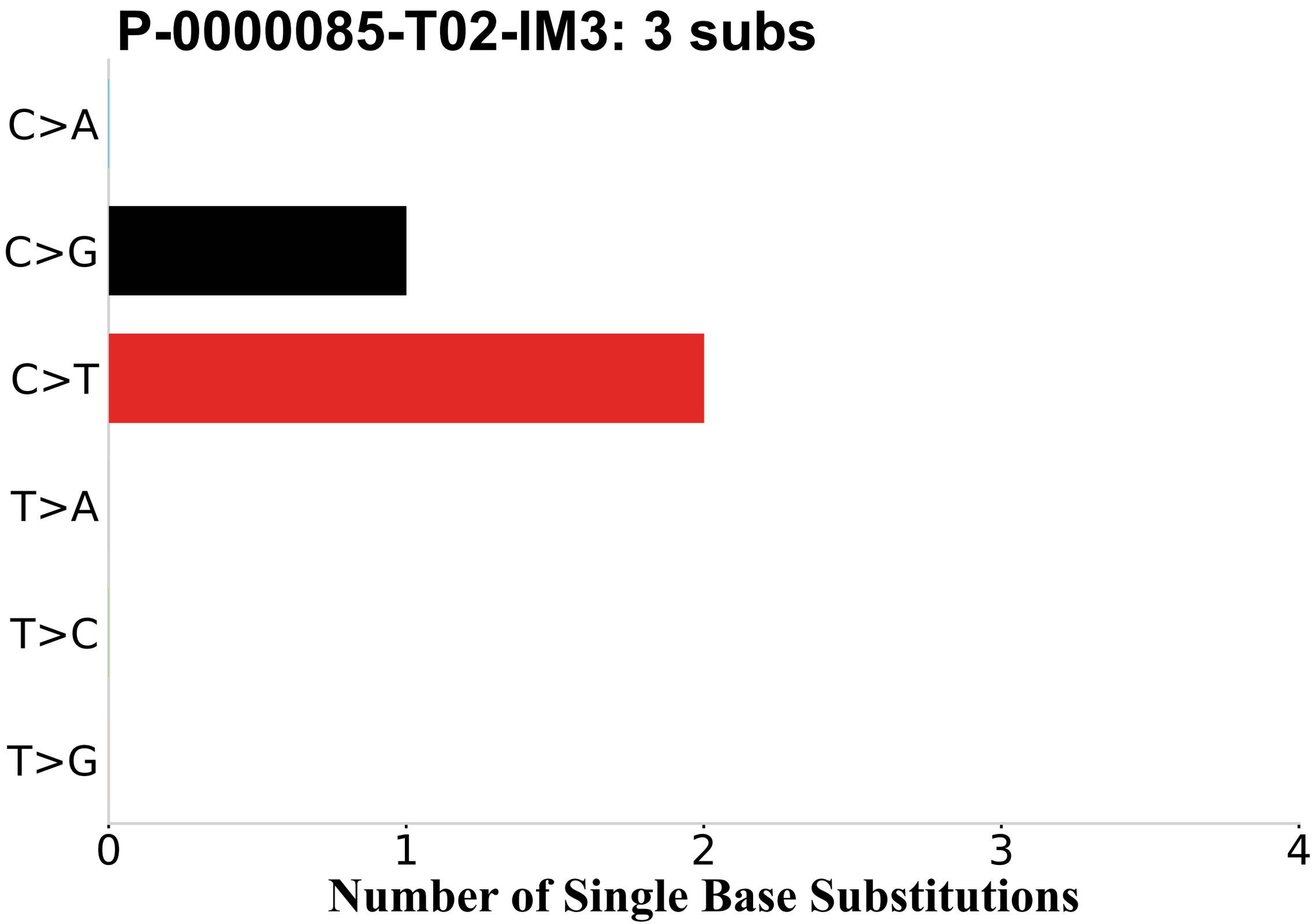
3
4
Number of Single Base Substitutions


P-0000085-T02-IM3: 3 subs
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C>T
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T>C
T>G
0
1
2
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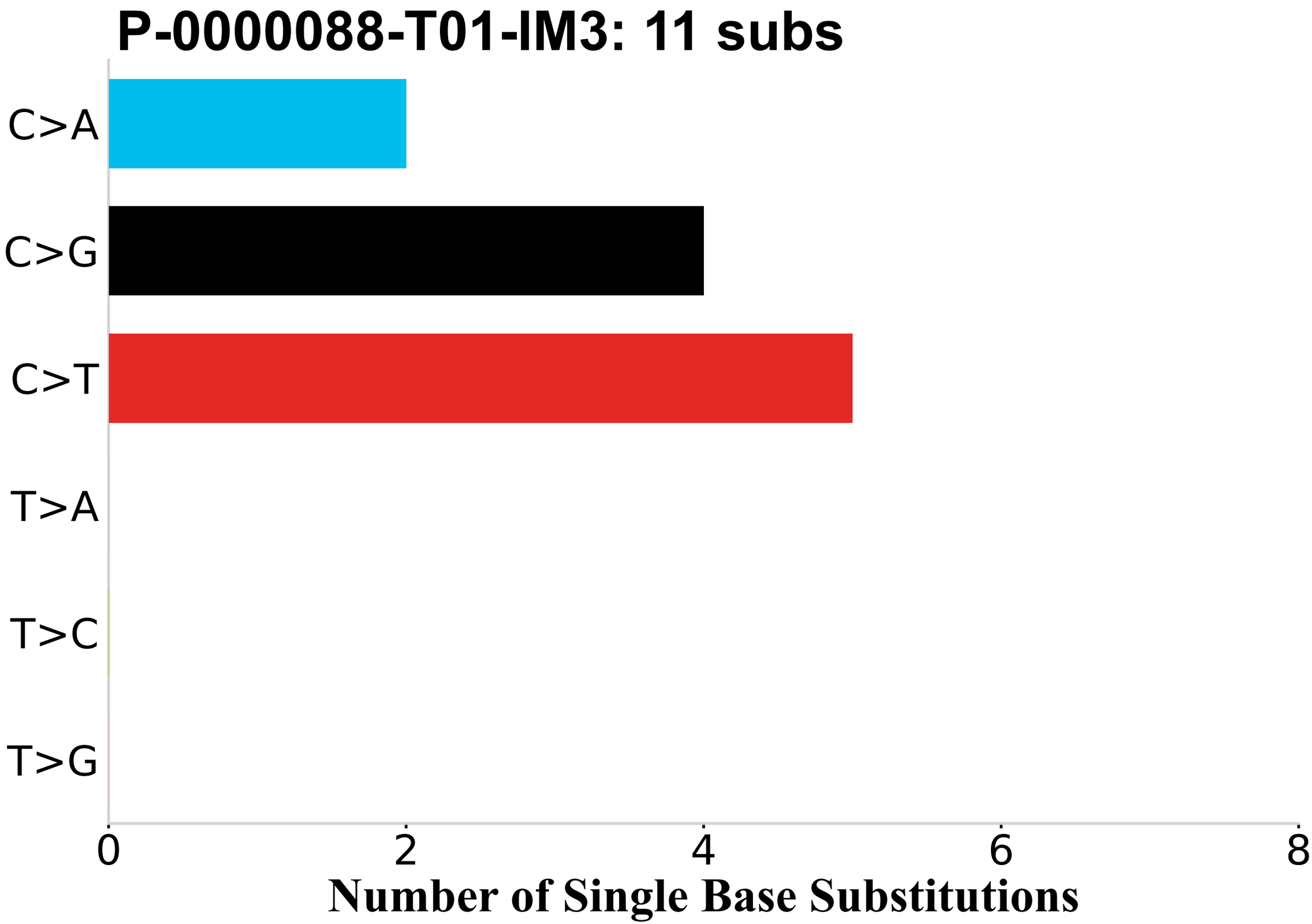
4
Number of Single Base Substitutions


P-0000088-T01-IM3: 11 subs
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C>T
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T>C
T>G
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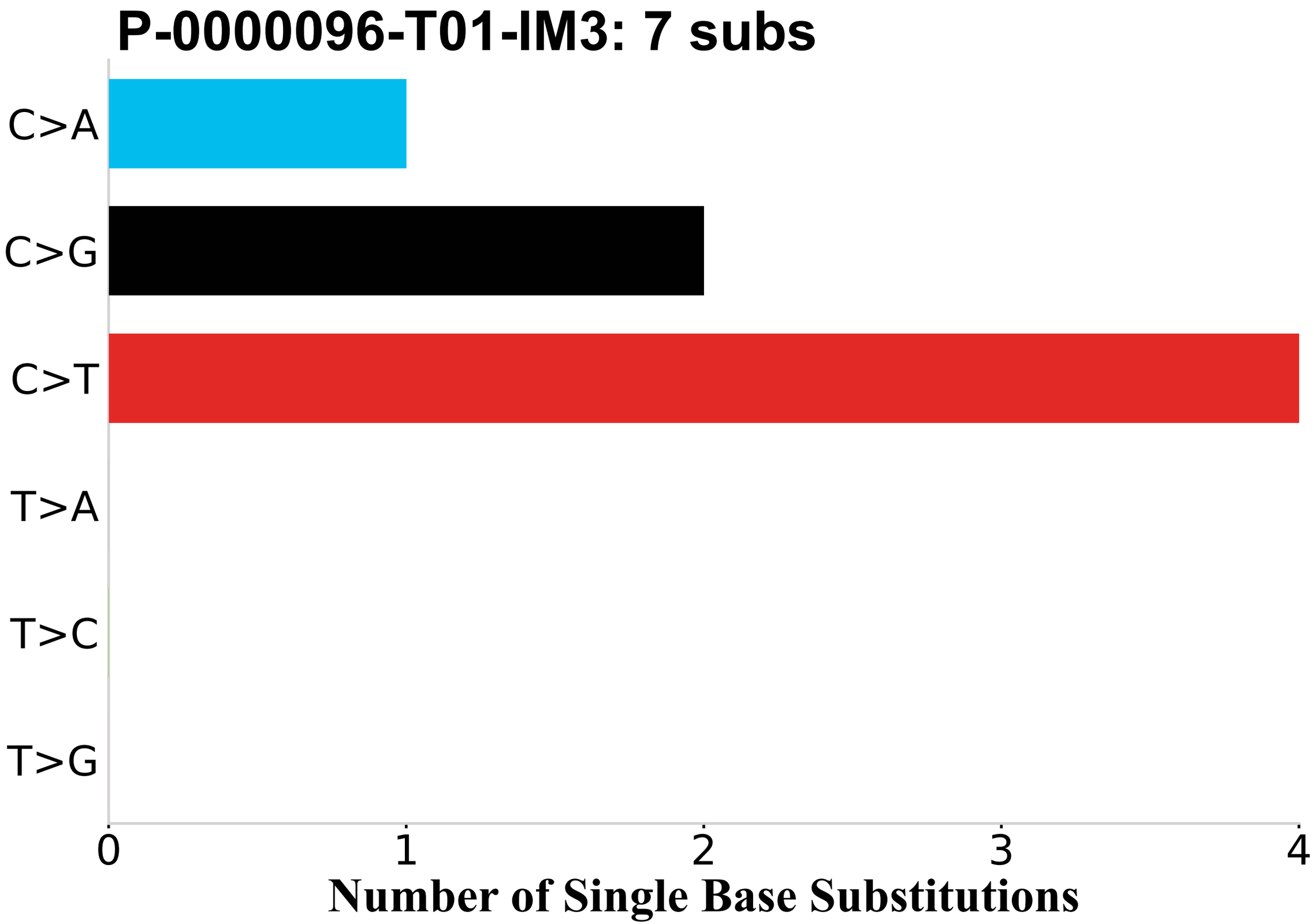
4
6
8
Number of Single Base Substitutions


P-0000096-T01-IM3: 7 subs
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T>G
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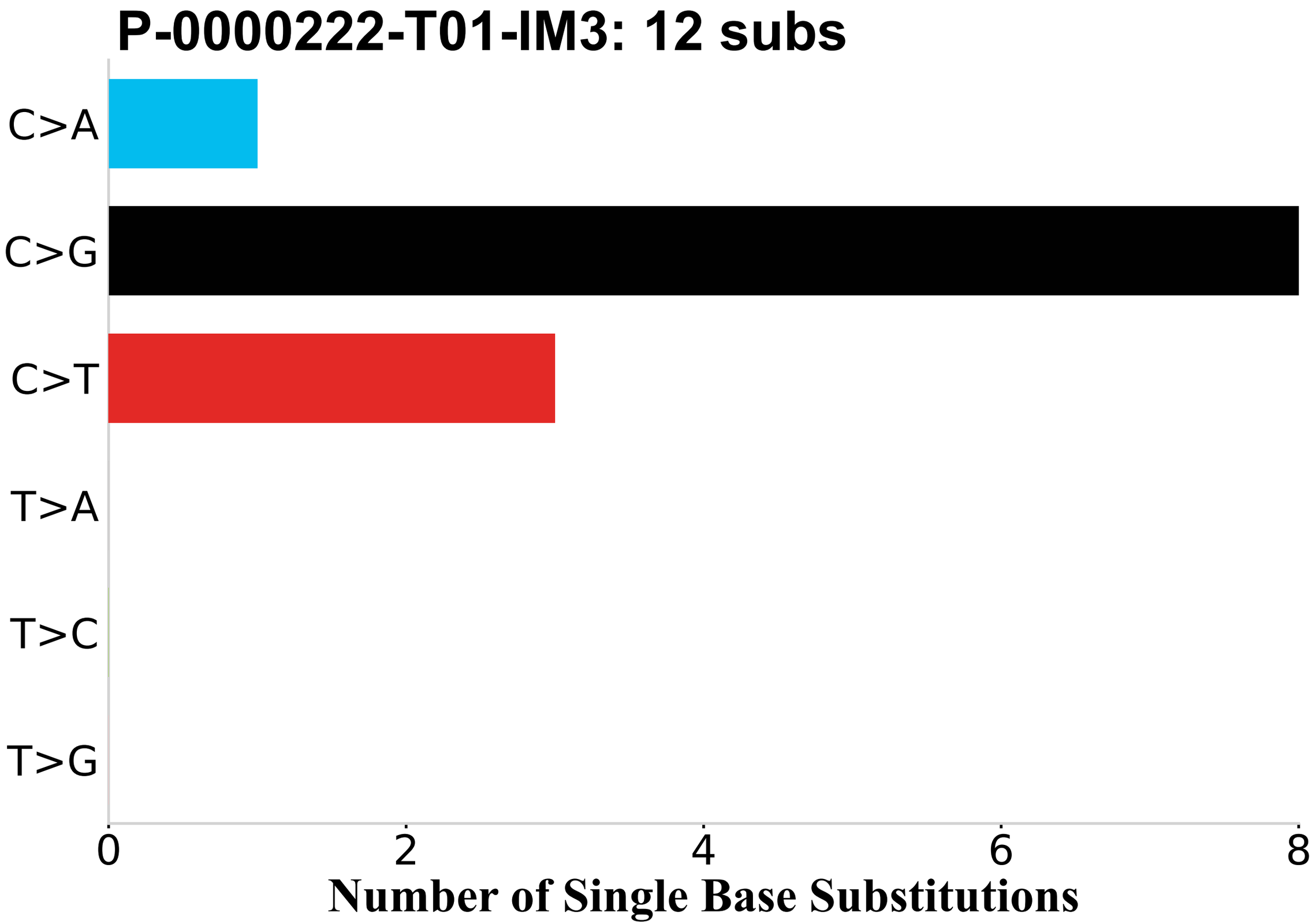
4
Number of Single Base Substitutions


P-0000222-T01-IM3: 12 subs
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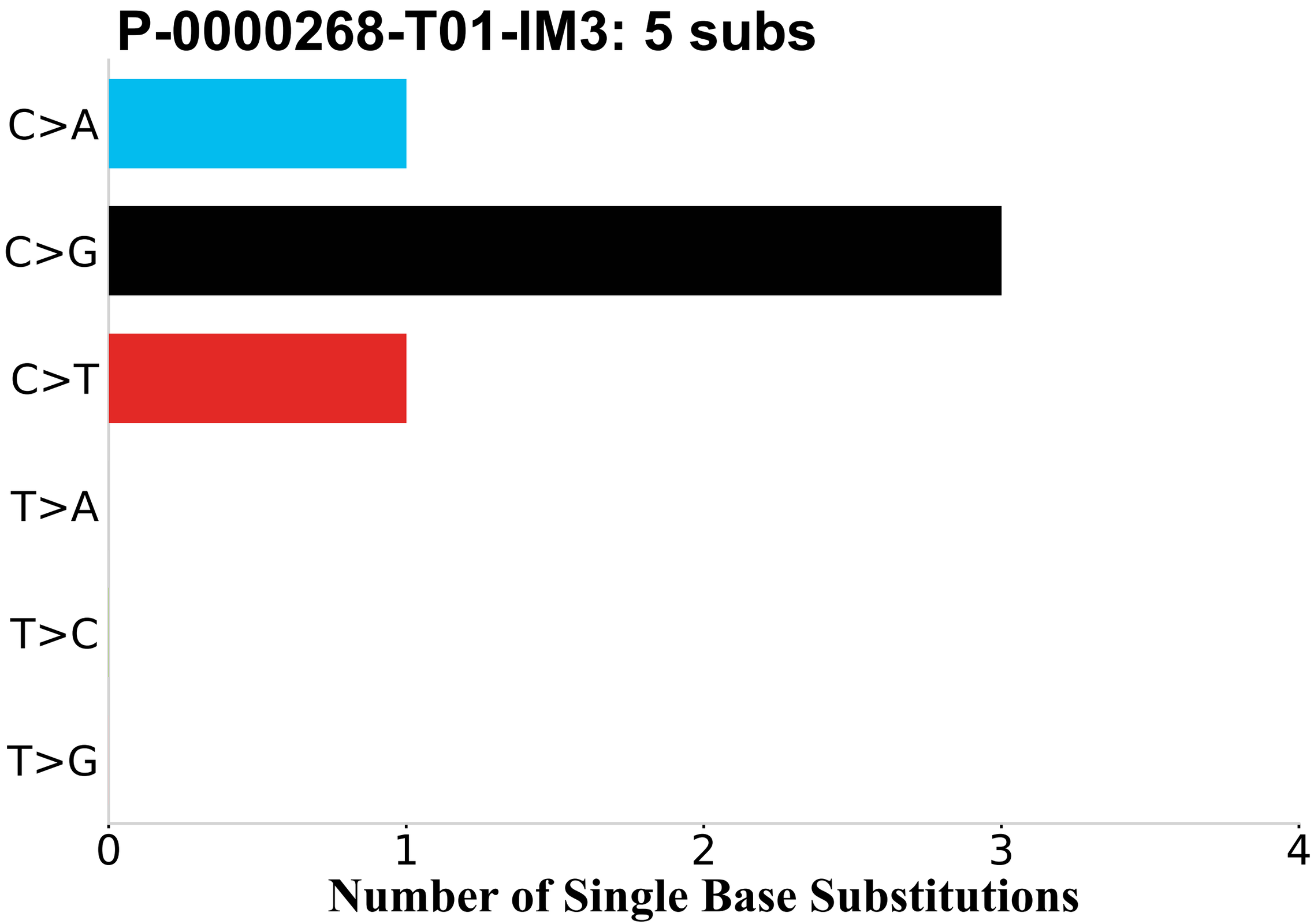
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0000268-T01-IM3: 5 subs
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C>G
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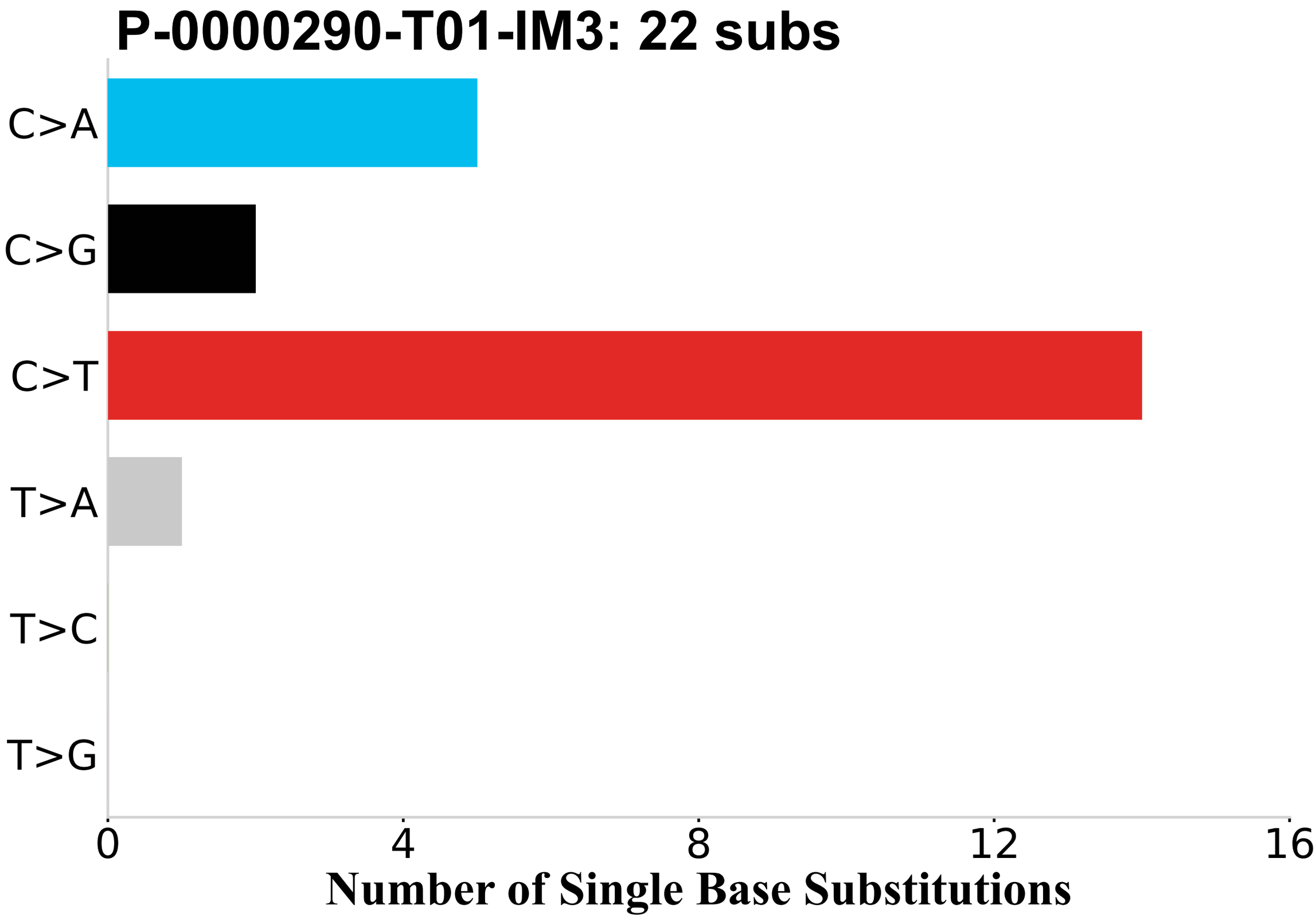
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000290-T01-IM3: 22 subs
C>A
C>G
C>T
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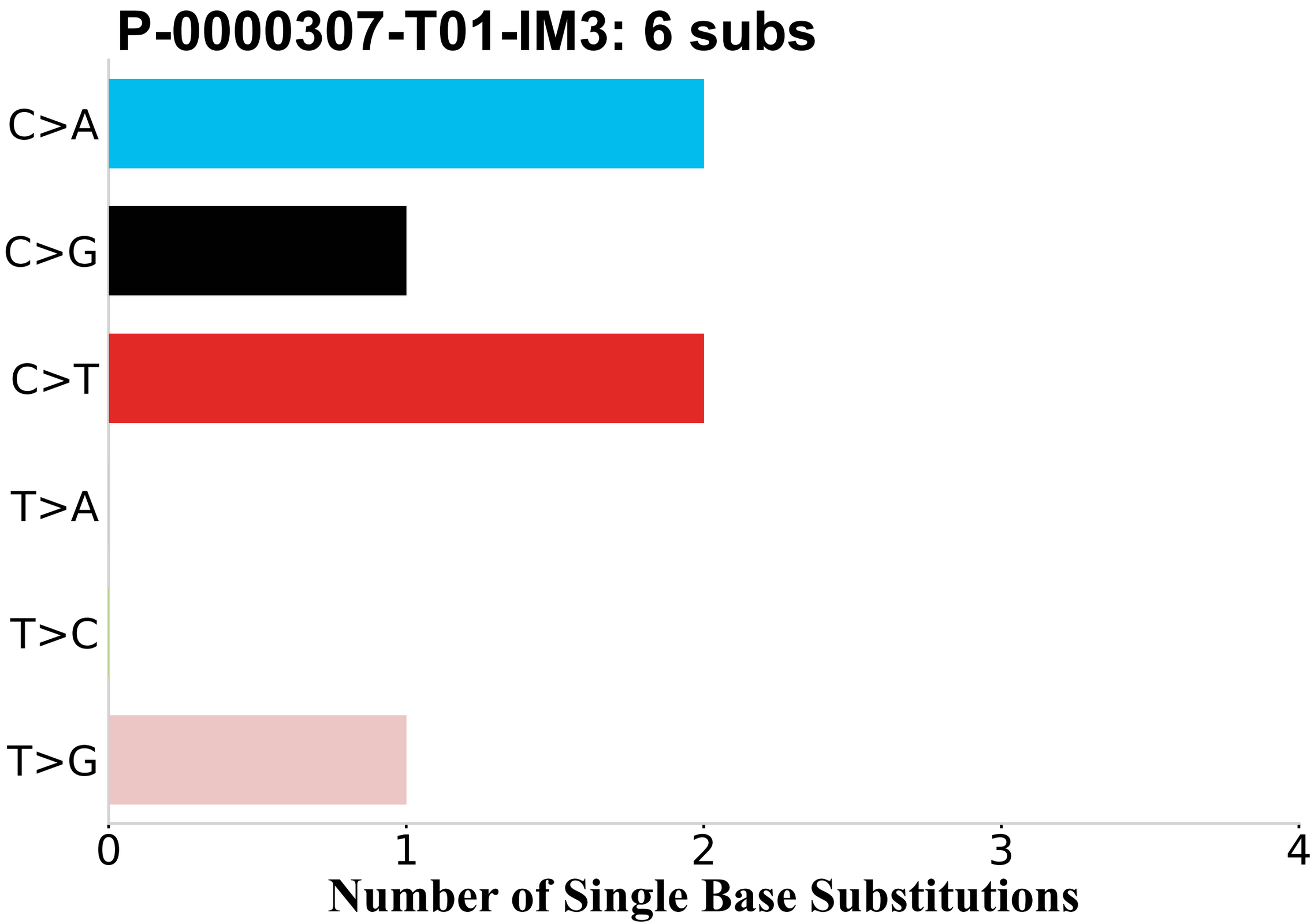
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0000307-T01-IM3: 6 subs
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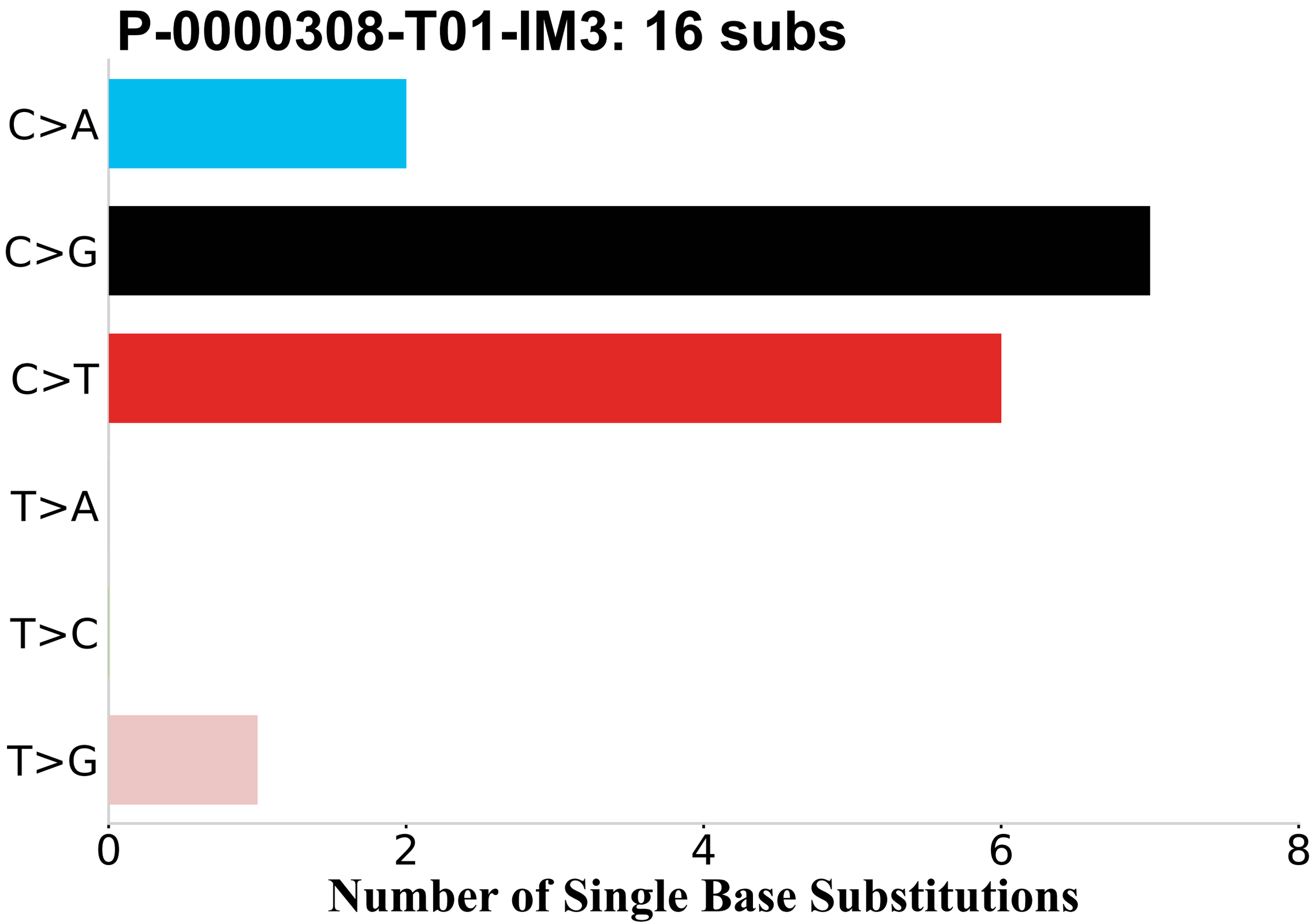
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000308-T01-IM3: 16 subs
C>A
C>G
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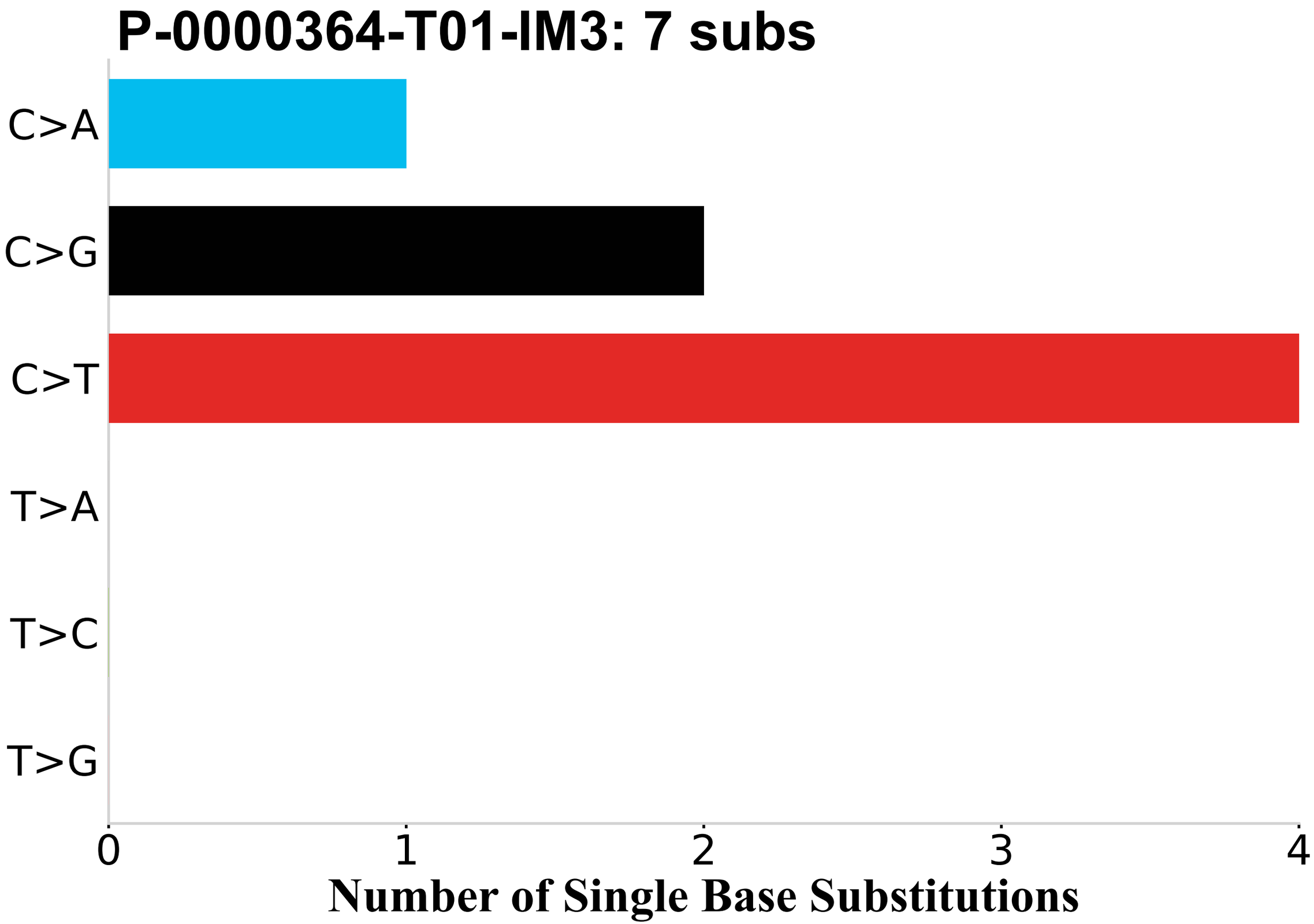
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0000364-T01-IM3: 7 subs
C>A
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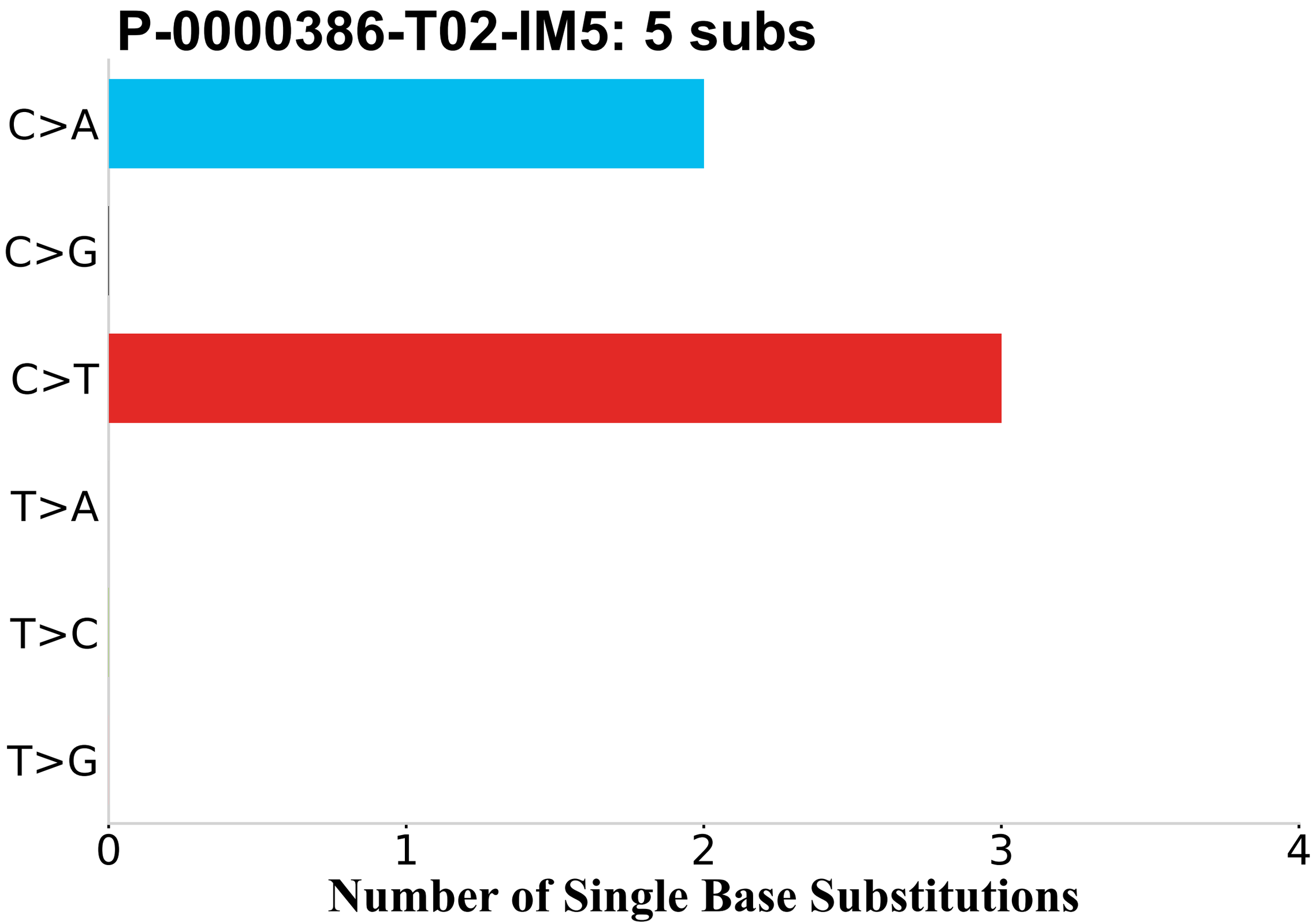
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000386-T02-IM5: 5 subs
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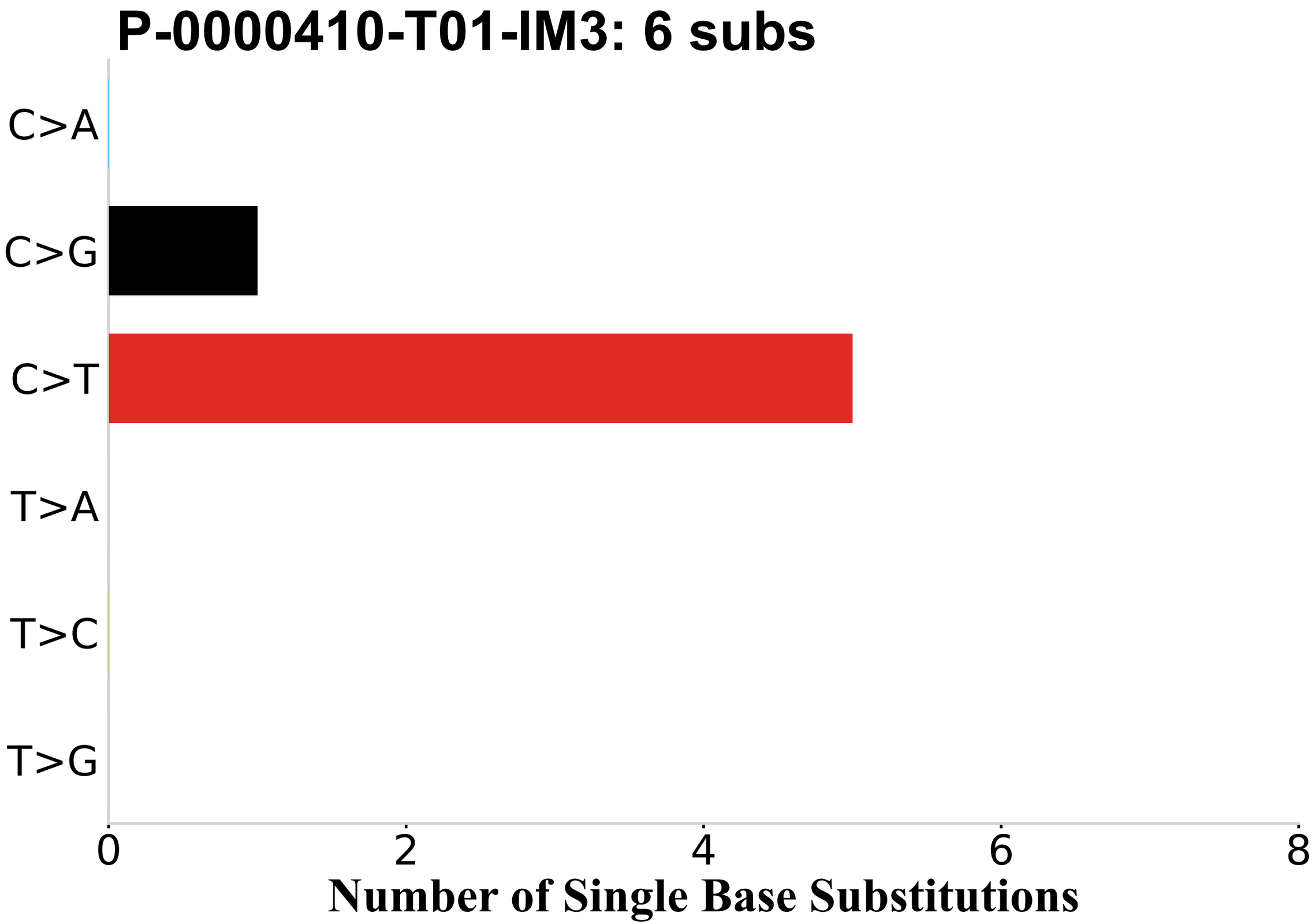
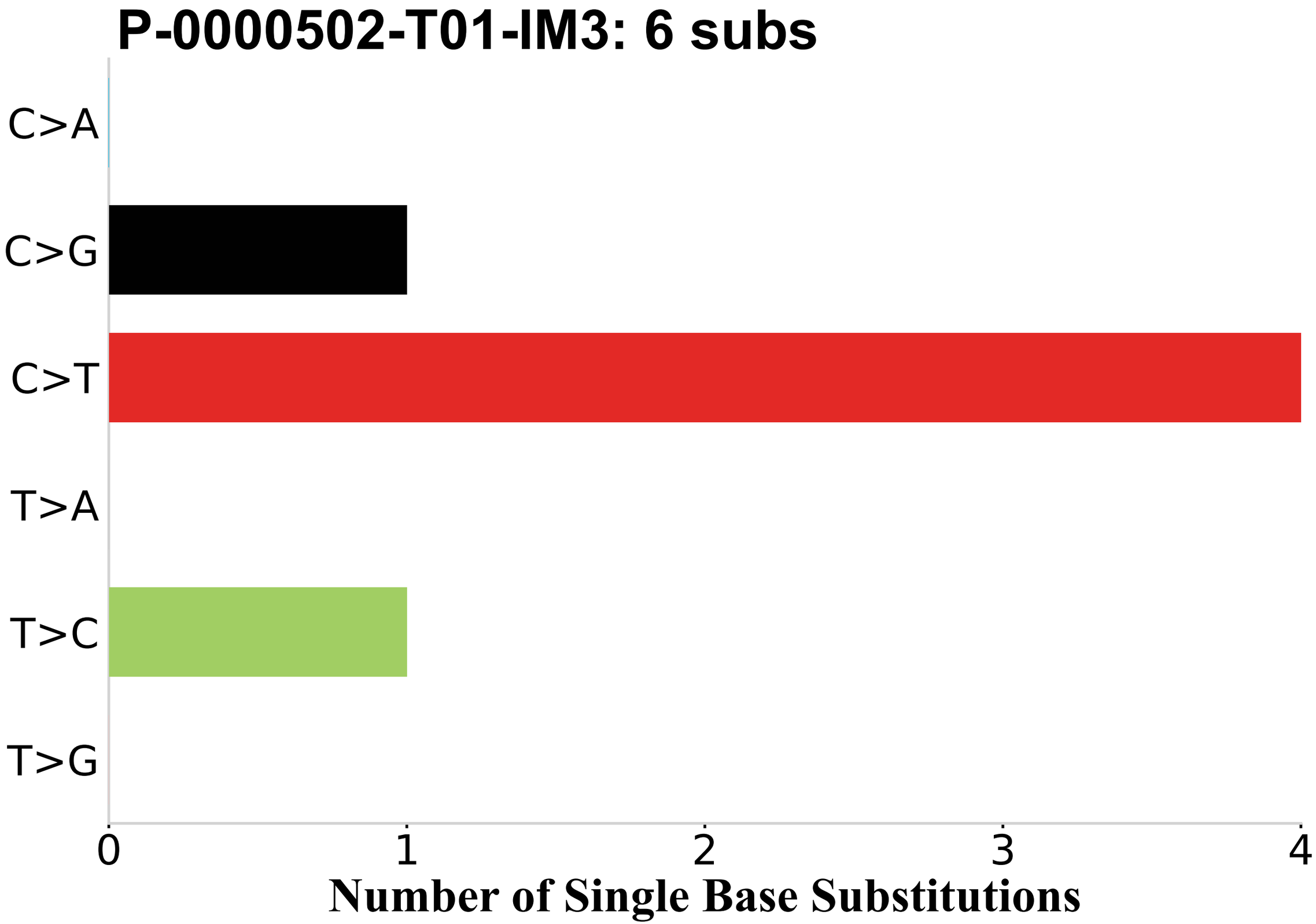
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000410-T01-IM3: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0000502-T01-IM3: 6 subs
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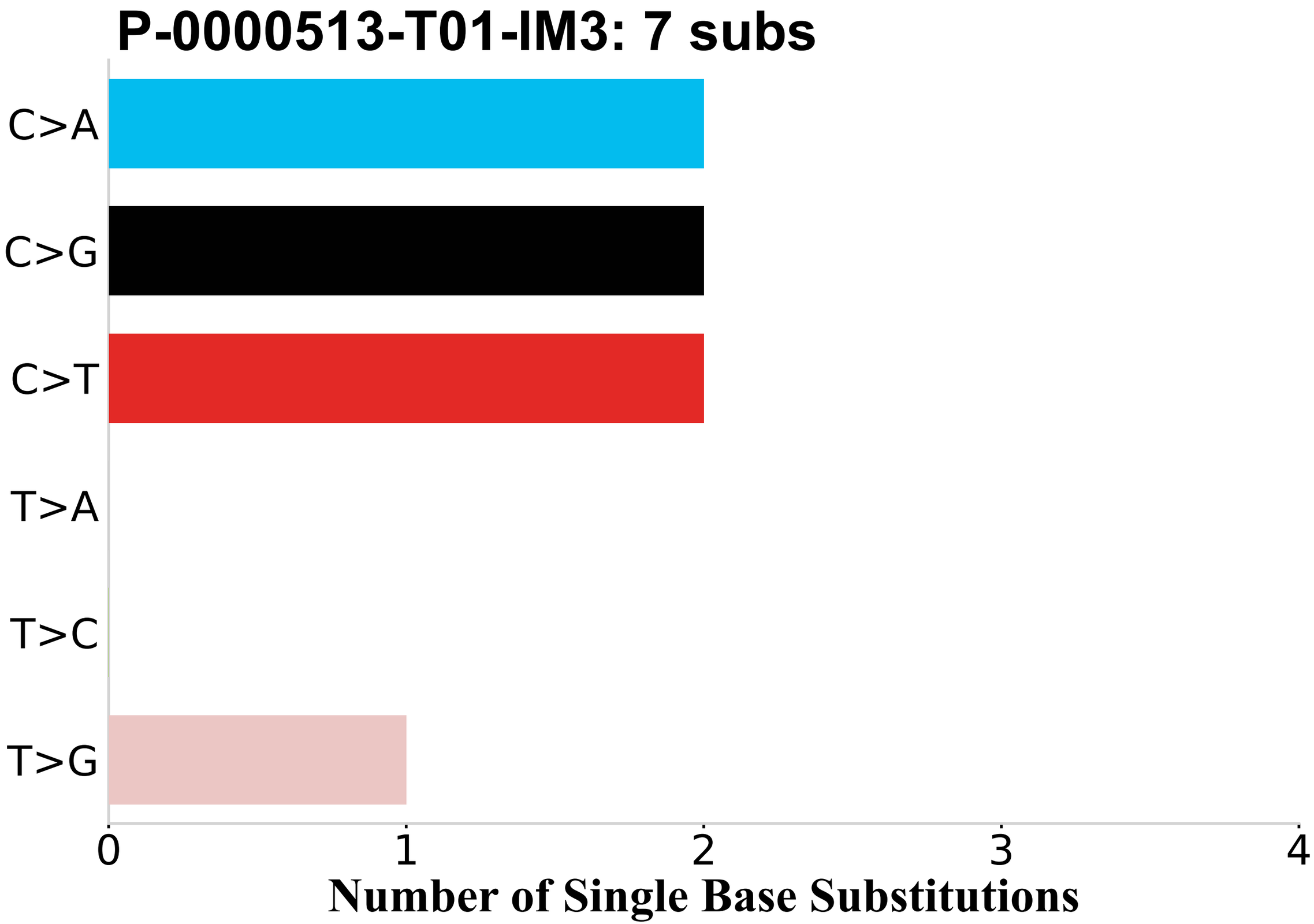
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000513-T01-IM3: 7 subs
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T>C
T>G
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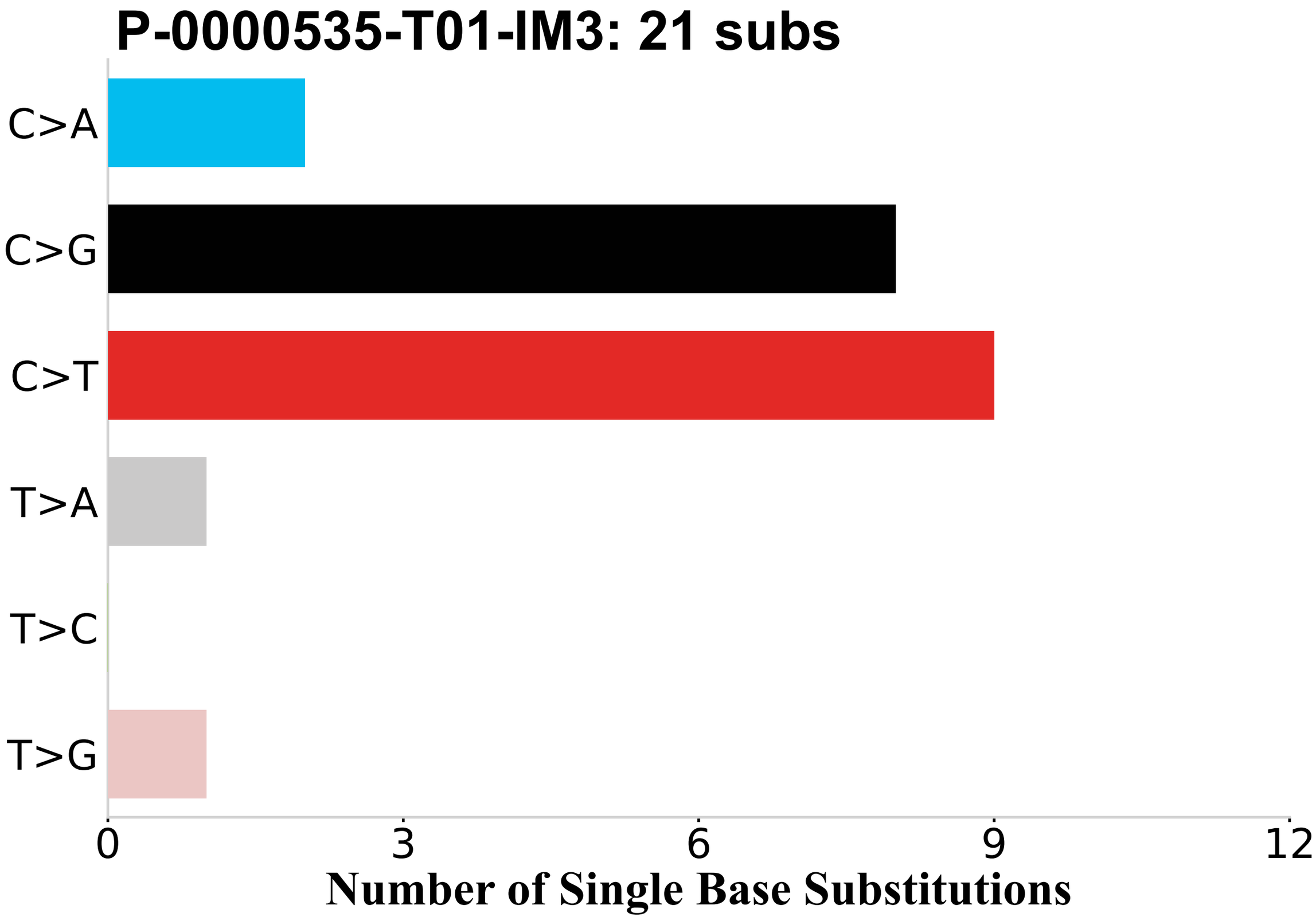
1
2
3
4
Number of Single Base Substitutions


P-0000535-T01-IM3: 21 subs
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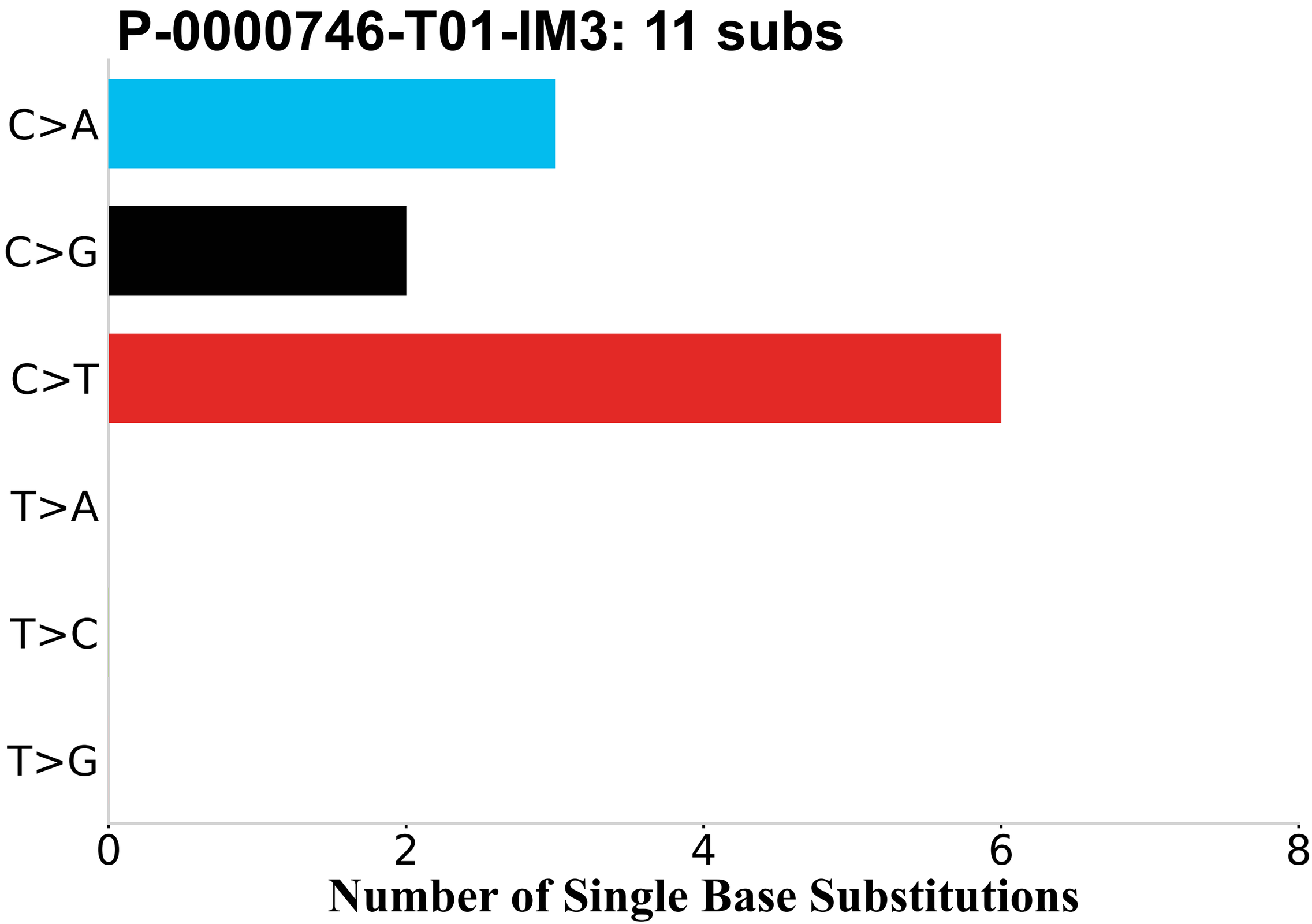
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0000746-T01-IM3: 11 subs
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C>G
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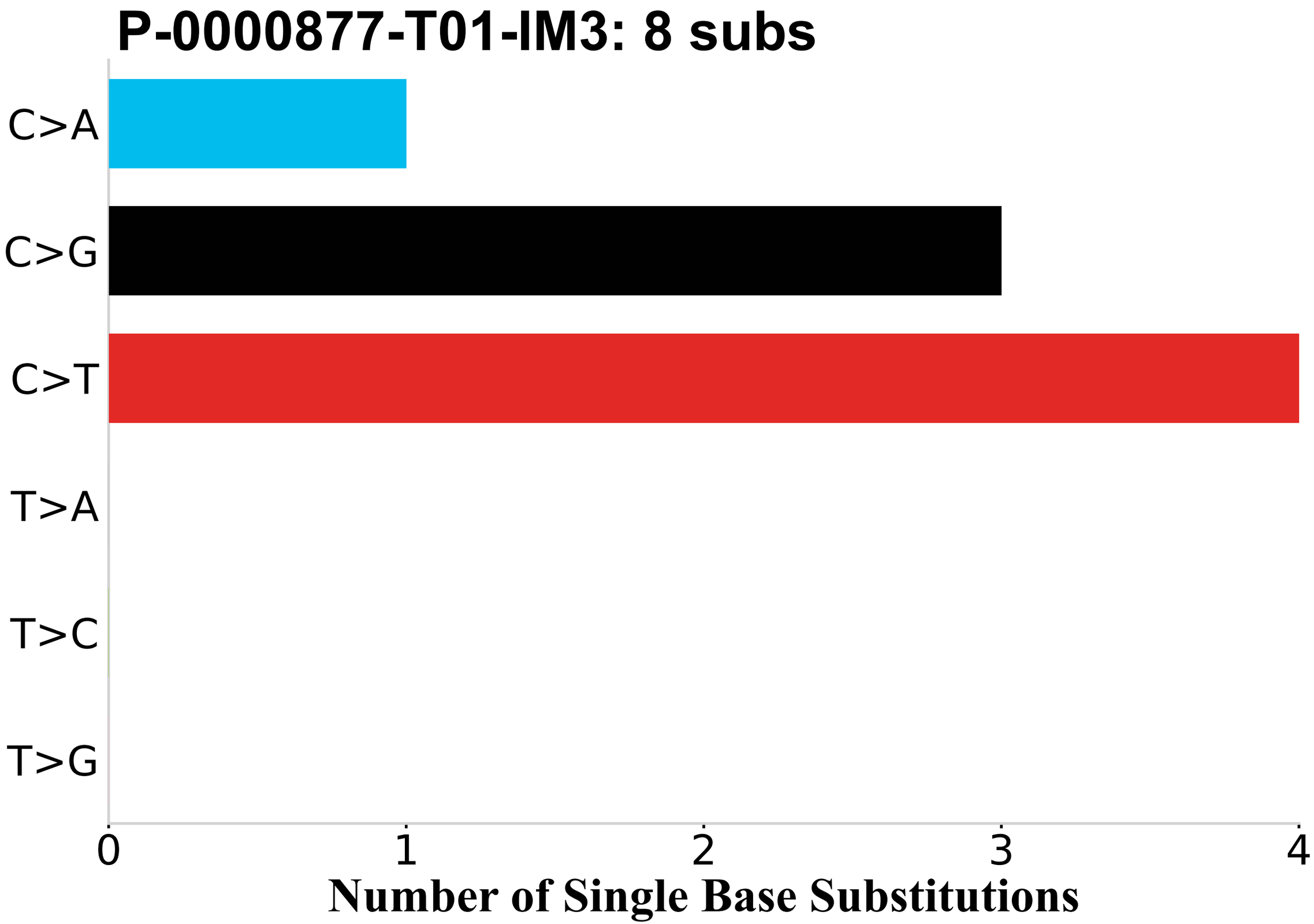
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0000877-T01-IM3: 8 subs
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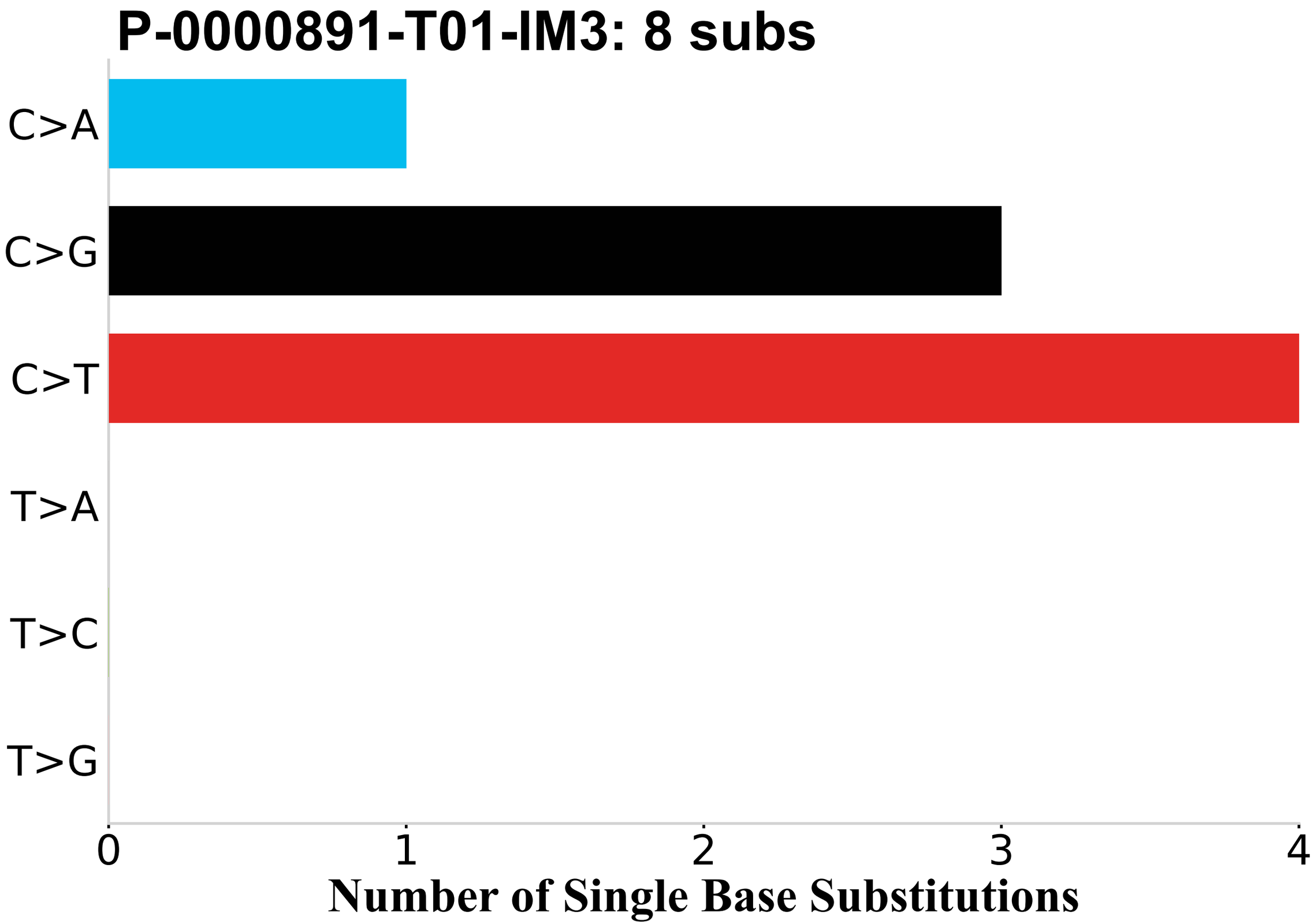
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000891-T01-IM3: 8 subs
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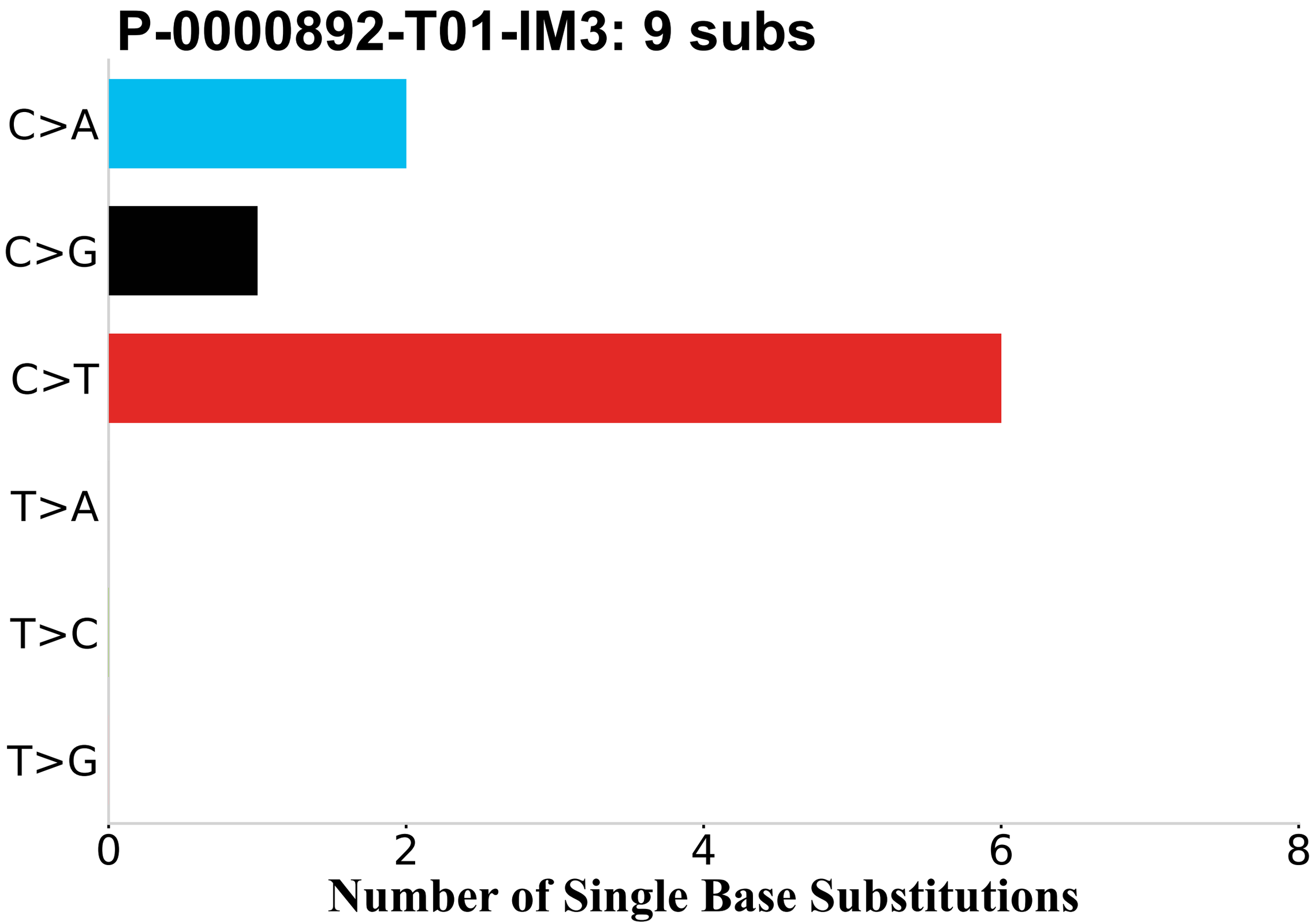
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0000892-T01-IM3: 9 subs
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T>C
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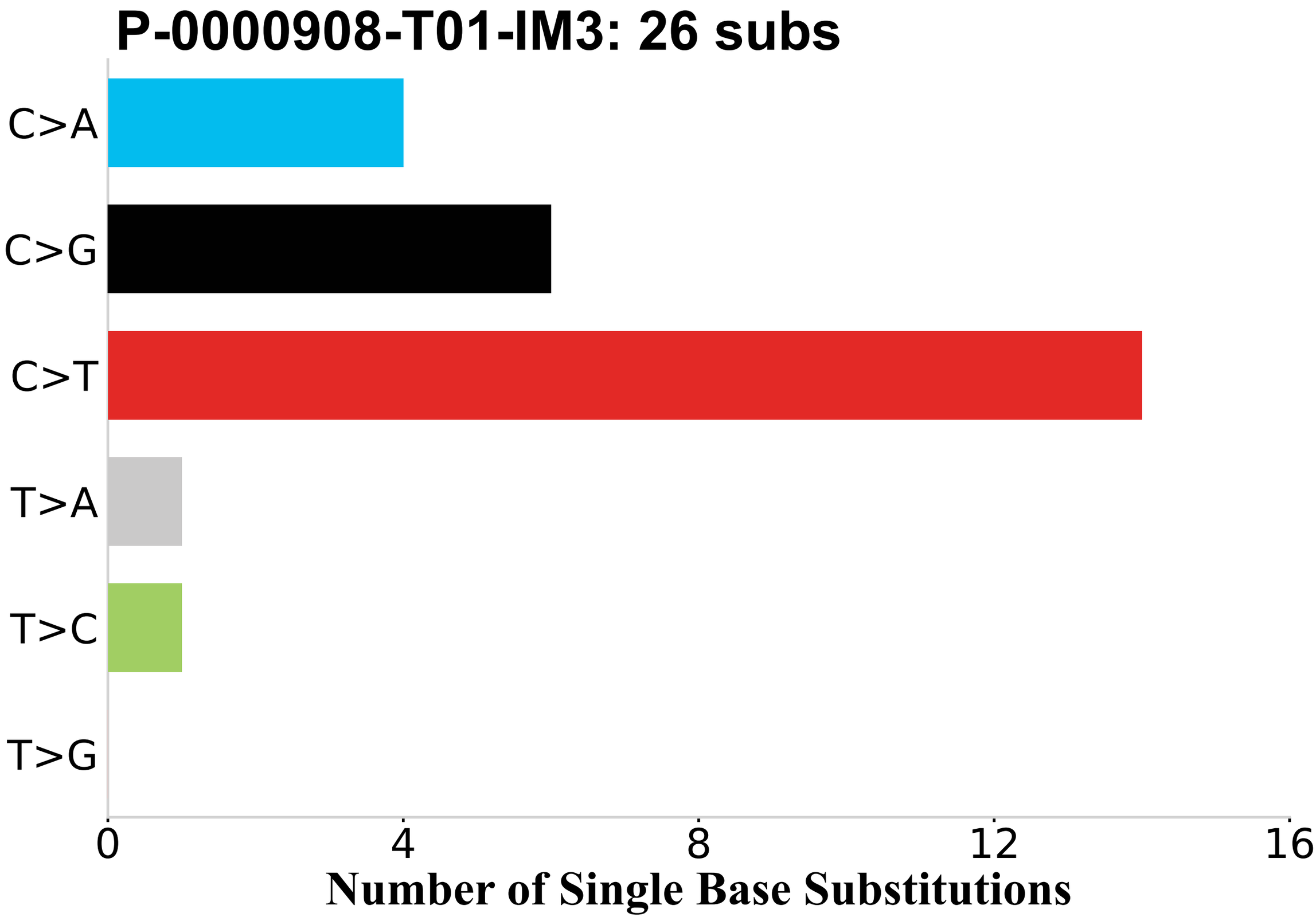
0
2
4
6
8
Number of Single Base Substitutions


P-0000908-T01-IM3: 26 subs
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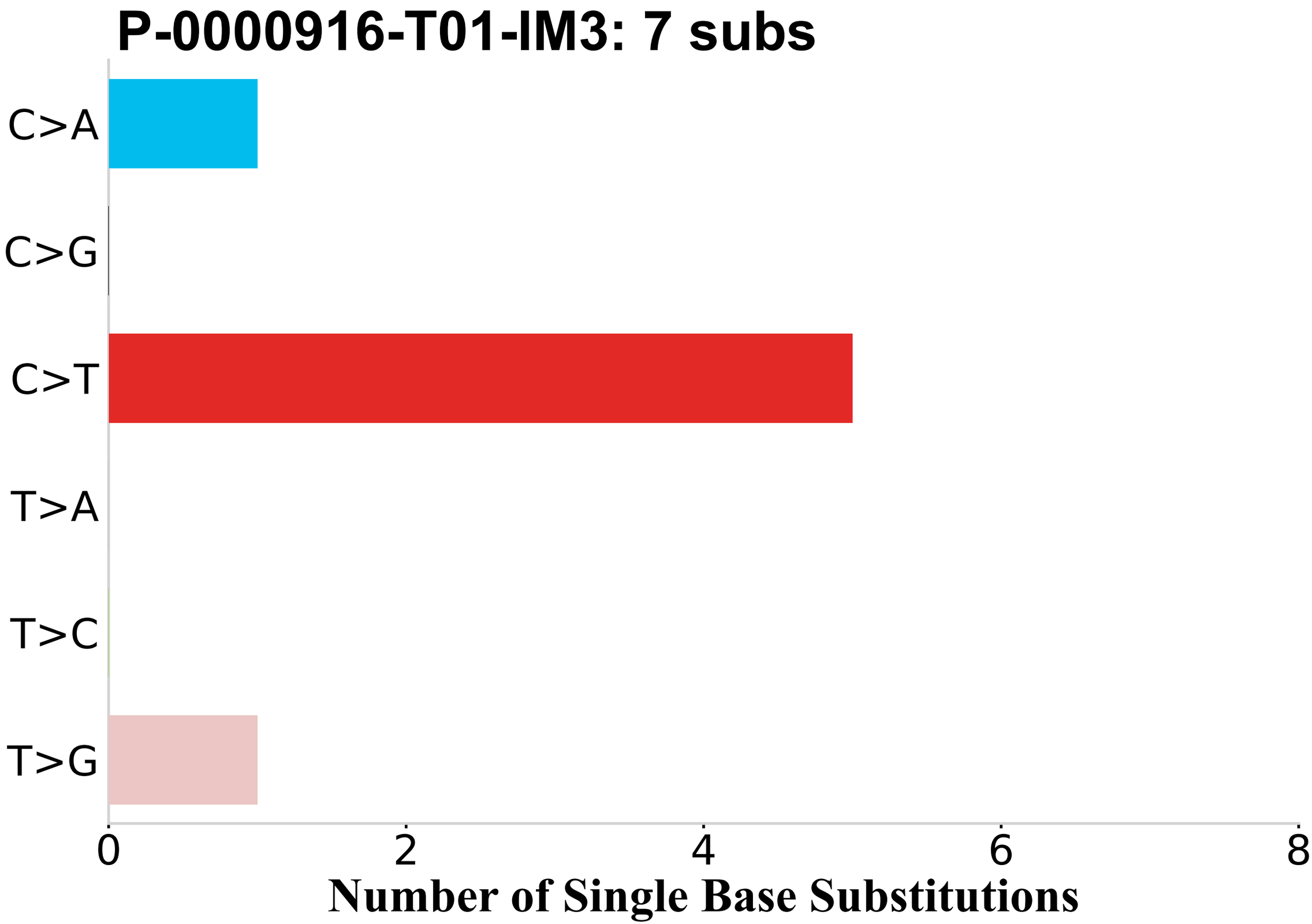
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0000916-T01-IM3: 7 subs
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T>C
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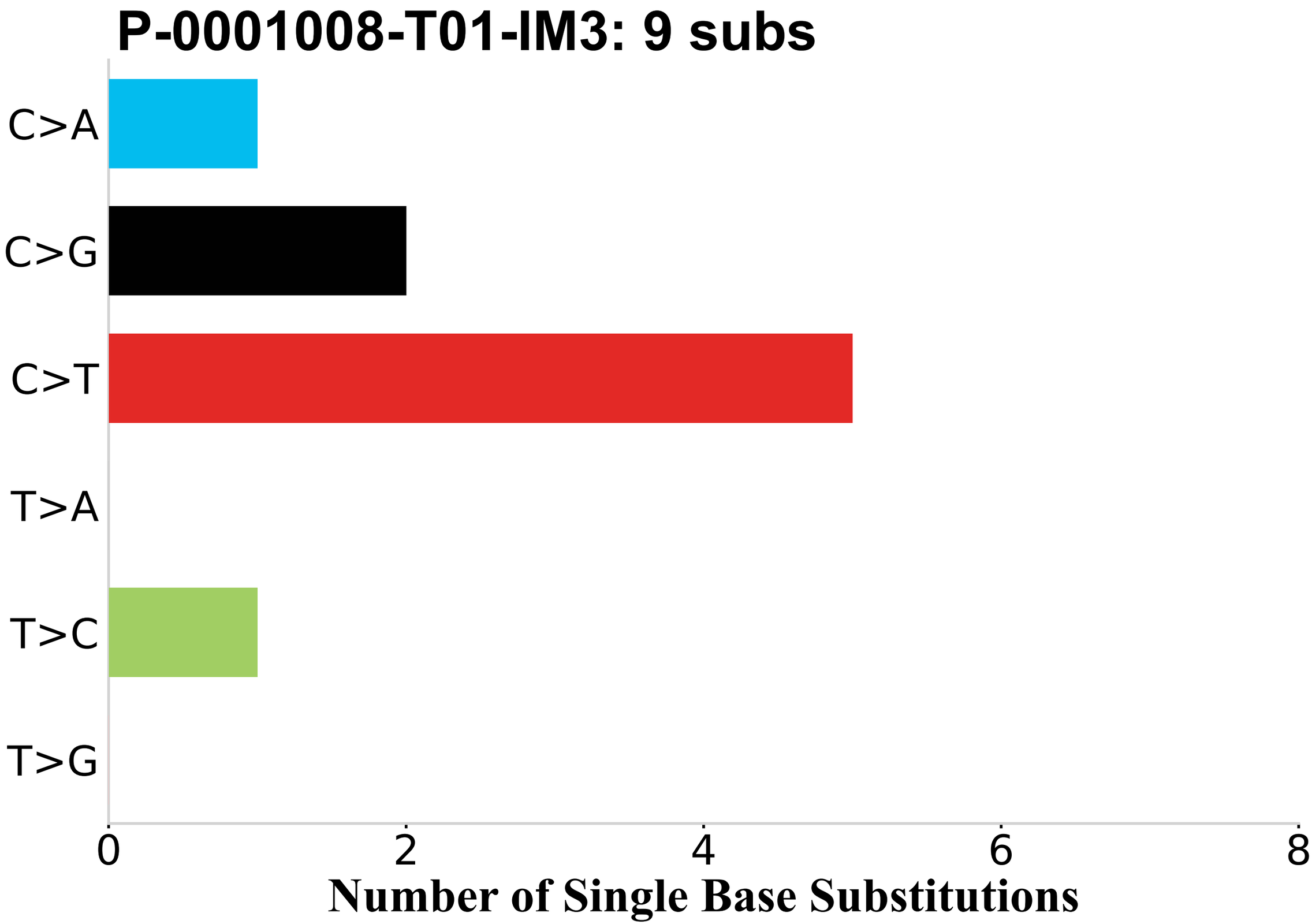
2
4
6
8
Number of Single Base Substitutions


P-0001008-T01-IM3: 9 subs
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T>C
T>G
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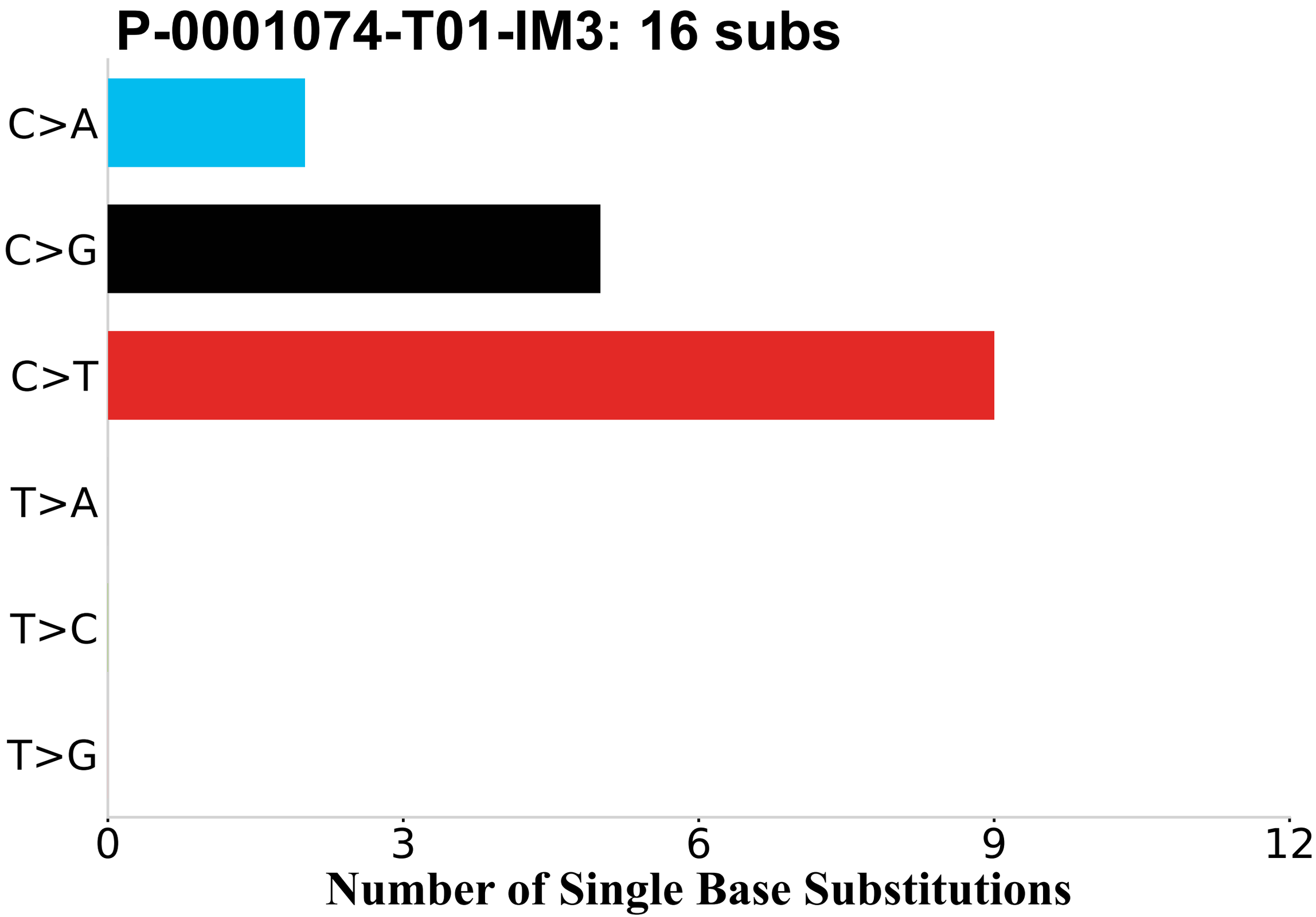
2
4
6
8
Number of Single Base Substitutions


P-0001074-T01-IM3: 16 subs
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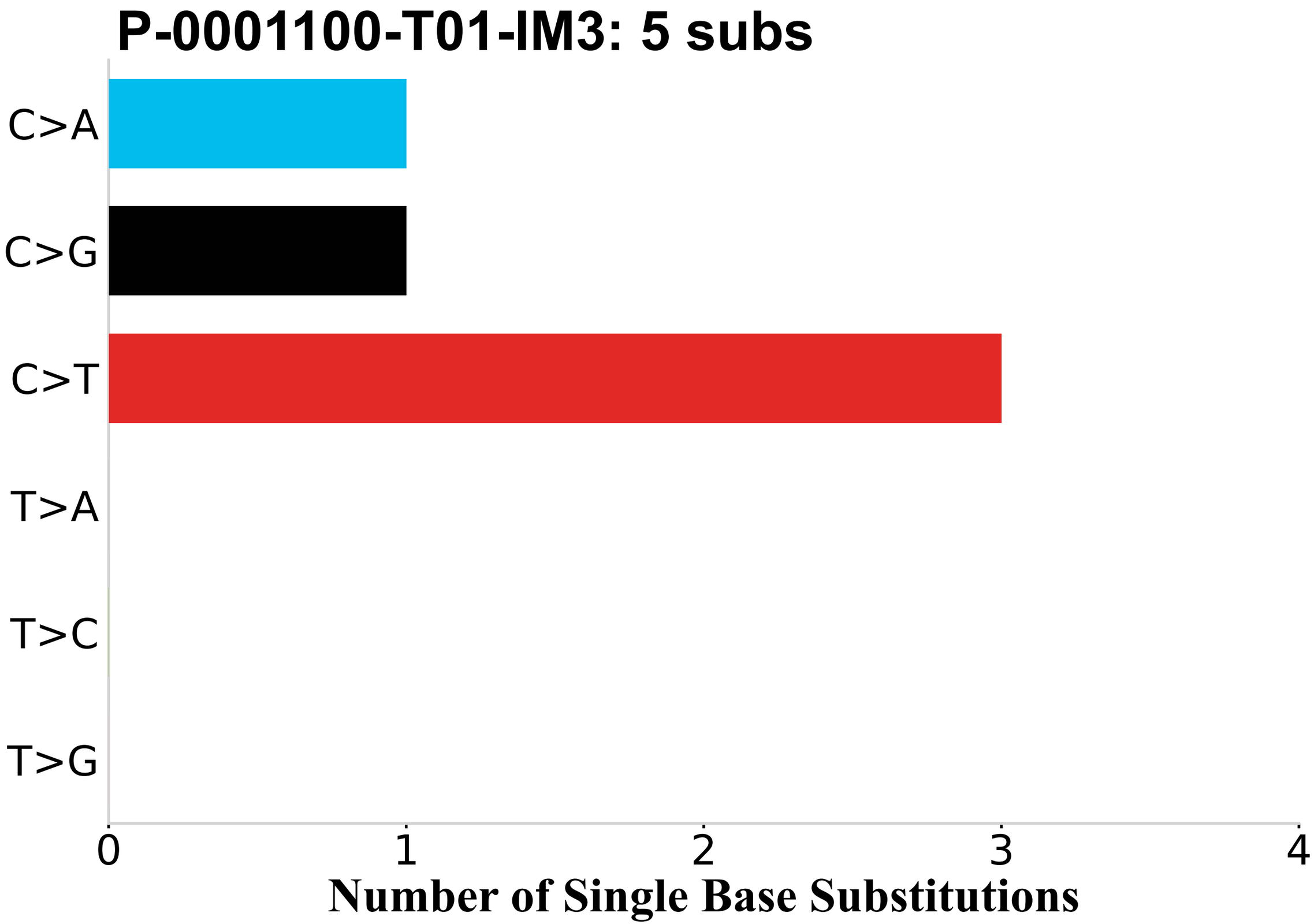
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0001100-T01-IM3: 5 subs
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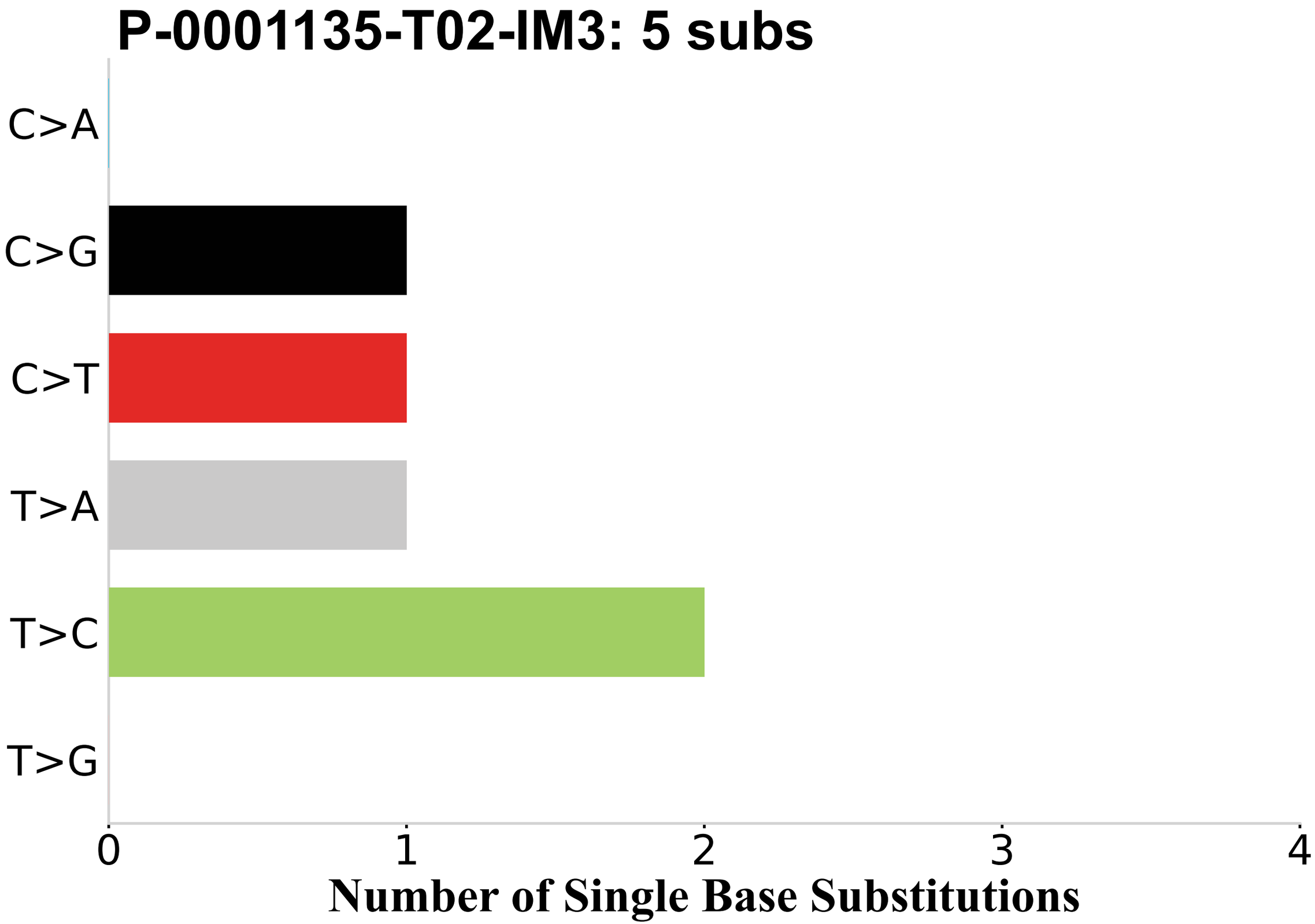
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0001135-T02-IM3: 5 subs
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T>C
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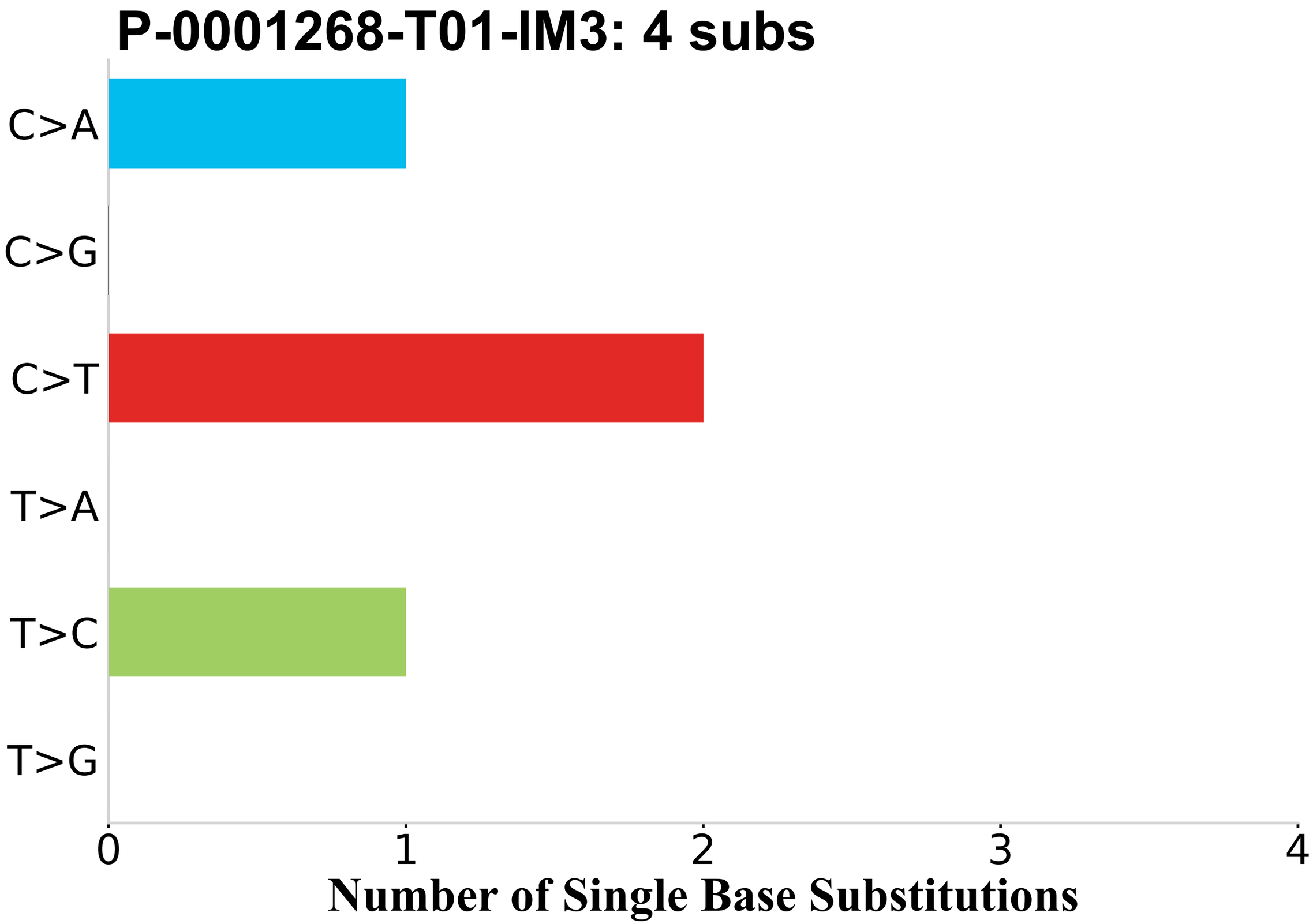
2
3
4
Number of Single Base Substitutions


P-0001268-T01-IM3: 4 subs
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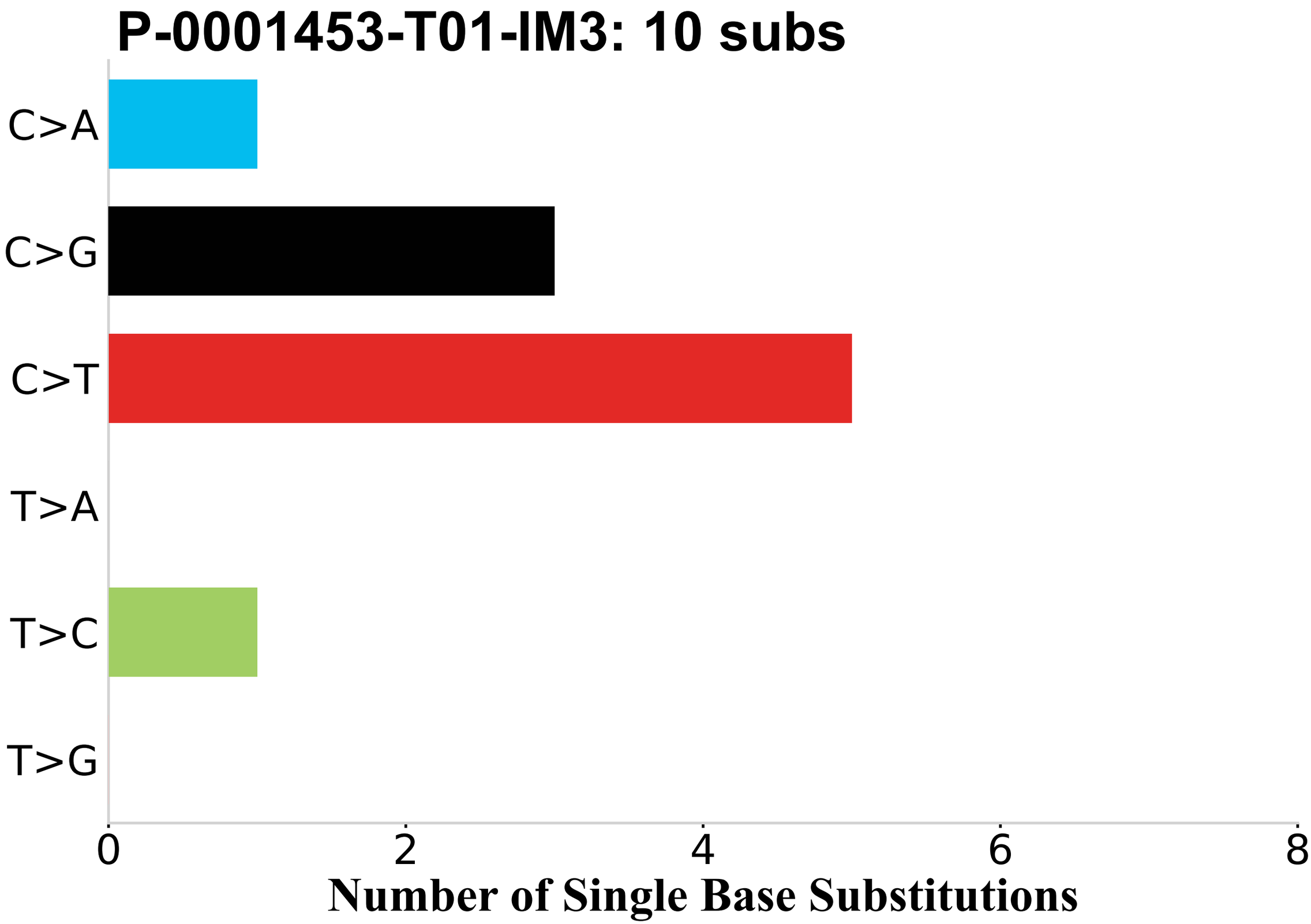
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0001453-T01-IM3: 10 subs
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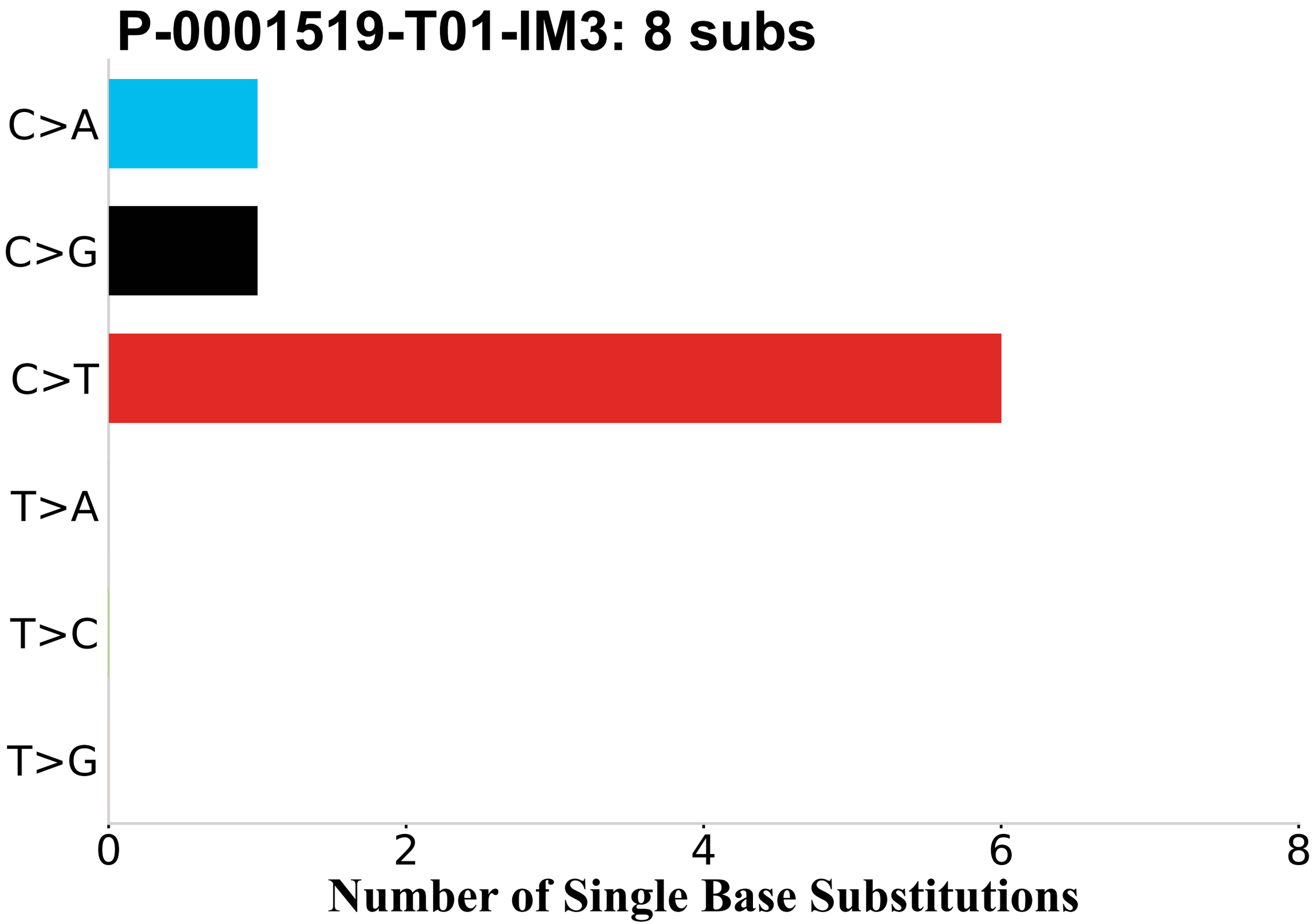
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0001519-T01-IM3: 8 subs
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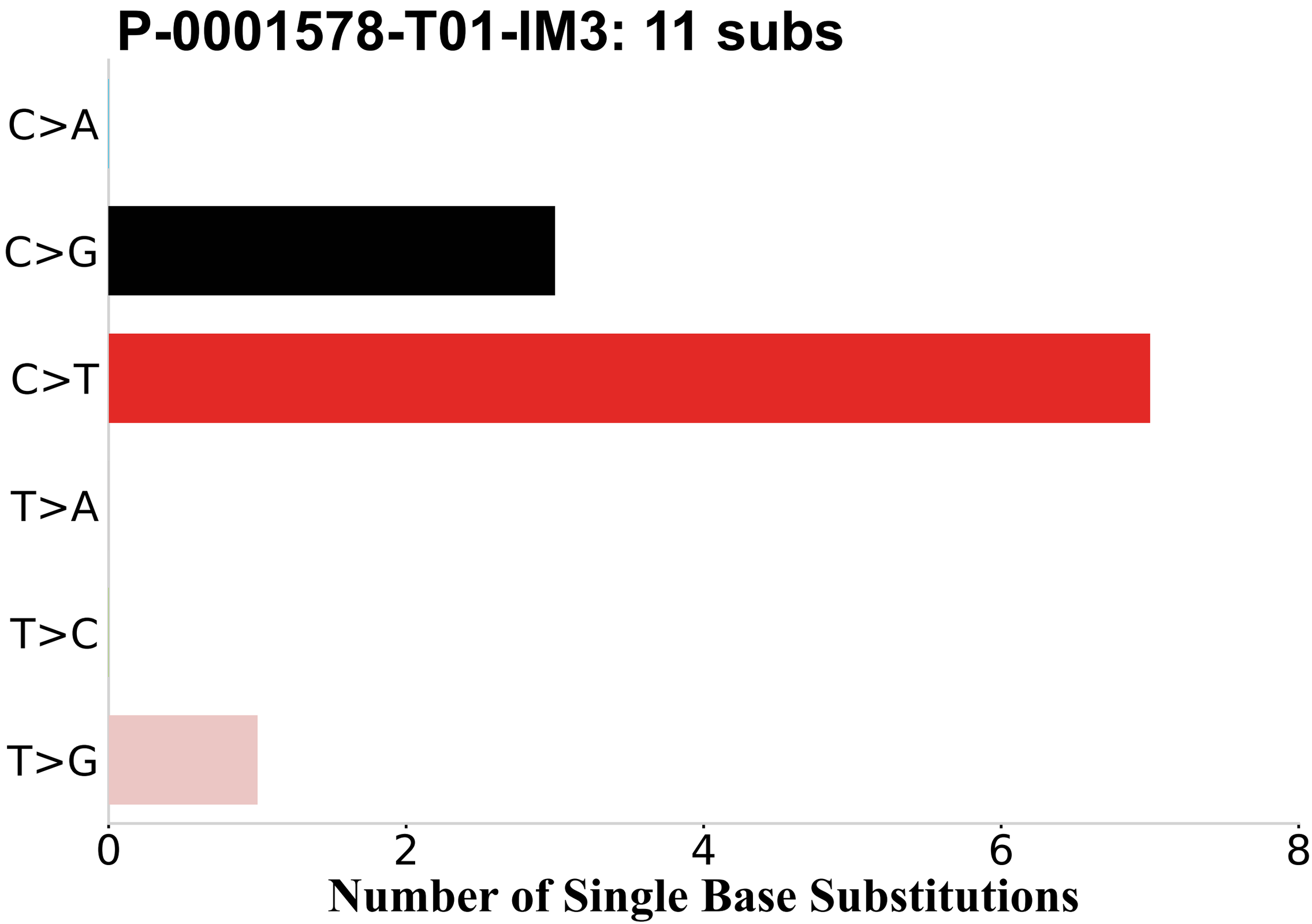
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0001578-T01-IM3: 11 subs
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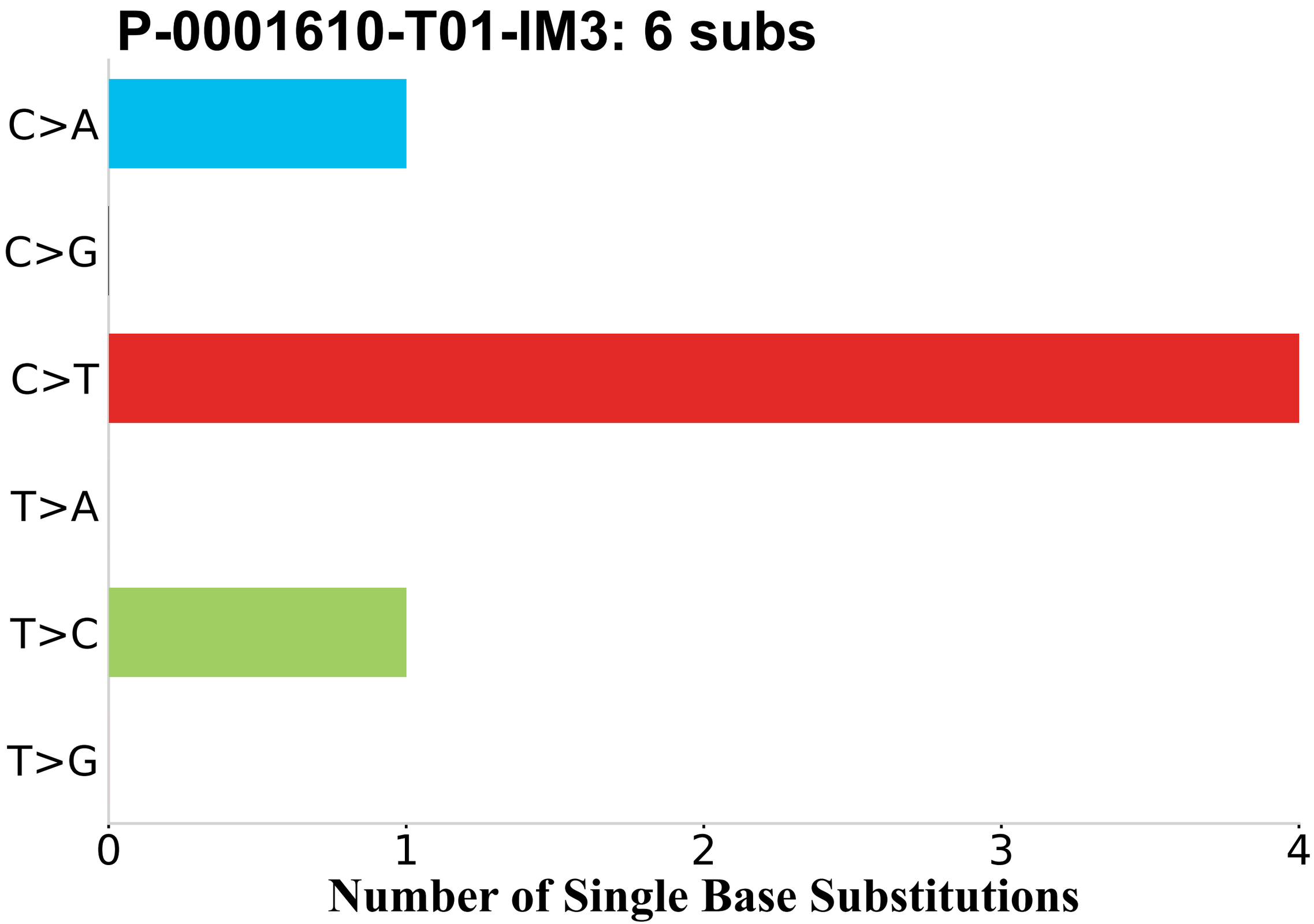
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0001610-T01-IM3: 6 subs
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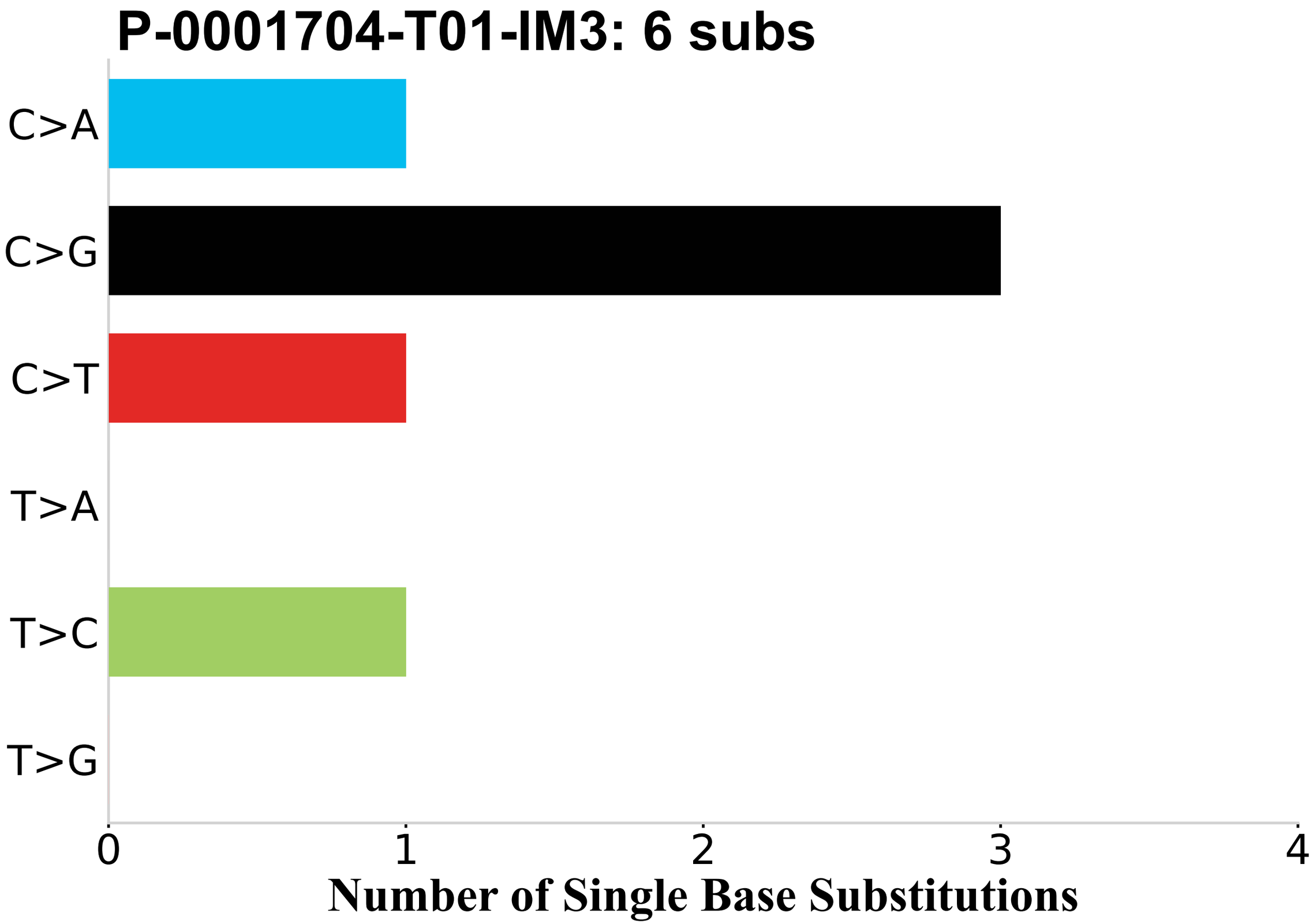
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0001704-T01-IM3: 6 subs
C>A
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C>T
T>A
T>C
T>G
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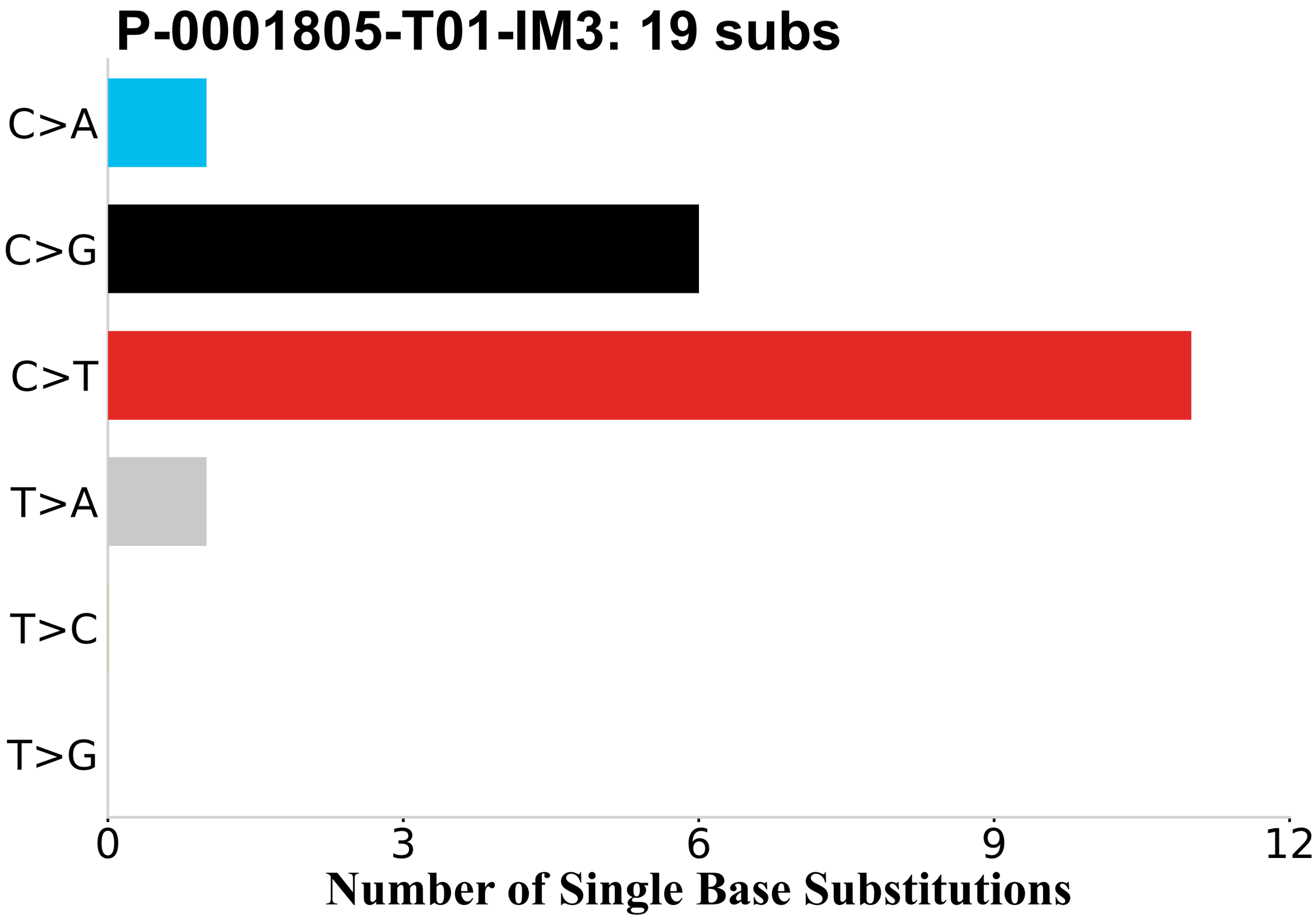
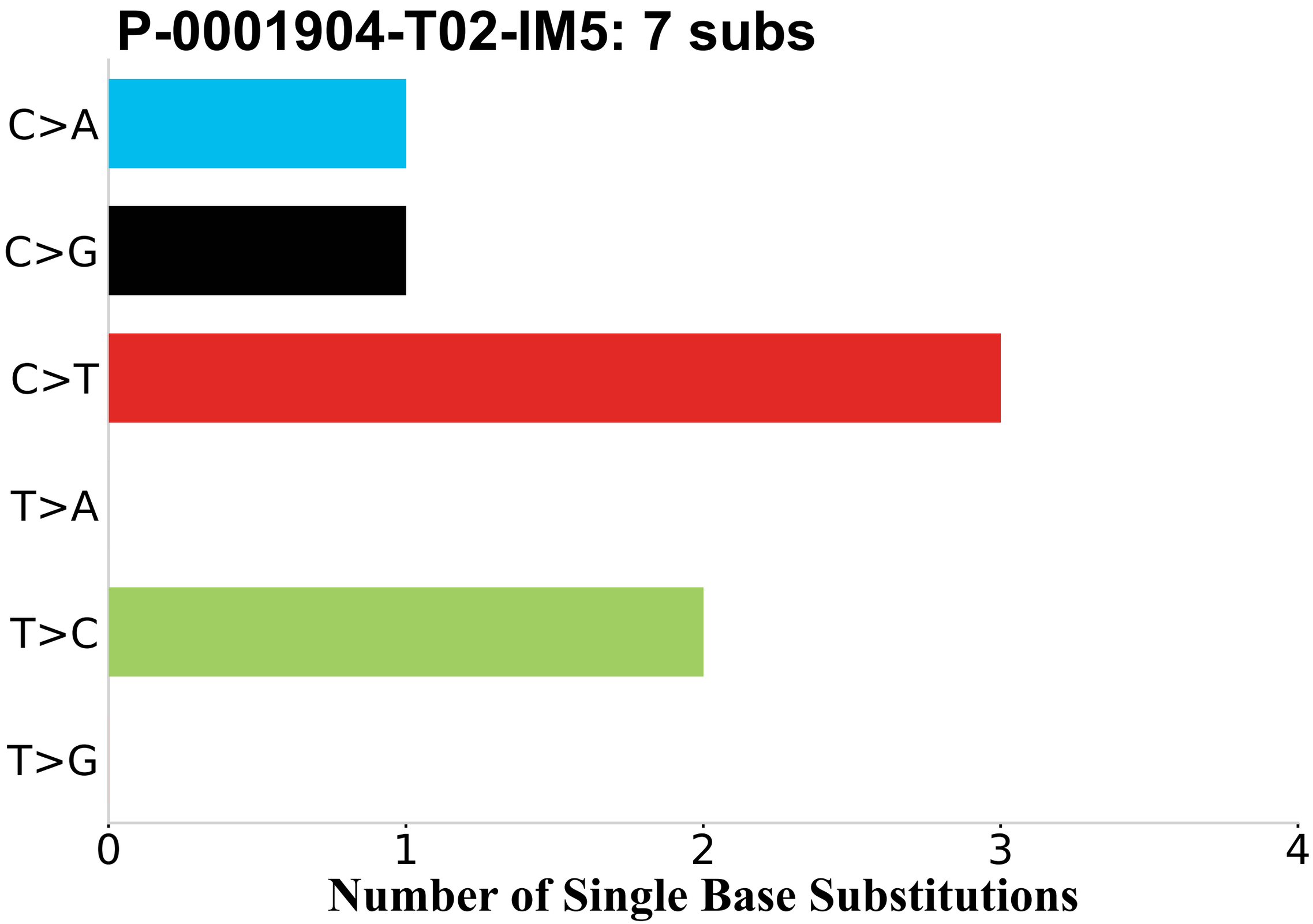
1
2
3
4
Number of Single Base Substitutions


P-0001805-T01-IM3: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0001904-T02-IM5: 7 subs
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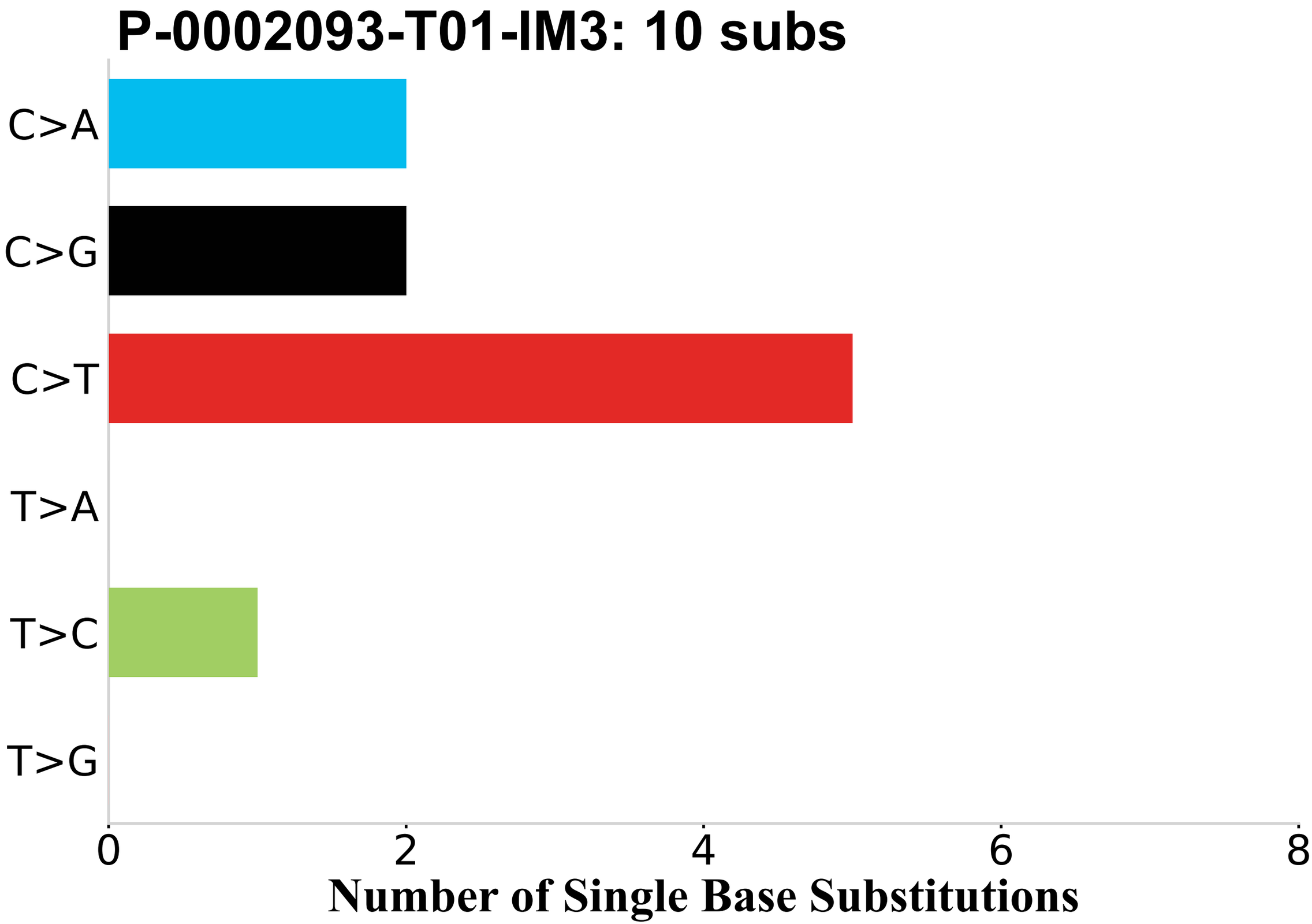
4
Number of Single Base Substitutions


P-0002093-T01-IM3: 10 subs
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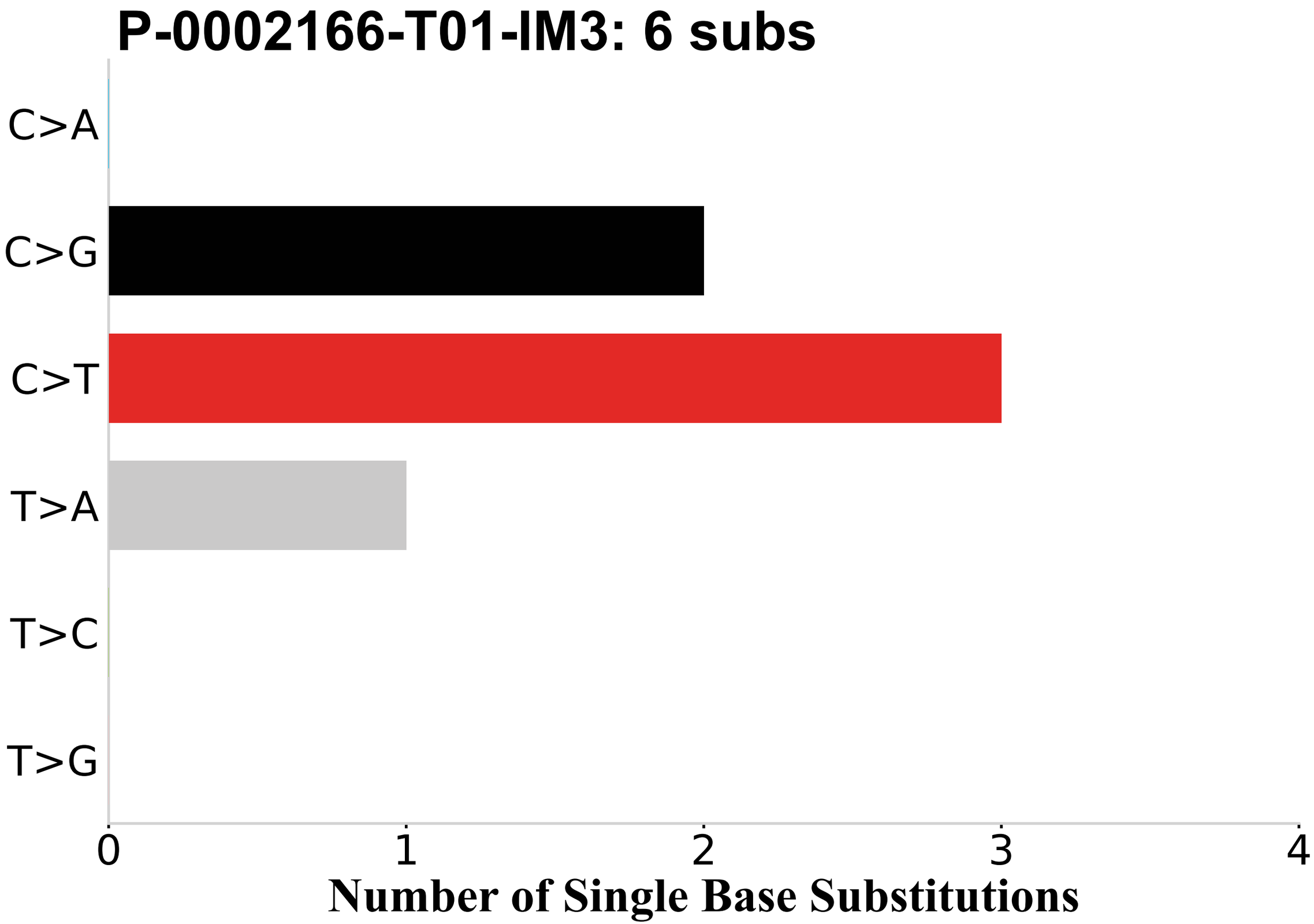
8
Number of Single Base Substitutions


P-0002166-T01-IM3: 6 subs
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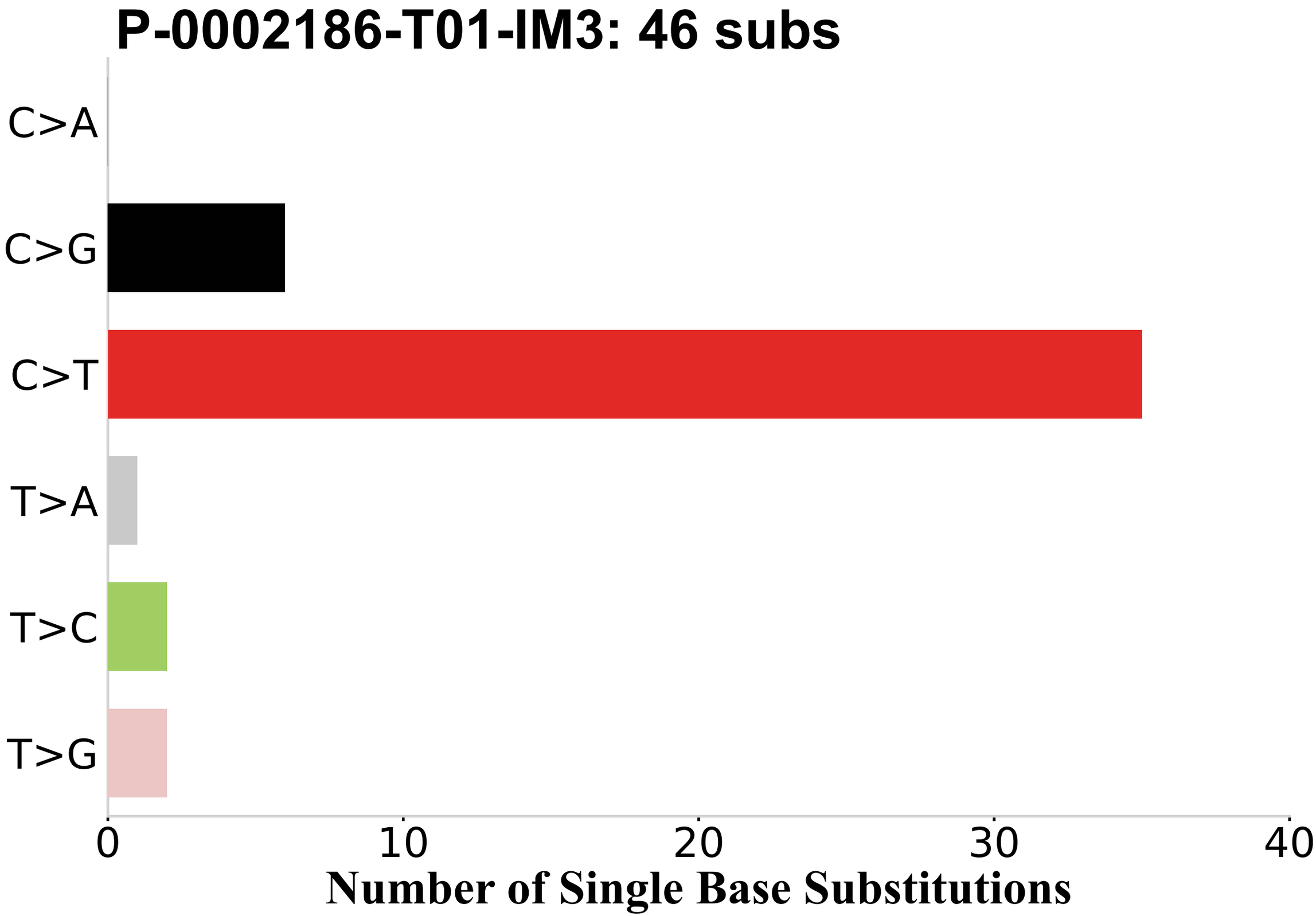
Number of Single Base Substitutions


P-0002186-T01-IM3: 46 subs
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T>C
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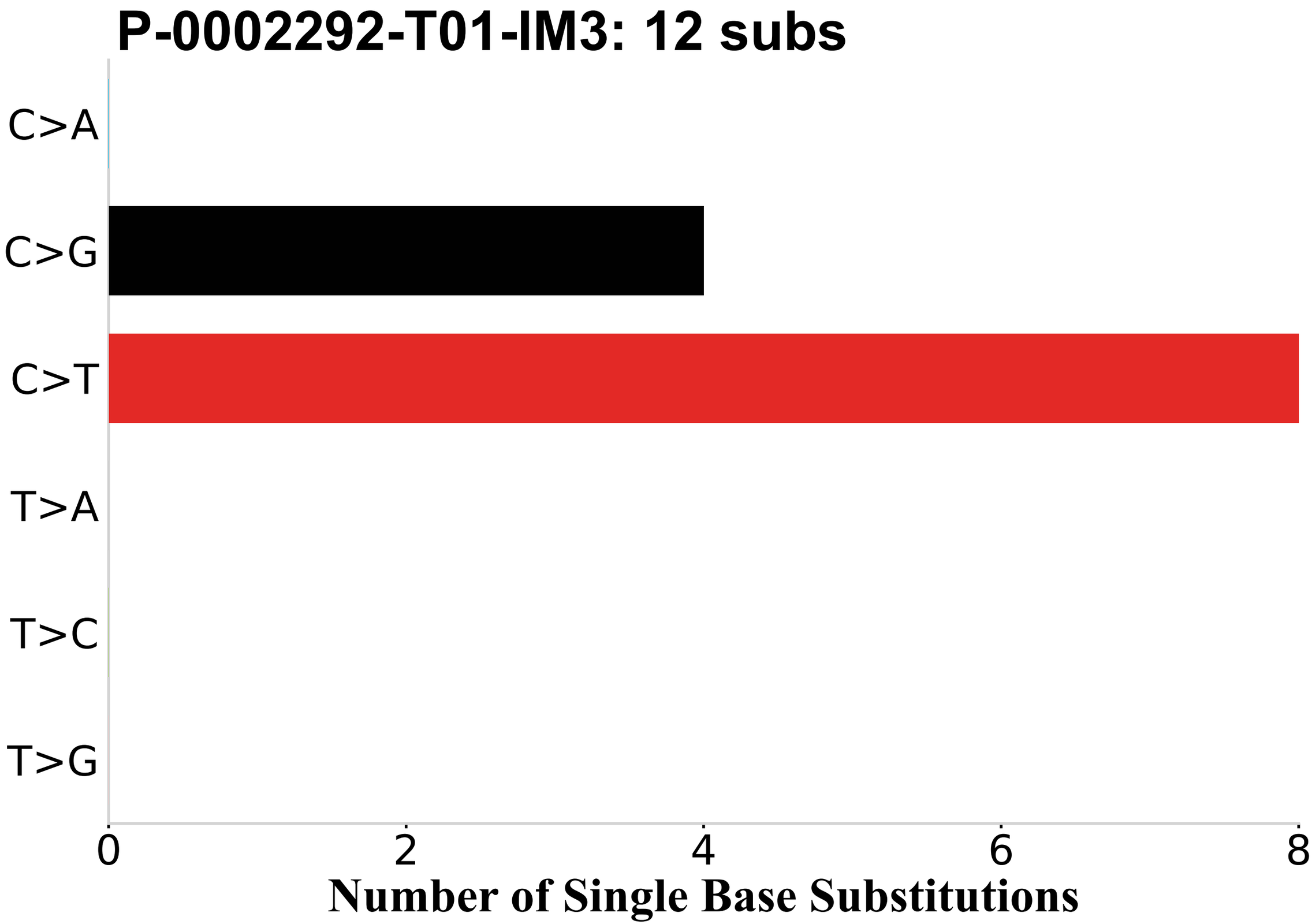
10
20
30
40
Number of Single Base Substitutions


P-0002292-T01-IM3: 12 subs
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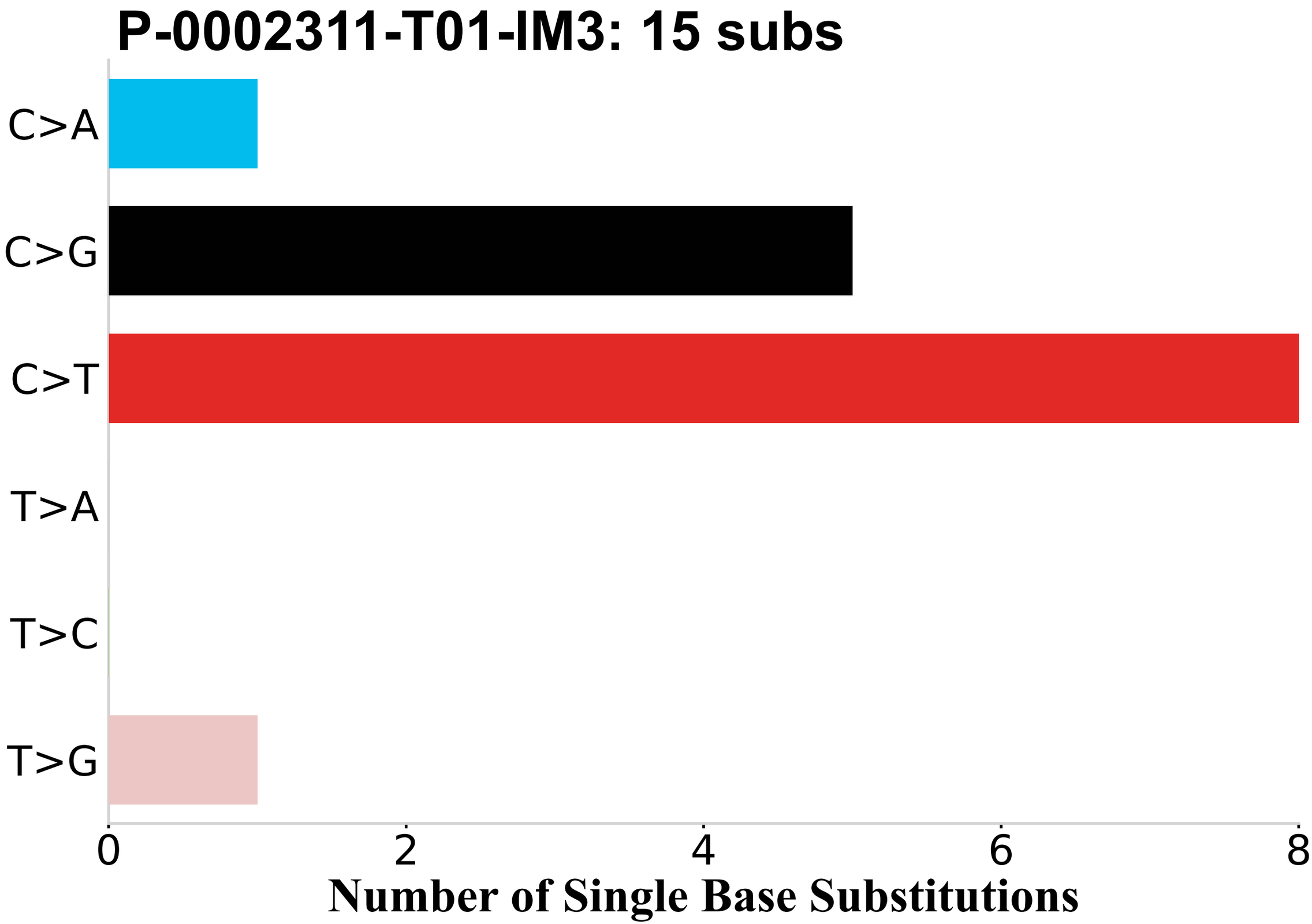
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0002311-T01-IM3: 15 subs
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T>G
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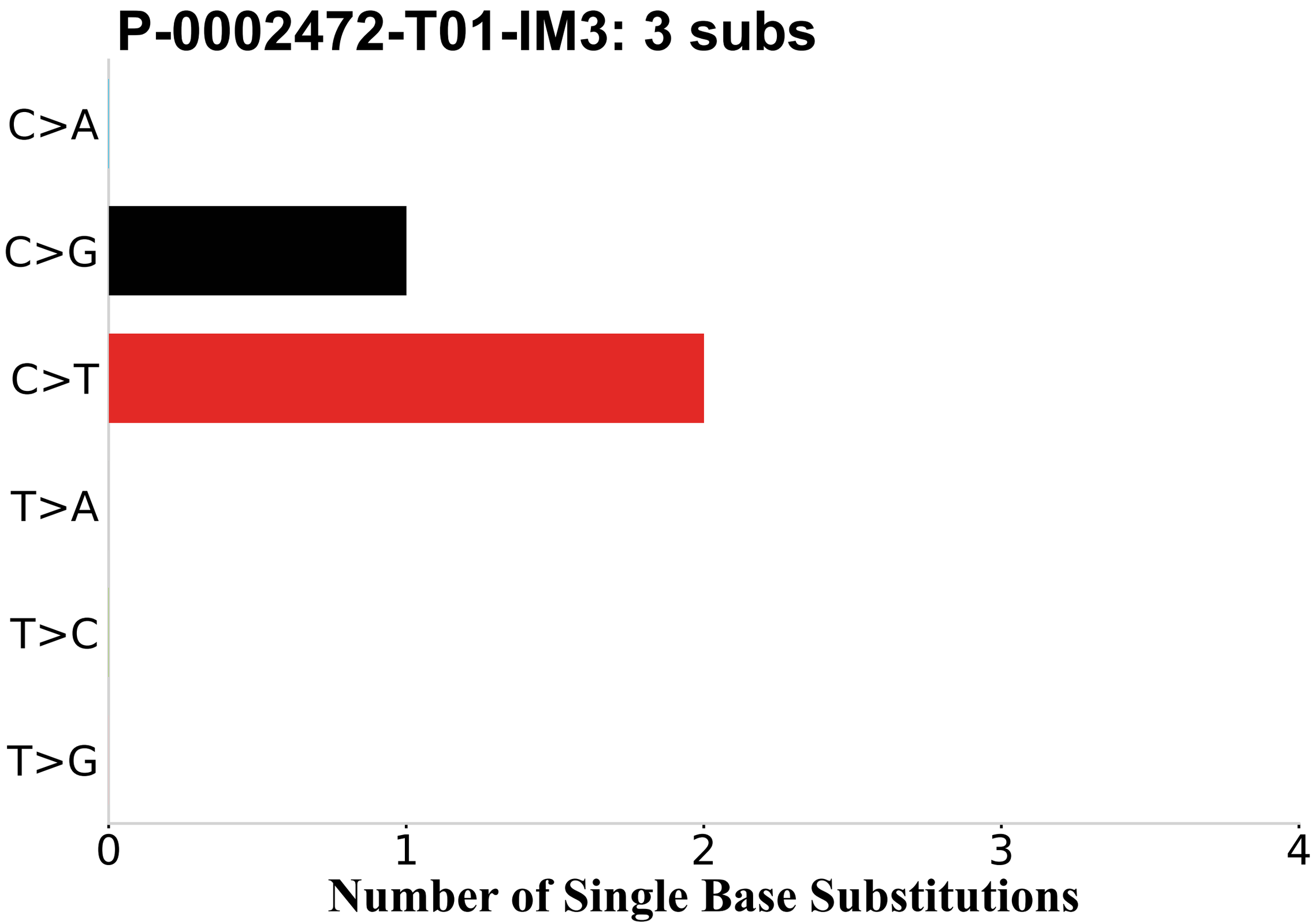
2
4
6
8
Number of Single Base Substitutions


P-0002472-T01-IM3: 3 subs
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T>G
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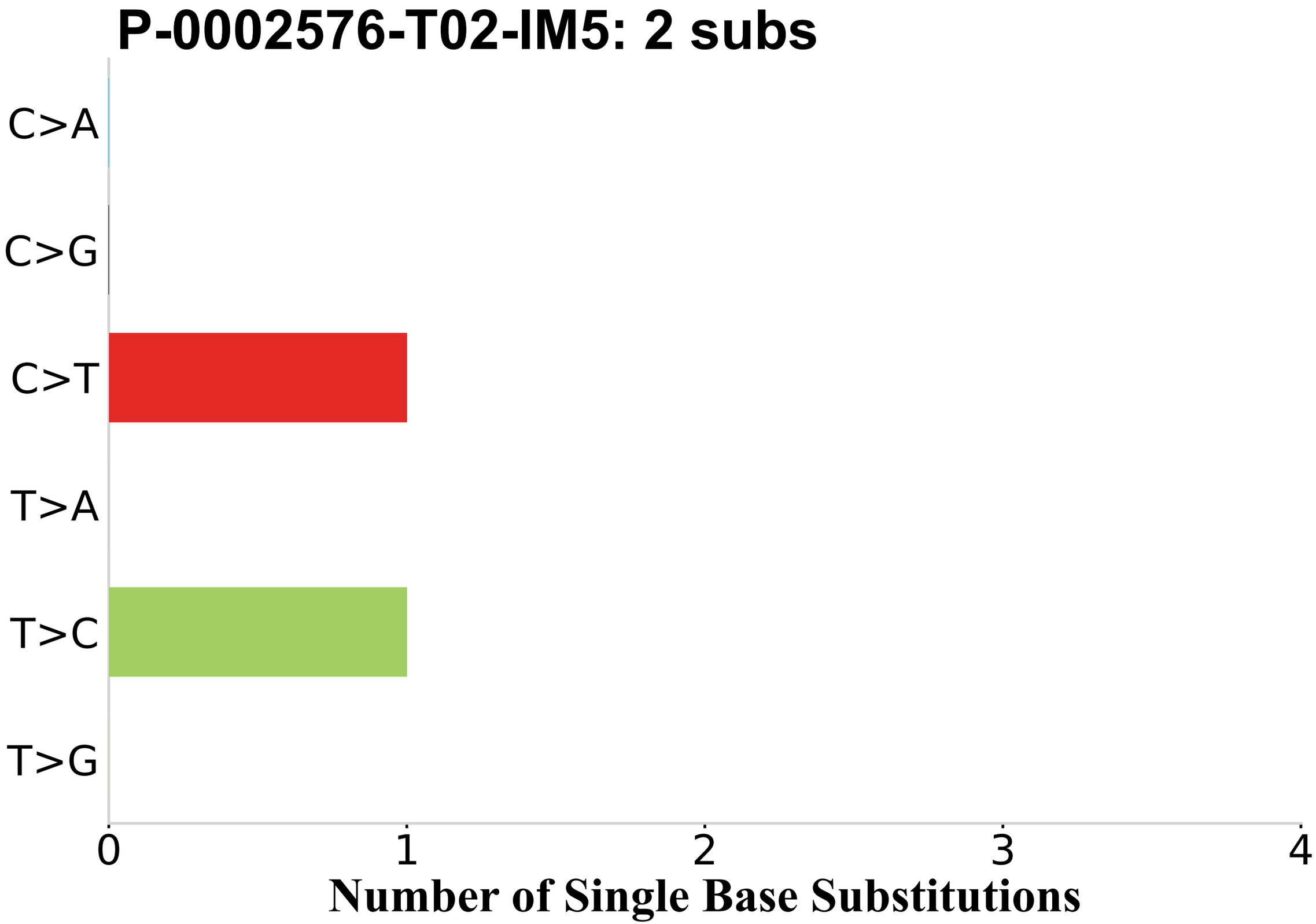
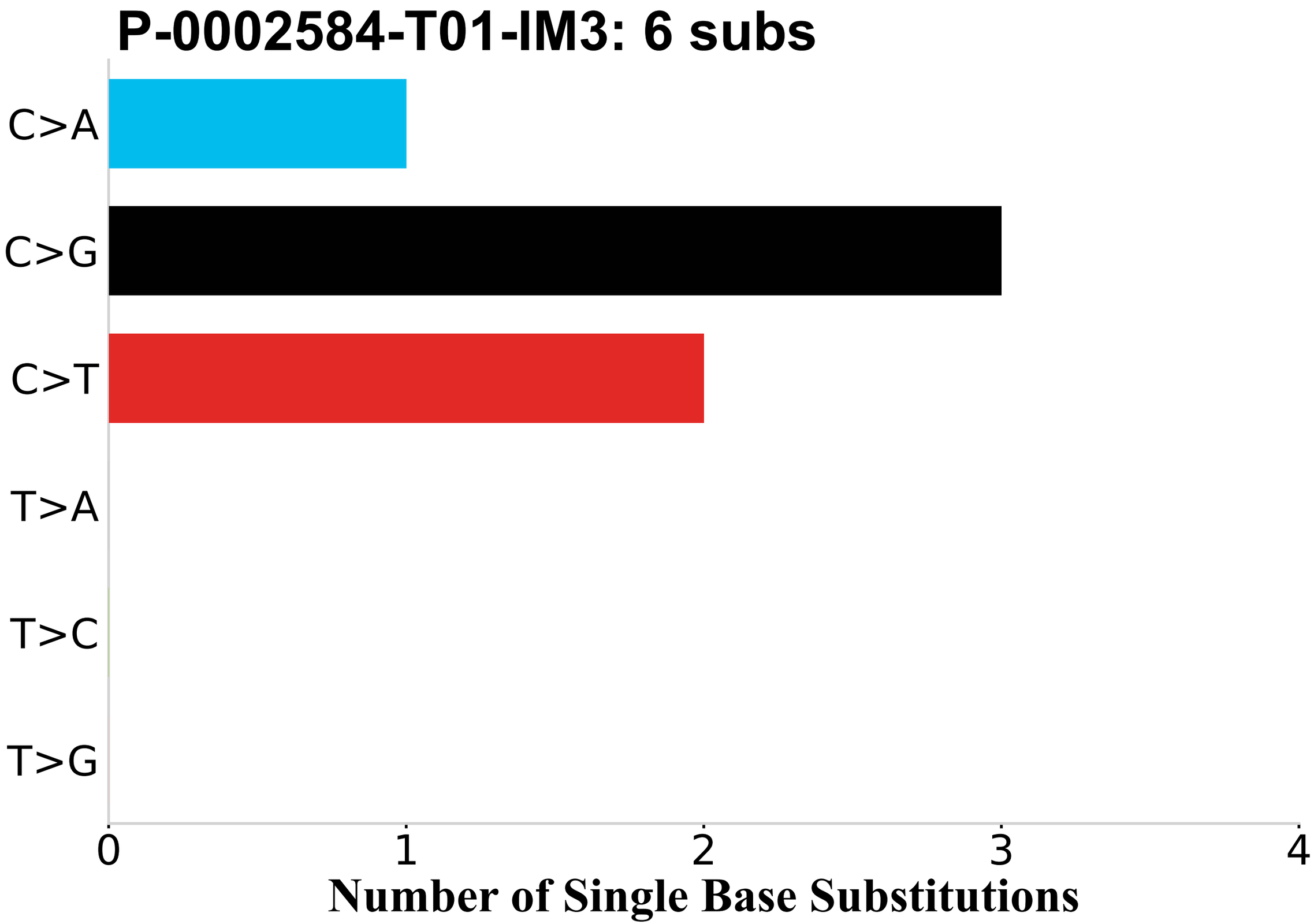
1
2
3
4
Number of Single Base Substitutions


P-0002576-T02-IM5: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

P-0002581-T02-IM5: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002584-T01-IM3: 6 subs
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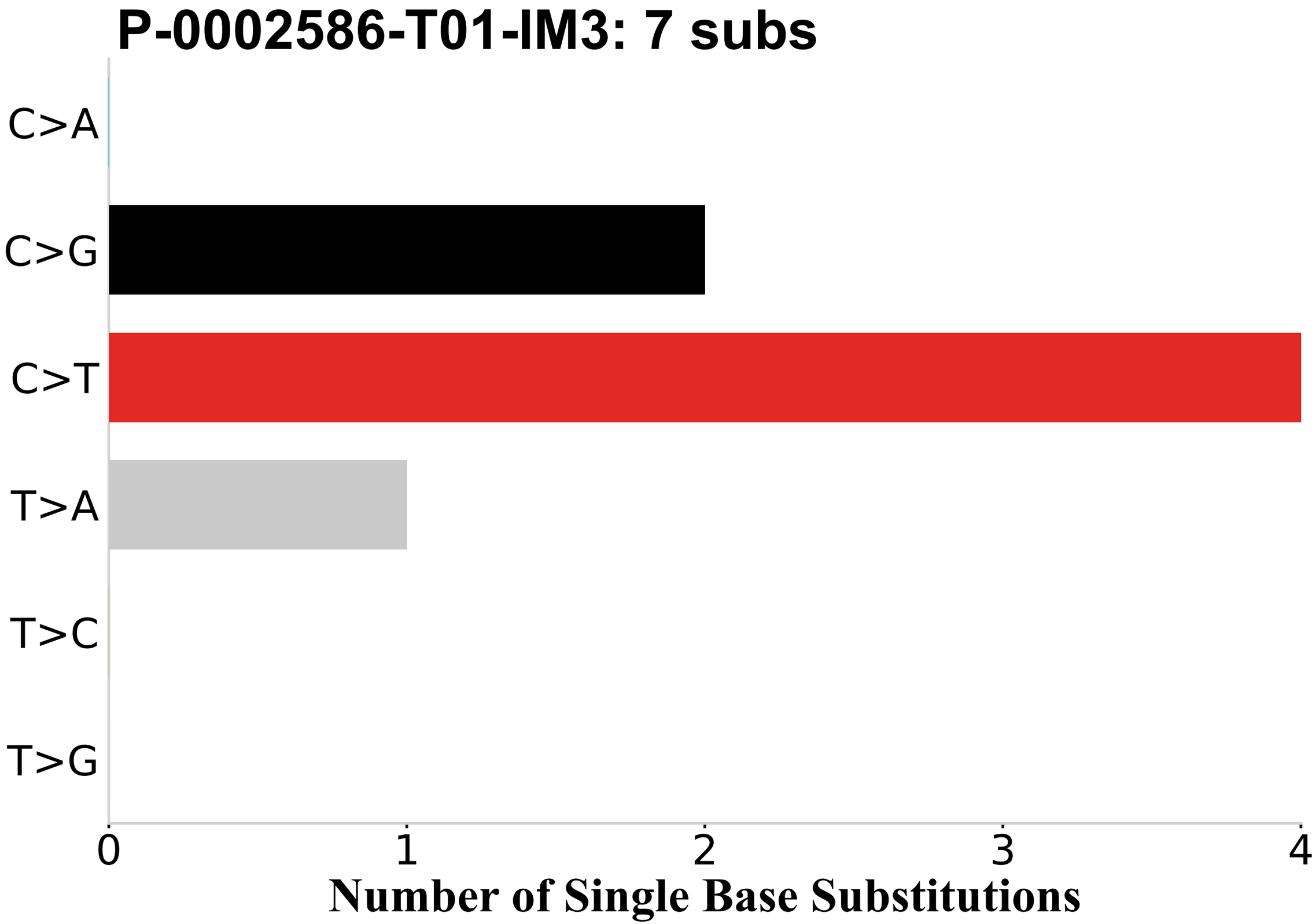
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002586-T01-IM3: 7 subs
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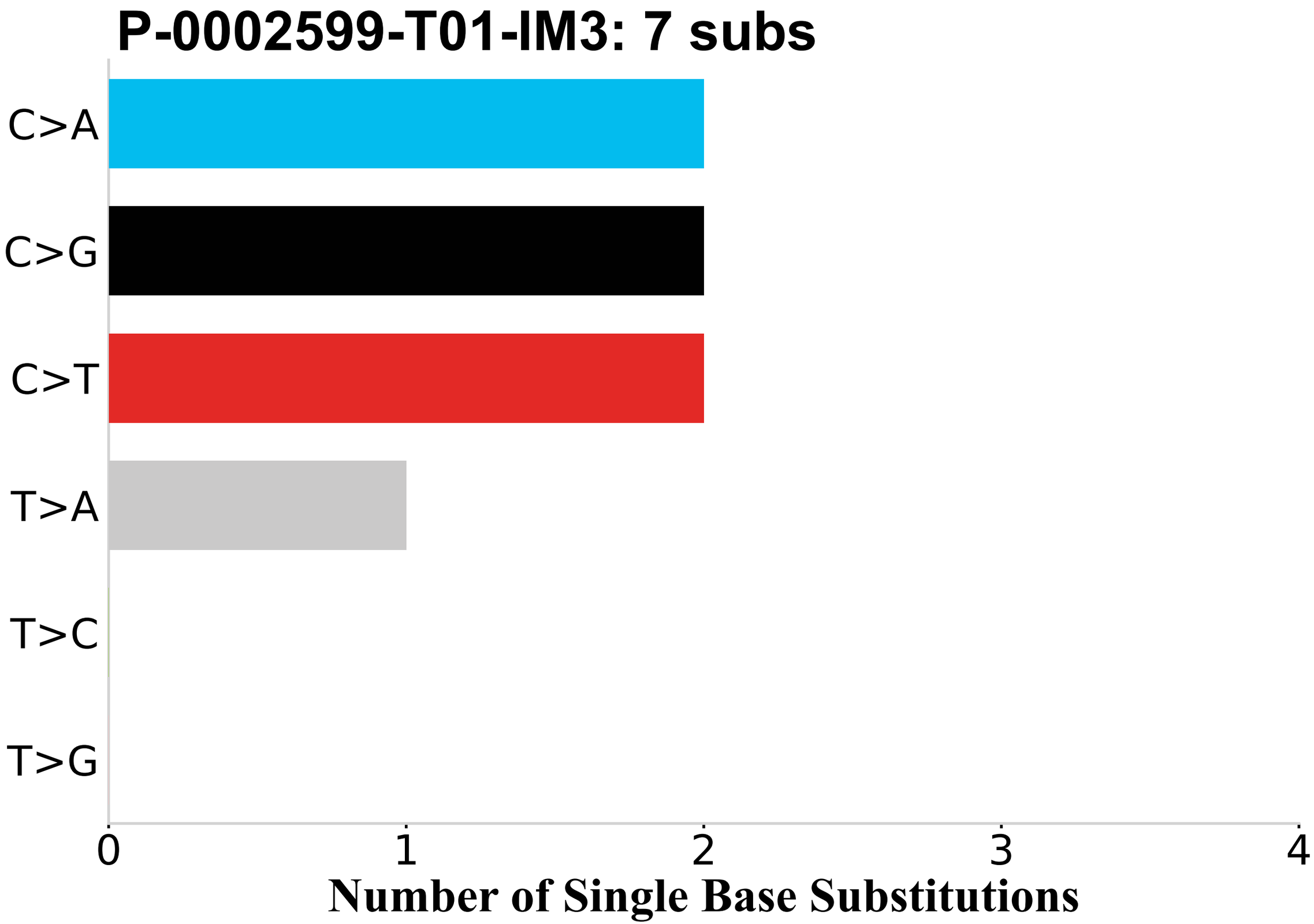
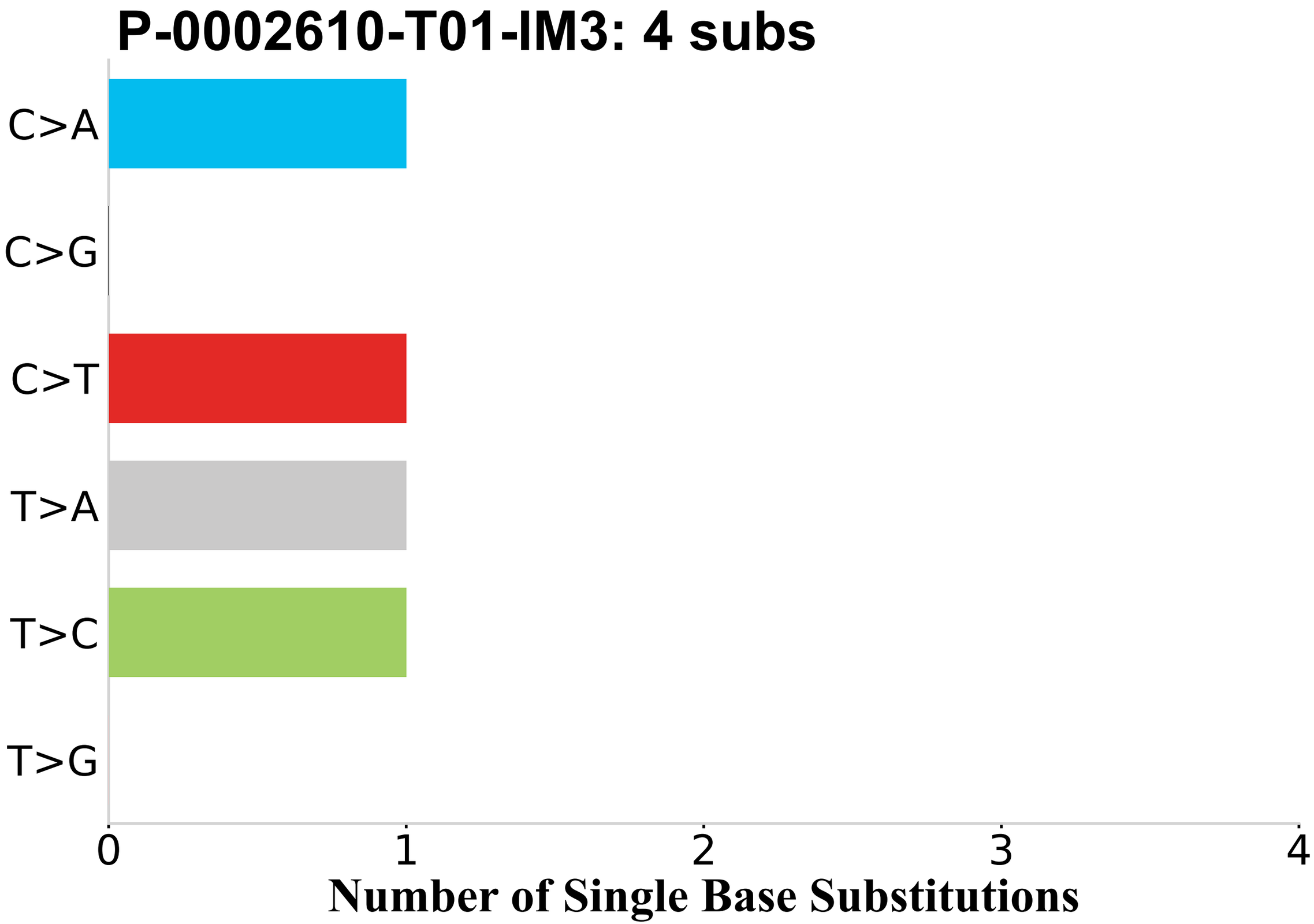
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002599-T01-IM3: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002610-T01-IM3: 4 subs
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C>G
C>T
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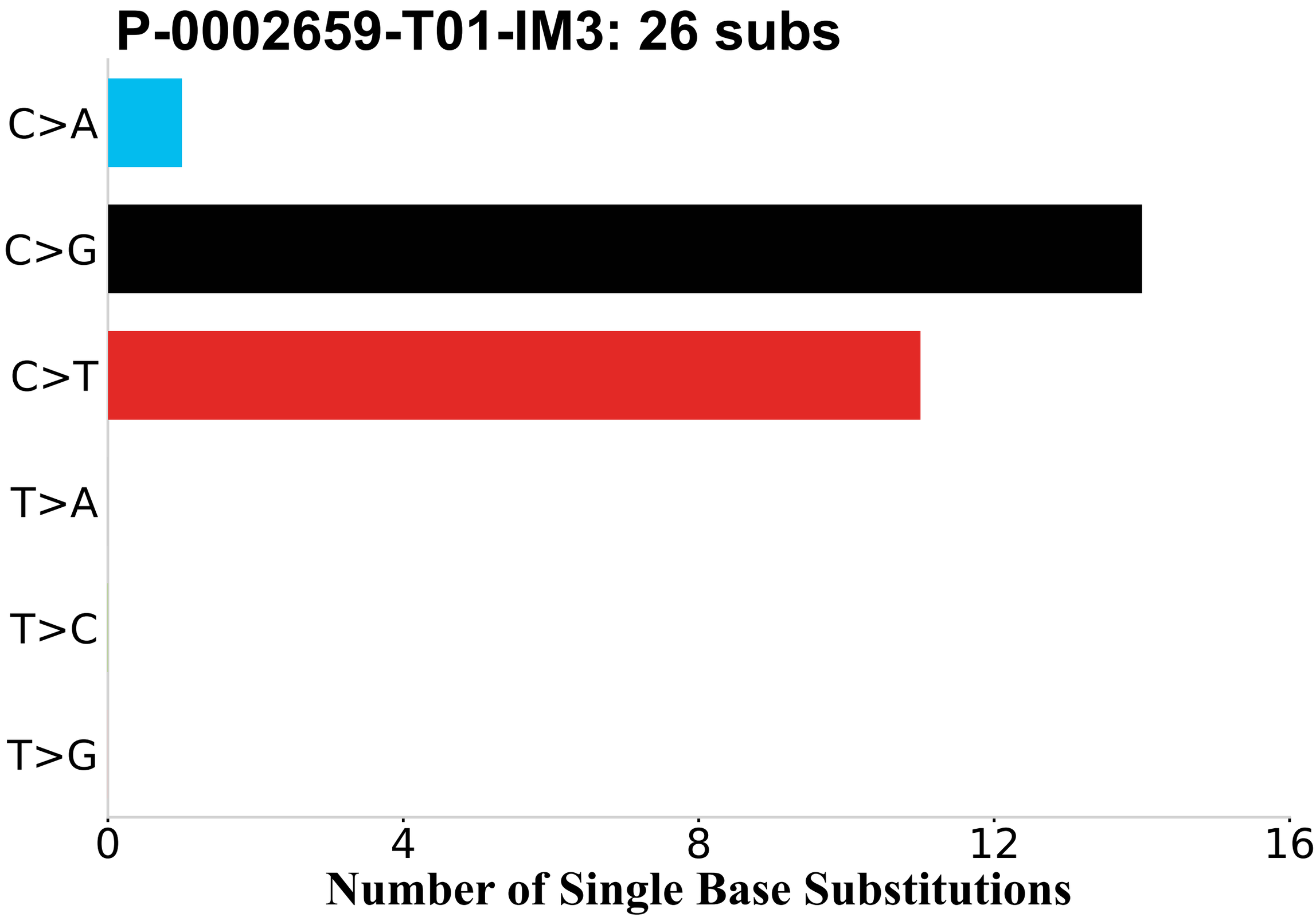
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002659-T01-IM3: 26 subs
C>A
C>G
C>T
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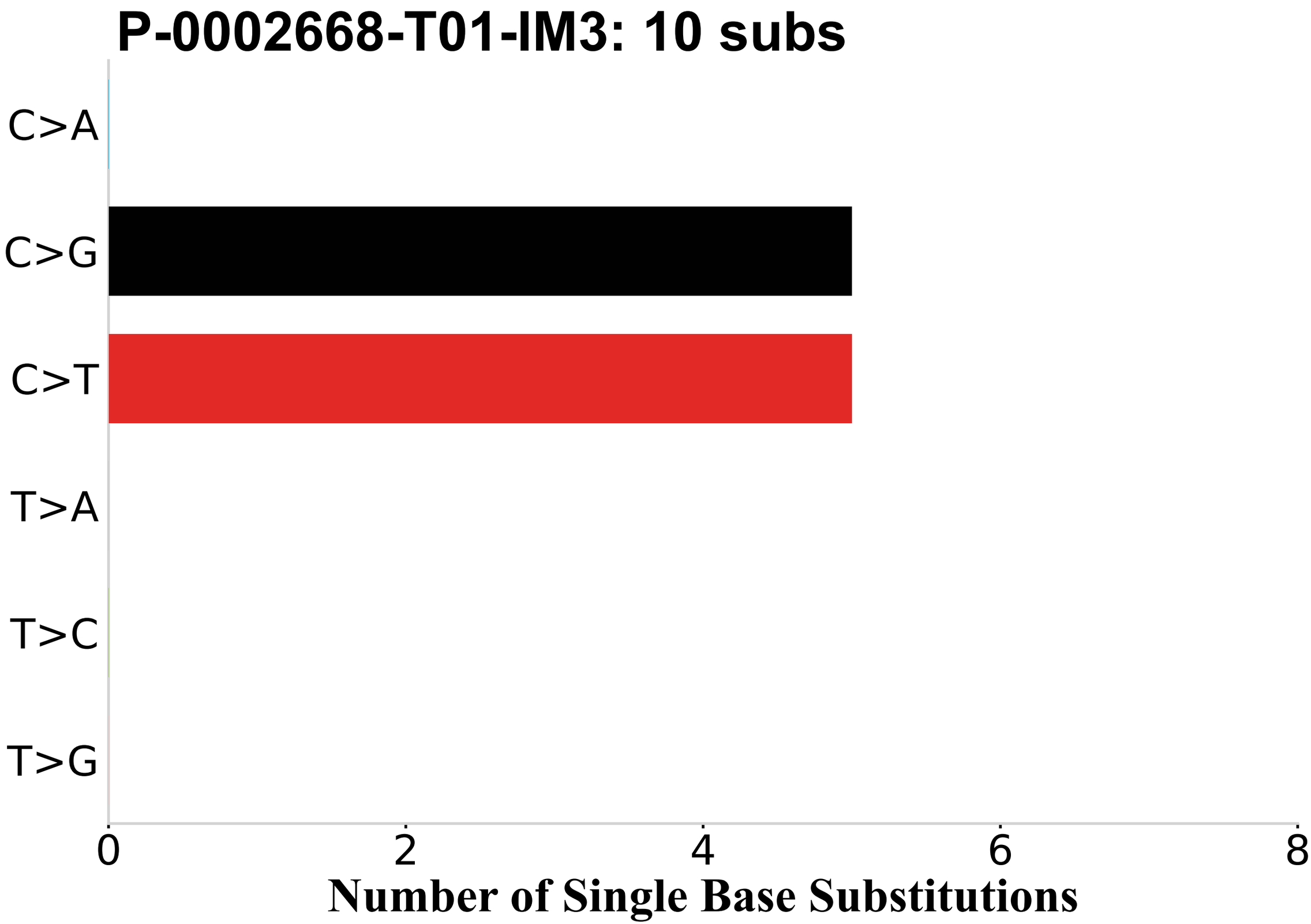
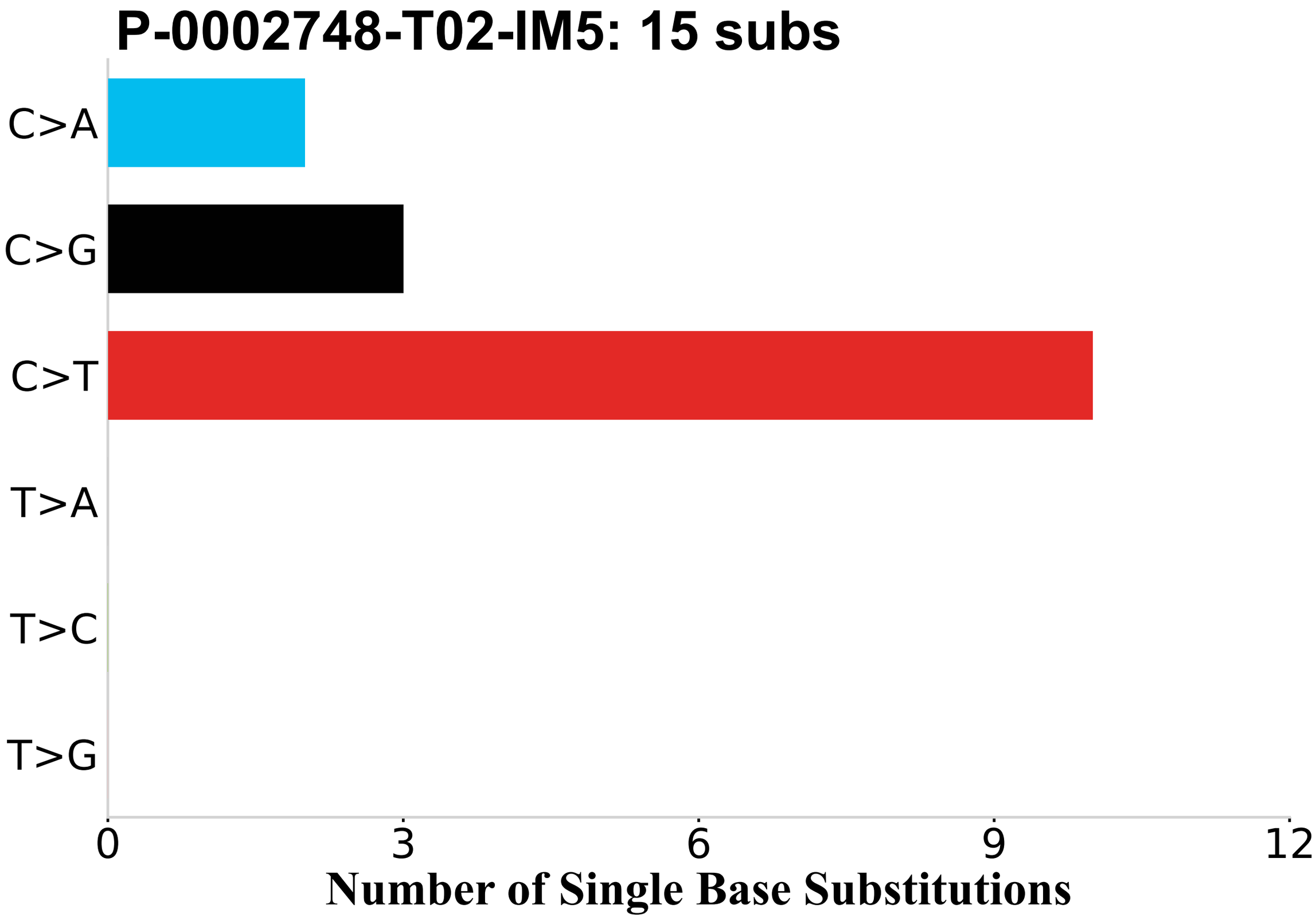
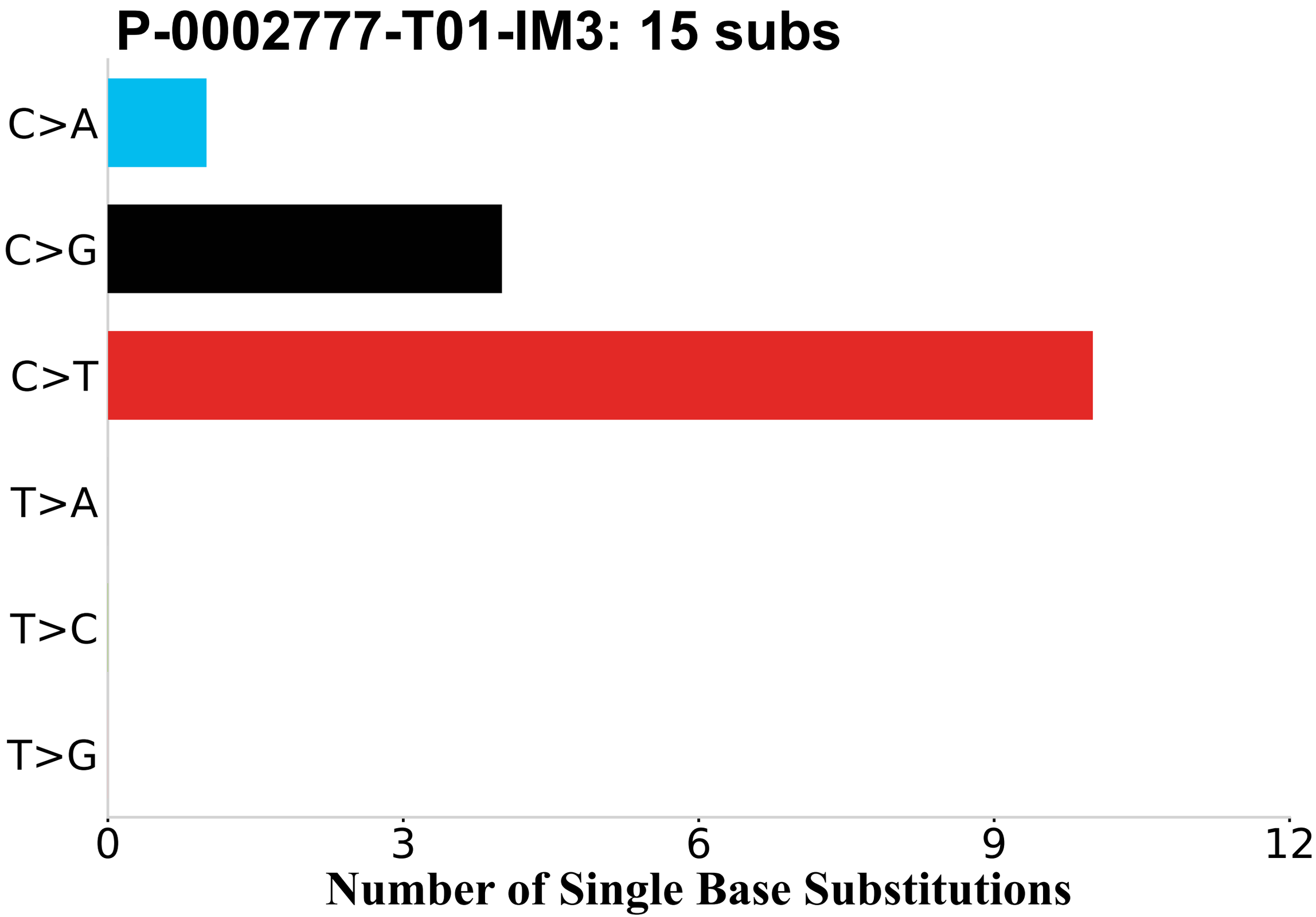
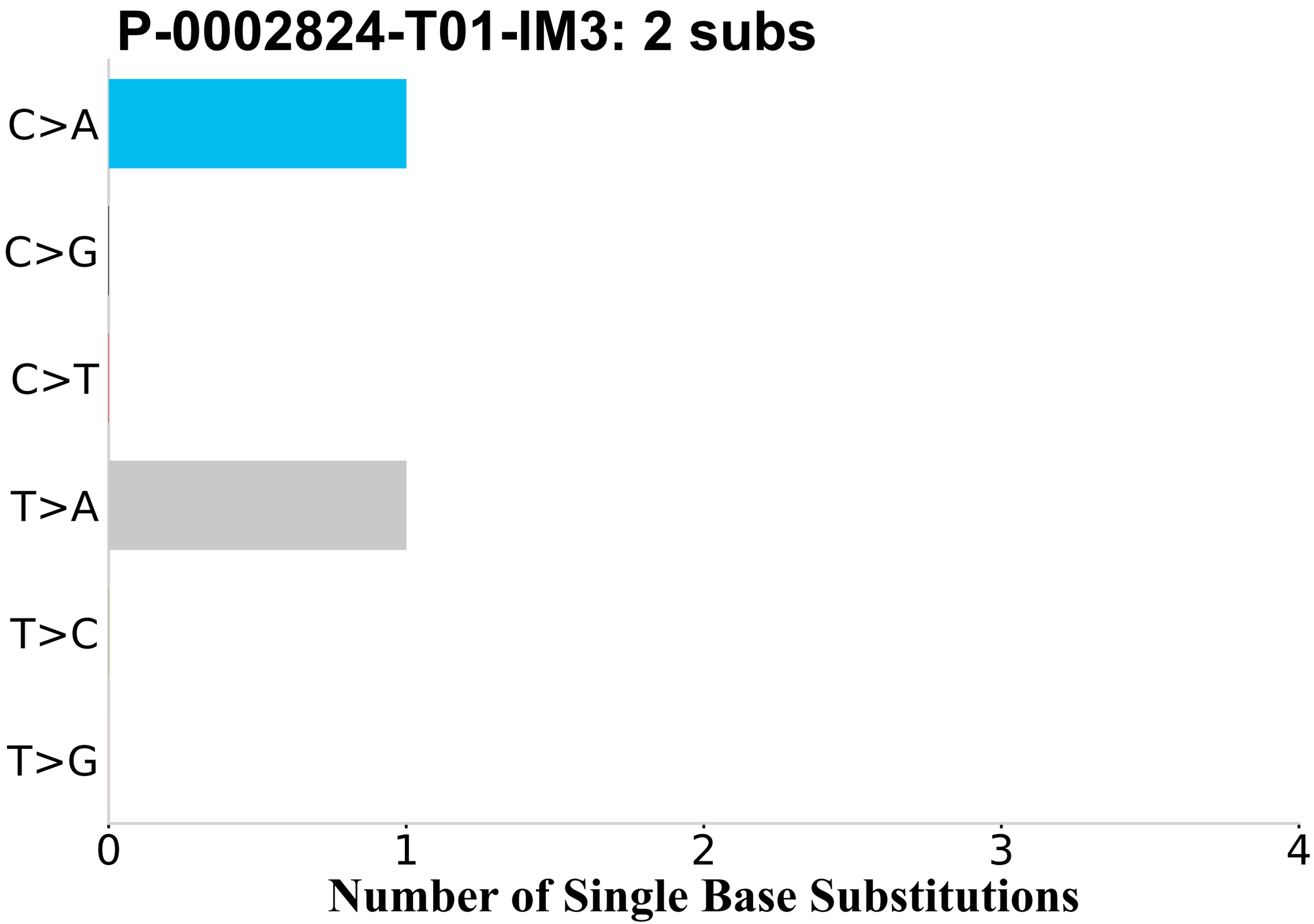
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0002668-T01-IM3: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

P-0002744-T01-IM3: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002748-T02-IM5: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0002777-T01-IM3: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0002824-T01-IM3: 2 subs
C>A
C>G
C>T
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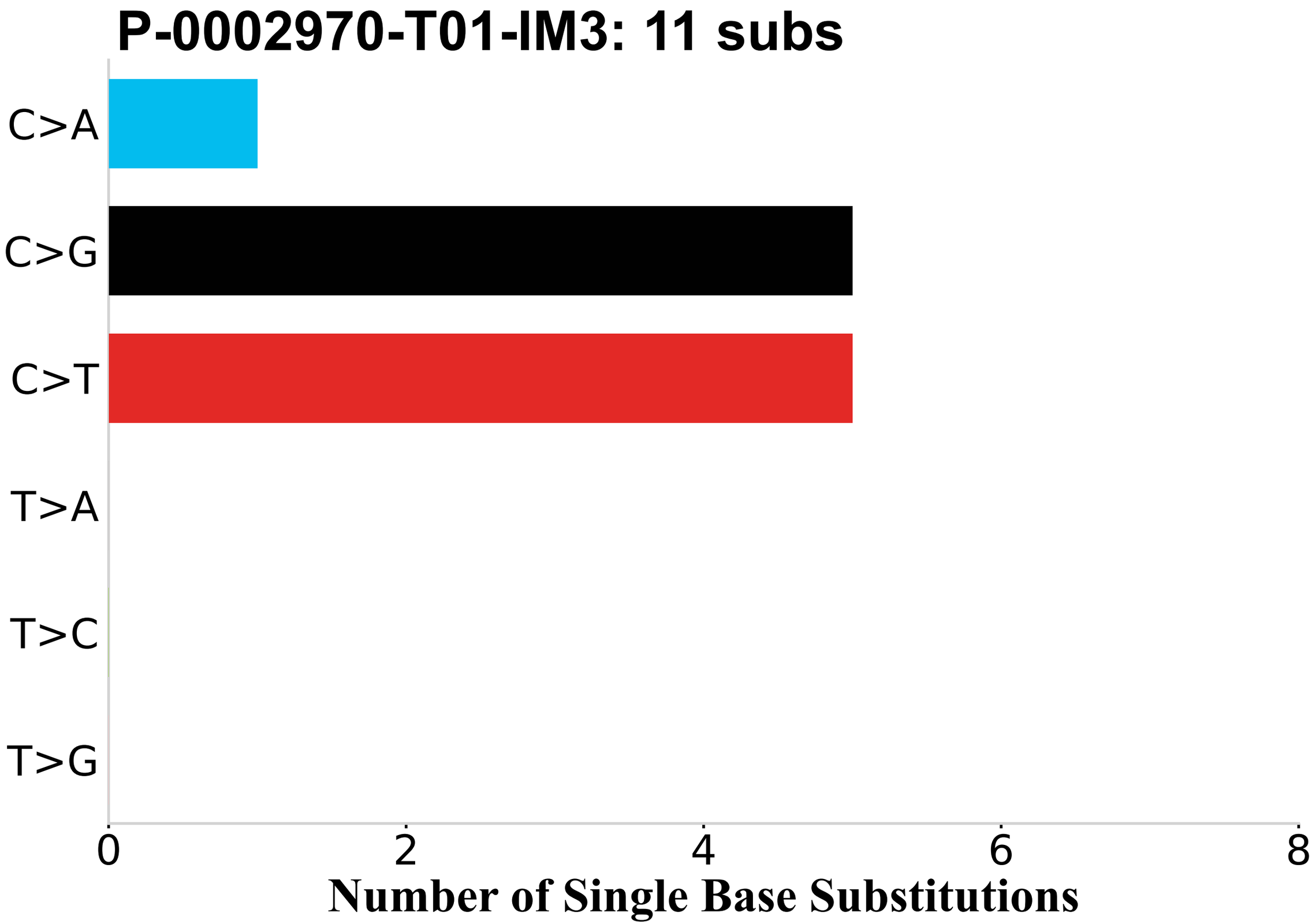
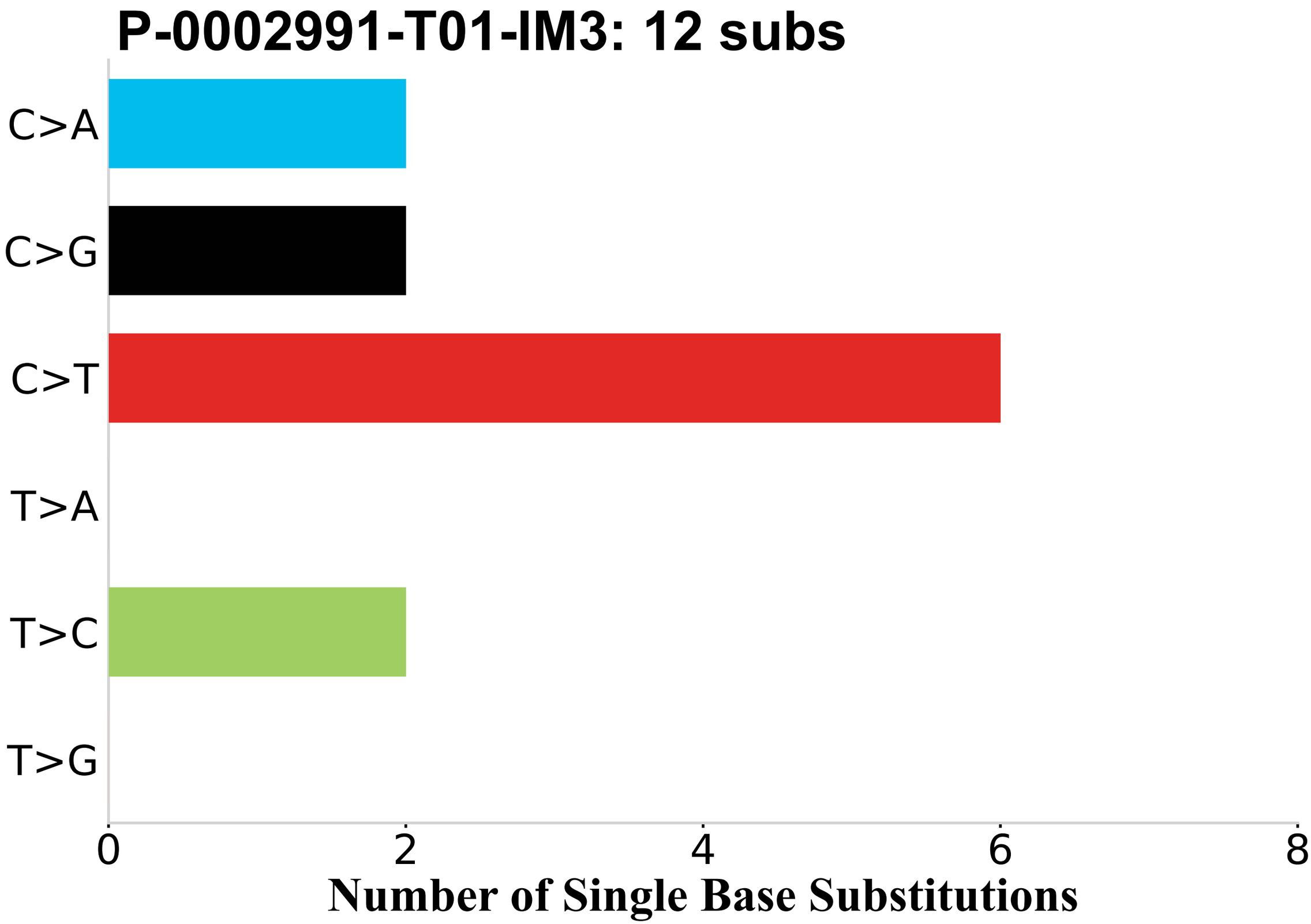
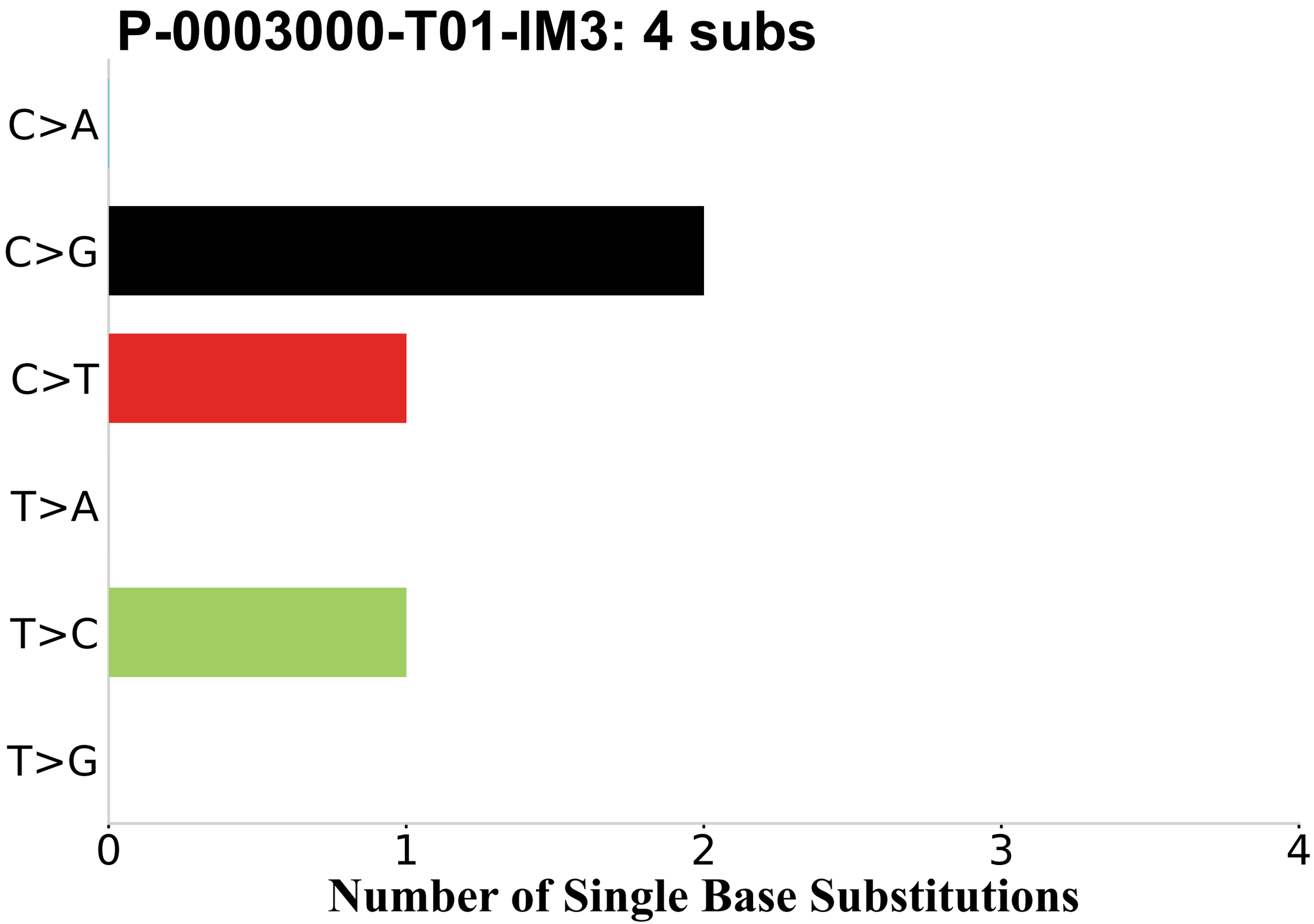
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0002970-T01-IM3: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0002991-T01-IM3: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003000-T01-IM3: 4 subs
C>A
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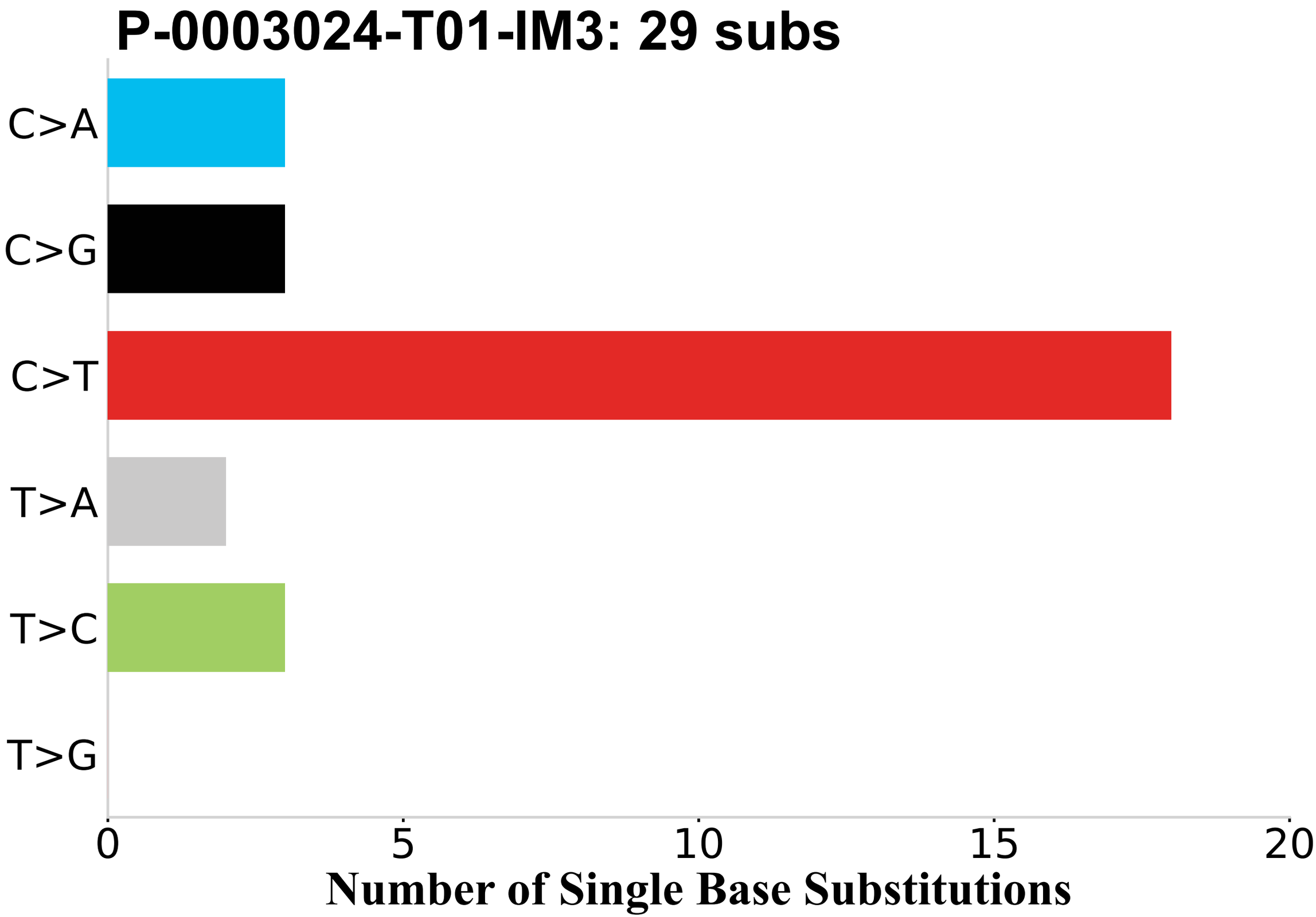
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003024-T01-IM3: 29 subs
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T>C
T>G
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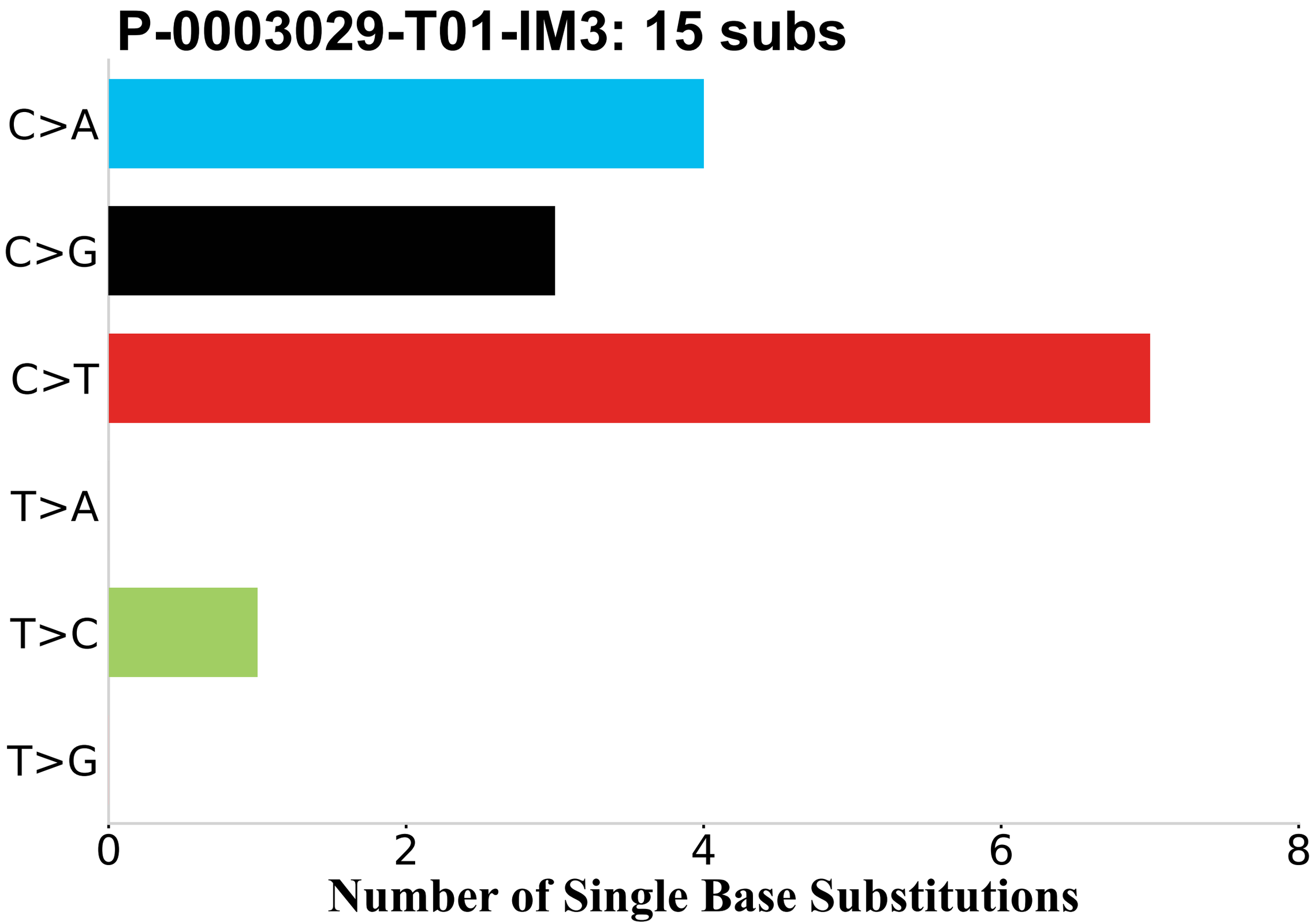
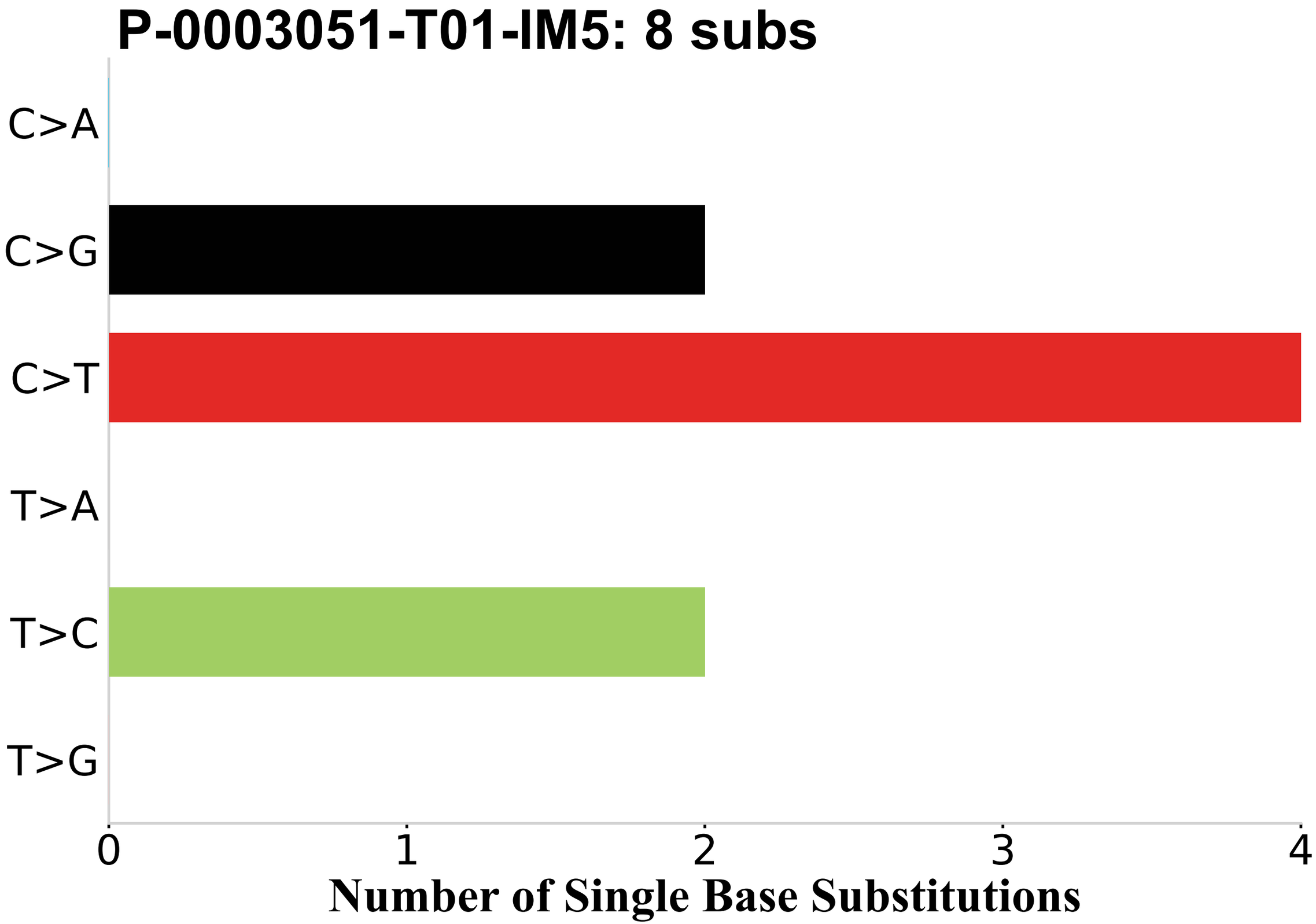
5
10
15
20
Number of Single Base Substitutions


P-0003029-T01-IM3: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003051-T01-IM5: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
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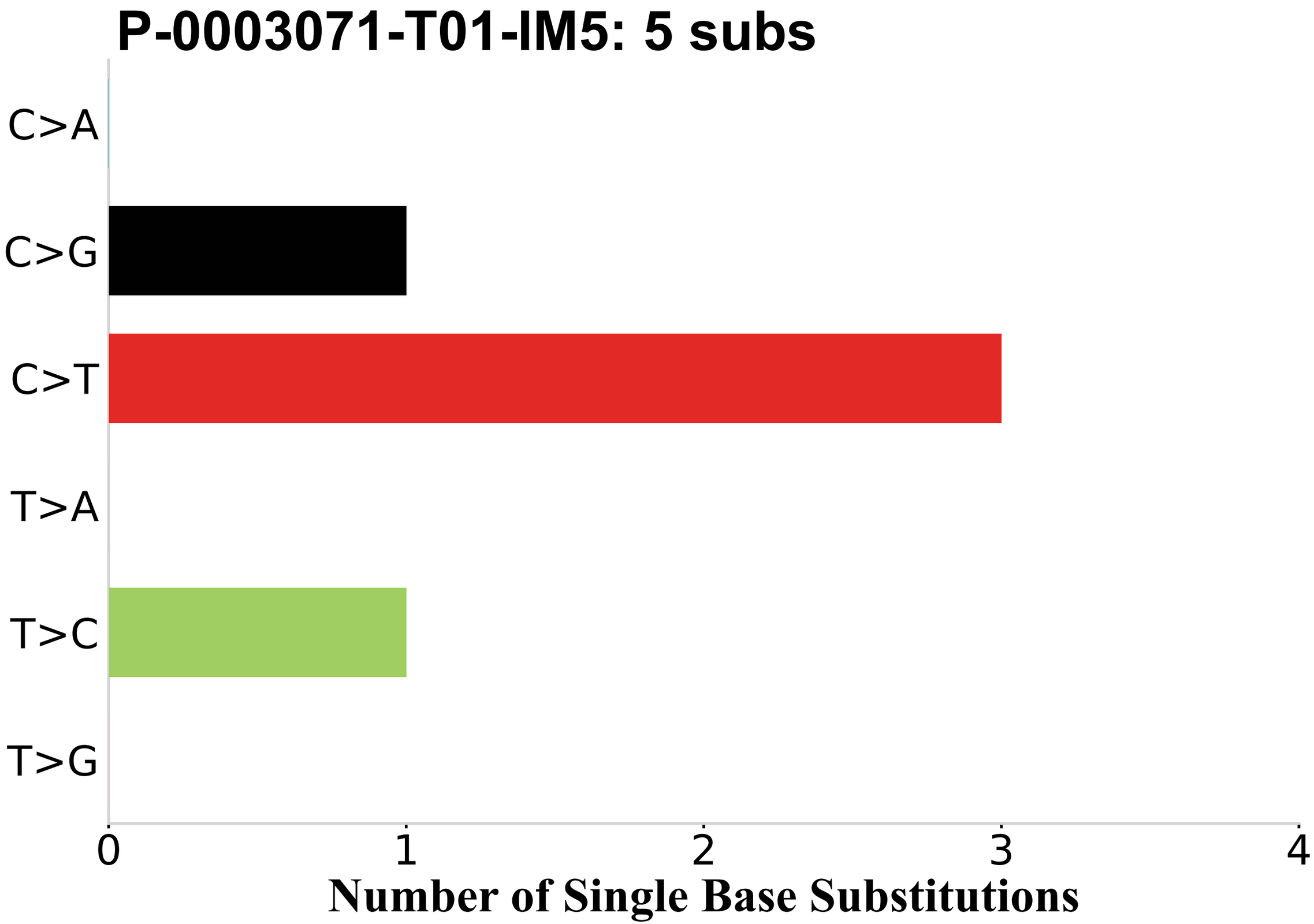
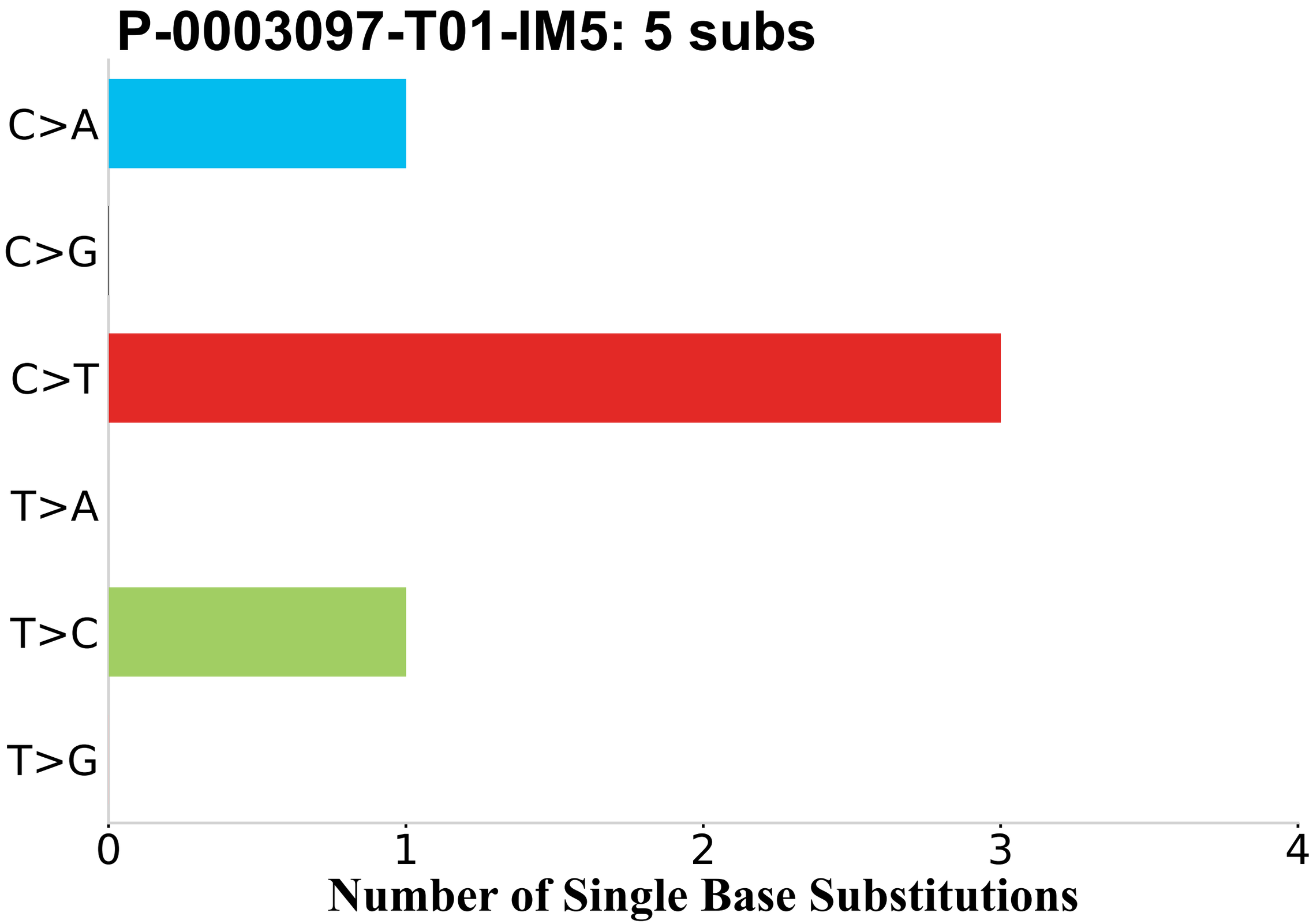
2
3
4
Number of Single Base Substitutions


P-0003071-T01-IM5: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003097-T01-IM5: 5 subs
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T>C
T>G
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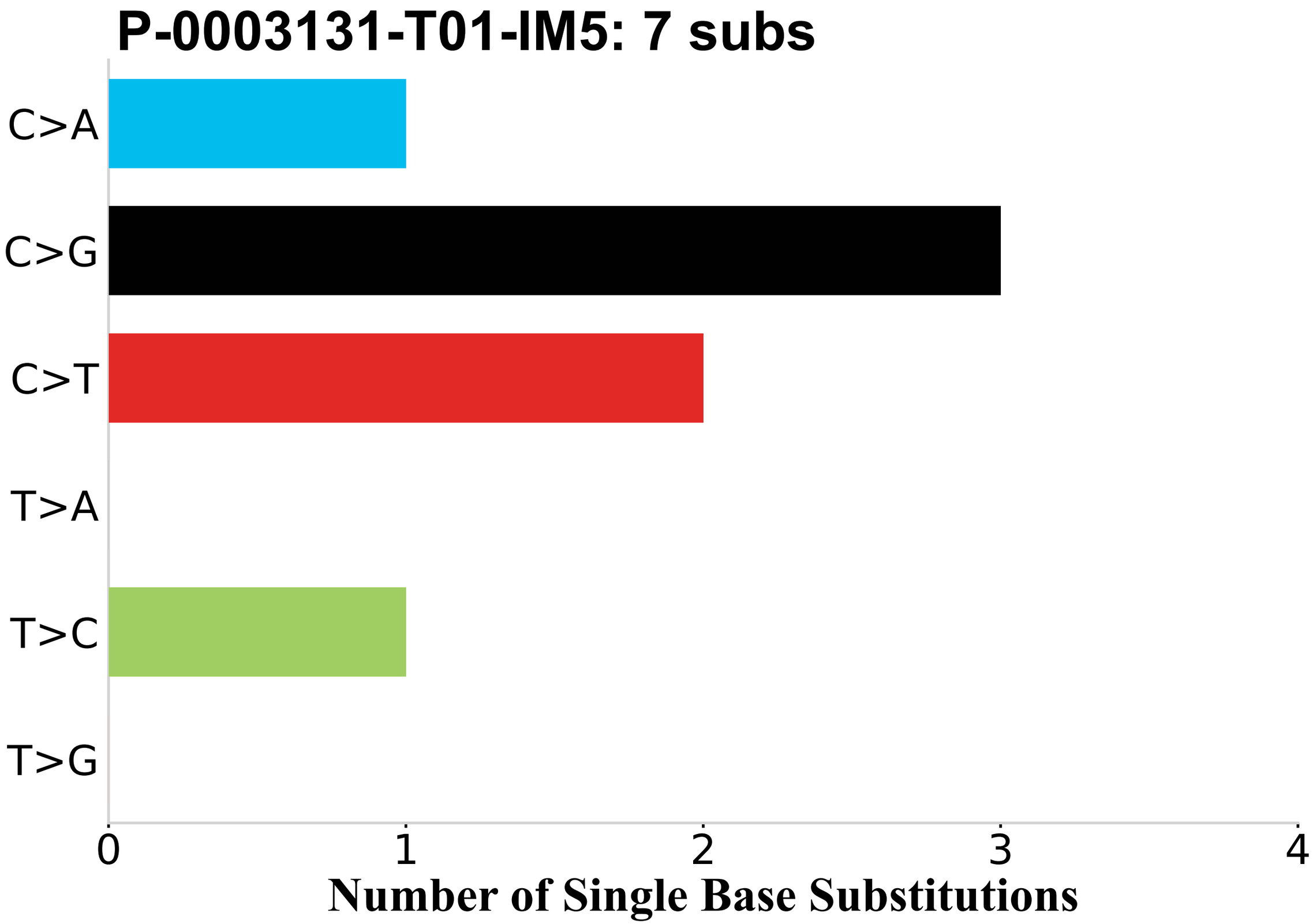
1
2
3
4
Number of Single Base Substitutions


P-0003131-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
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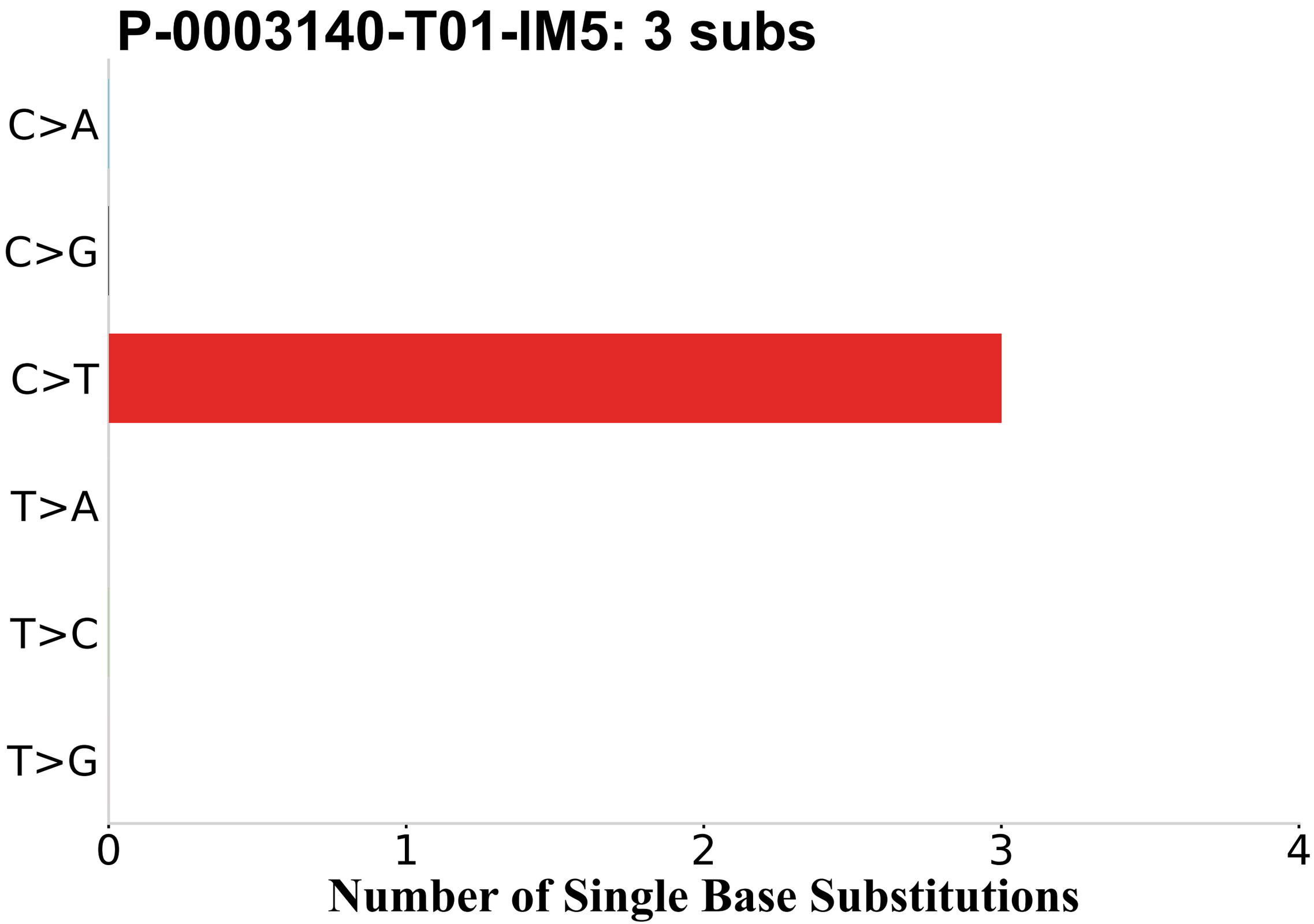
1
2
3
4
Number of Single Base Substitutions


P-0003140-T01-IM5: 3 subs
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C>T
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T>C
T>G
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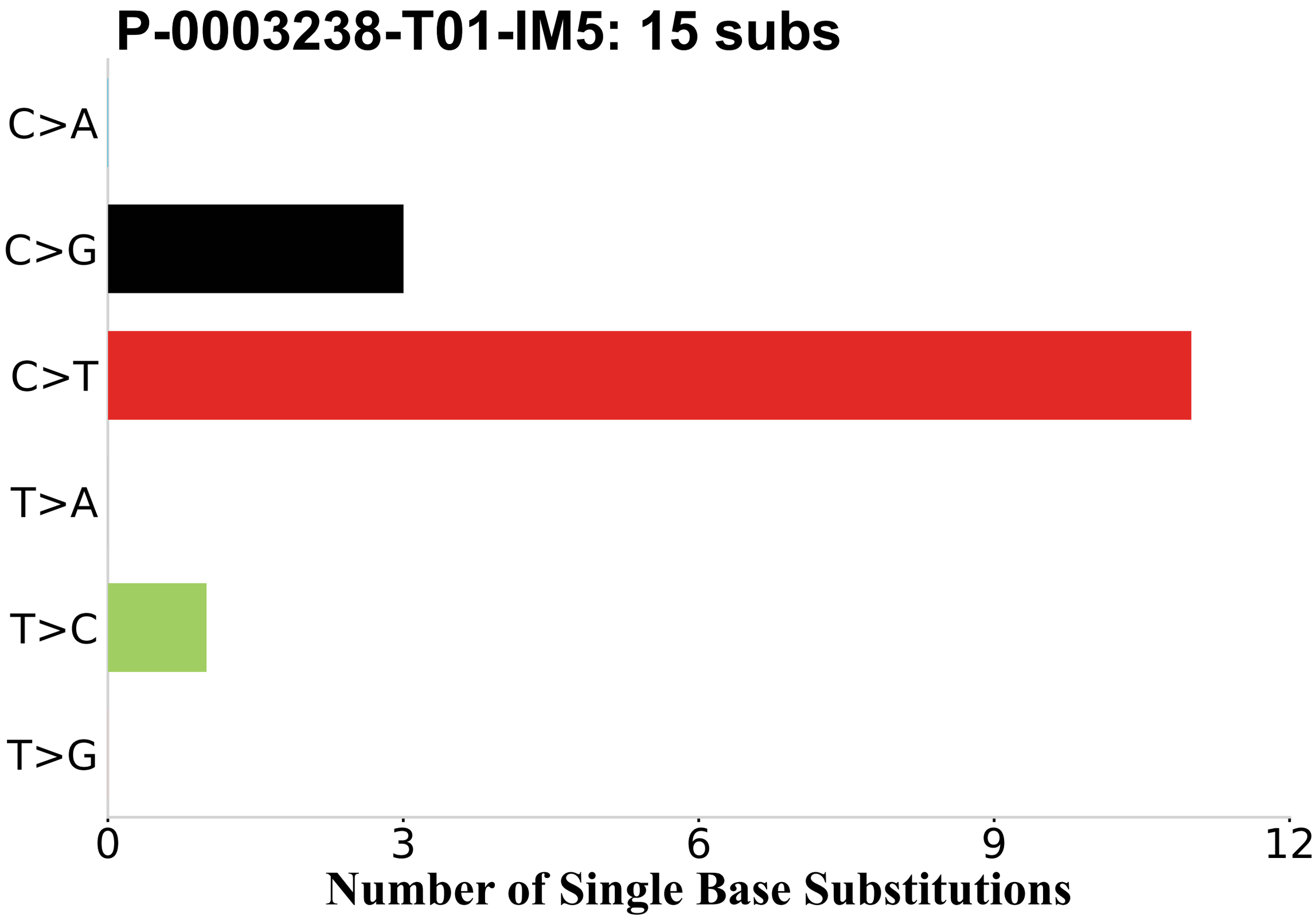
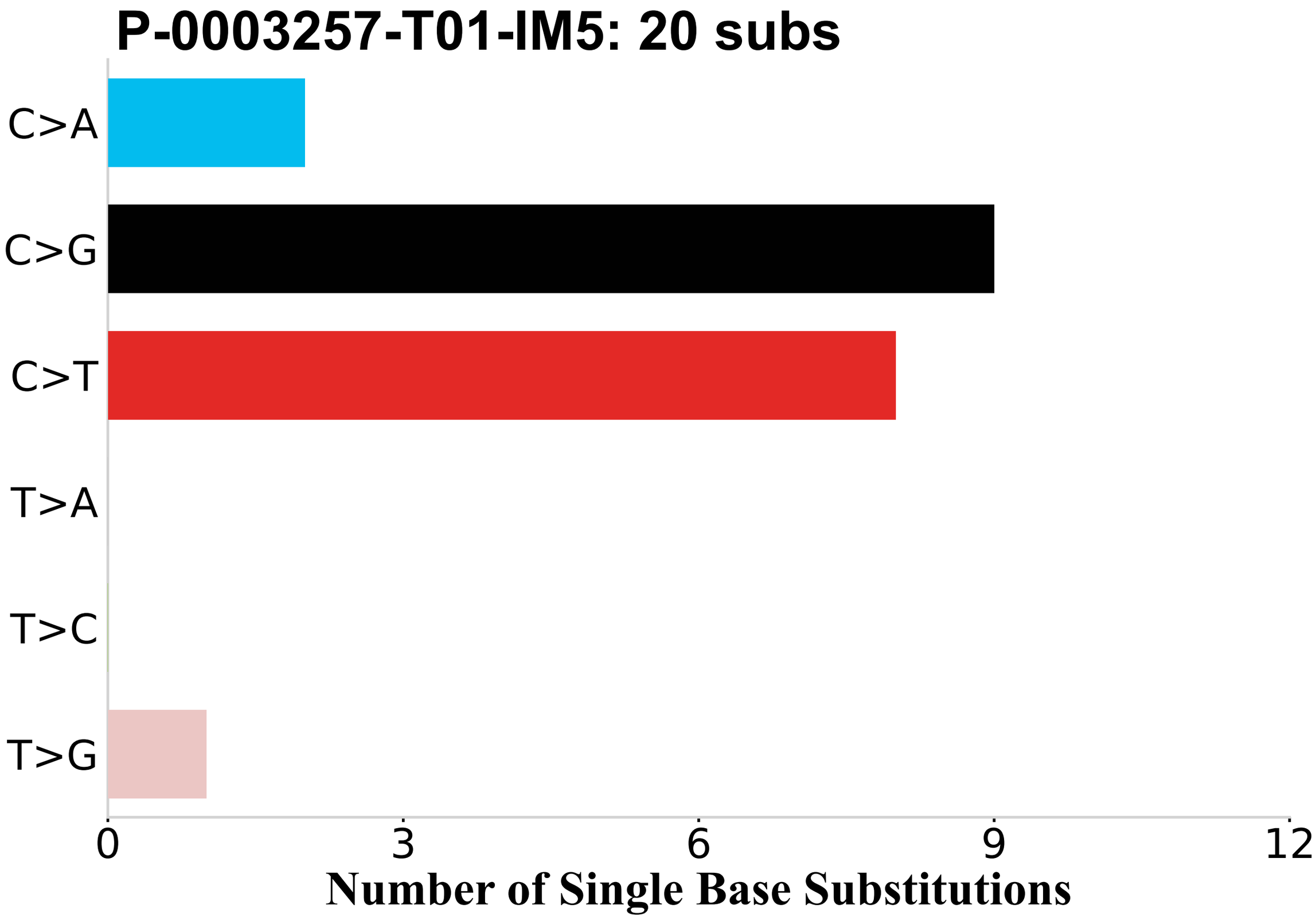
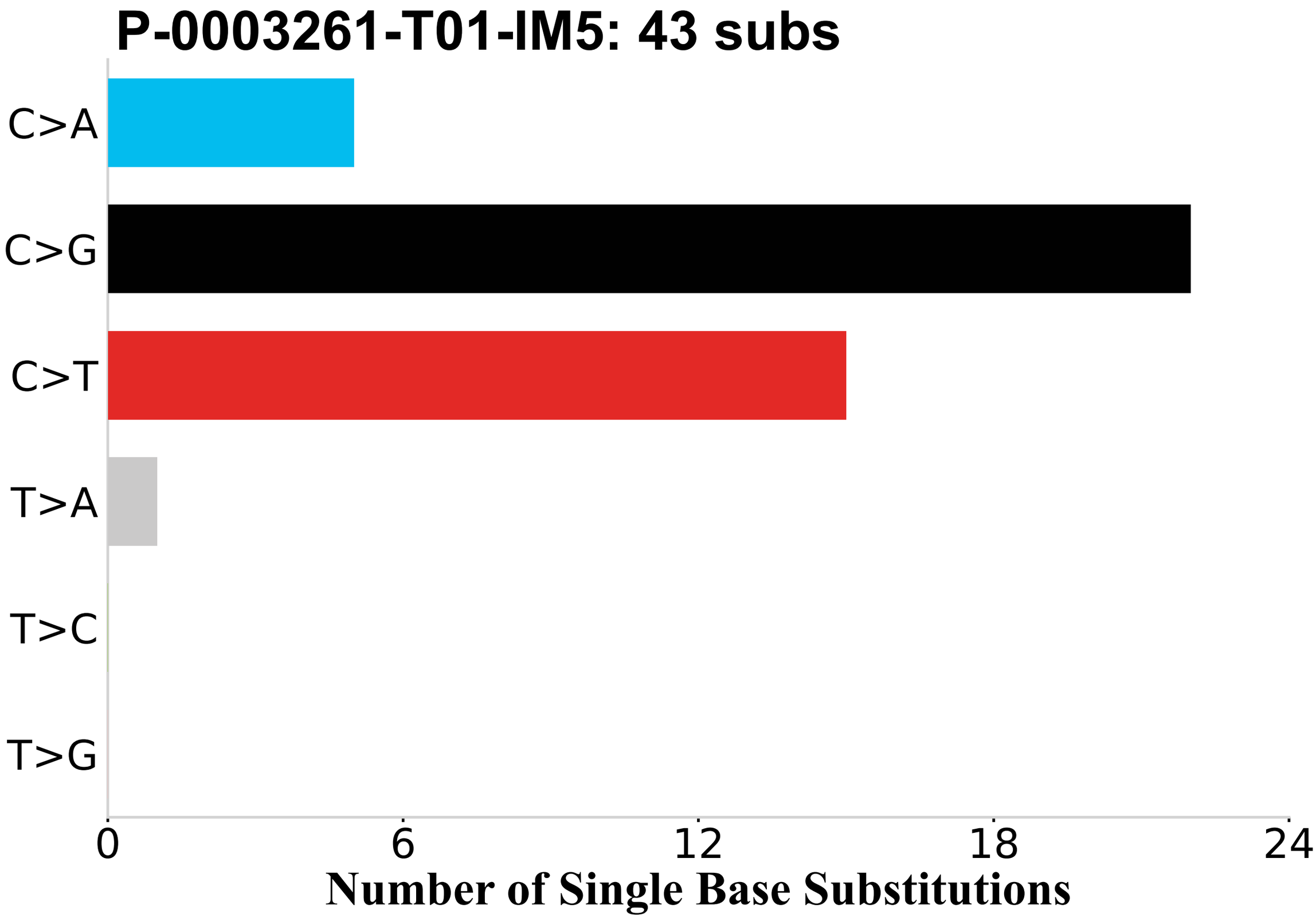
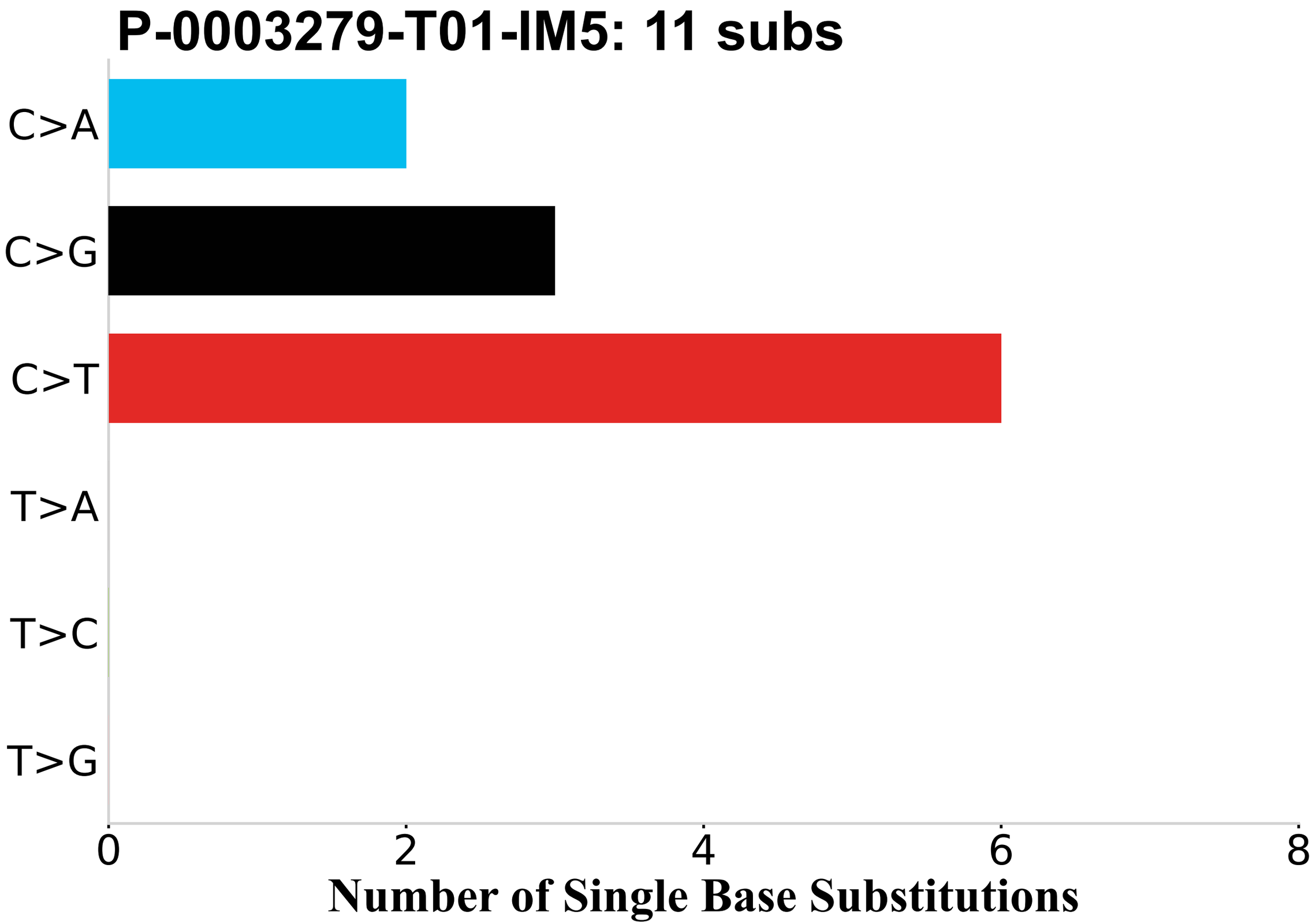
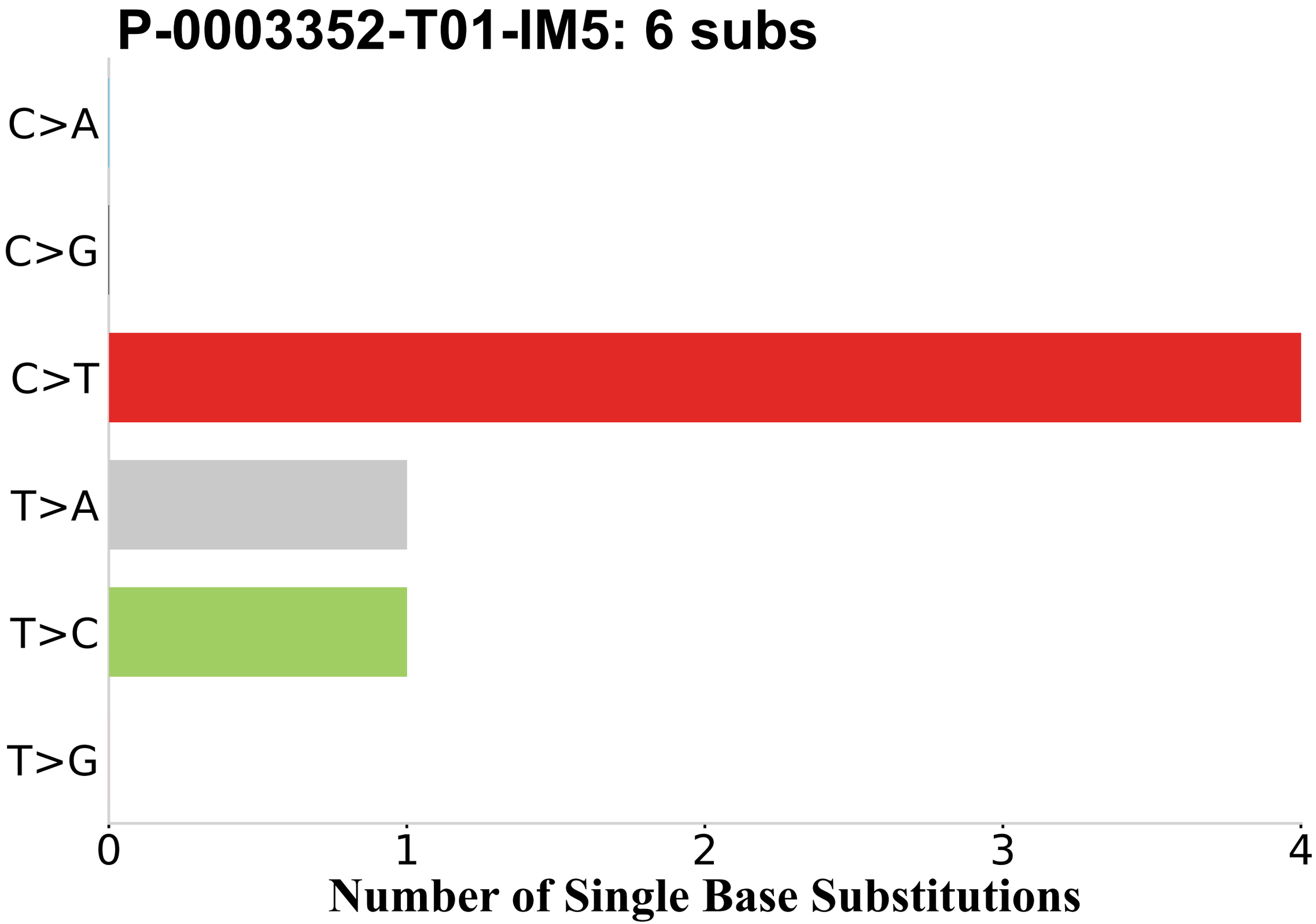
1
2
3
4
Number of Single Base Substitutions

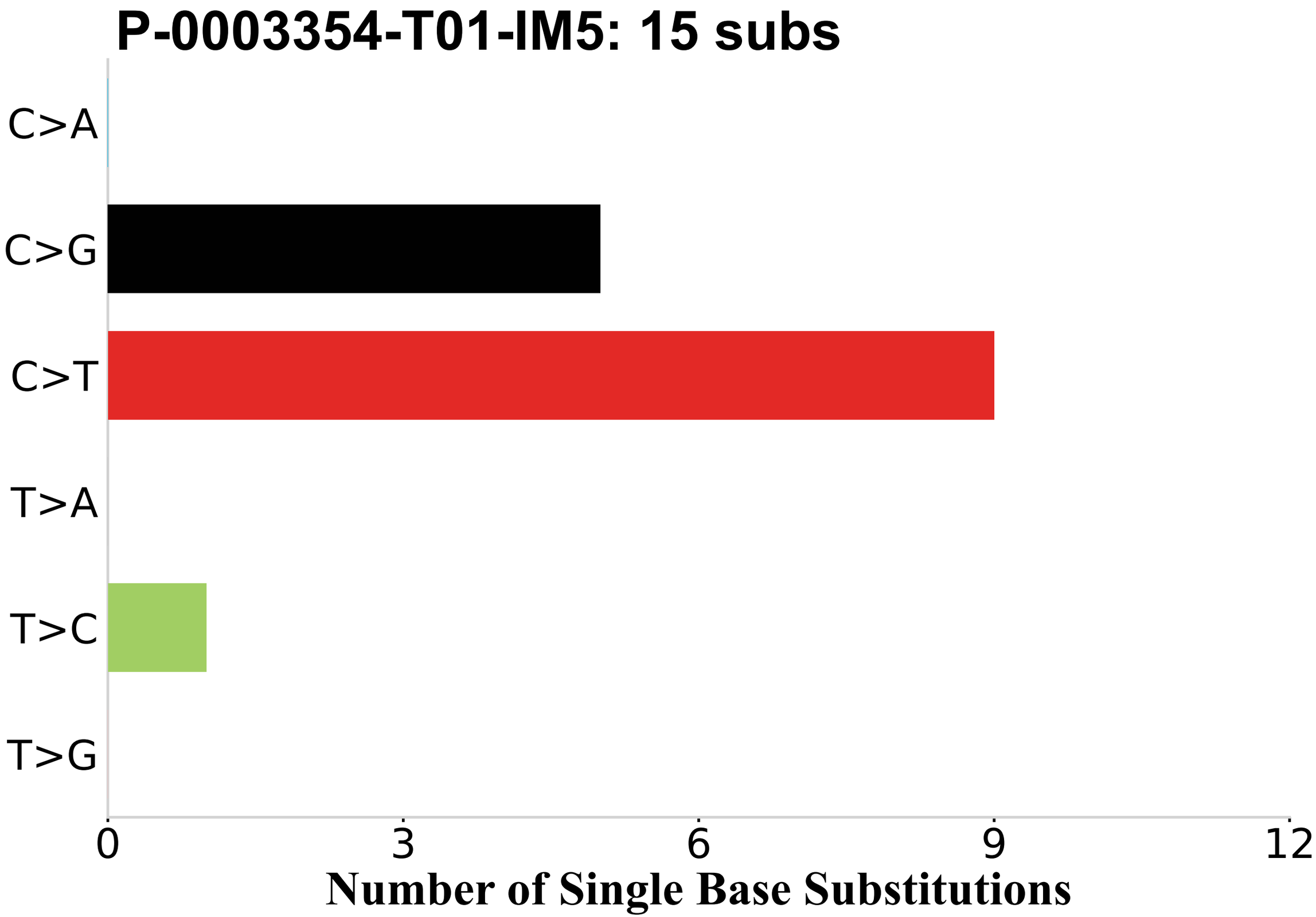

P-0003238-T01-IM5: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

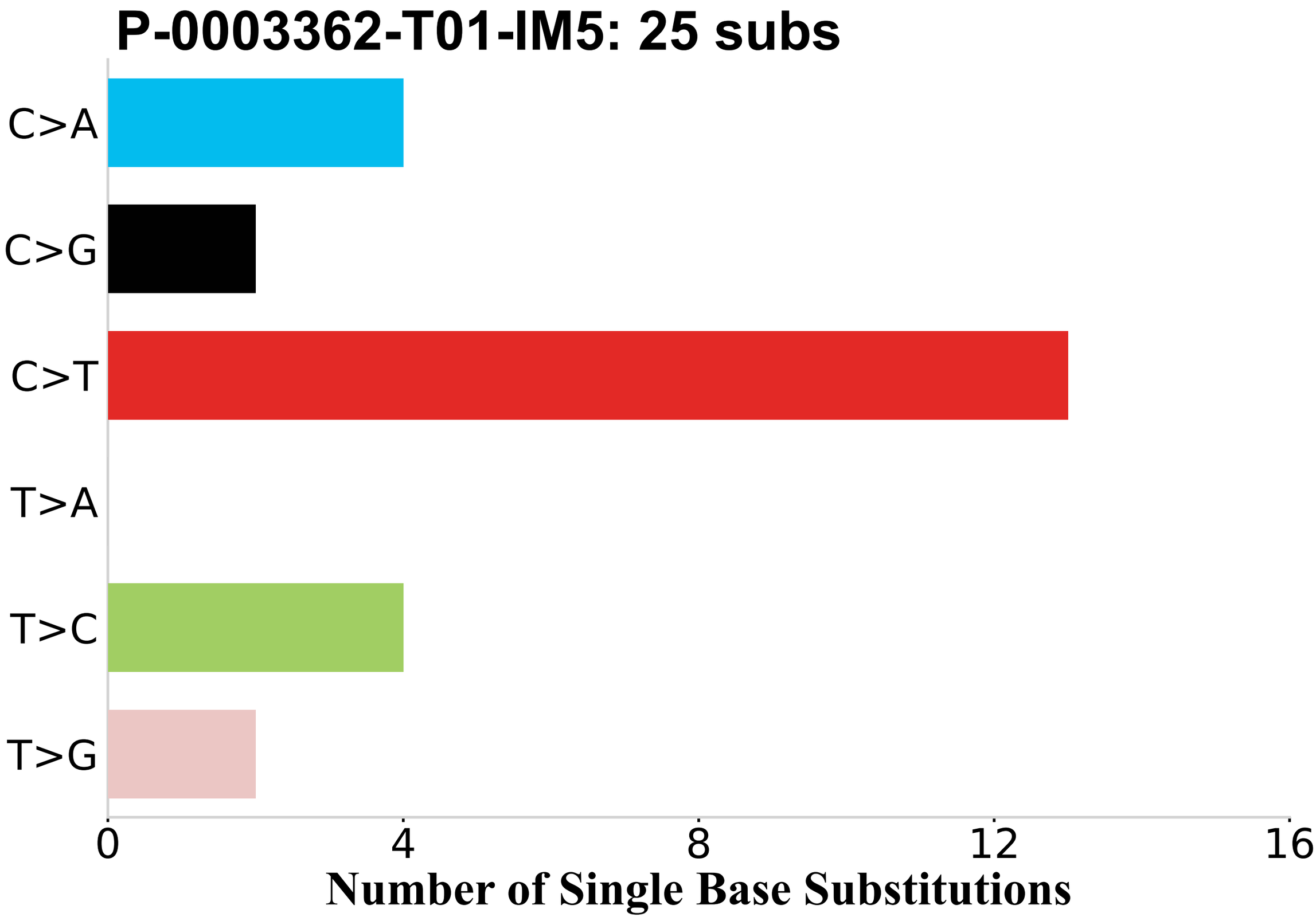

P-0003257-T01-IM5: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

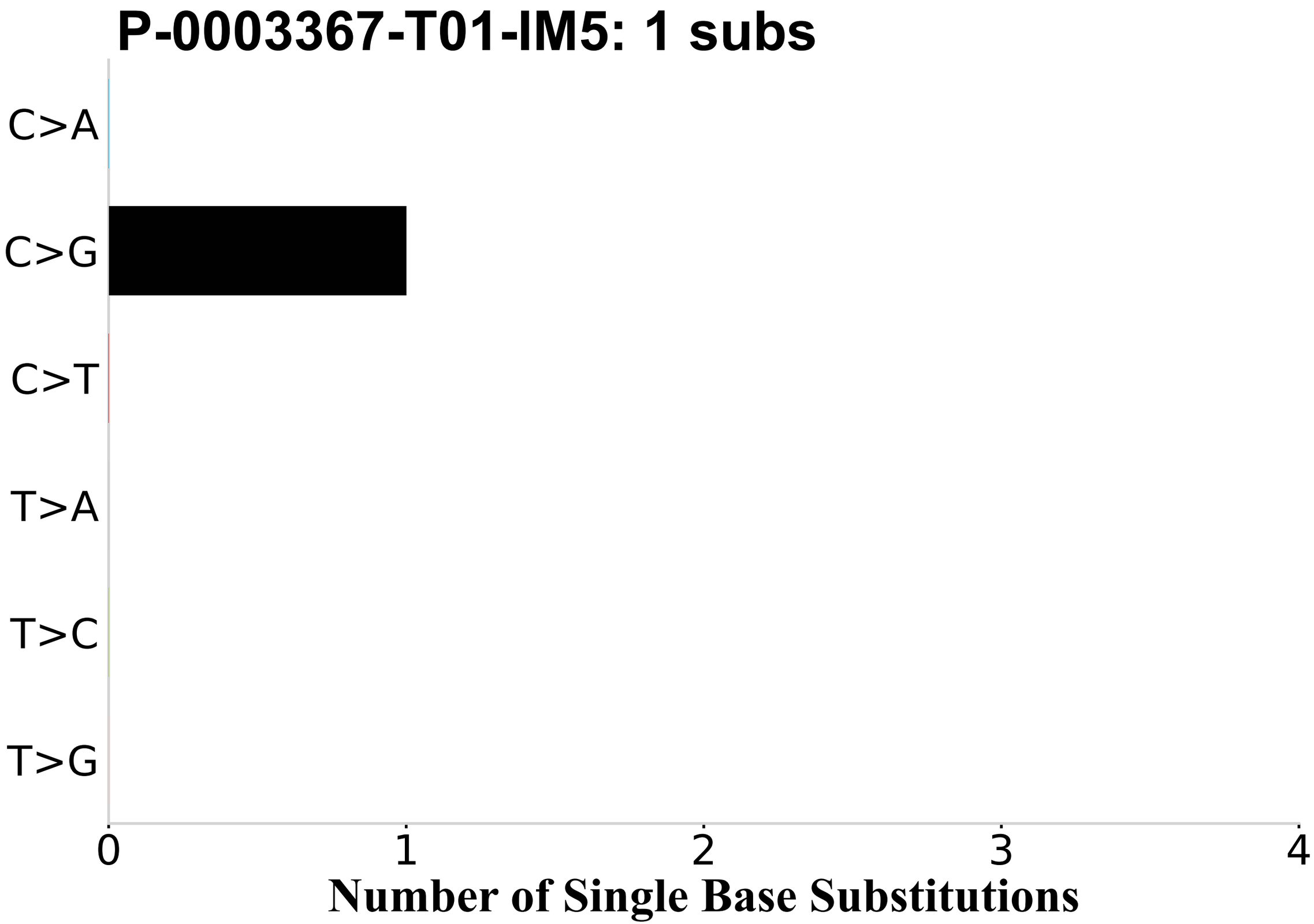

P-0003261-T01-IM5: 43 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions

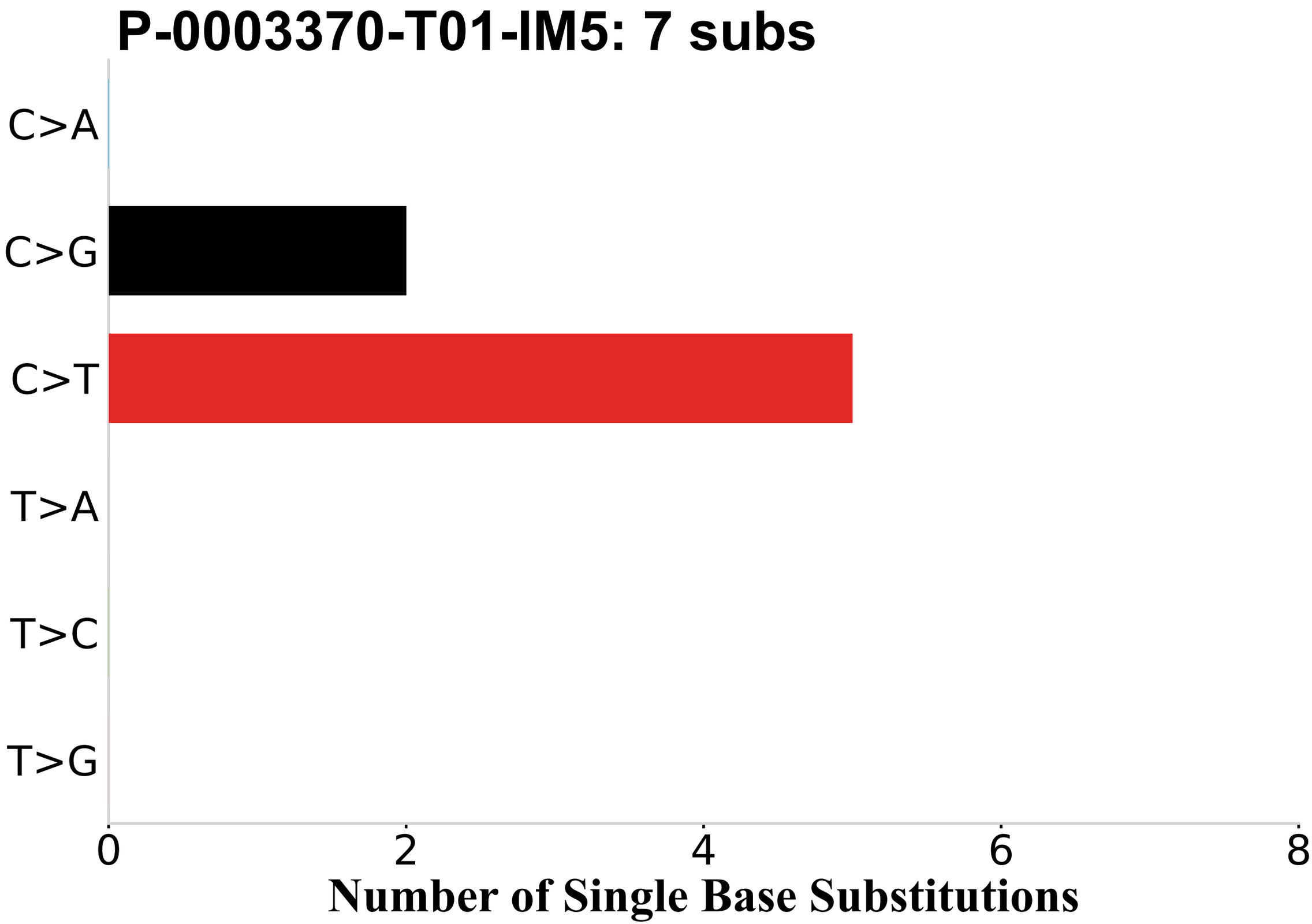

P-0003279-T01-IM5: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

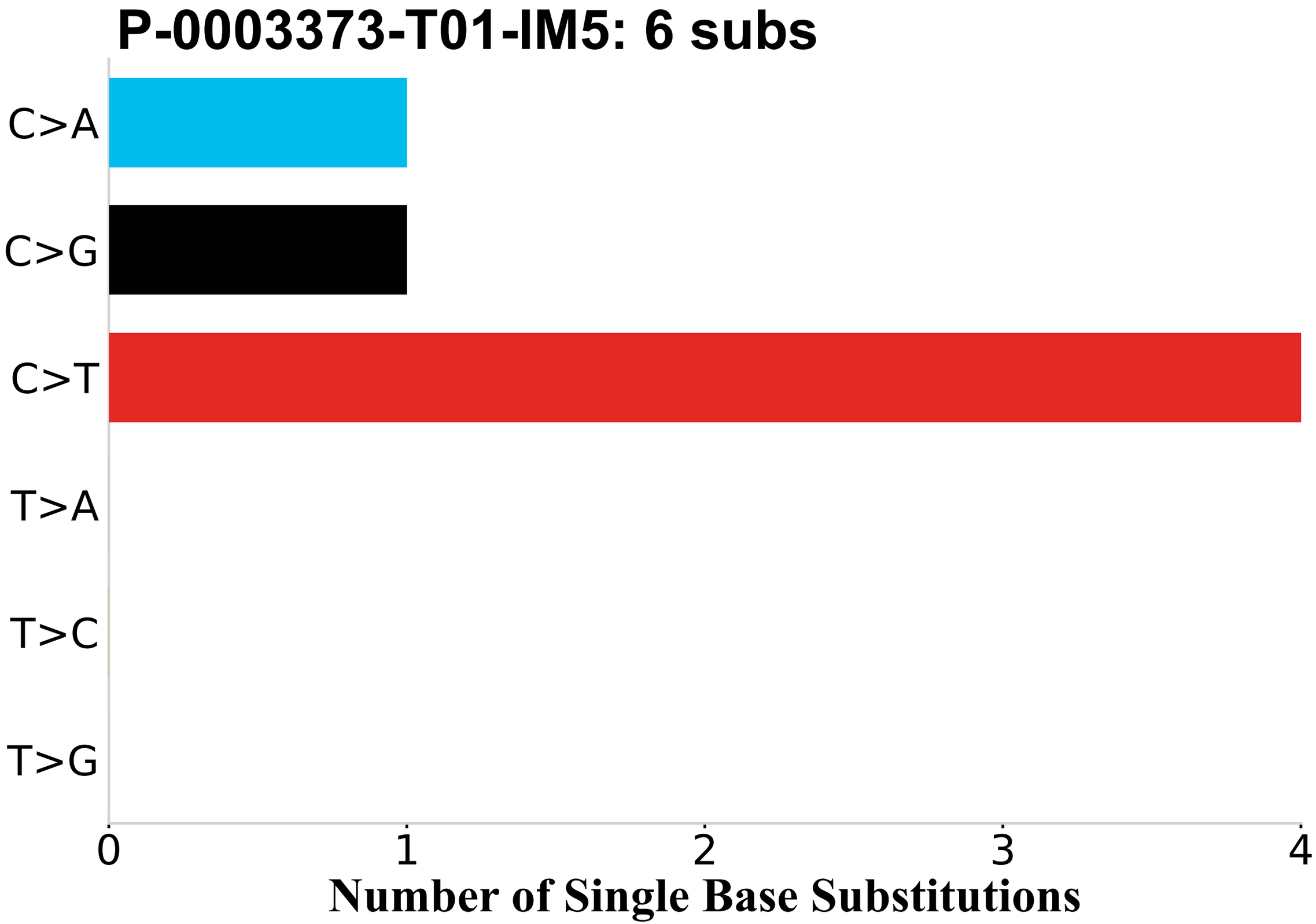

P-0003352-T01-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

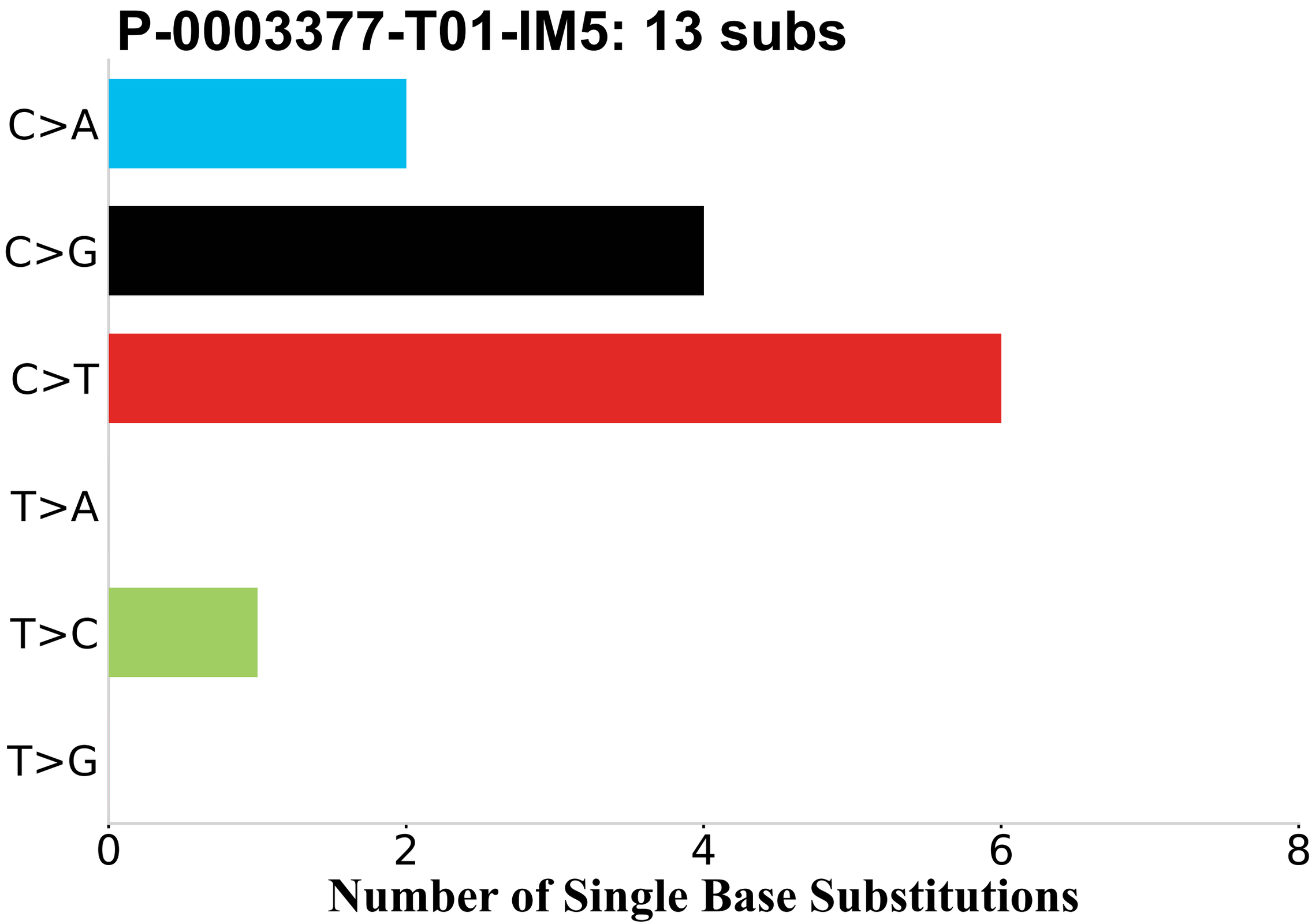

P-0003354-T01-IM5: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0003362-T01-IM5: 25 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0003367-T01-IM5: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003370-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003373-T01-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003377-T01-IM5: 13 subs
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T>C
T>G
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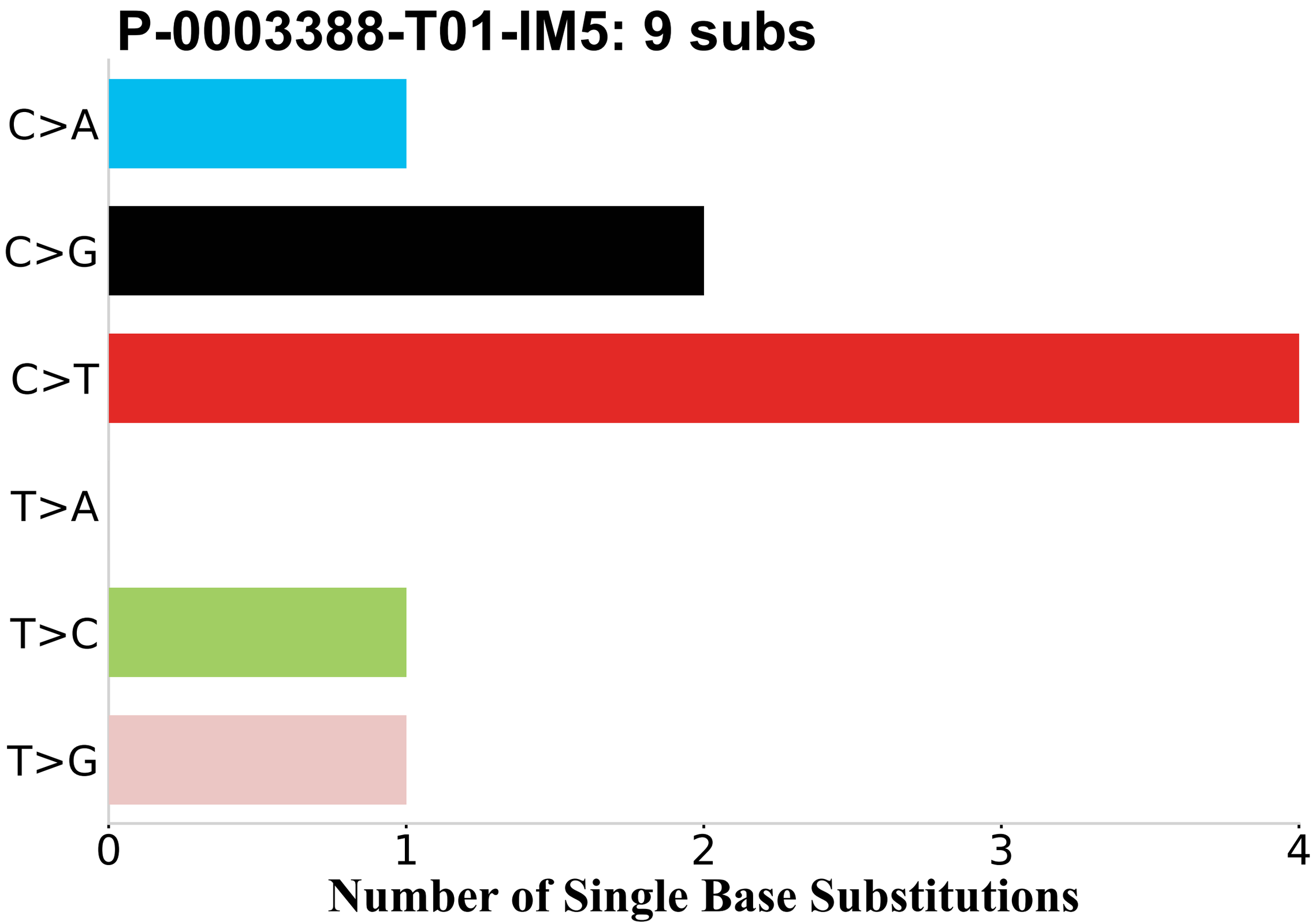
8
Number of Single Base Substitutions


P-0003388-T01-IM5: 9 subs
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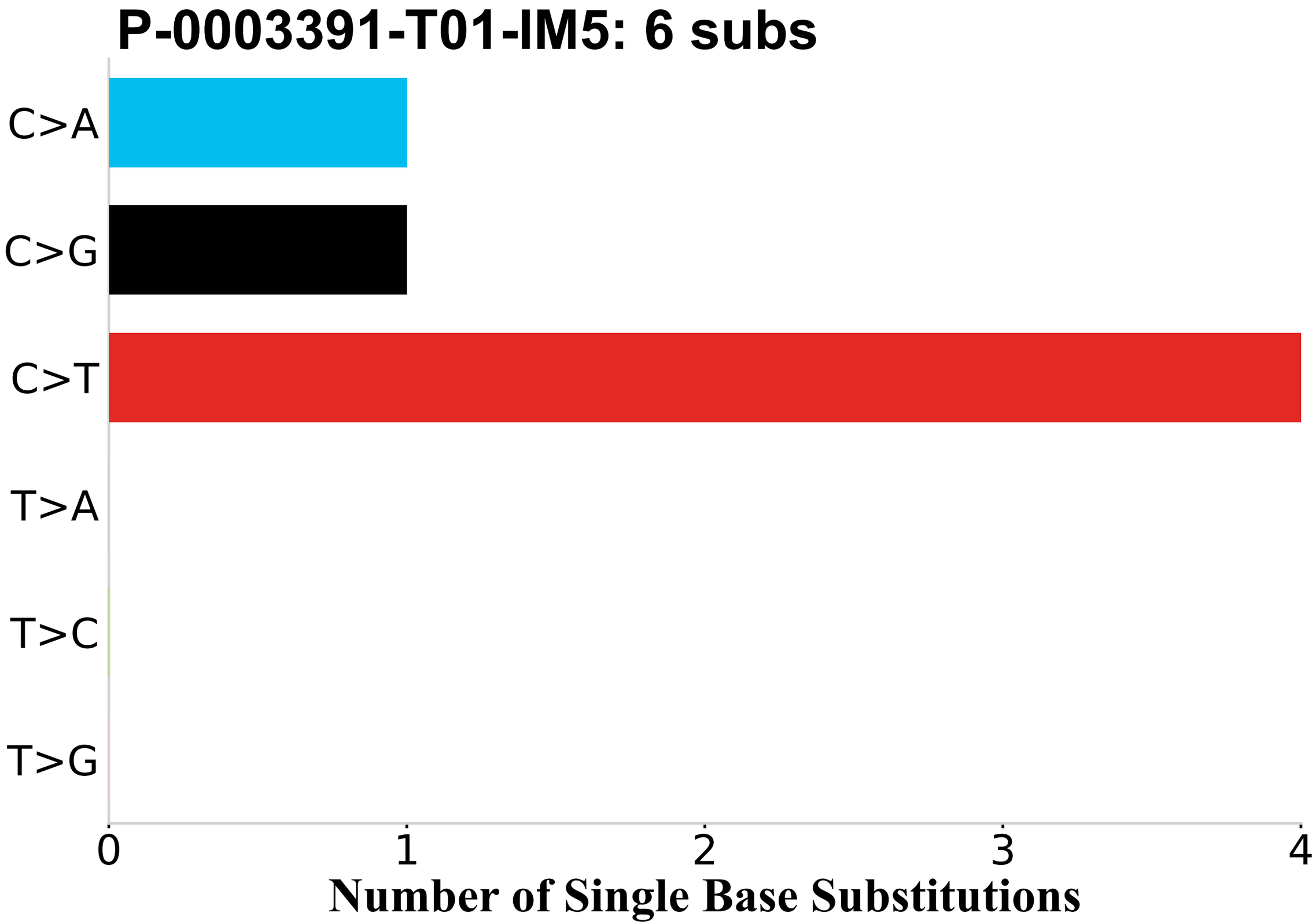
3
4
Number of Single Base Substitutions


P-0003391-T01-IM5: 6 subs
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T>C
T>G
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3
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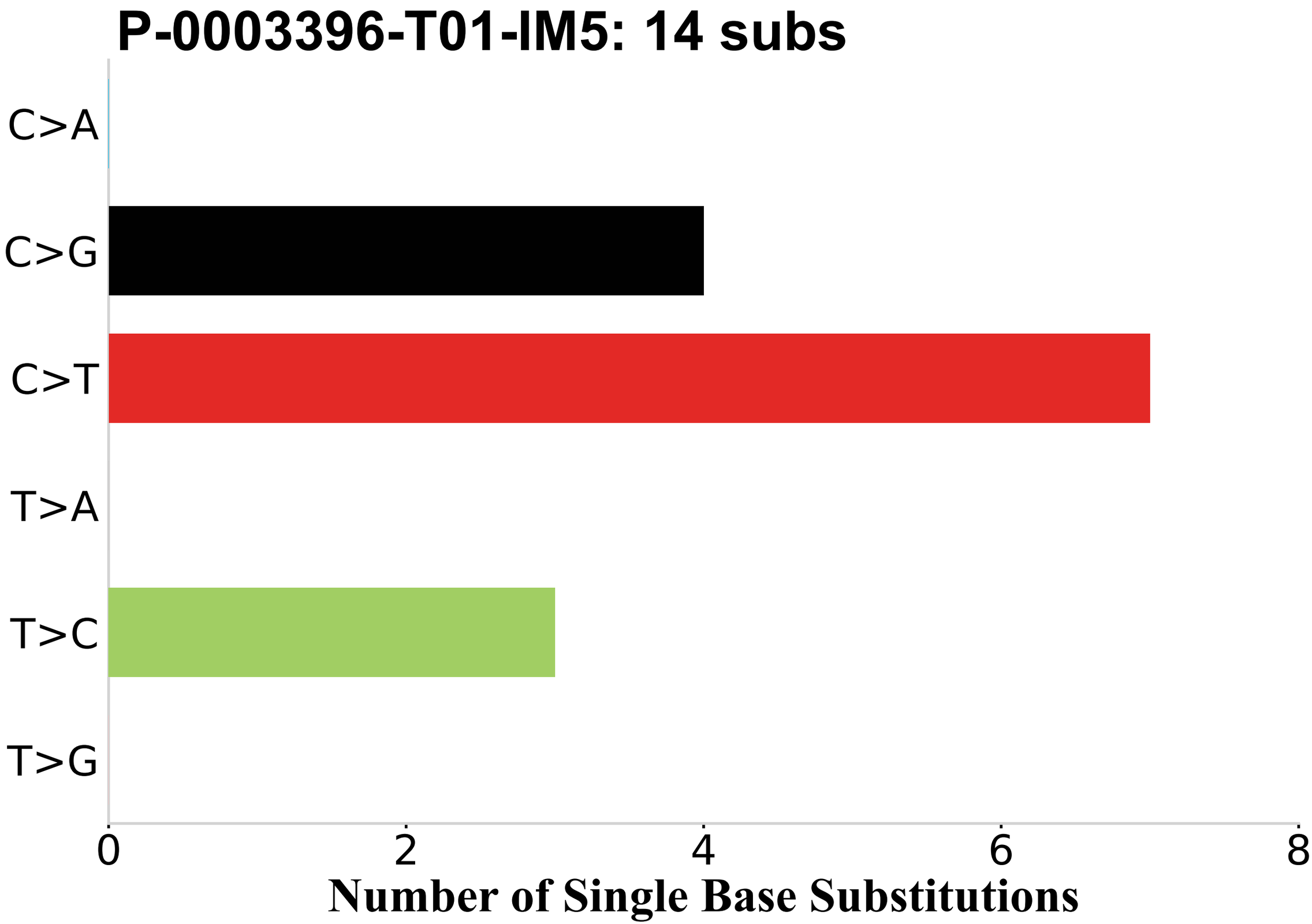
Number of Single Base Substitutions


P-0003396-T01-IM5: 14 subs
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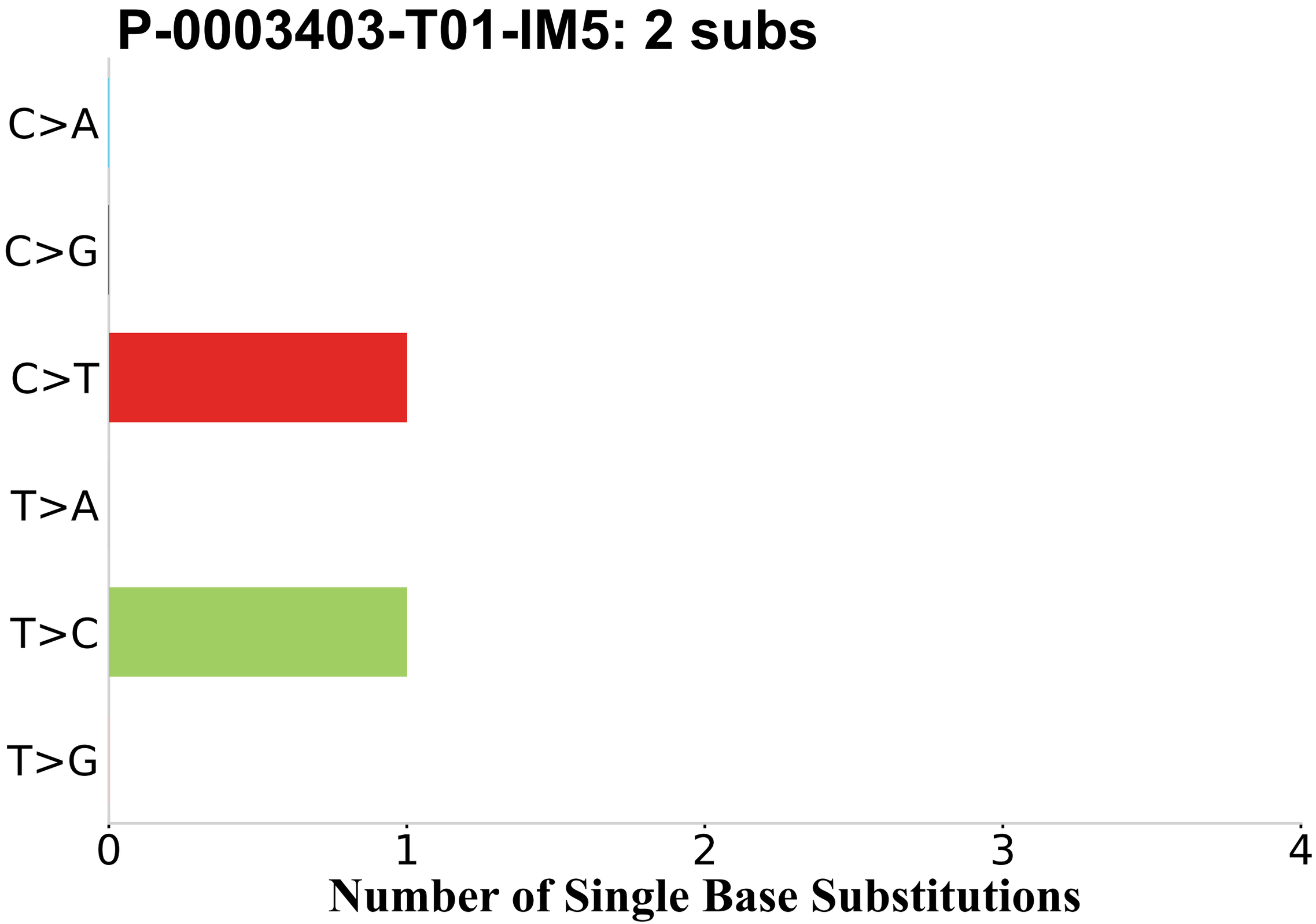
Number of Single Base Substitutions


P-0003403-T01-IM5: 2 subs
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T>C
T>G
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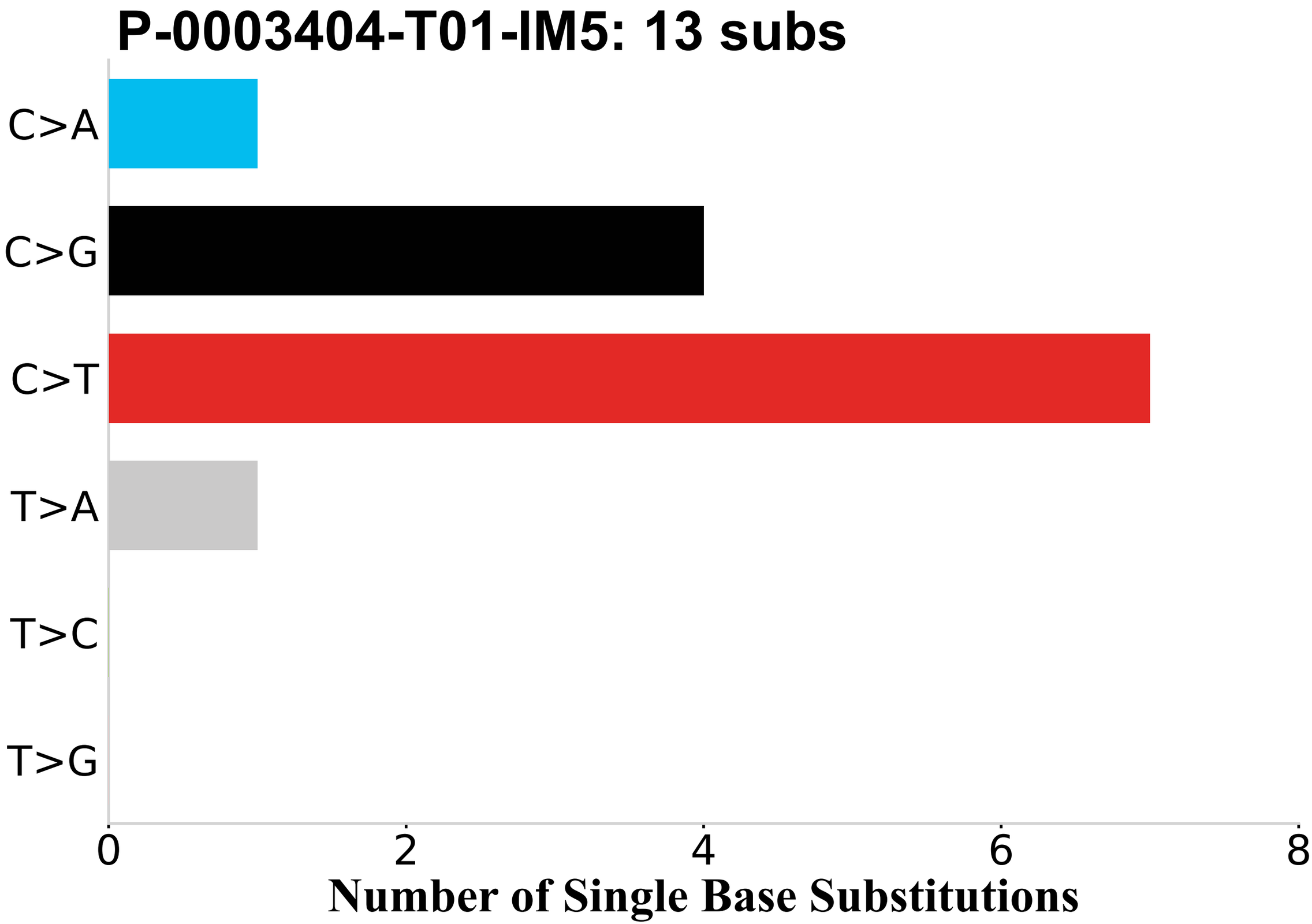
2
3
4
Number of Single Base Substitutions


P-0003404-T01-IM5: 13 subs
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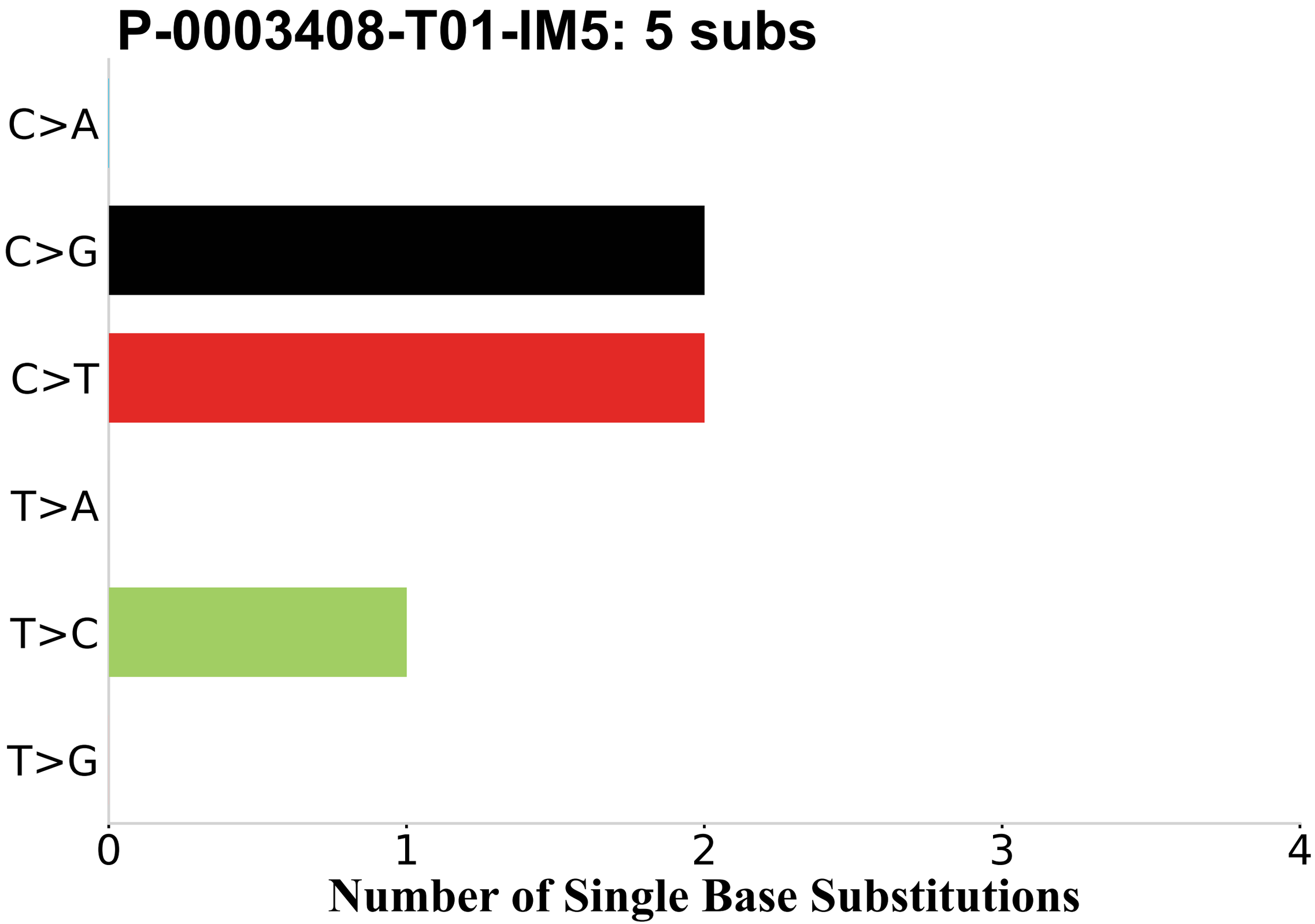
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003408-T01-IM5: 5 subs
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T>C
T>G
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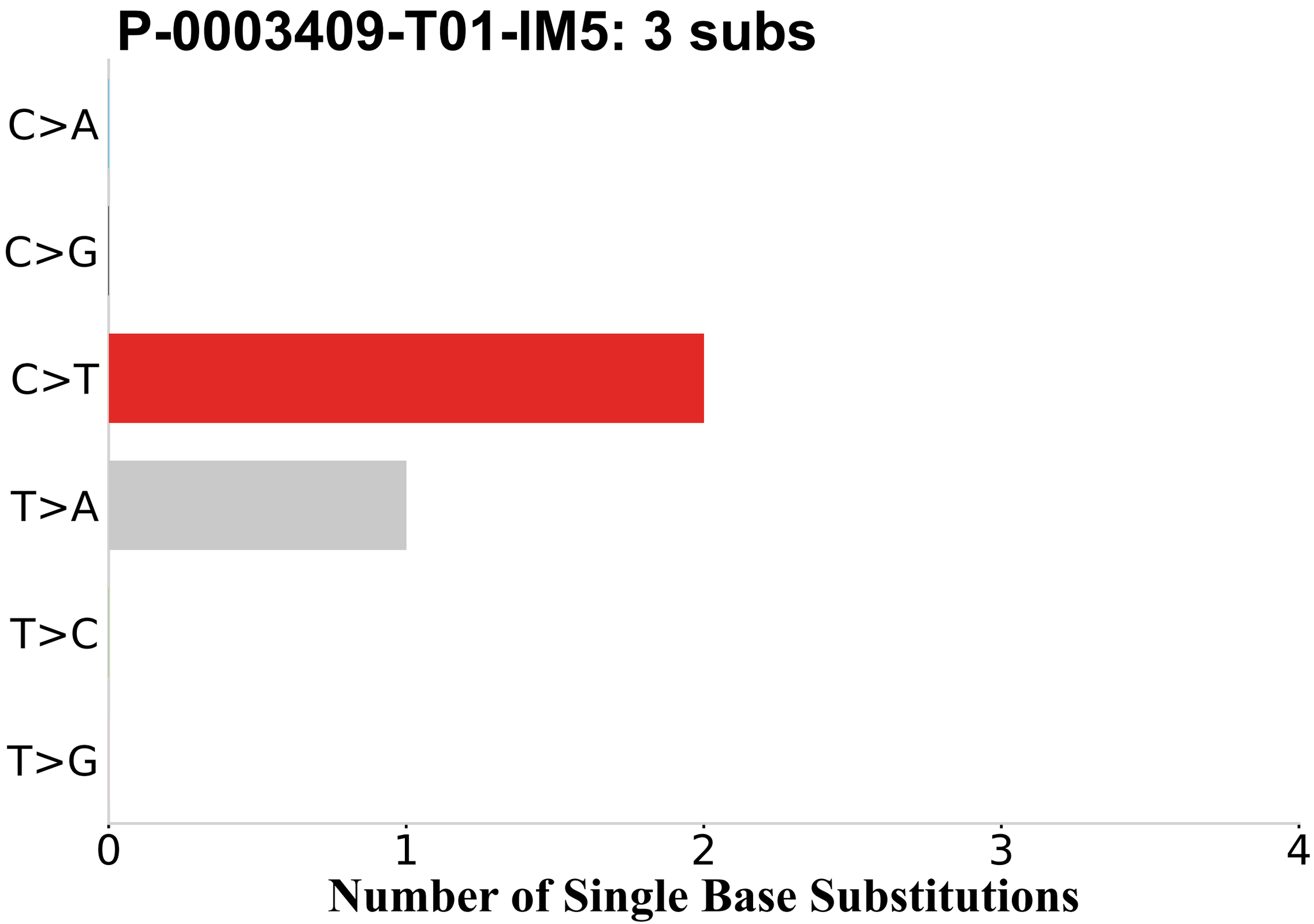
2
3
4
Number of Single Base Substitutions


P-0003409-T01-IM5: 3 subs
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T>C
T>G
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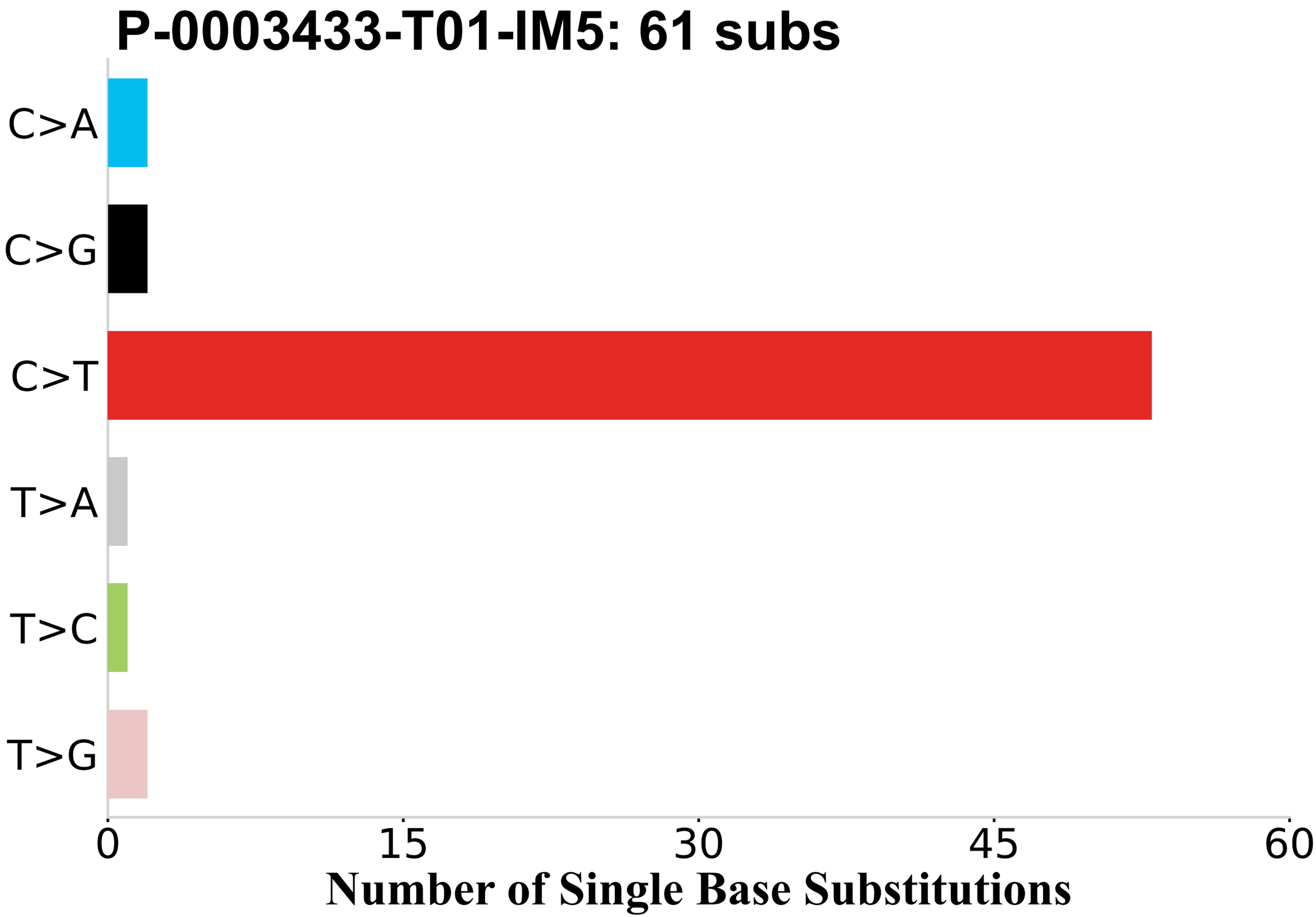
2
3
4
Number of Single Base Substitutions


P-0003433-T01-IM5: 61 subs
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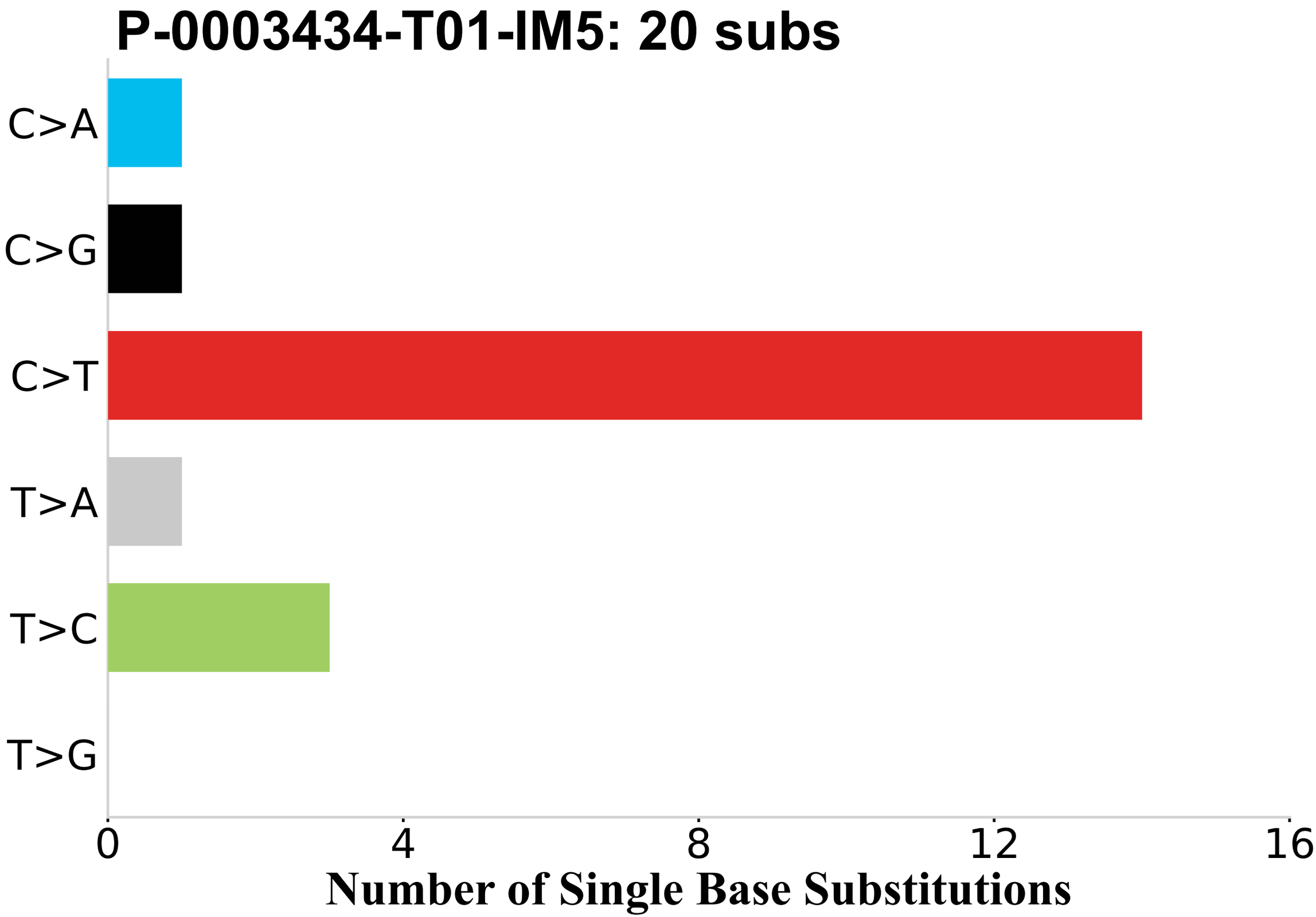
T>C
T>G
0
15
30
45
60
Number of Single Base Substitutions


P-0003434-T01-IM5: 20 subs
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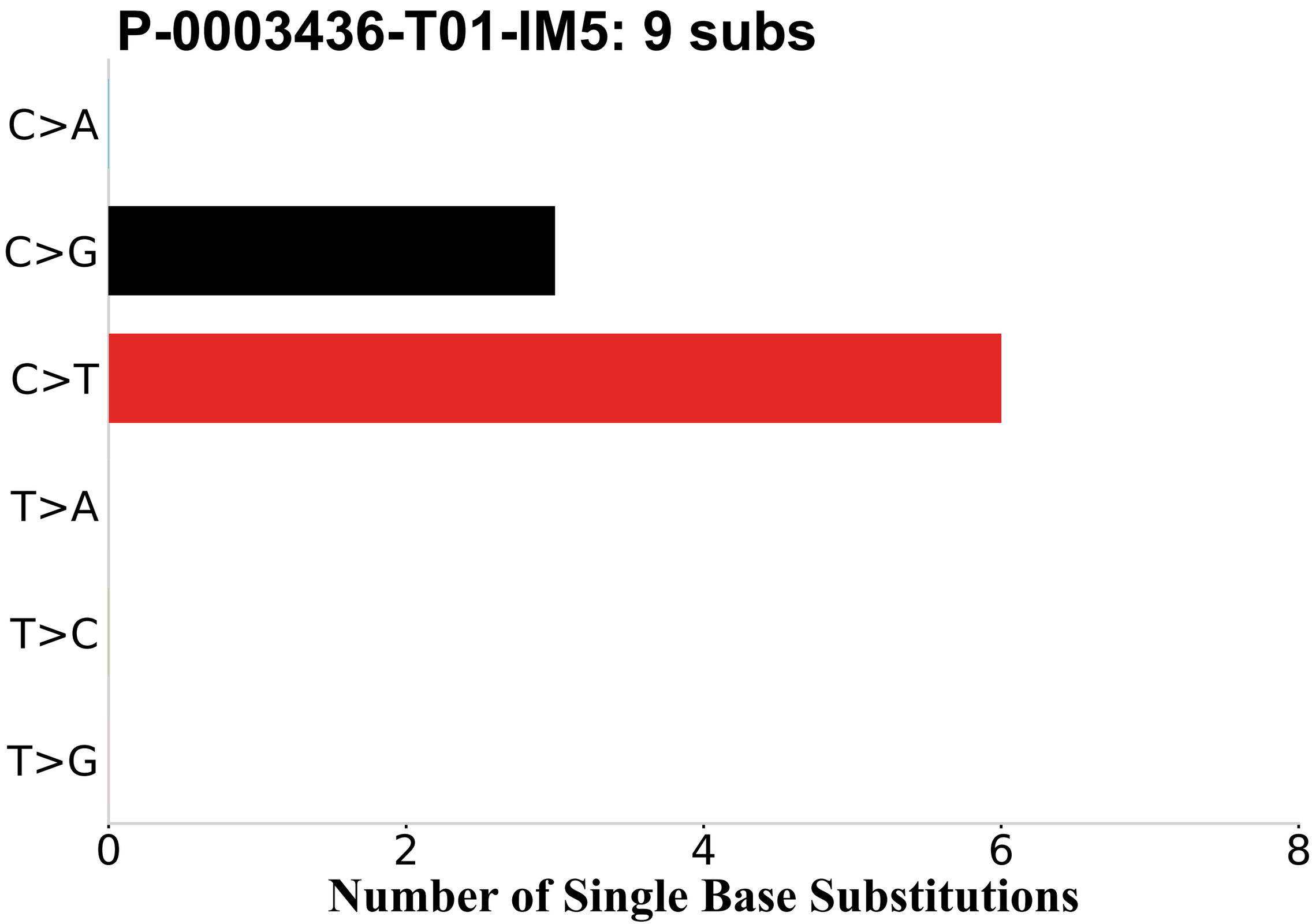
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0003436-T01-IM5: 9 subs
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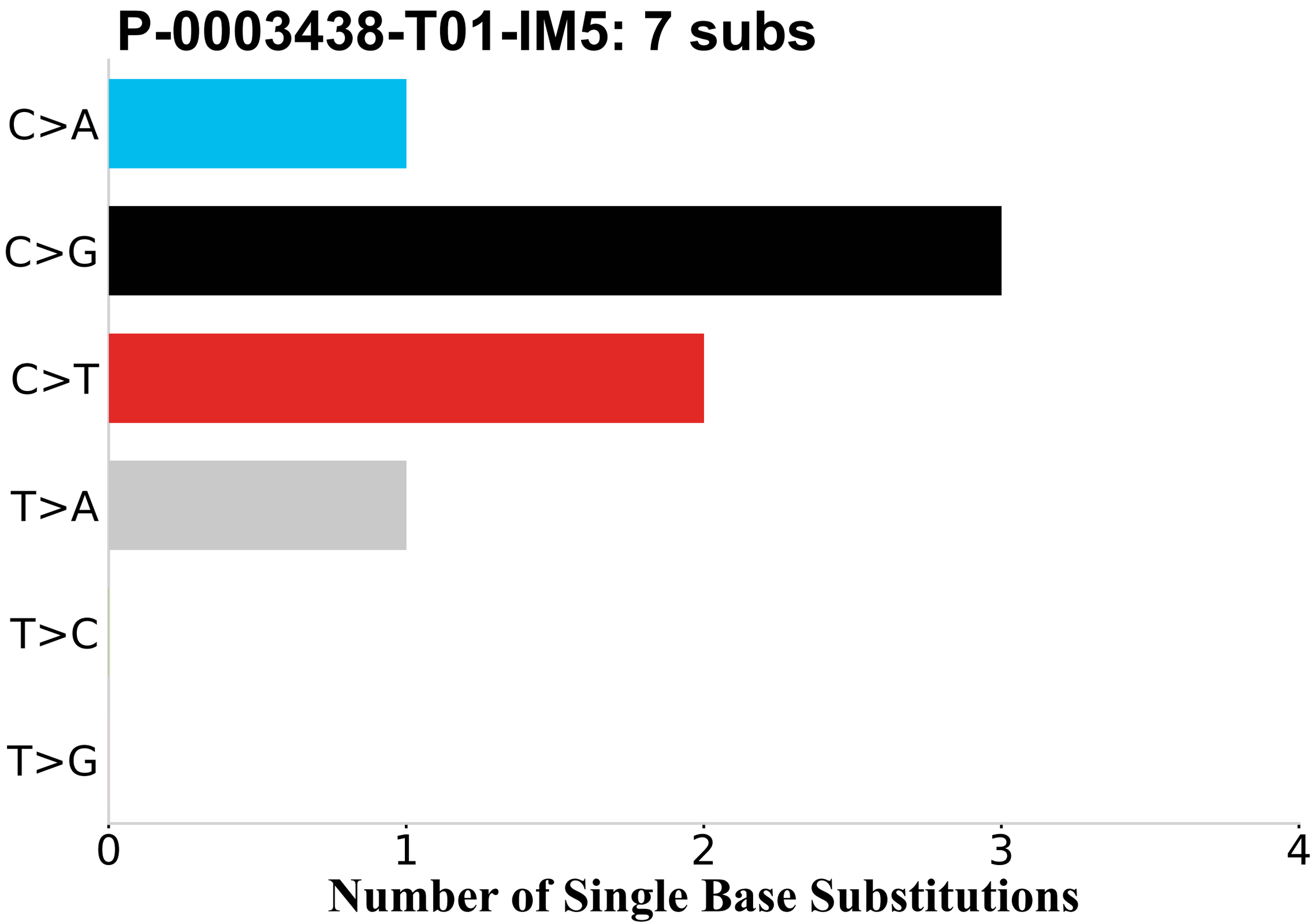
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003438-T01-IM5: 7 subs
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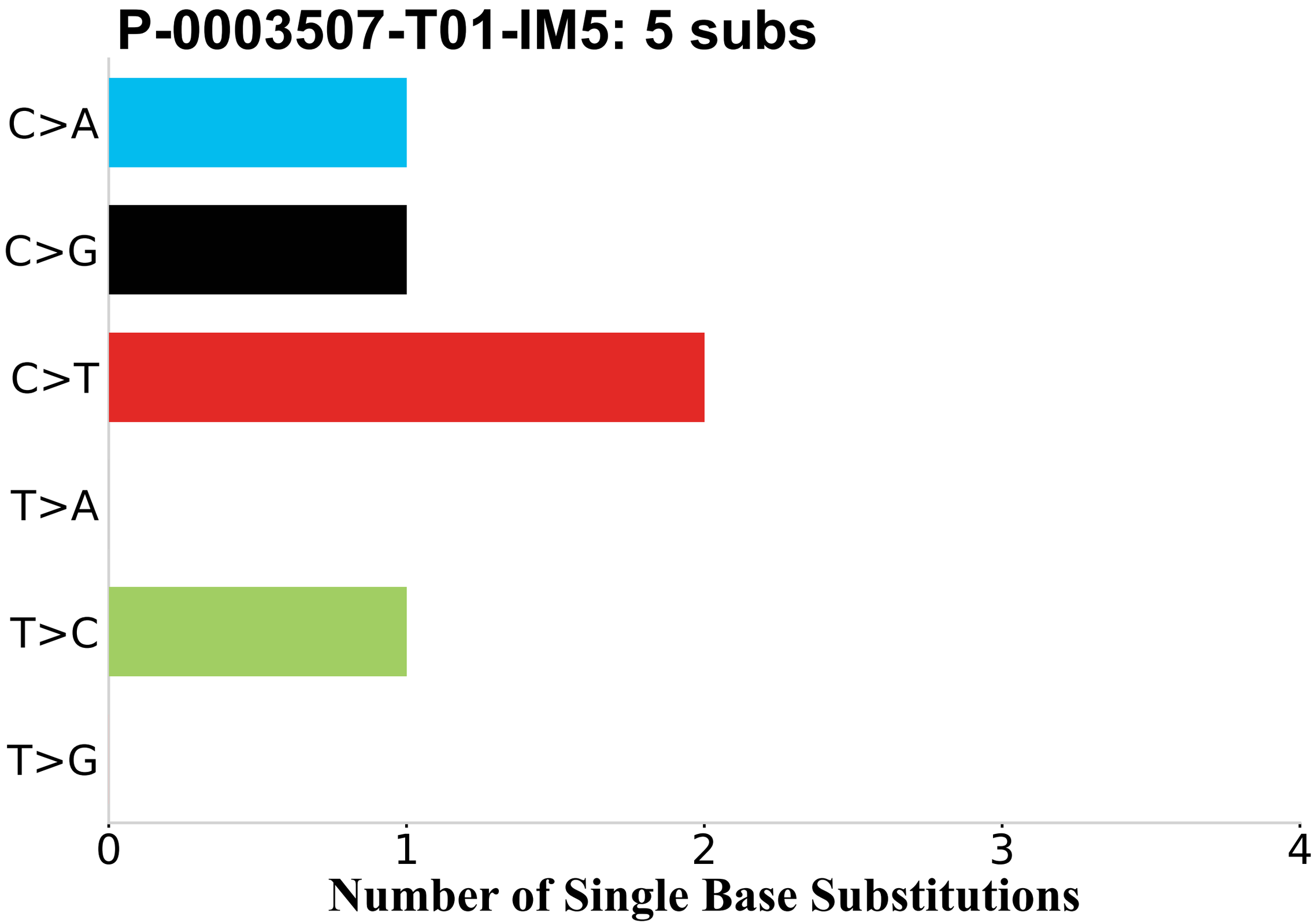
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003507-T01-IM5: 5 subs
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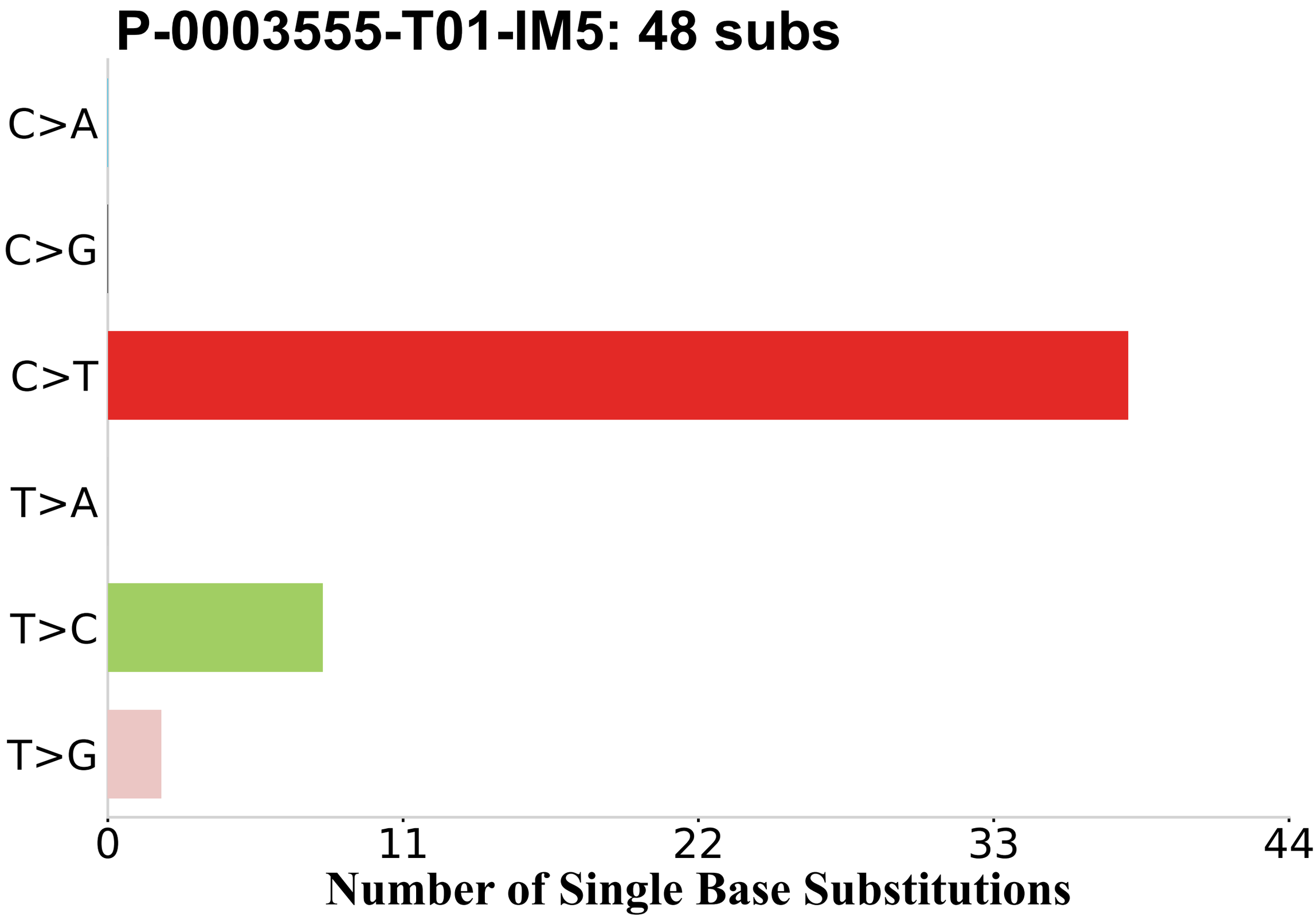
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003555-T01-IM5: 48 subs
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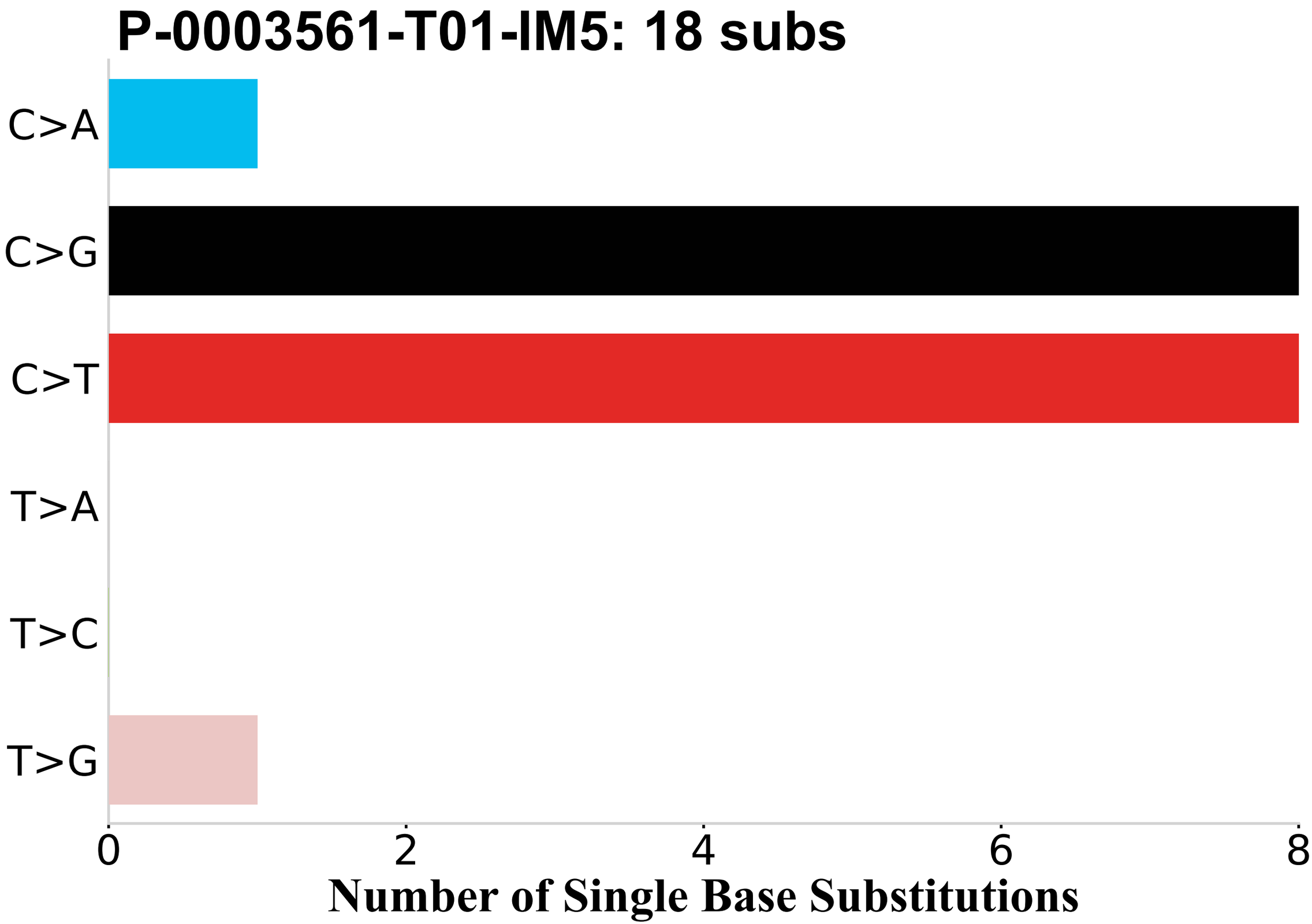
C>T
T>A
T>C
T>G
0
11
22
33
44
Number of Single Base Substitutions


P-0003561-T01-IM5: 18 subs
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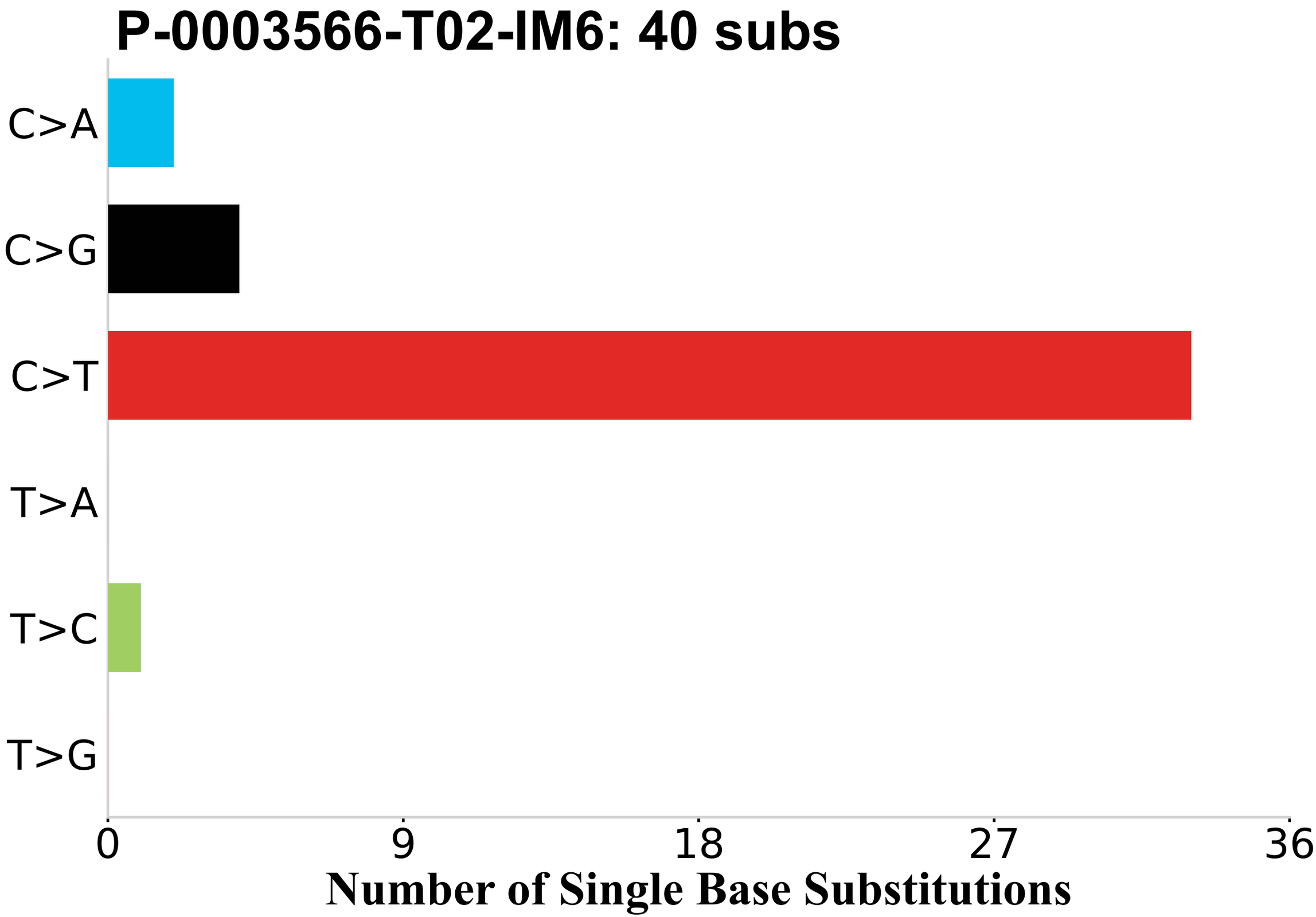
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003566-T02-IM6: 40 subs
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C>G
C>T
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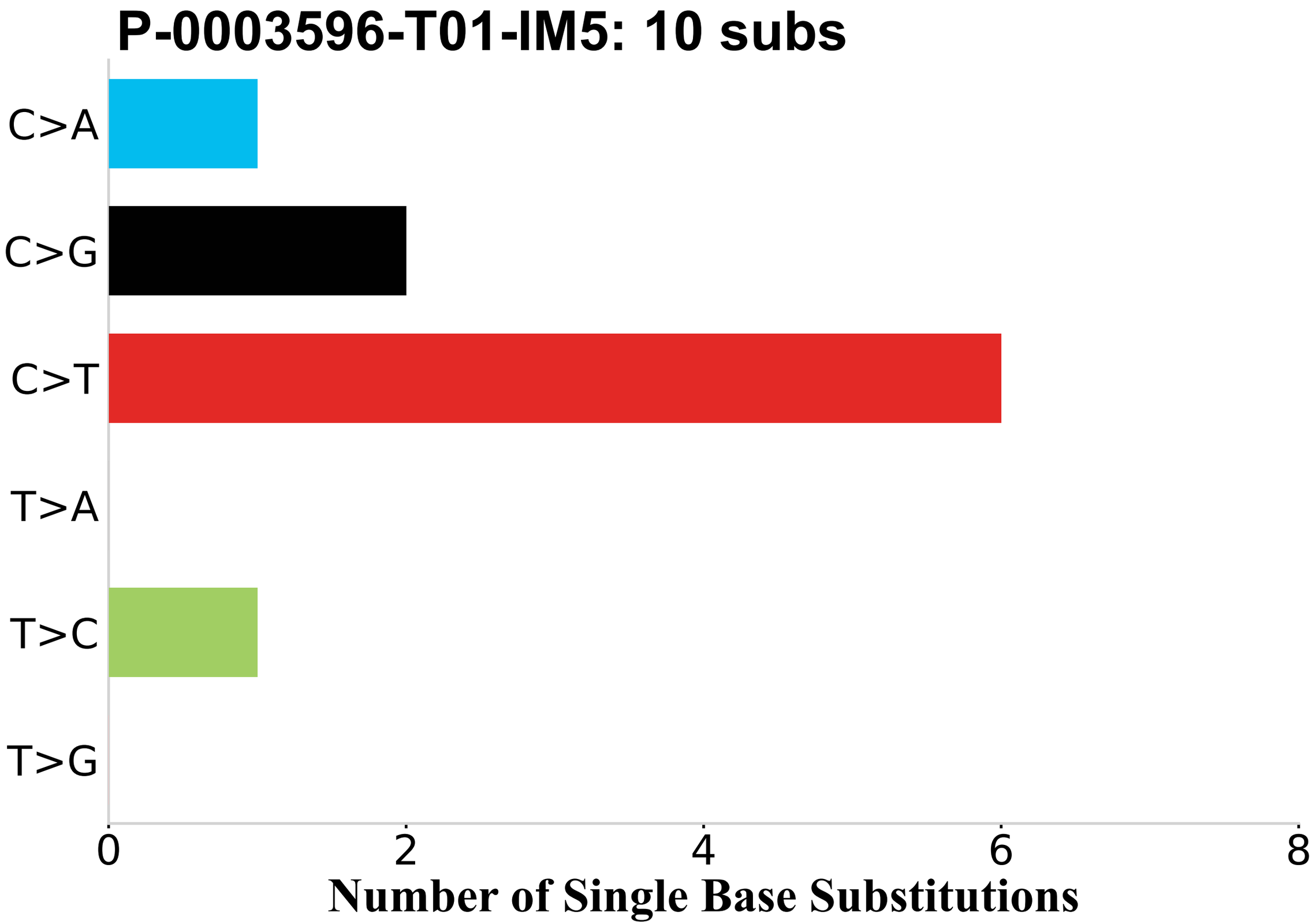
T>C
T>G
0
9
18
27
36
Number of Single Base Substitutions


P-0003596-T01-IM5: 10 subs
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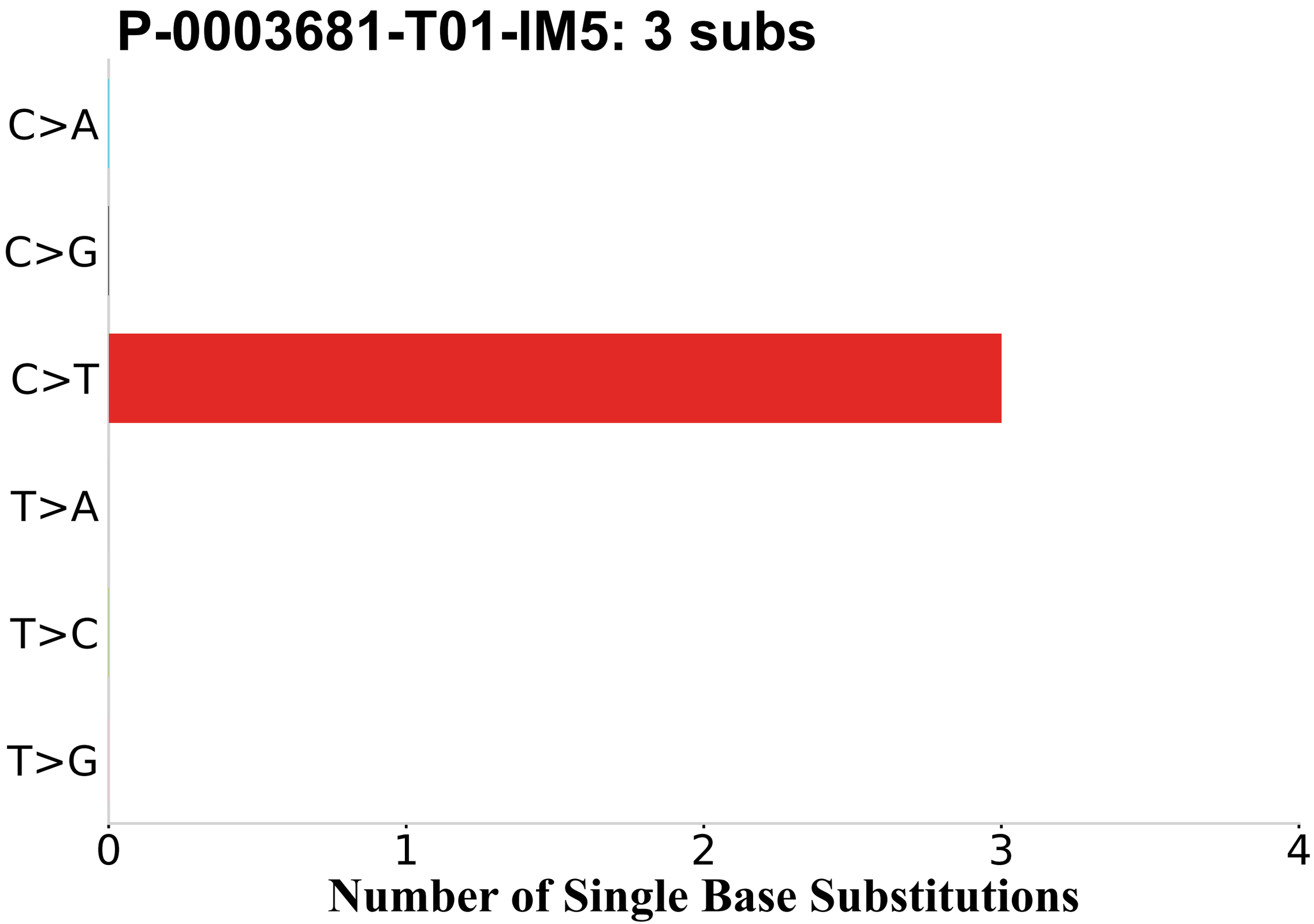
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003681-T01-IM5: 3 subs
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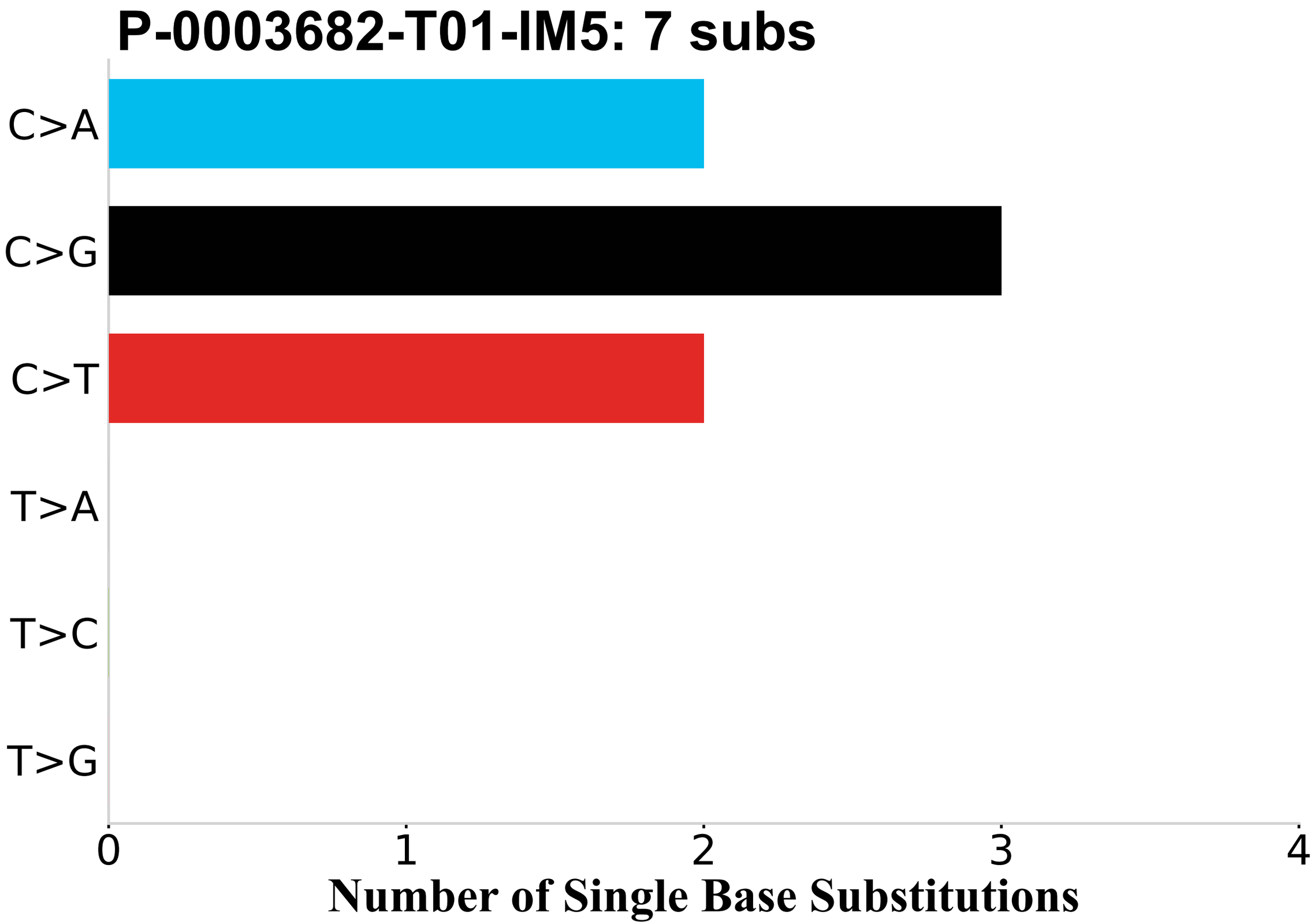
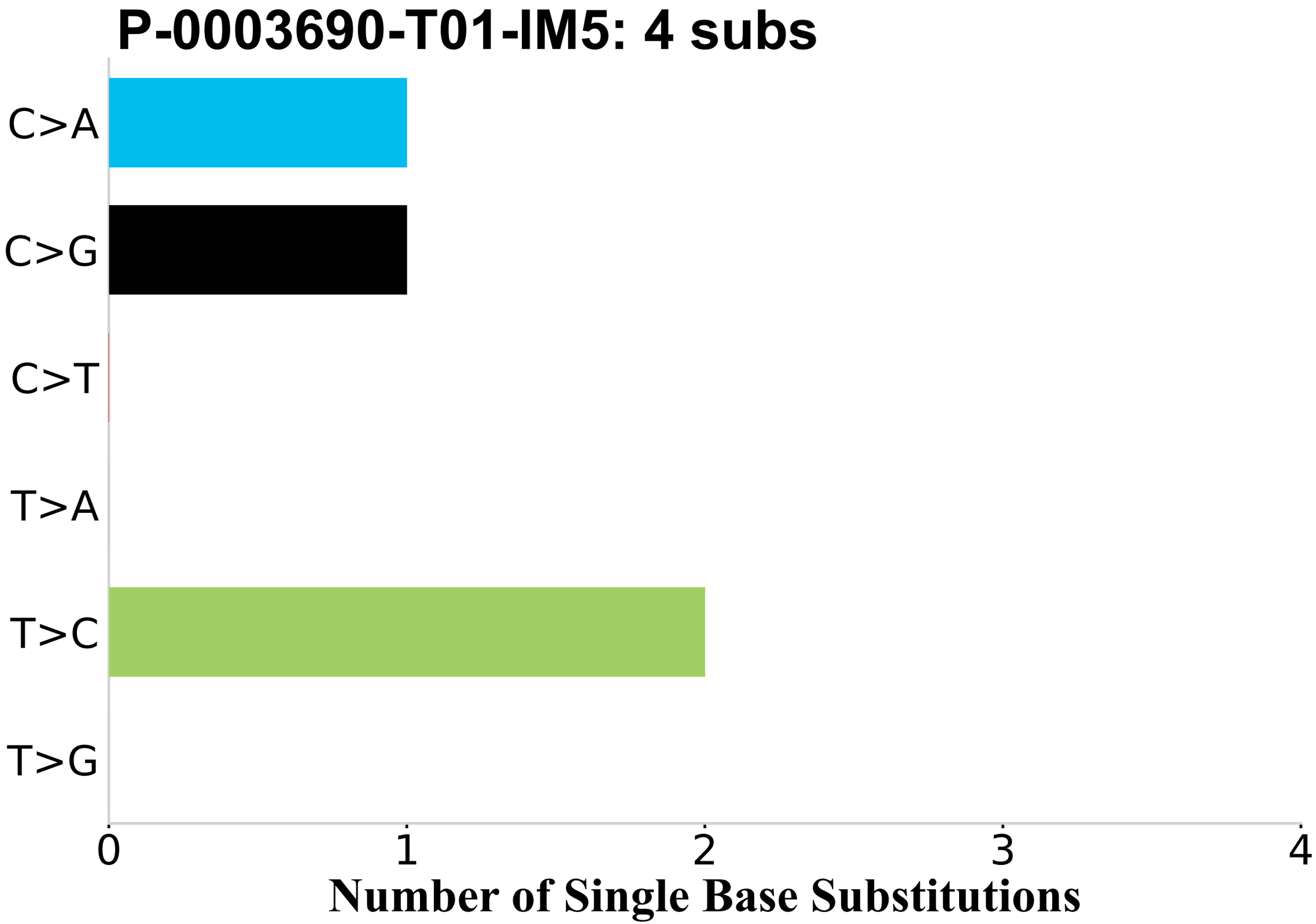
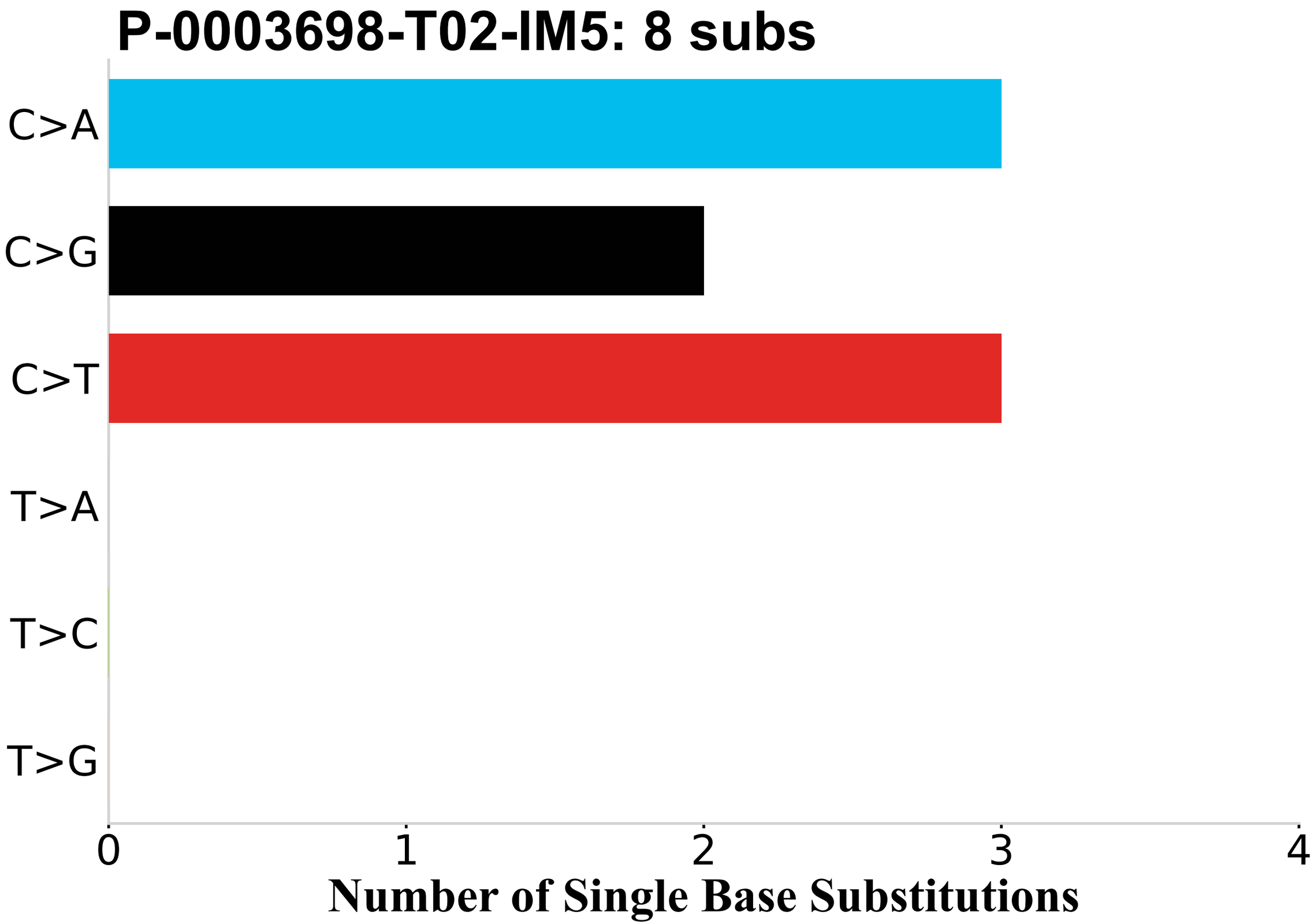
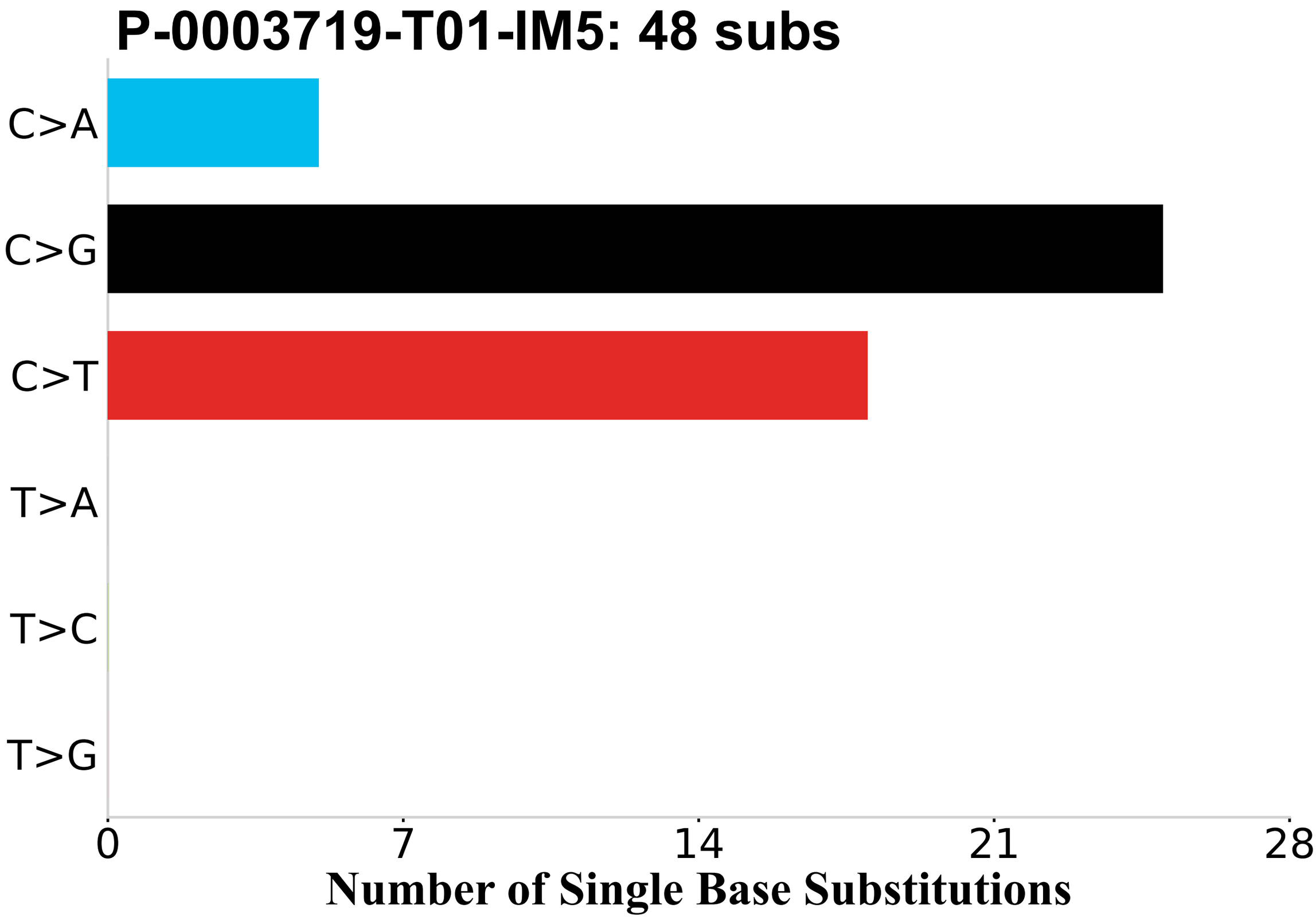
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003682-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003690-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003698-T02-IM5: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003719-T01-IM5: 48 subs
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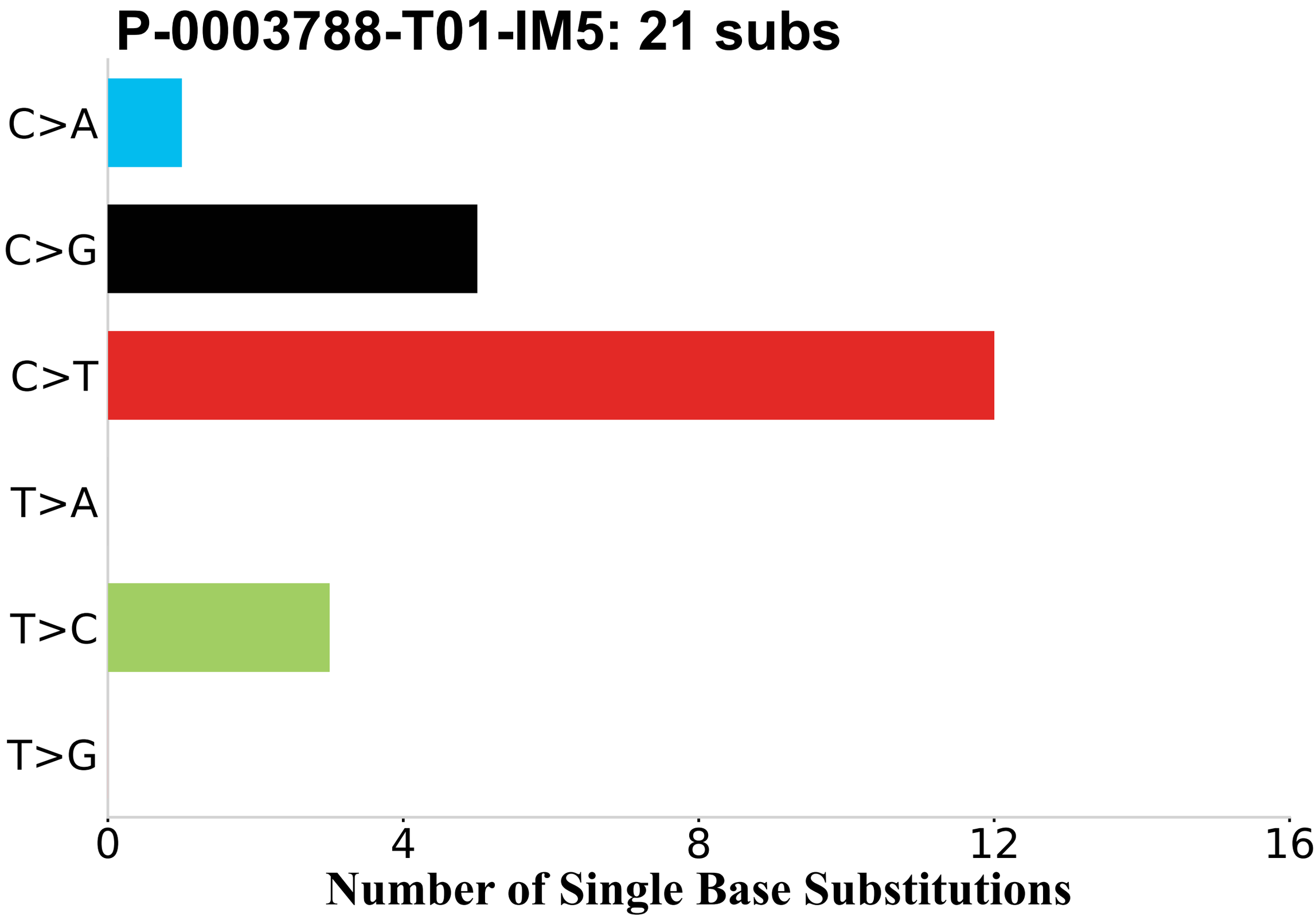
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0003788-T01-IM5: 21 subs
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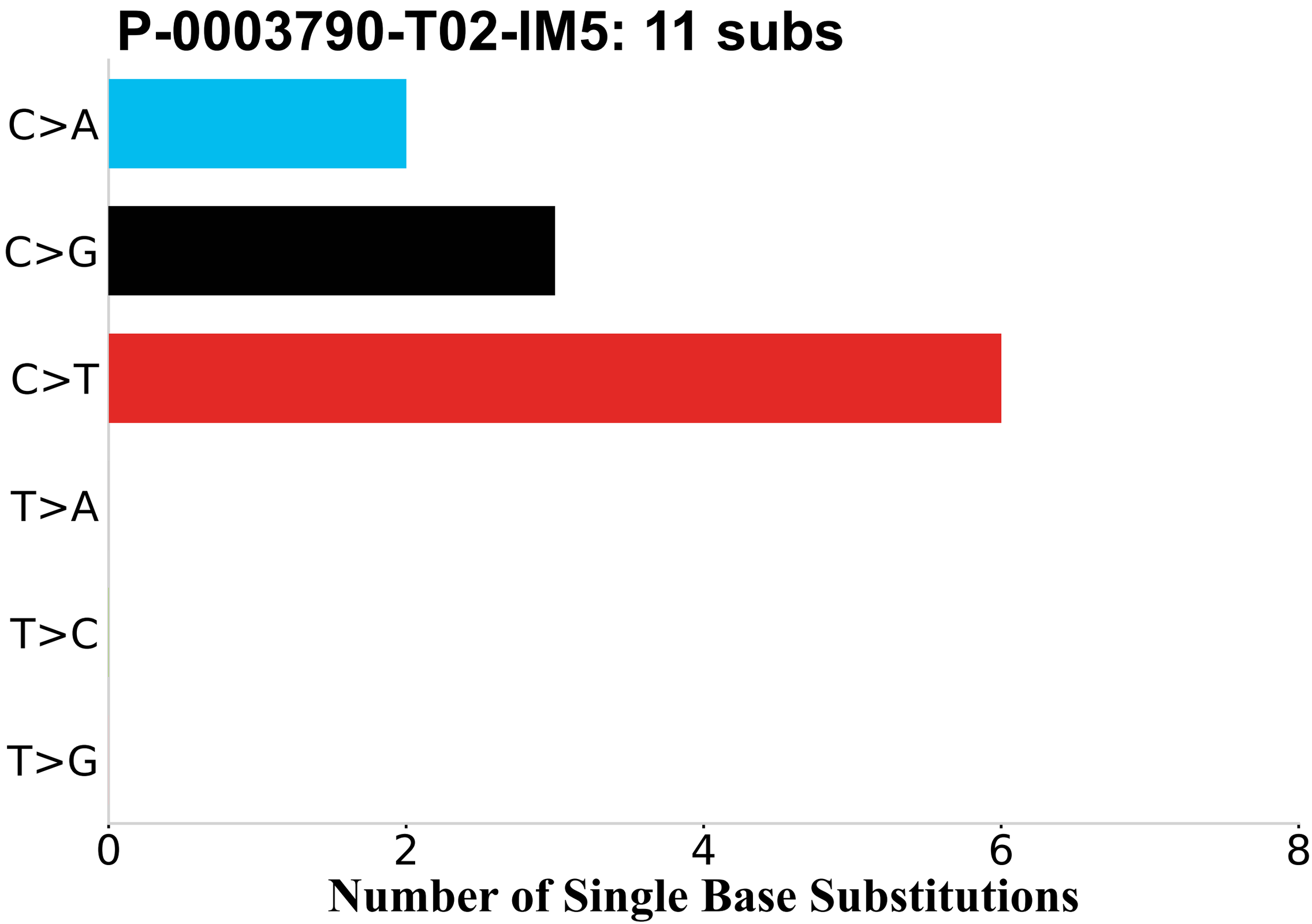
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0003790-T02-IM5: 11 subs
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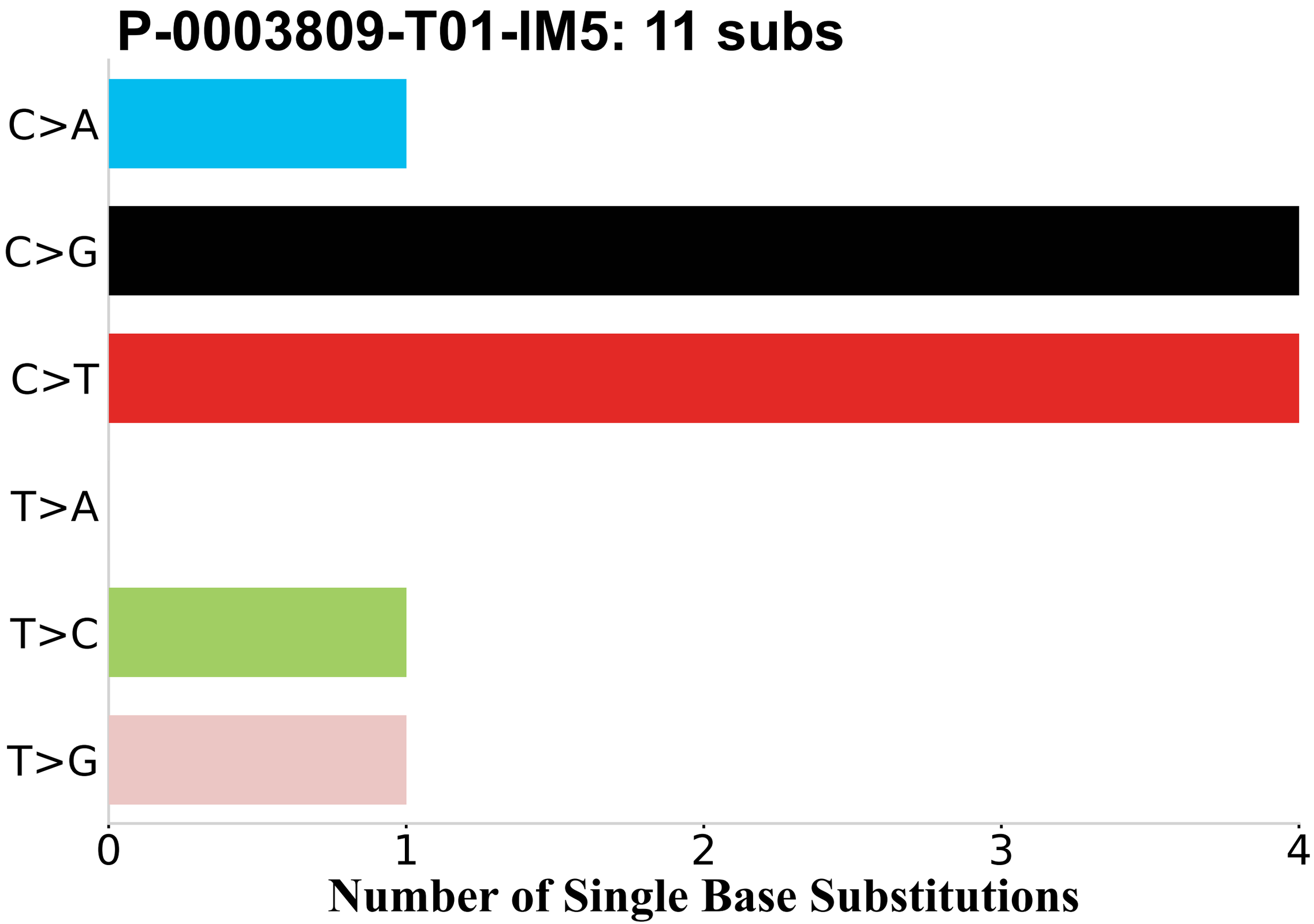
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003809-T01-IM5: 11 subs
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C>T
T>A
T>C
T>G
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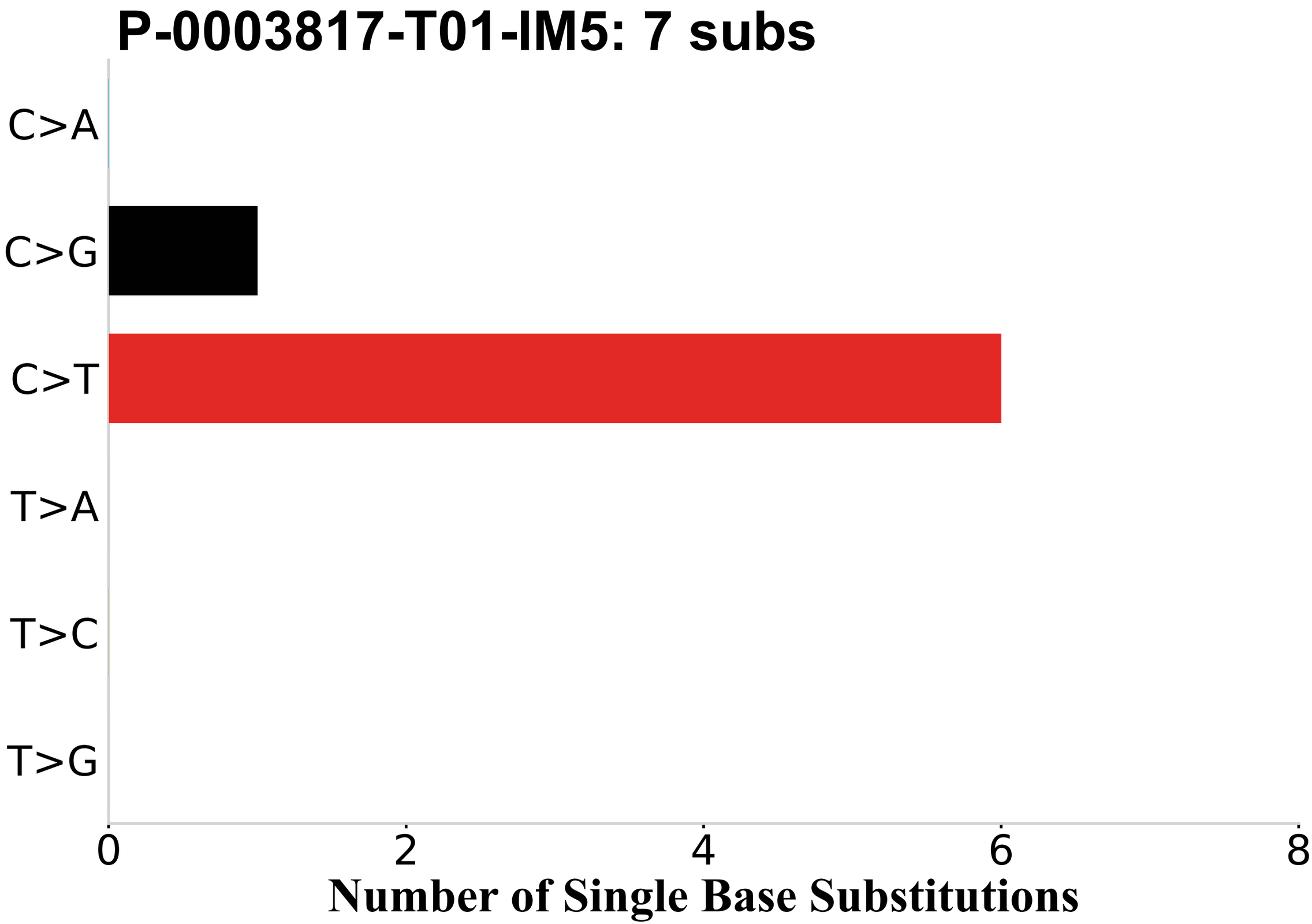
1
2
3
4
Number of Single Base Substitutions


P-0003817-T01-IM5: 7 subs
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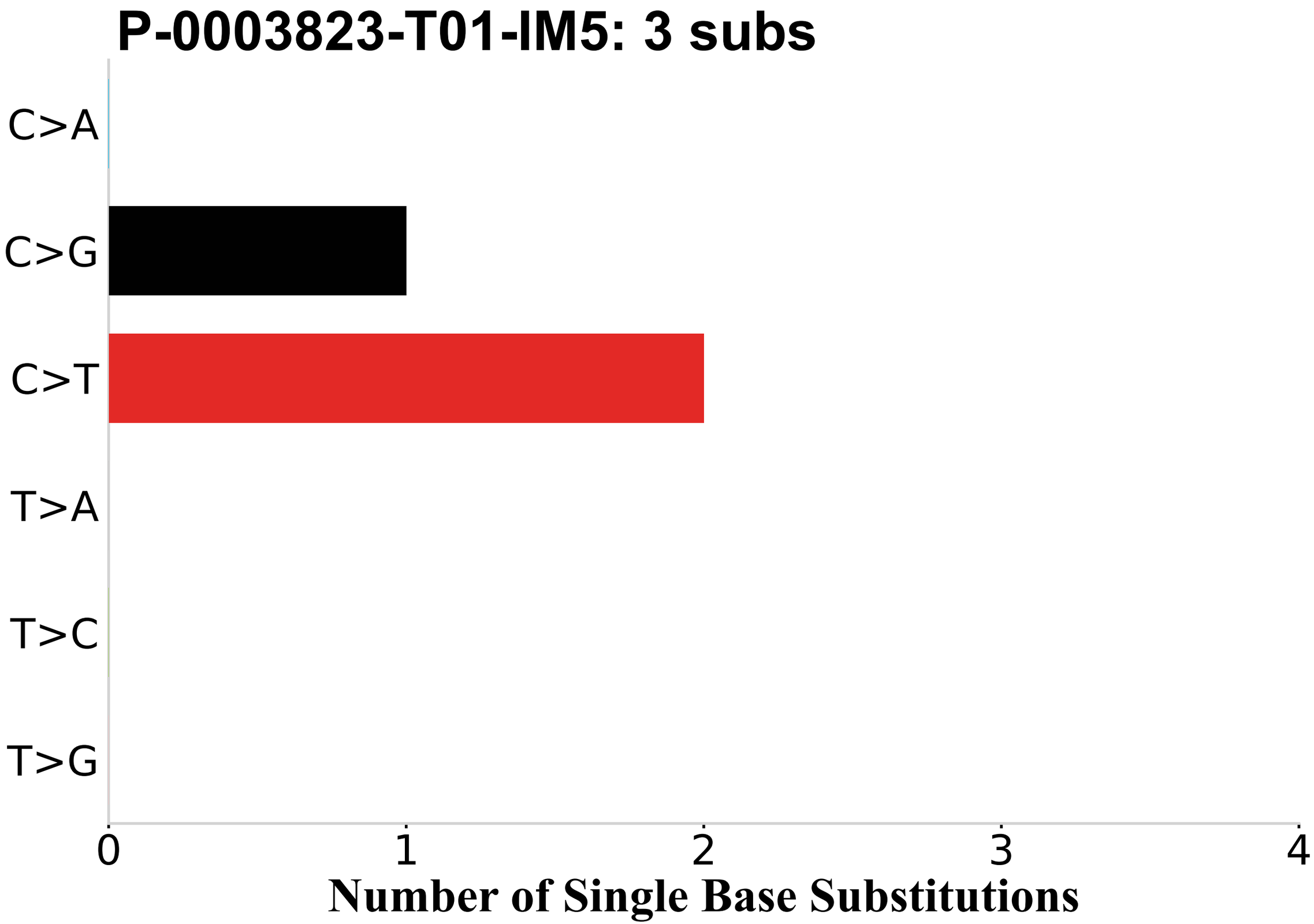
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003823-T01-IM5: 3 subs
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C>T
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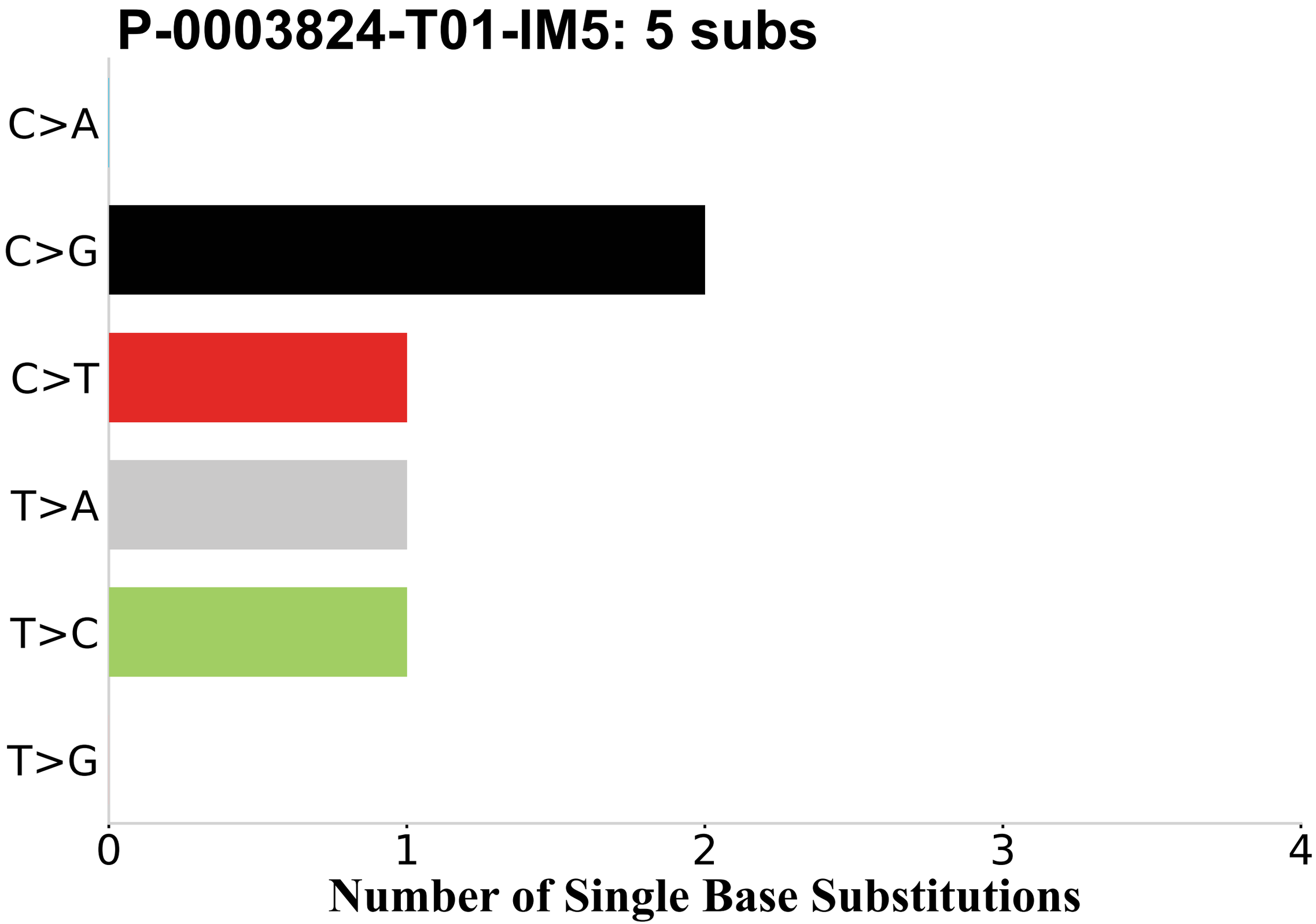
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003824-T01-IM5: 5 subs
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C>T
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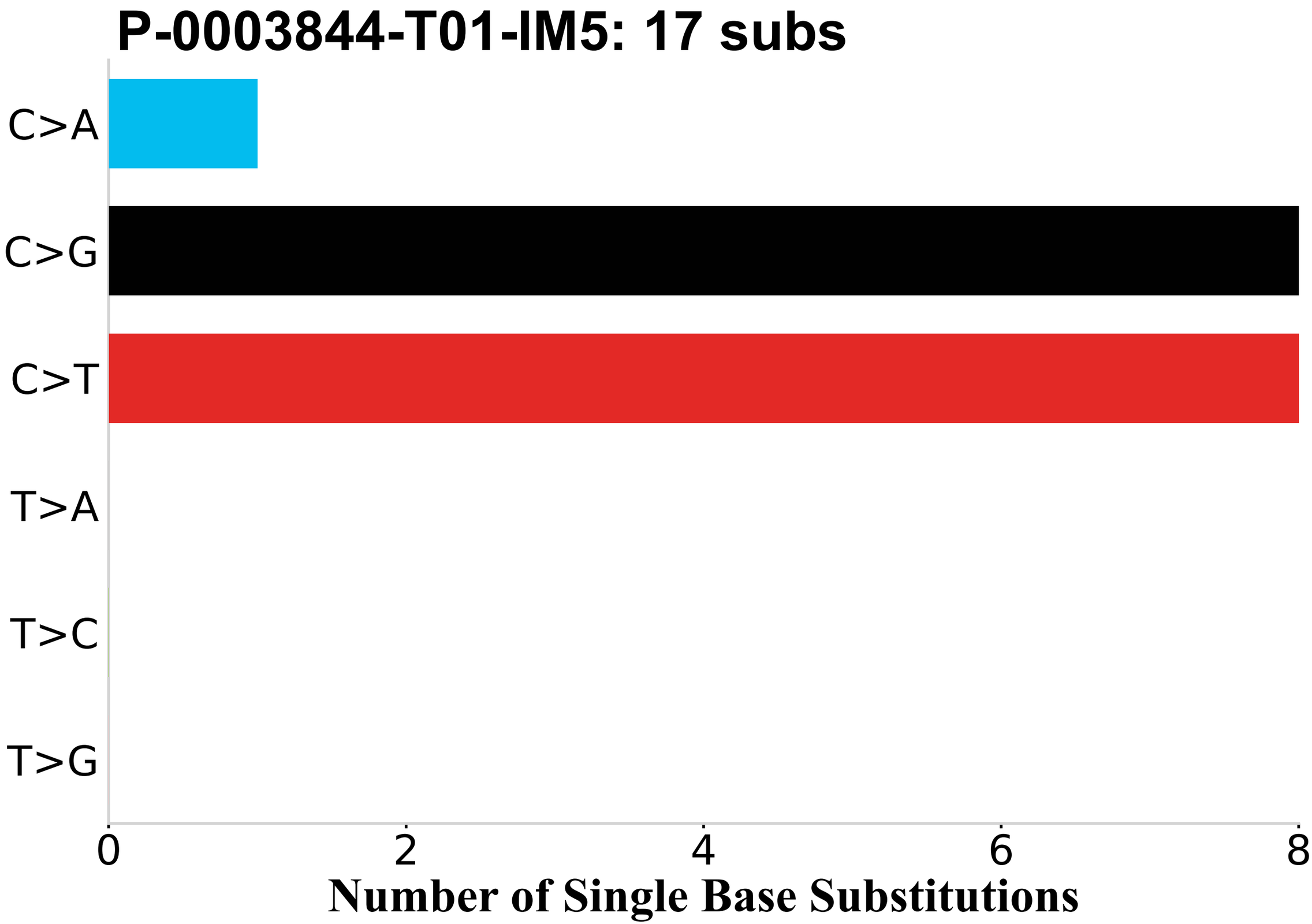
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003844-T01-IM5: 17 subs
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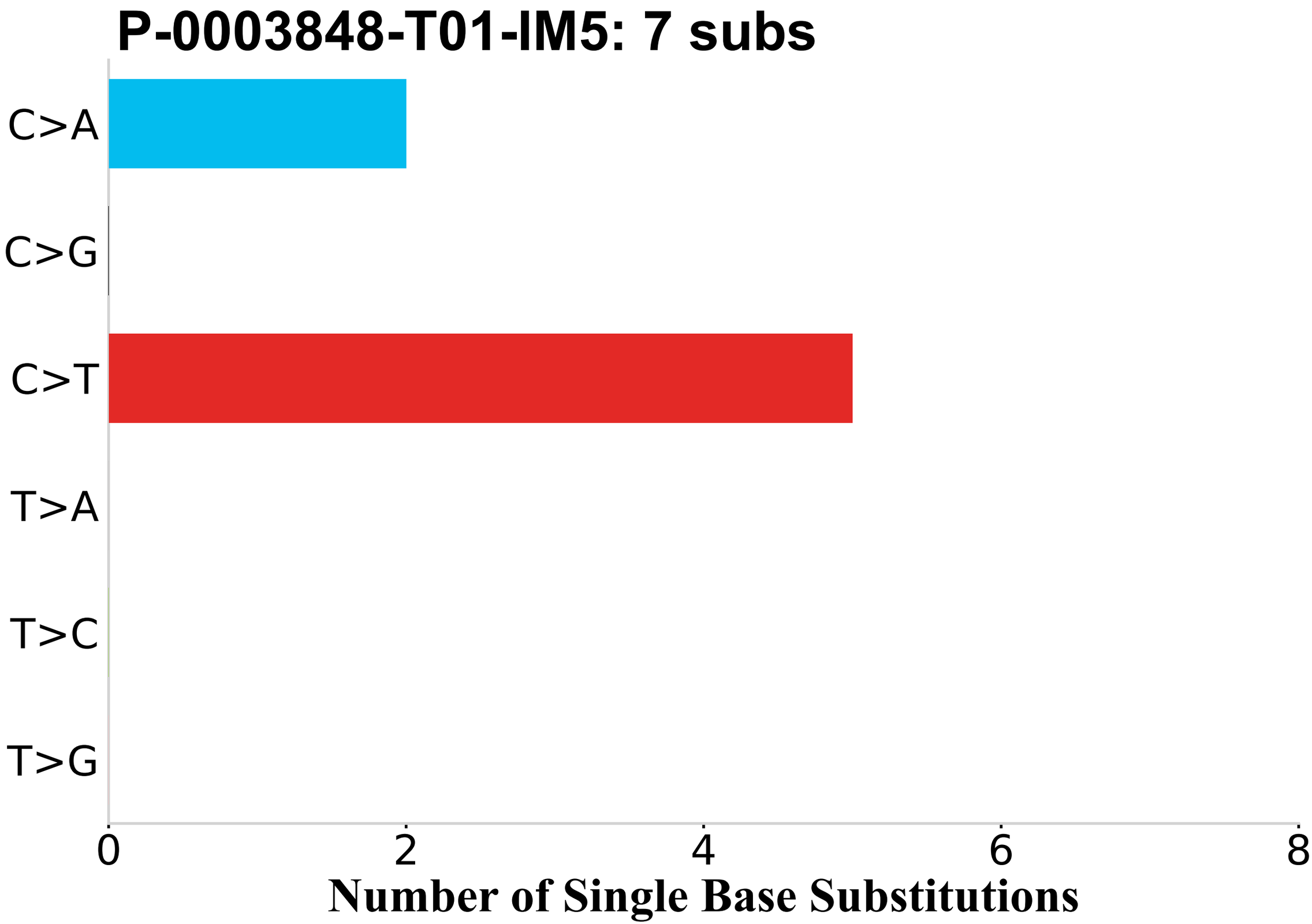
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003848-T01-IM5: 7 subs
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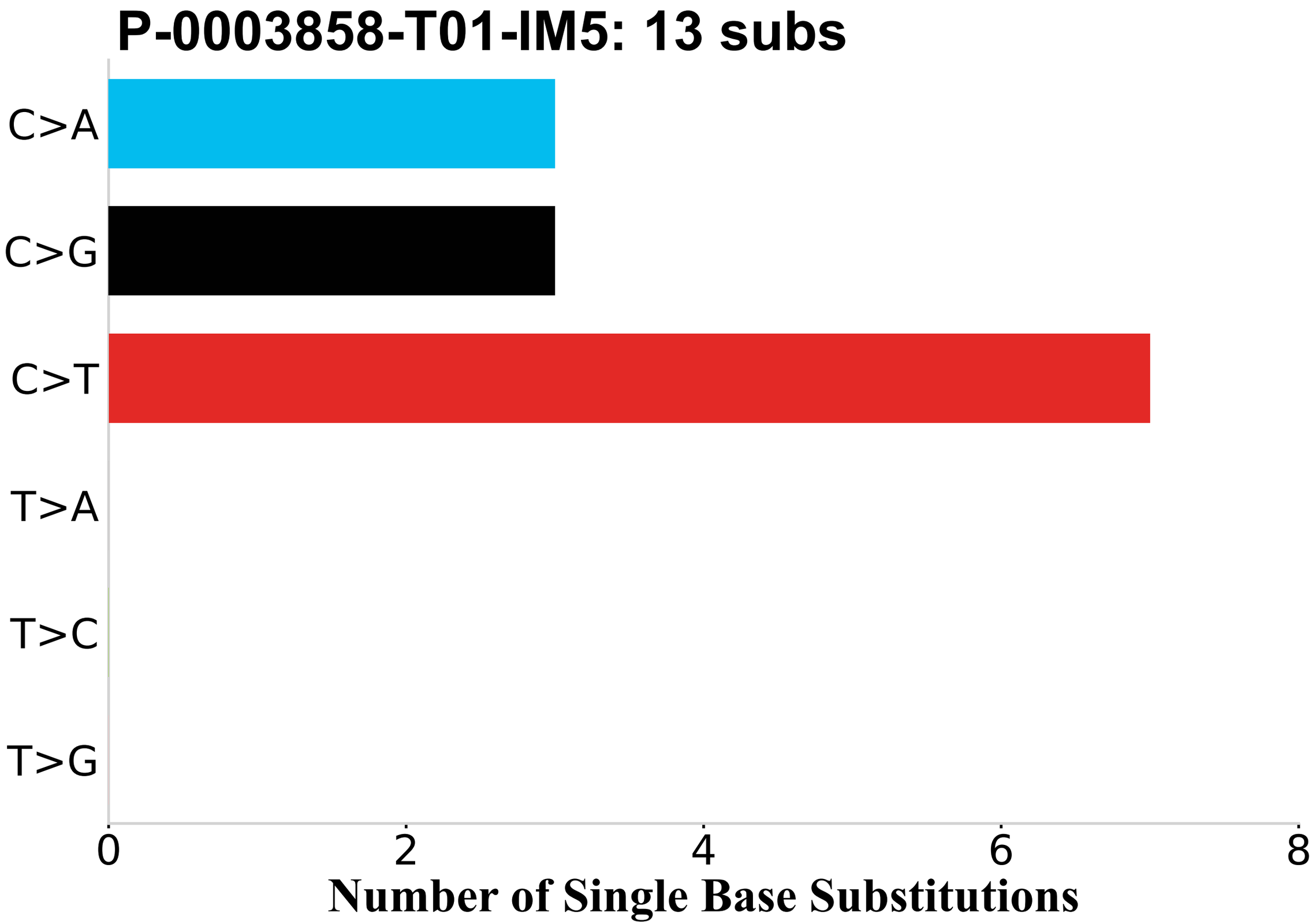
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003858-T01-IM5: 13 subs
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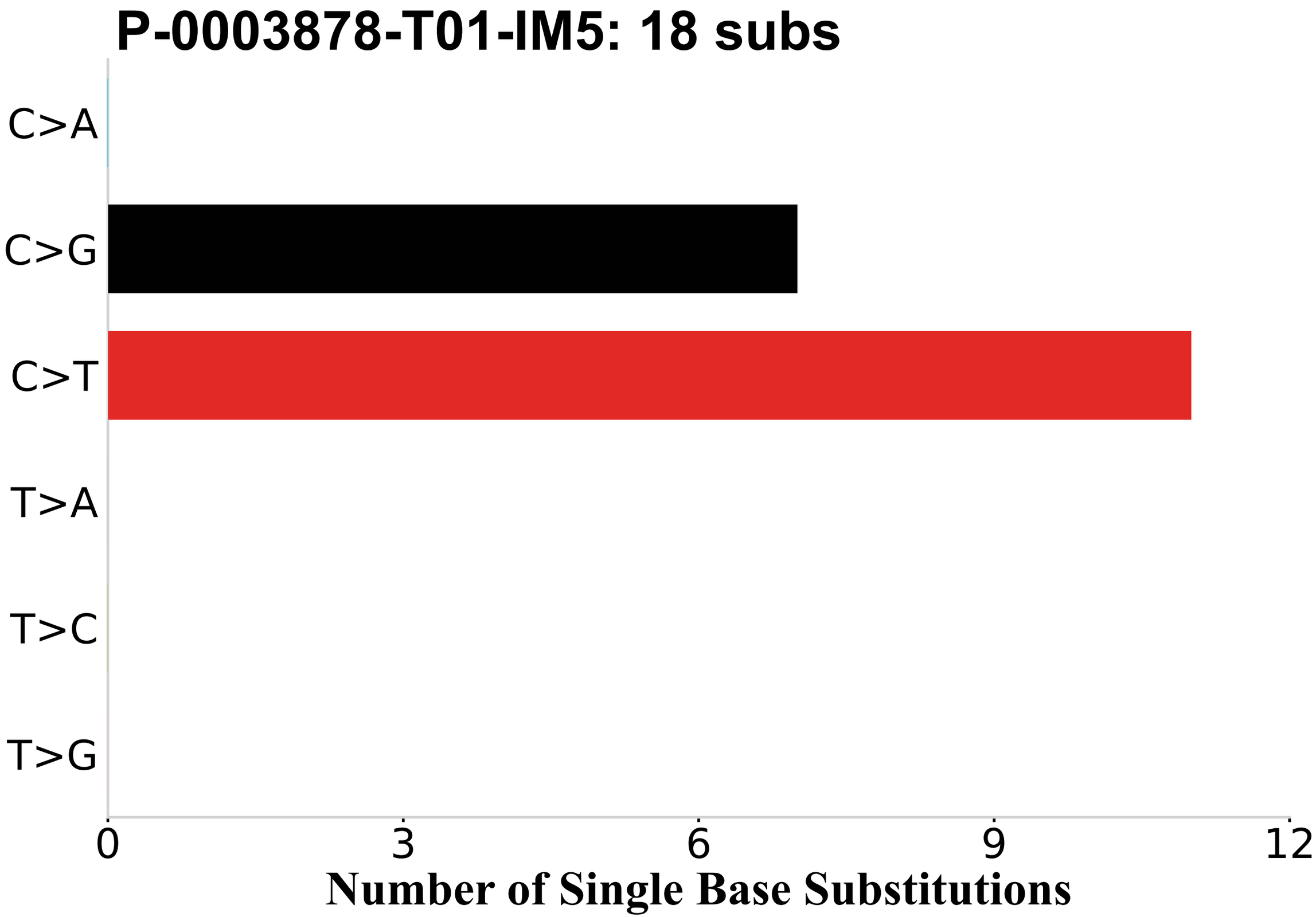
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0003878-T01-IM5: 18 subs
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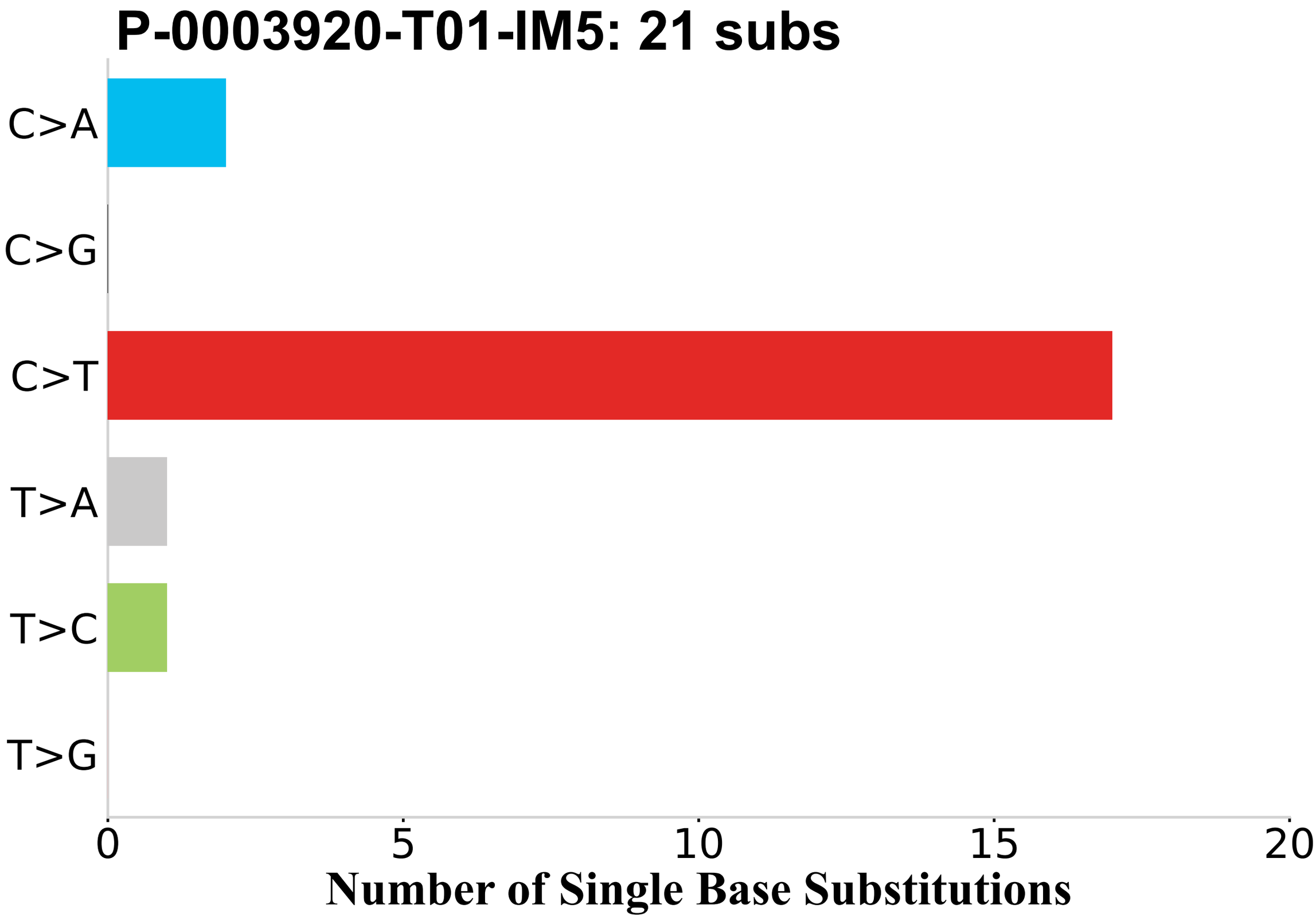
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0003920-T01-IM5: 21 subs
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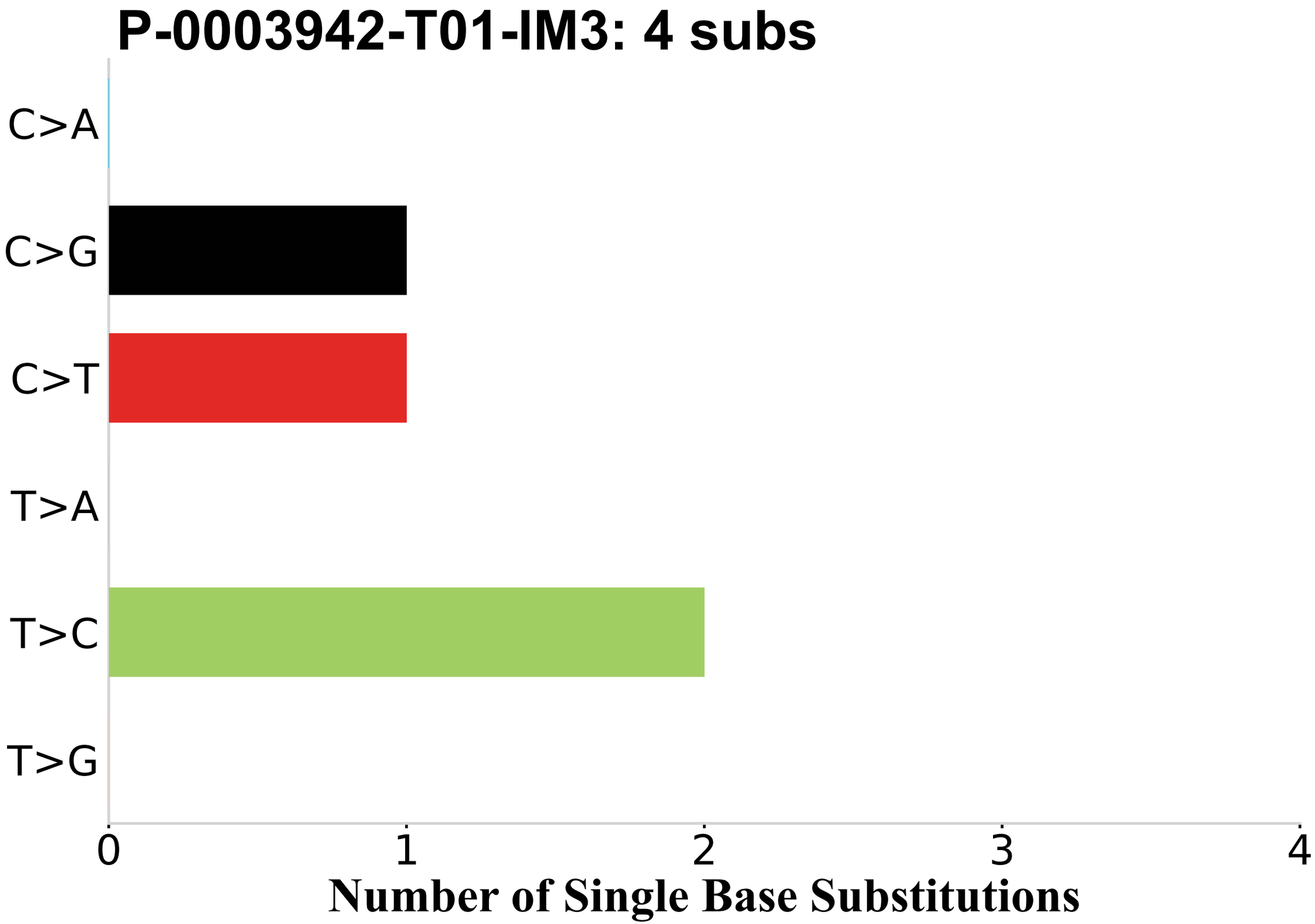
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0003942-T01-IM3: 4 subs
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C>G
C>T
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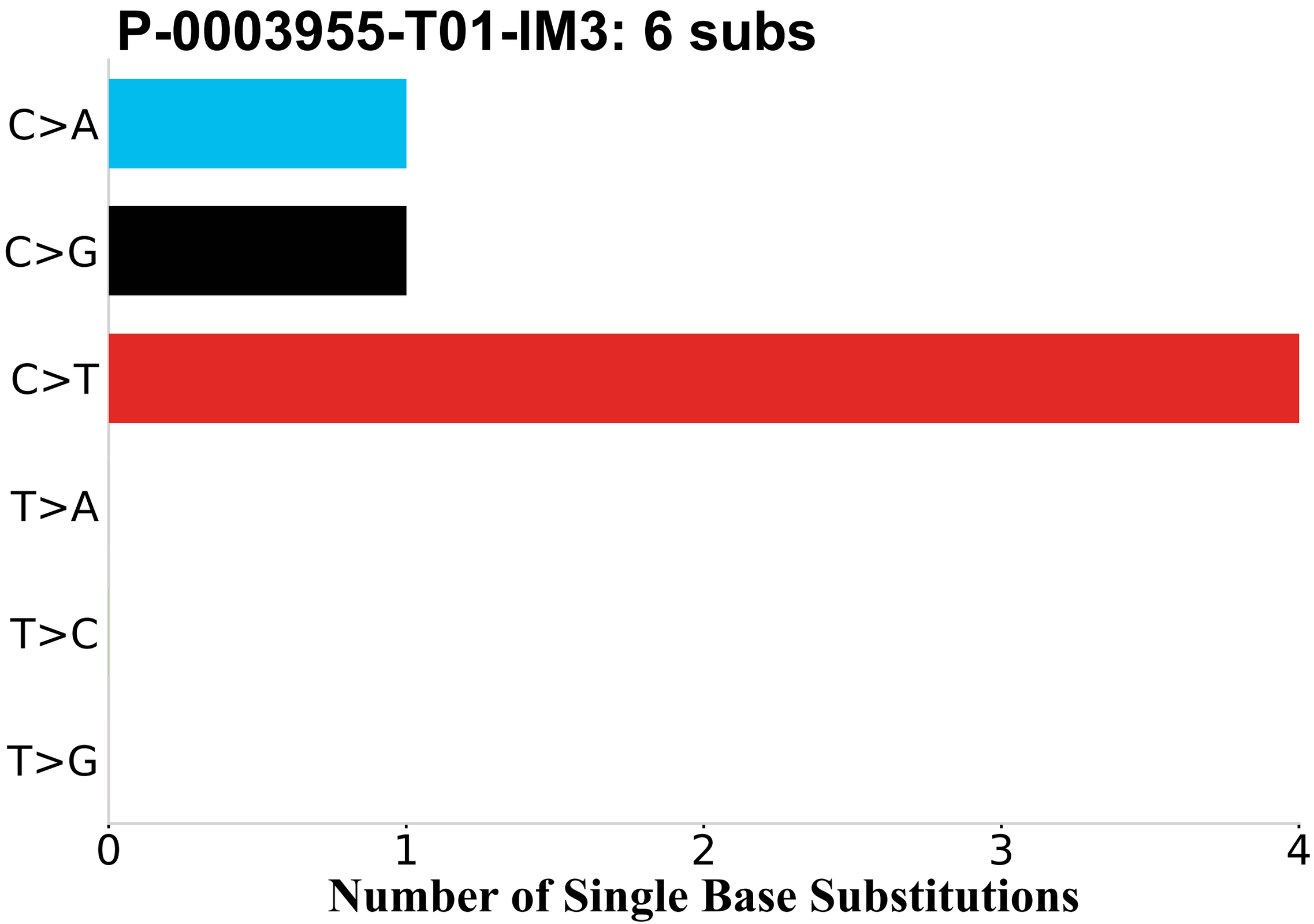
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0003955-T01-IM3: 6 subs
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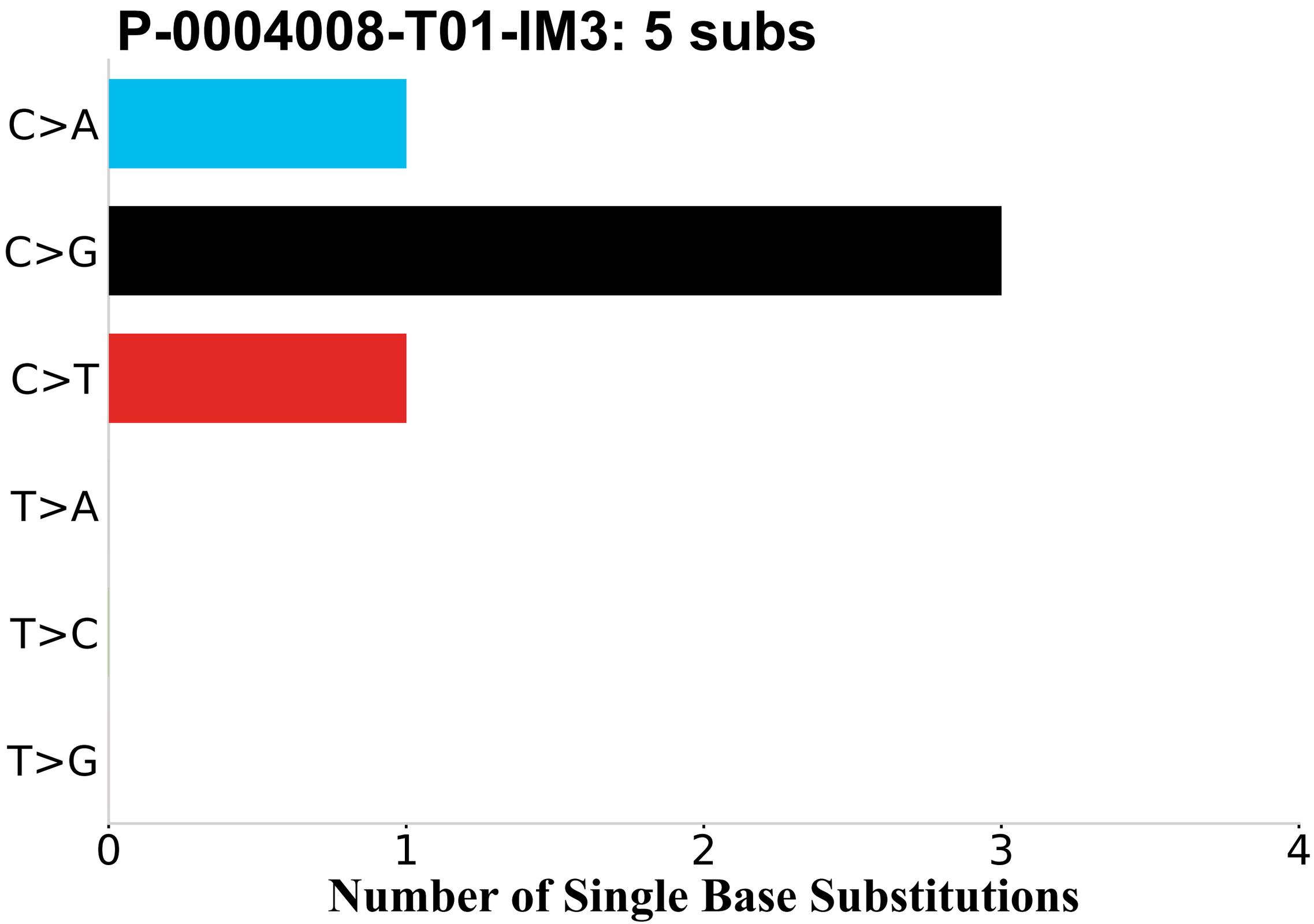
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004008-T01-IM3: 5 subs
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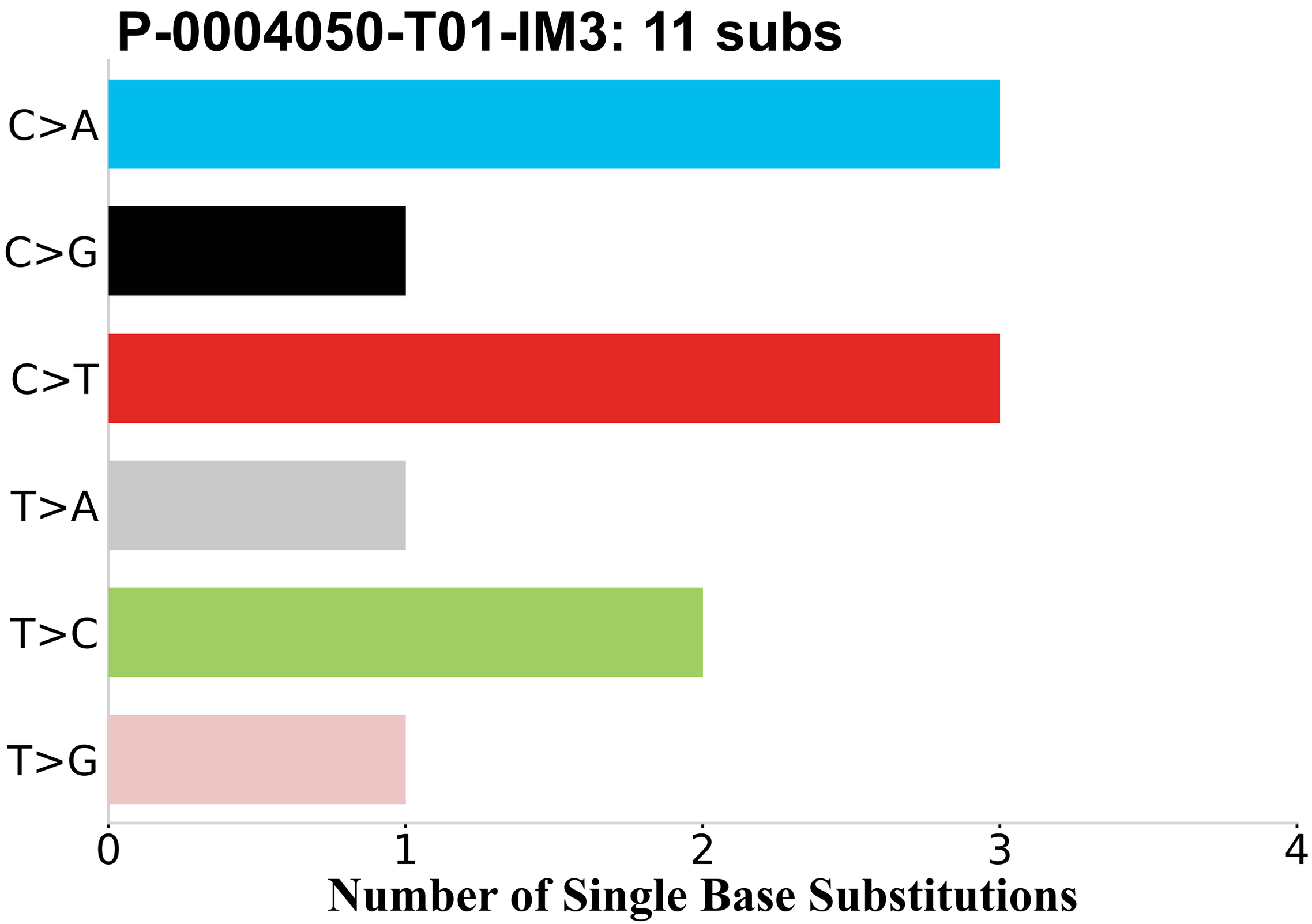
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004050-T01-IM3: 11 subs
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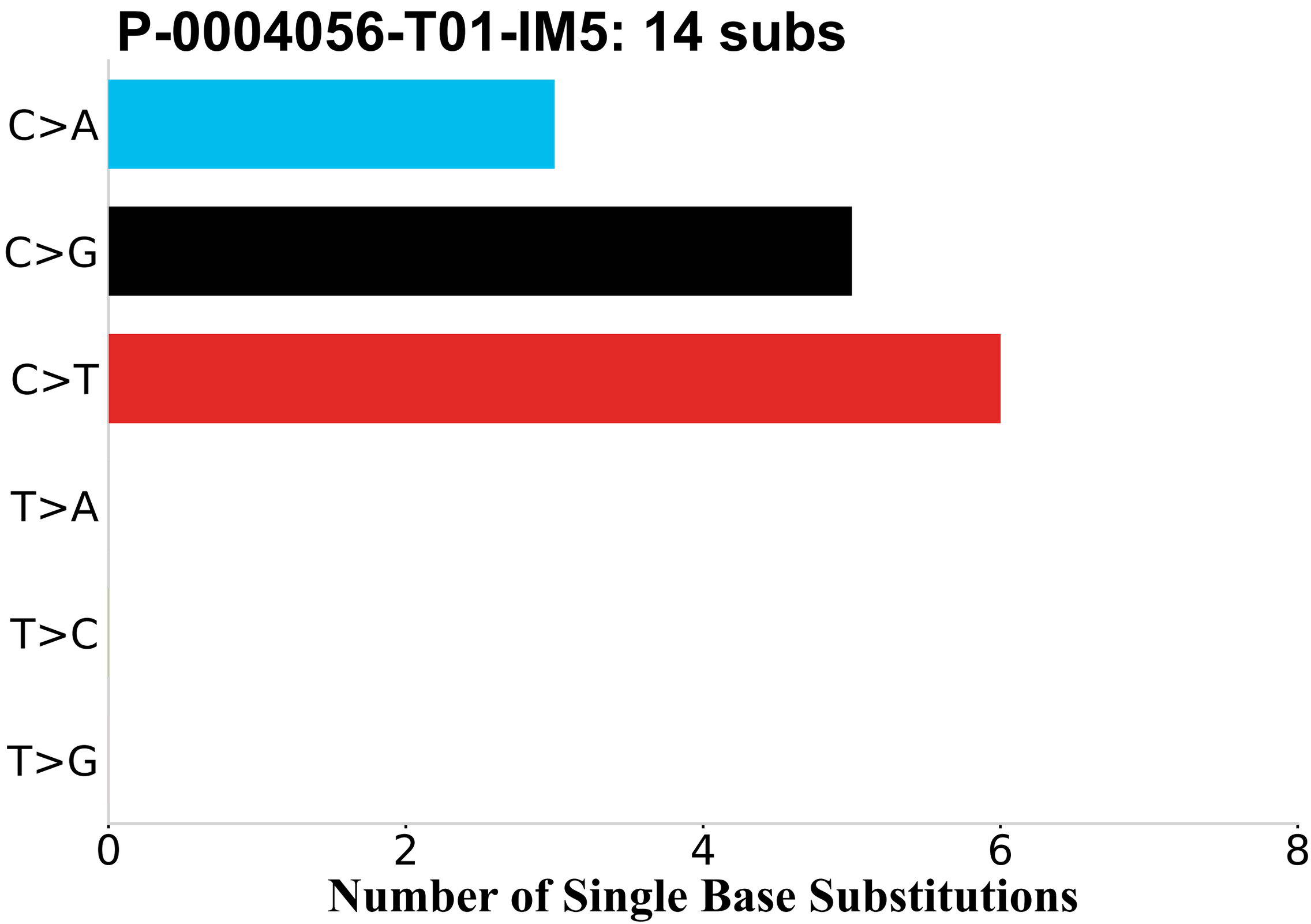
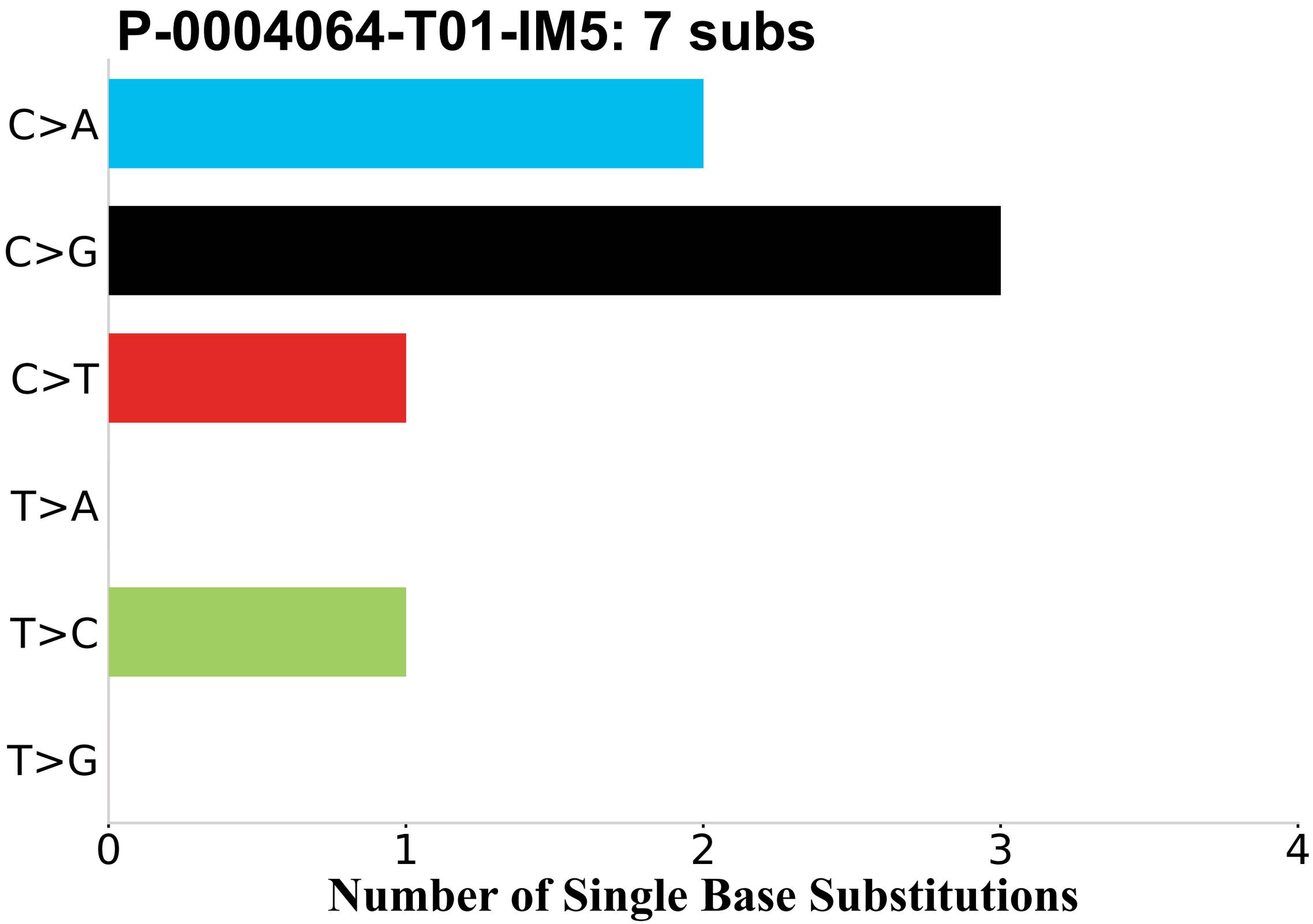
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004056-T01-IM5: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0004064-T01-IM5: 7 subs
C>A
C>G
C>T
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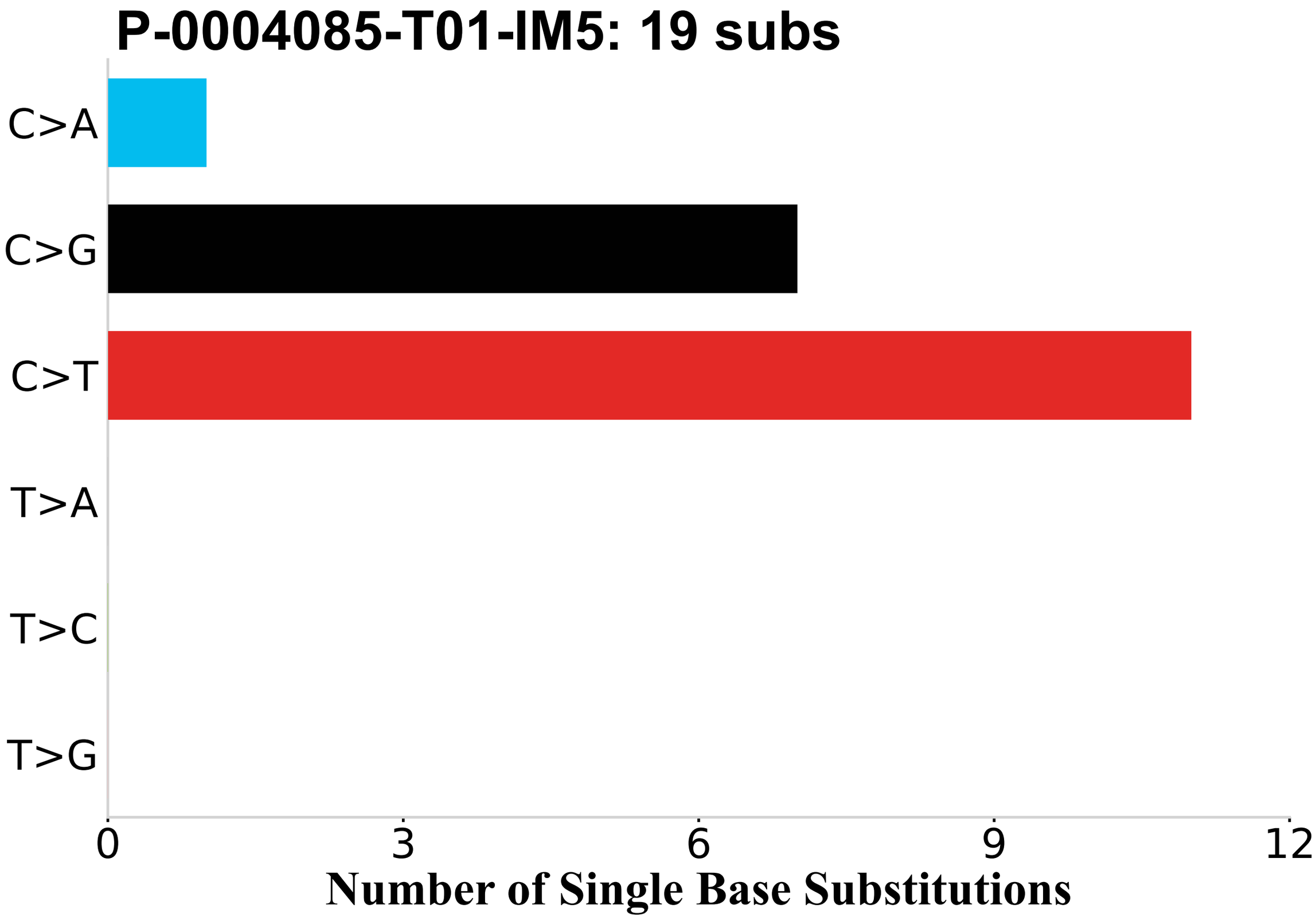
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004085-T01-IM5: 19 subs
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C>G
C>T
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T>C
T>G
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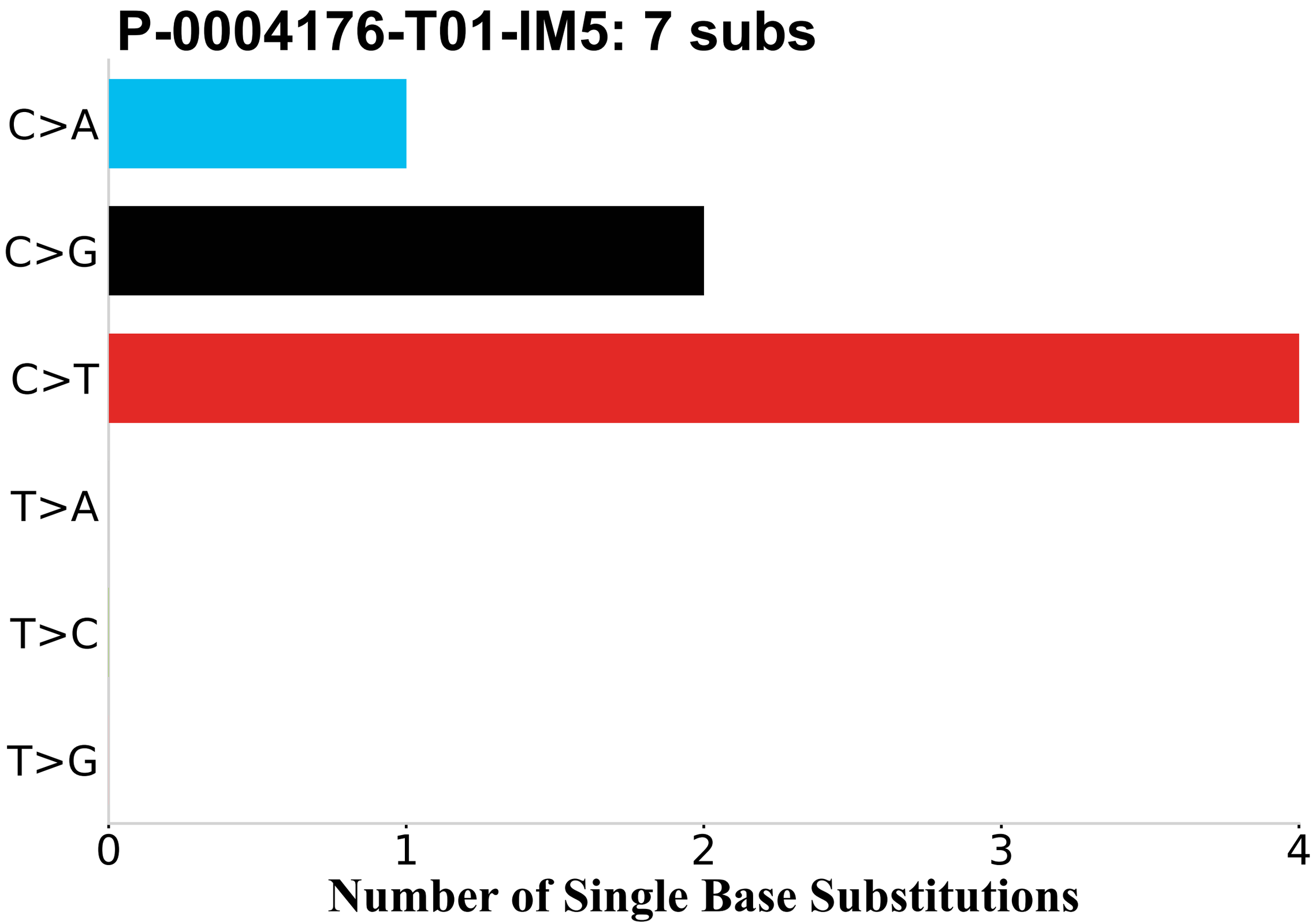
3
6
9
12
Number of Single Base Substitutions


P-0004176-T01-IM5: 7 subs
C>A
C>G
C>T
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T>C
T>G
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1
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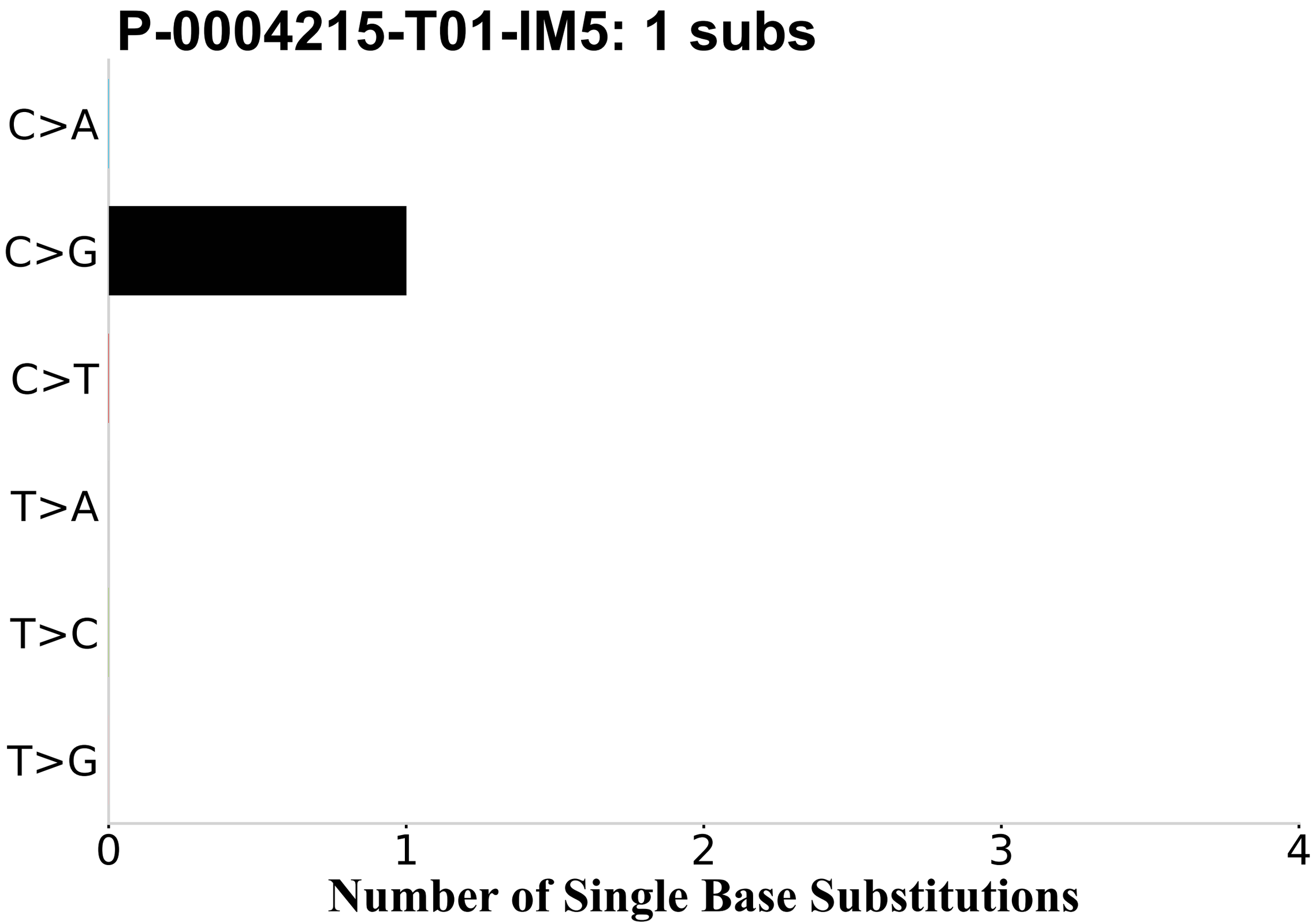
3
4
Number of Single Base Substitutions


P-0004215-T01-IM5: 1 subs
C>A
C>G
C>T
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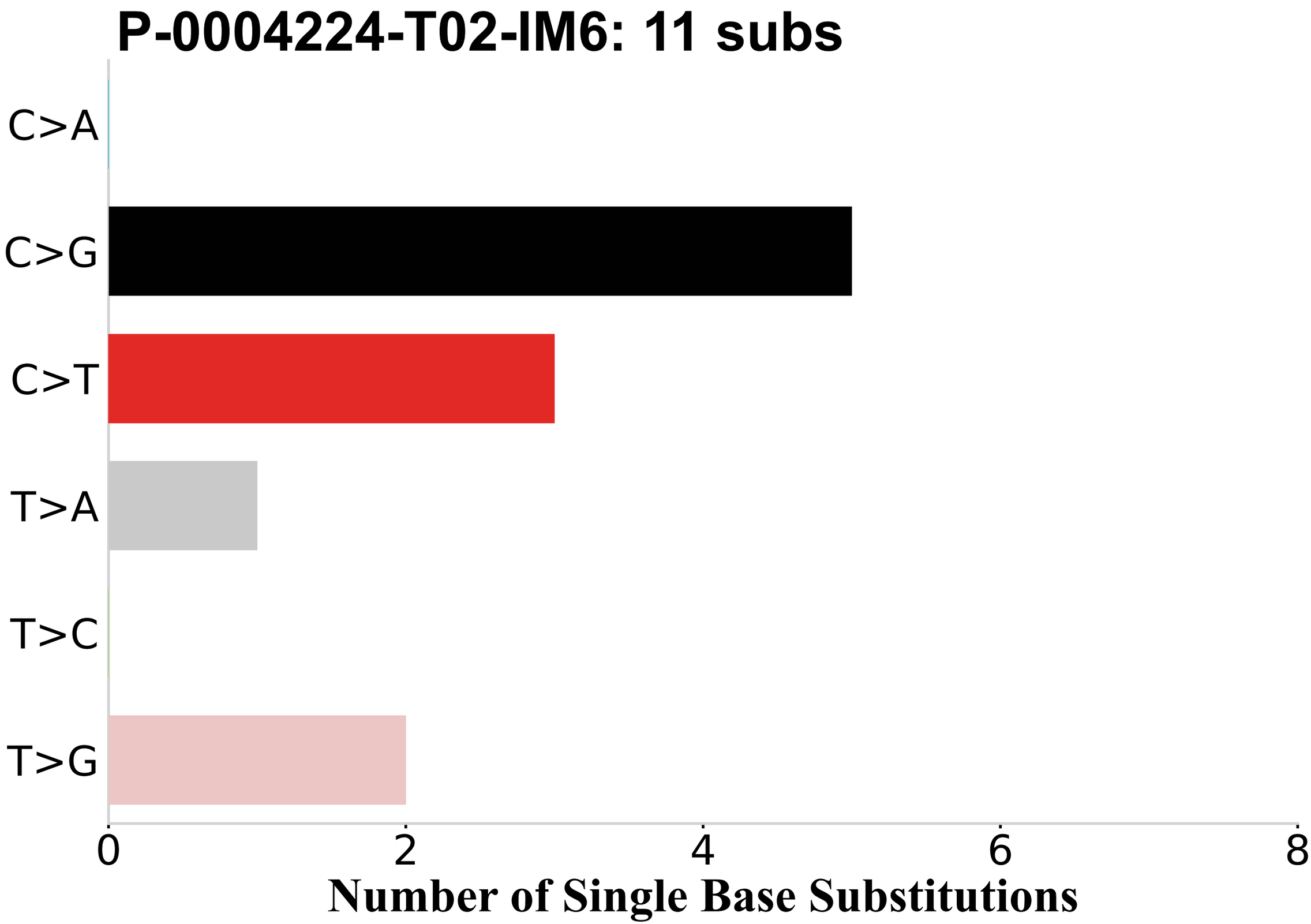
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004224-T02-IM6: 11 subs
C>A
C>G
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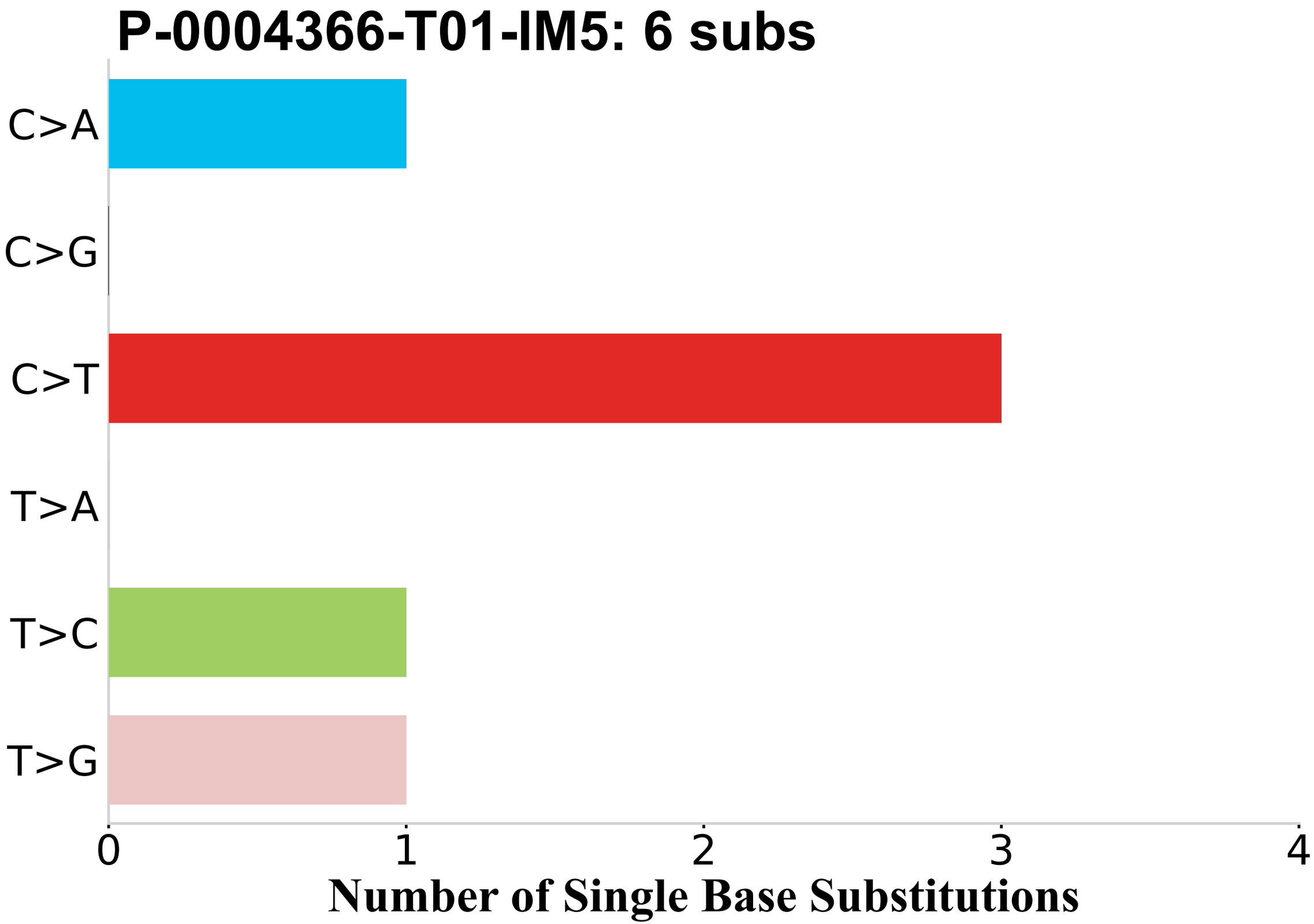
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0004366-T01-IM5: 6 subs
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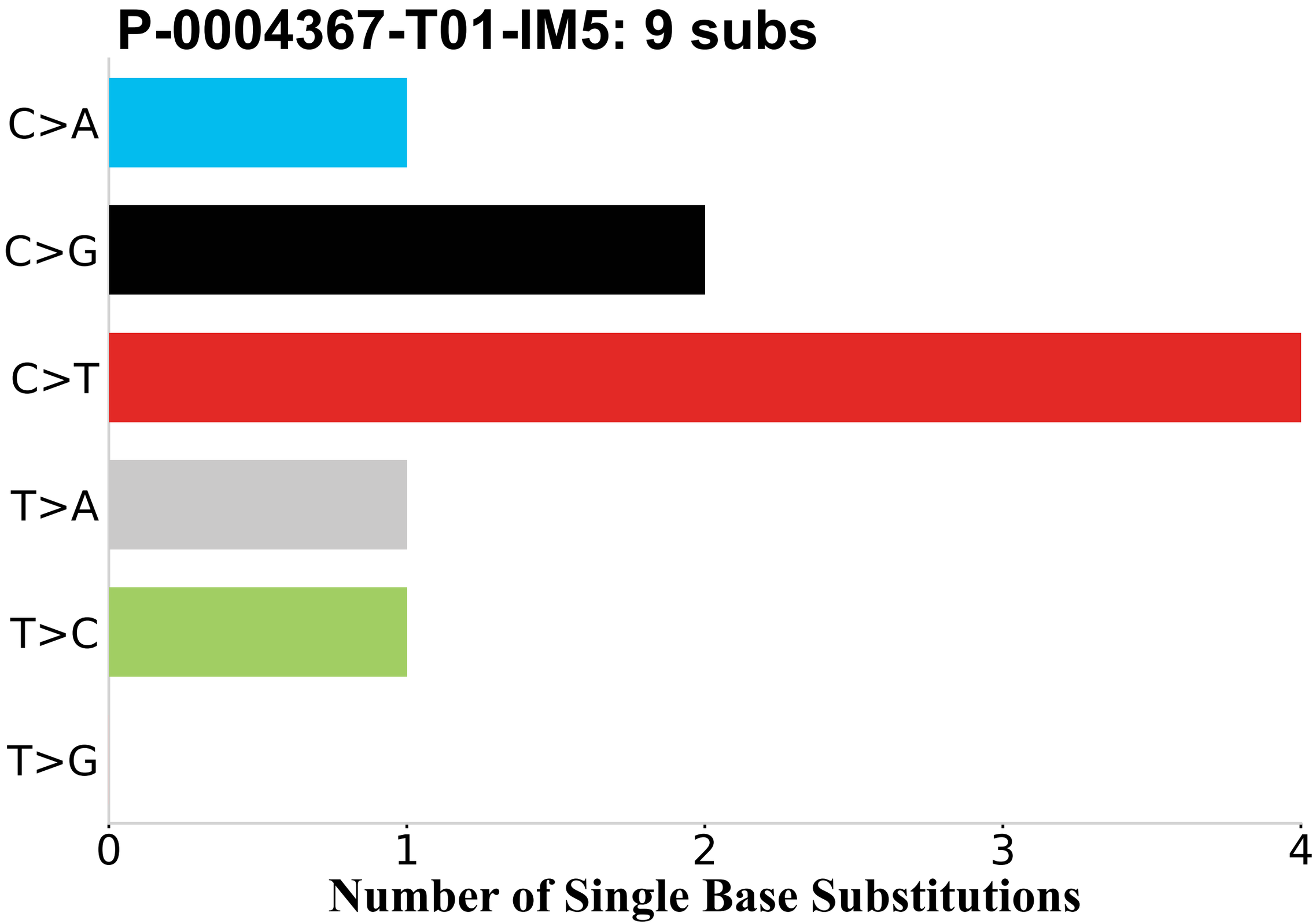
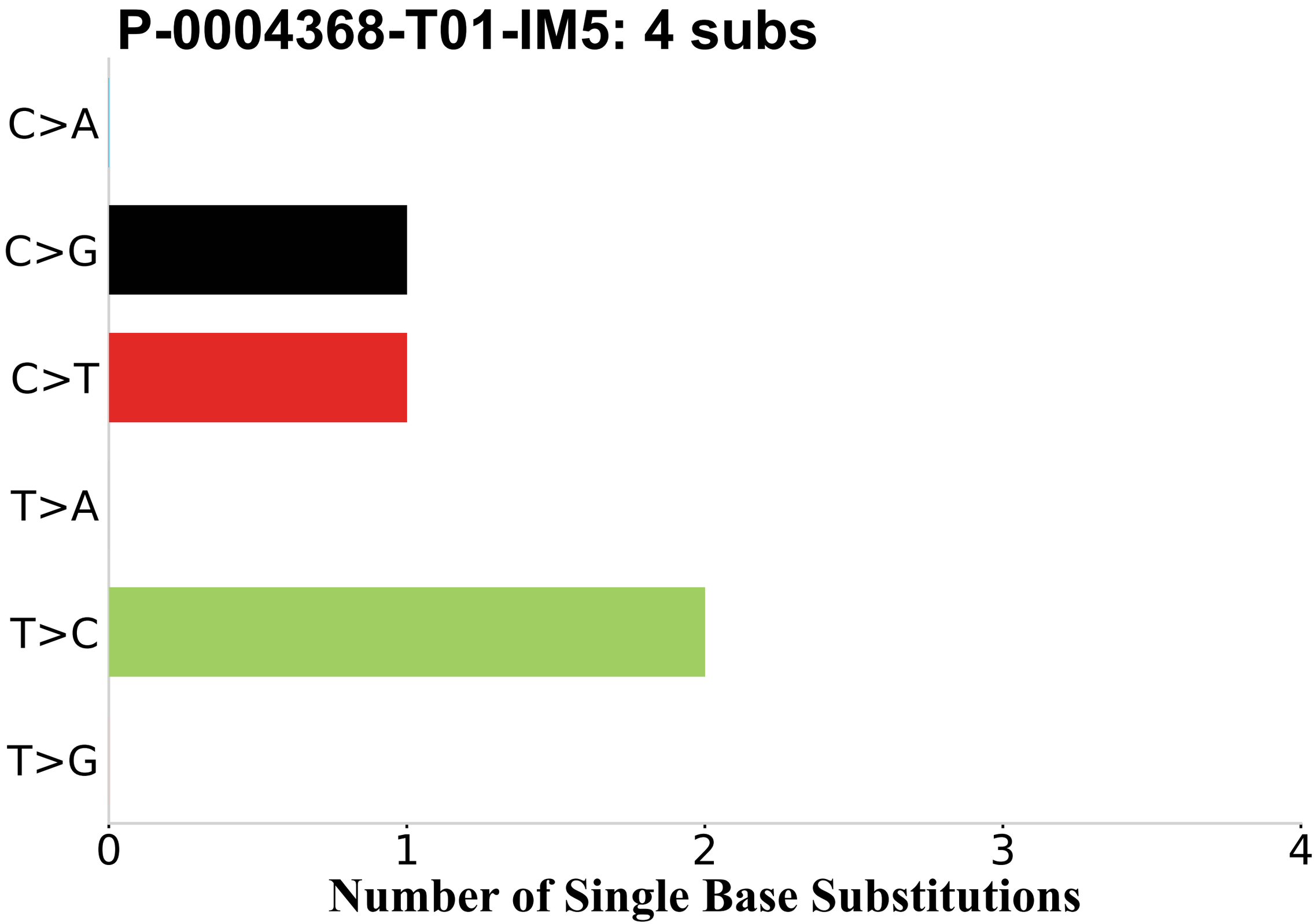
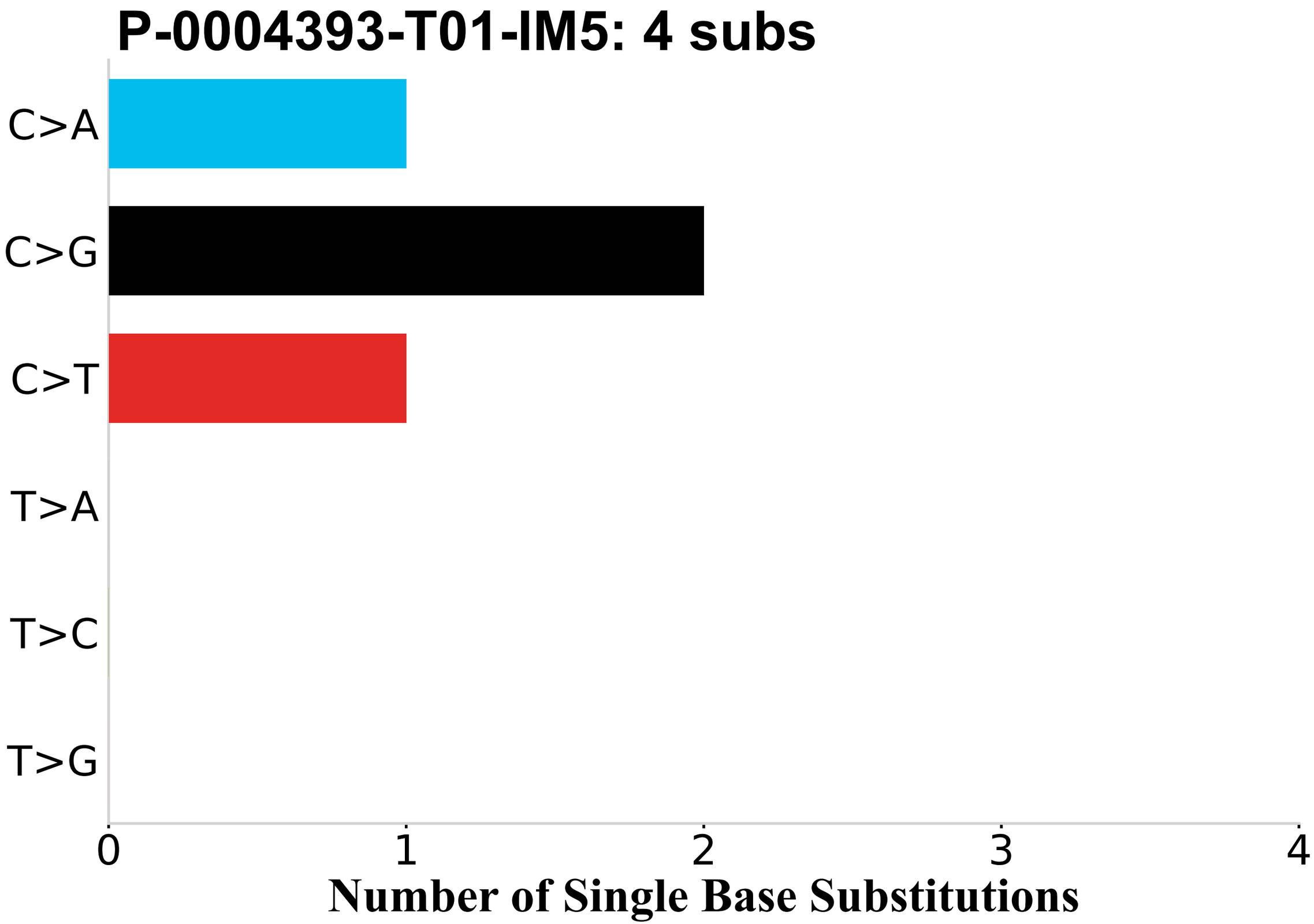
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004367-T01-IM5: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004368-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004393-T01-IM5: 4 subs
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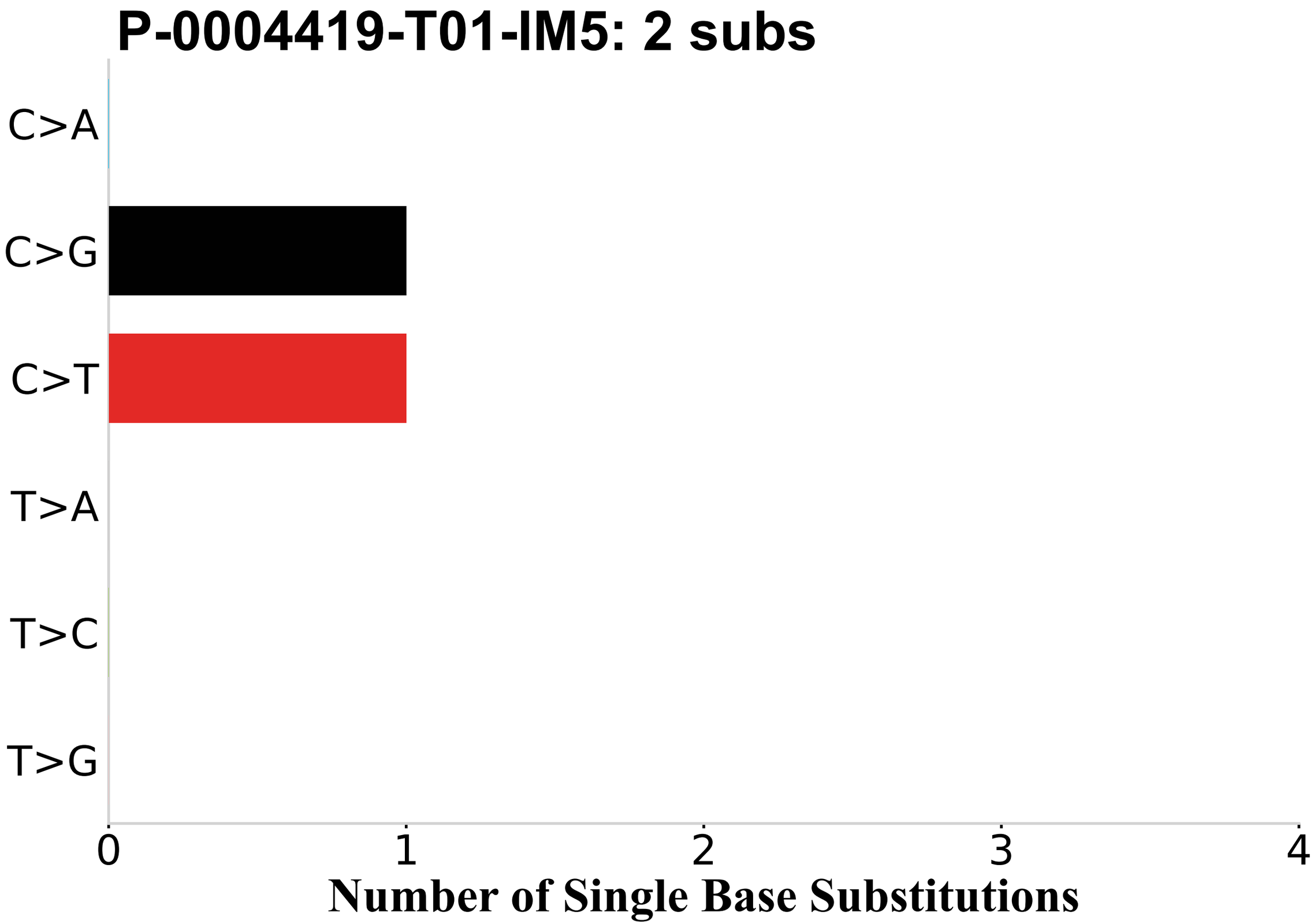
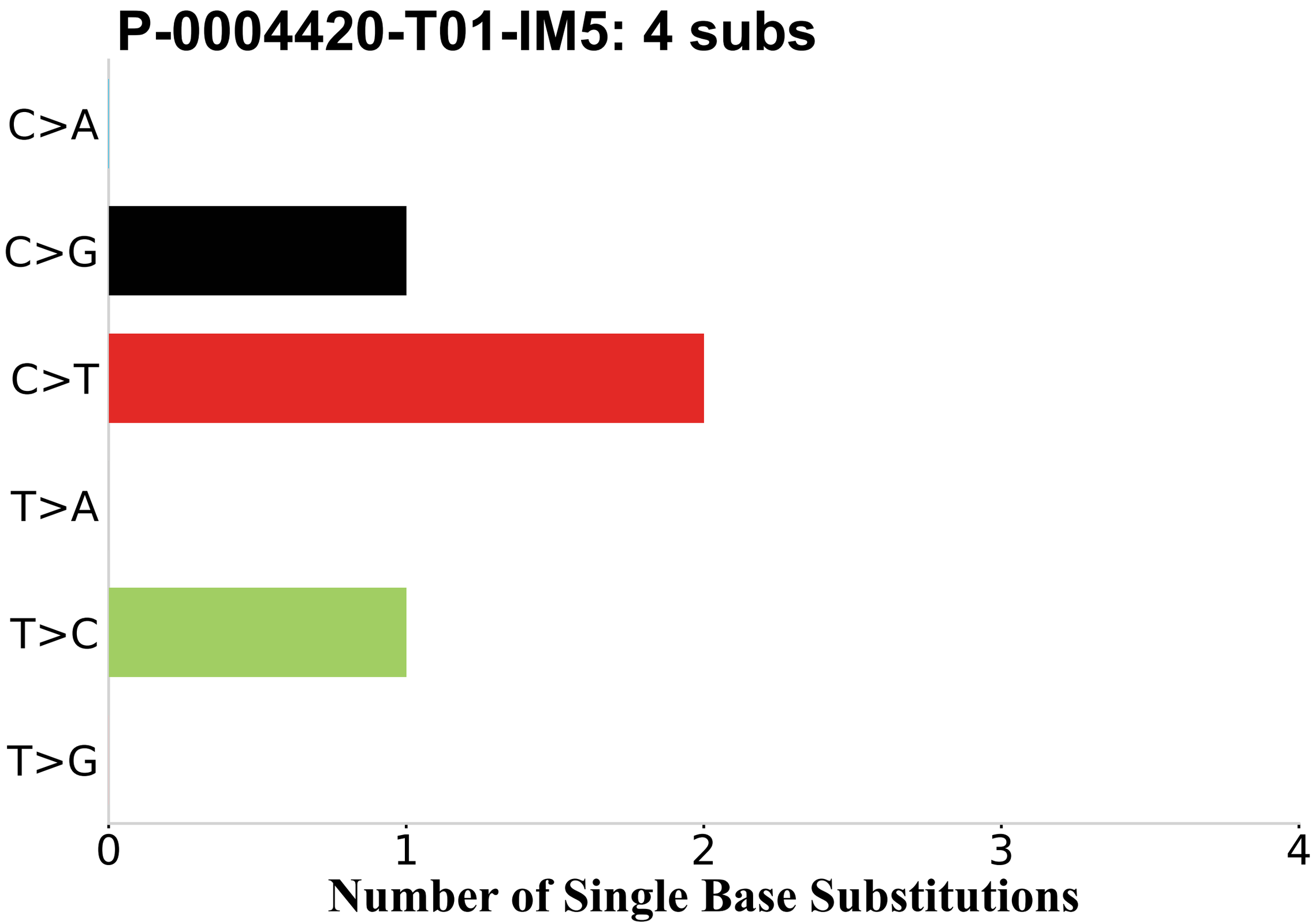
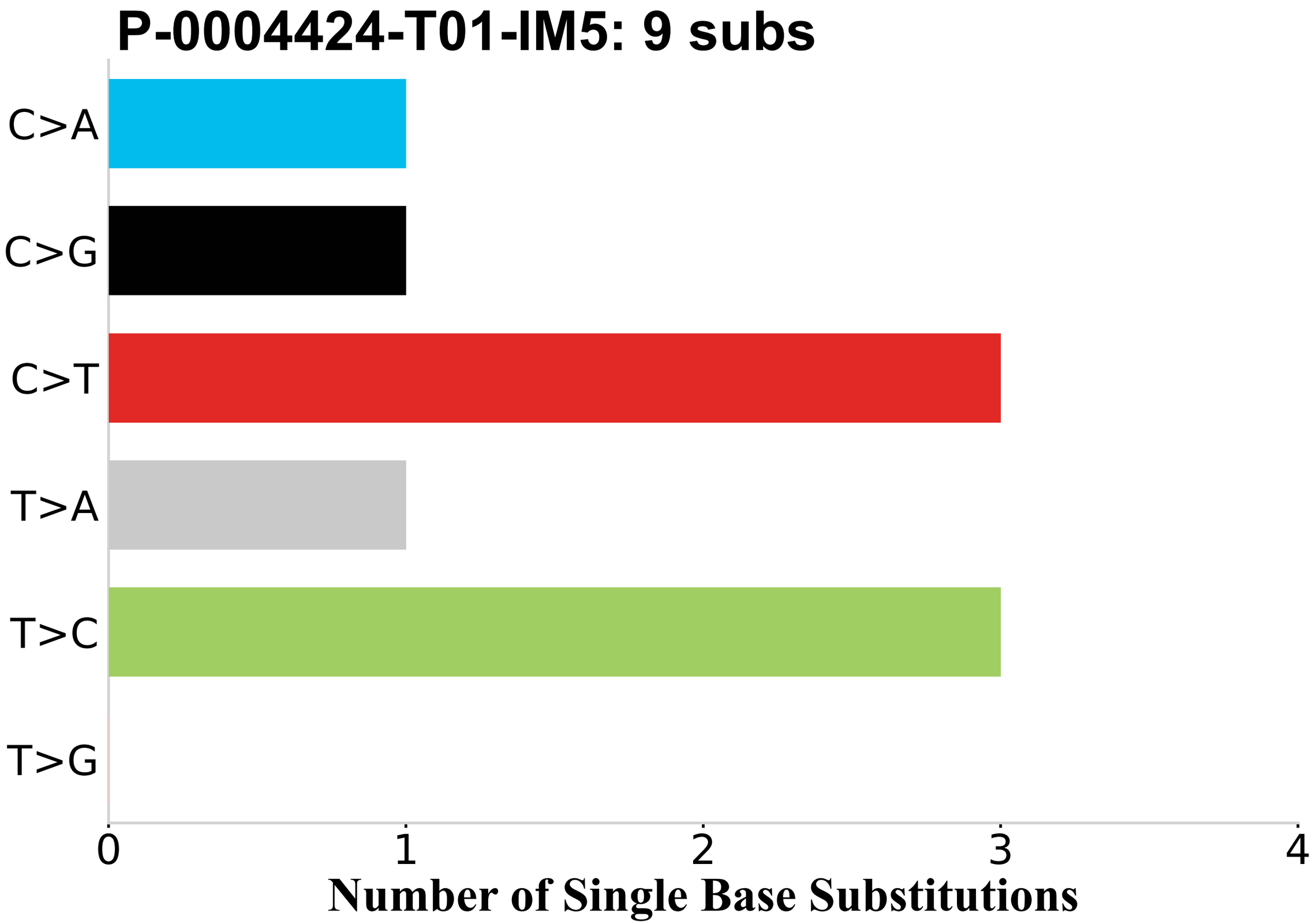
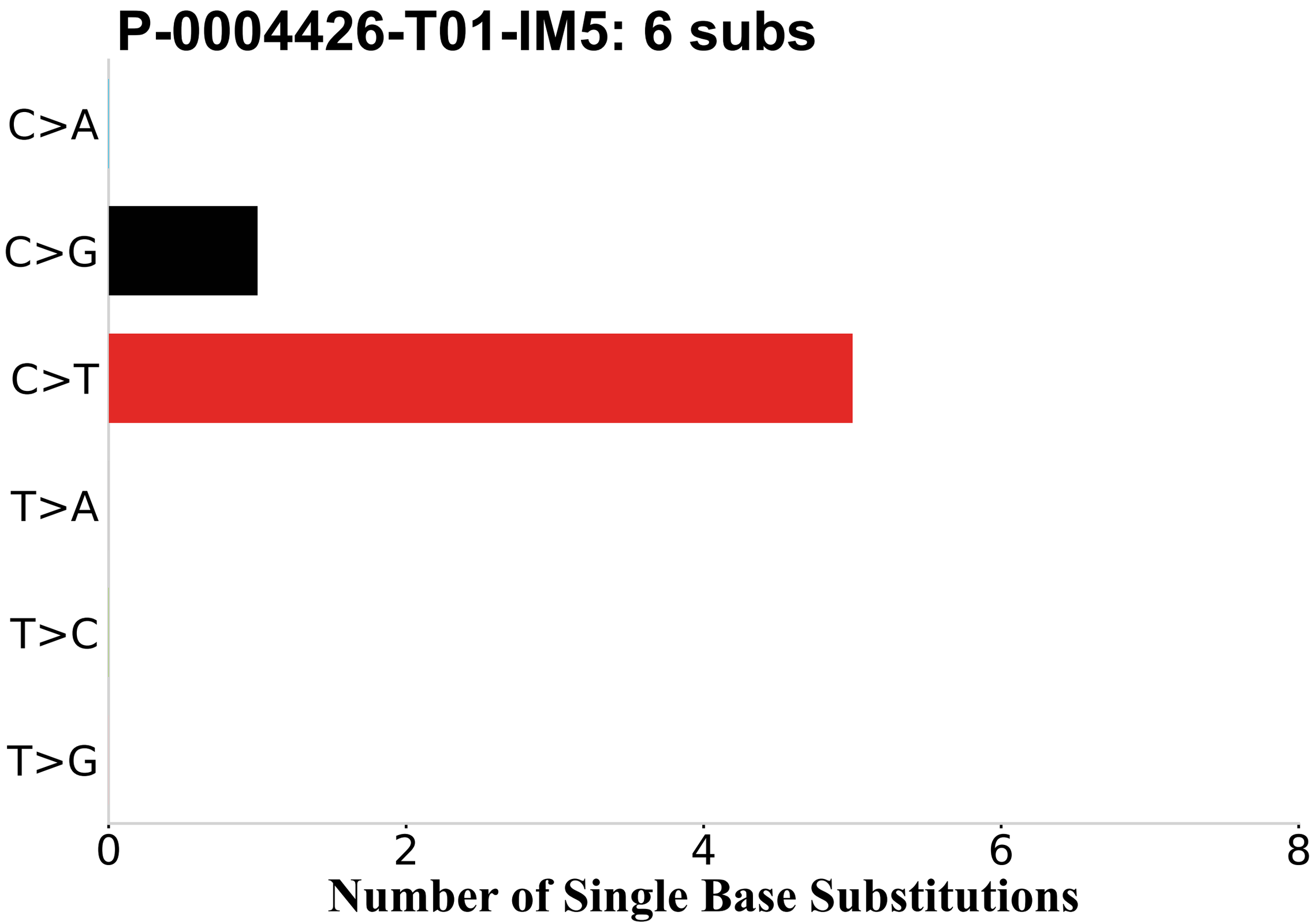
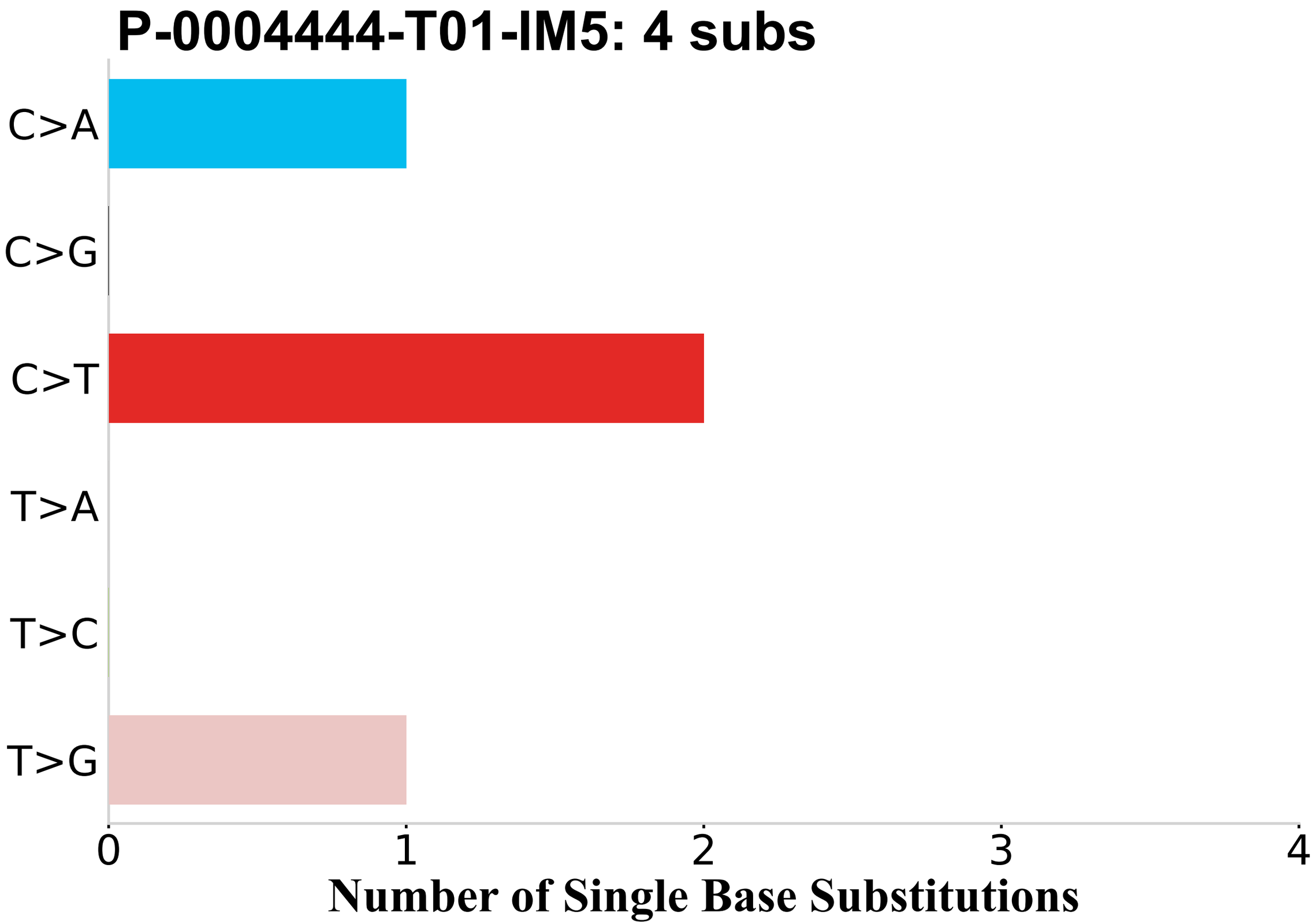
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

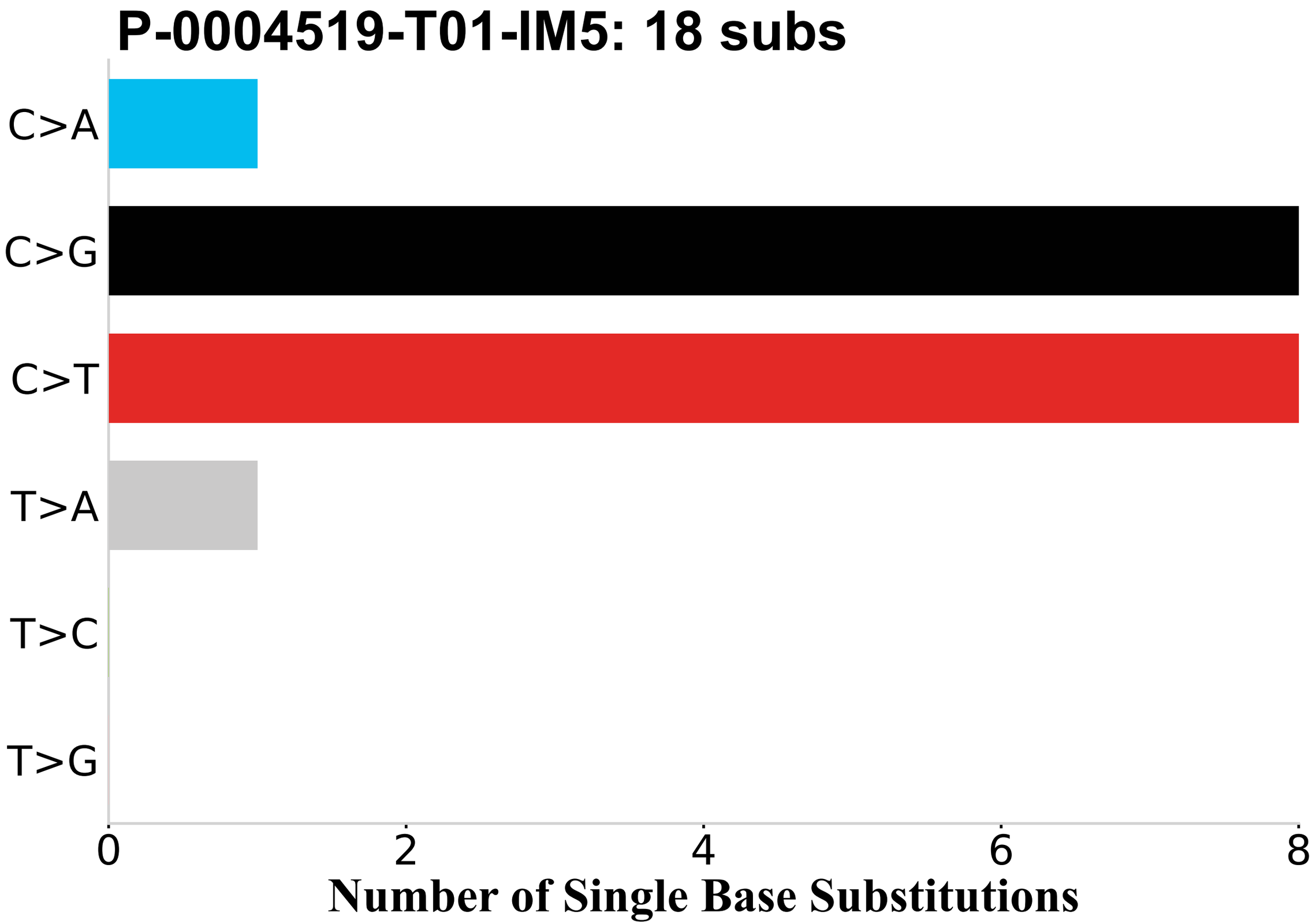

P-0004419-T01-IM5: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

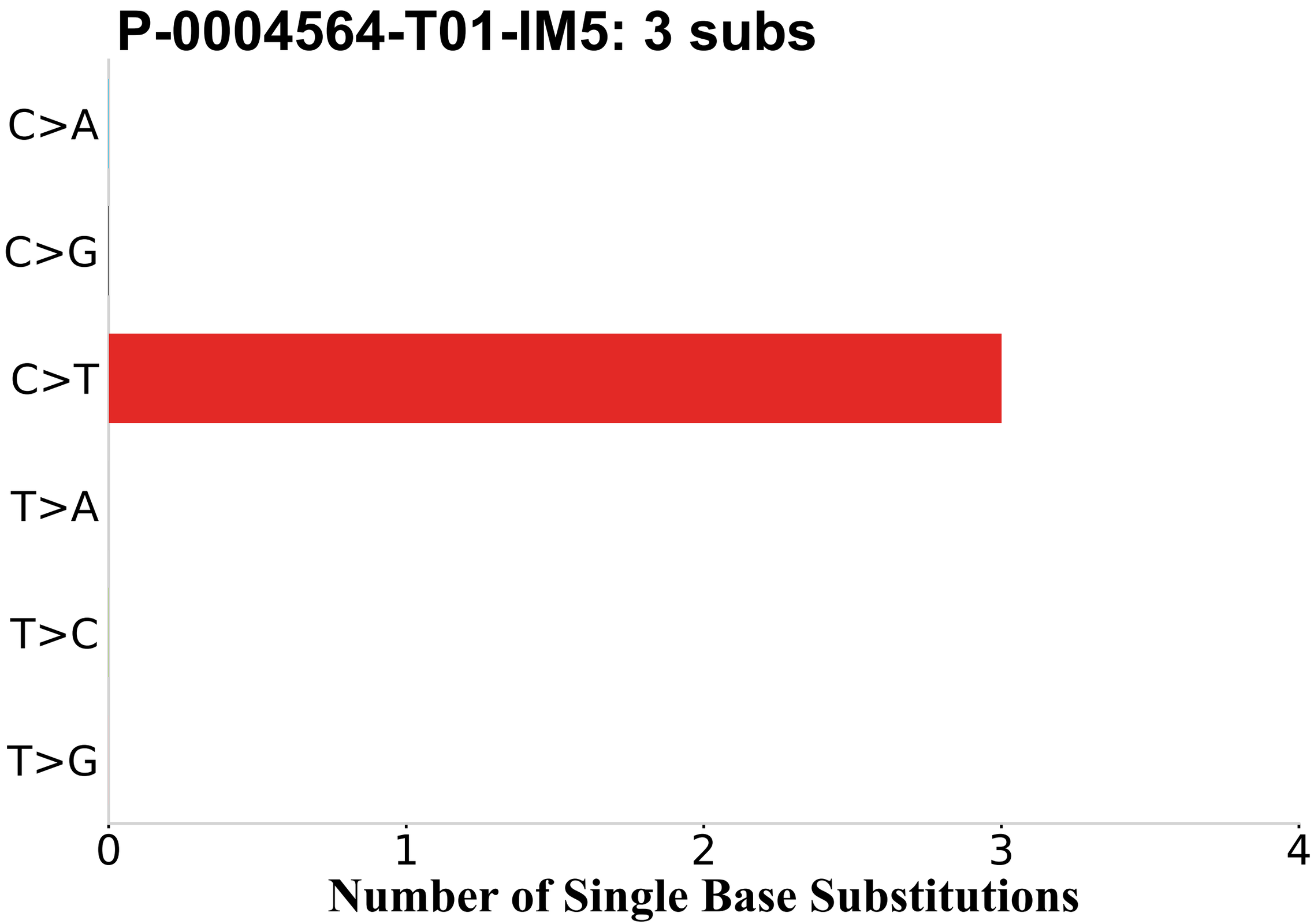

P-0004420-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

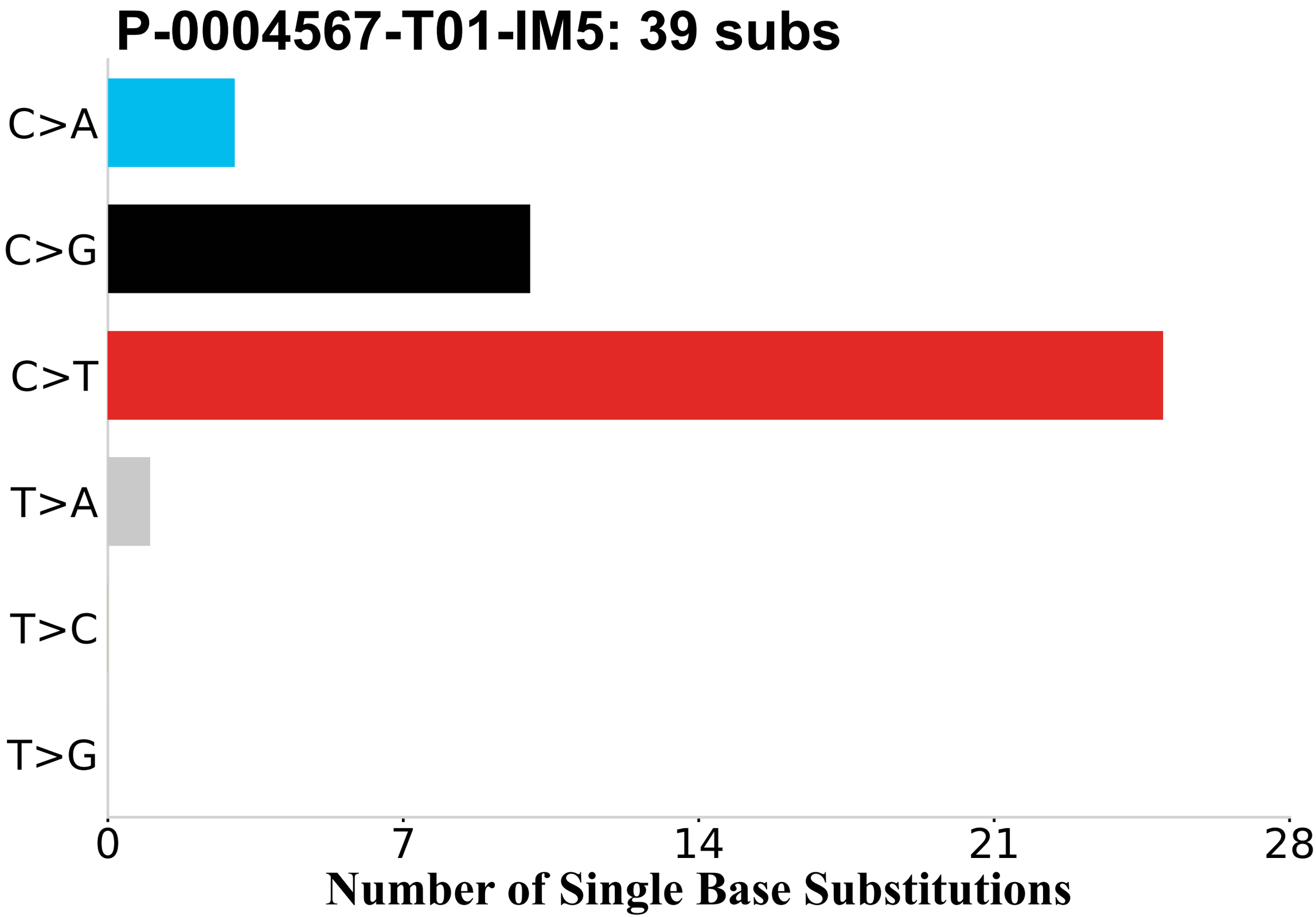

P-0004424-T01-IM5: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

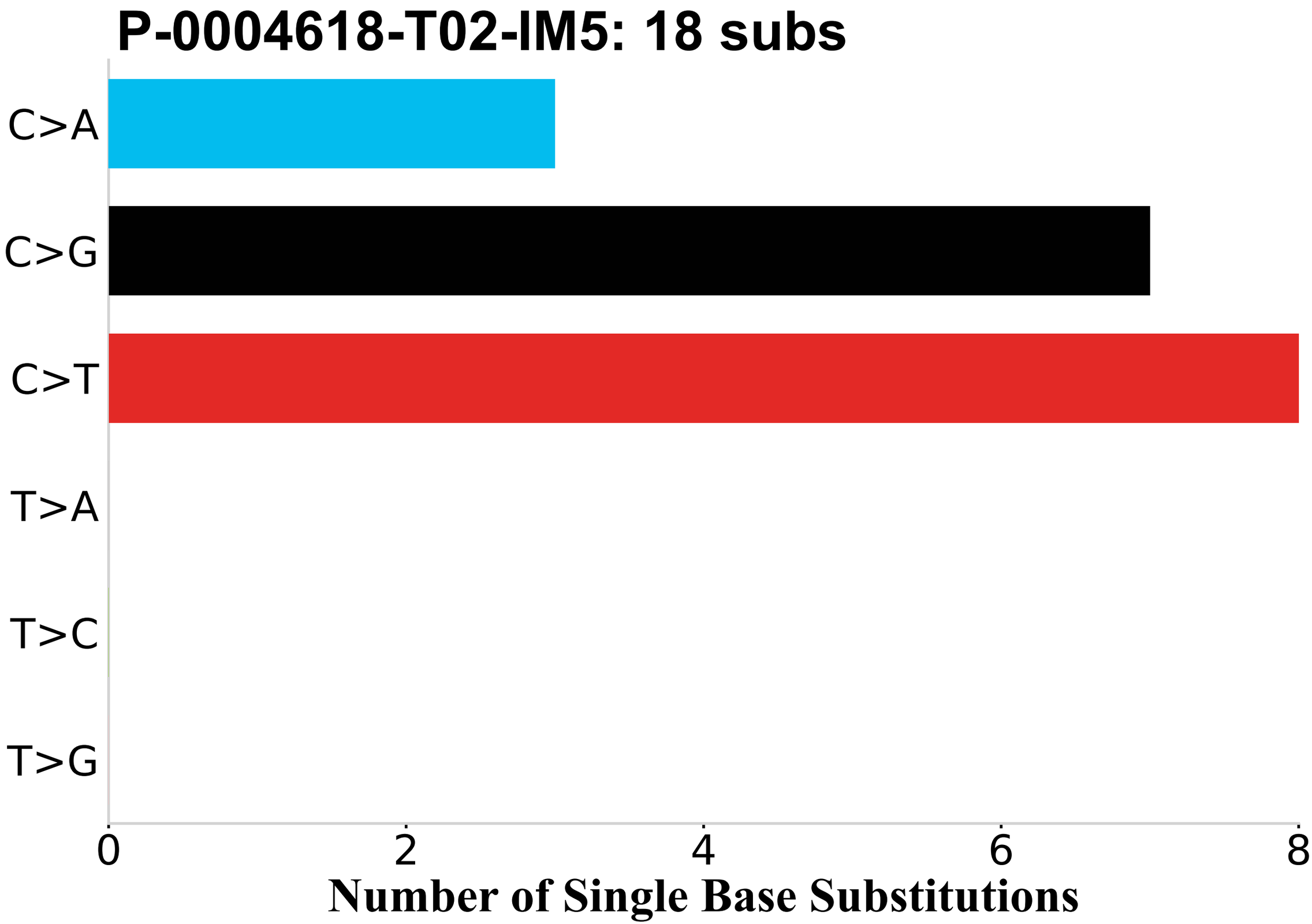

P-0004426-T01-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

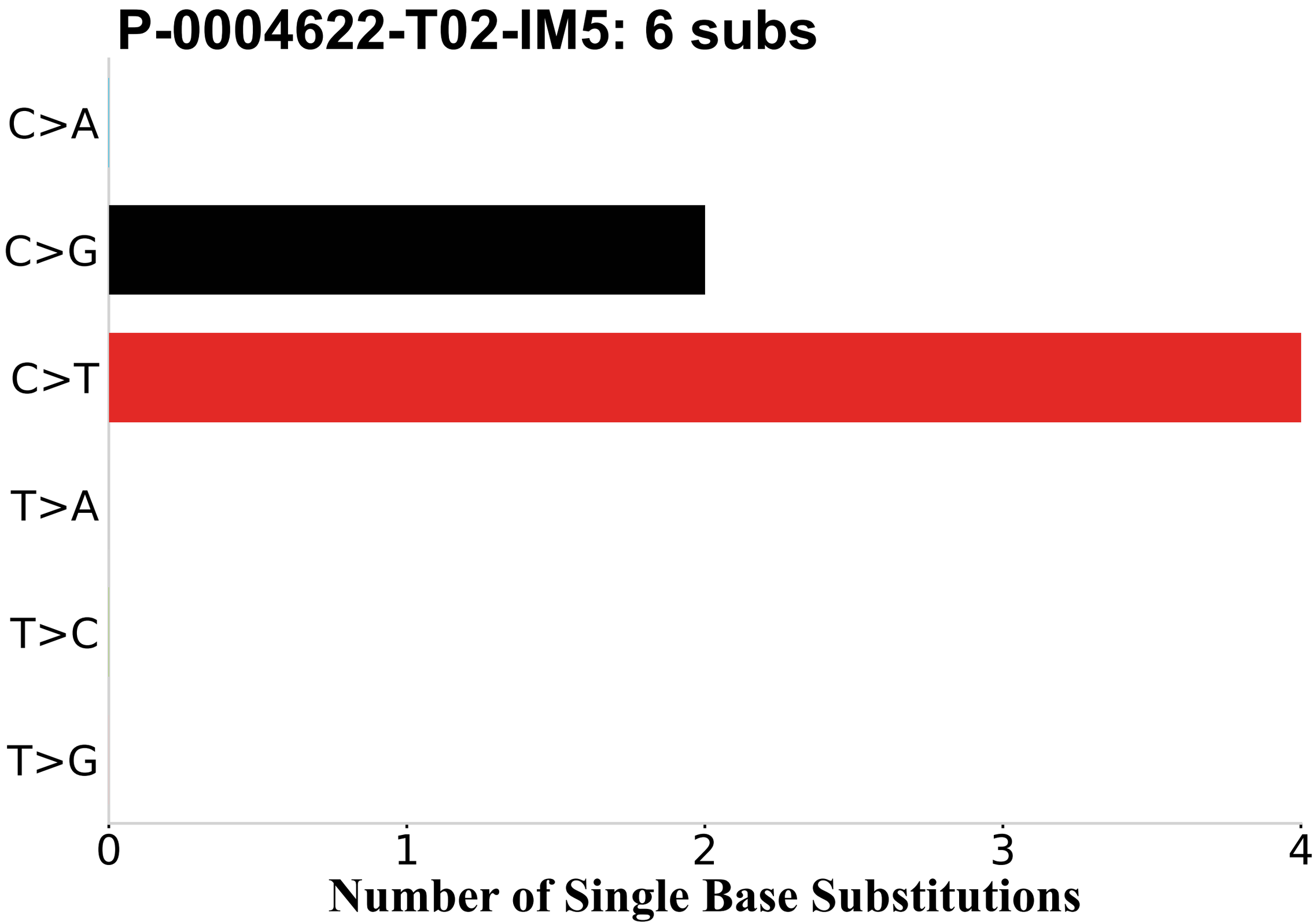

P-0004444-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

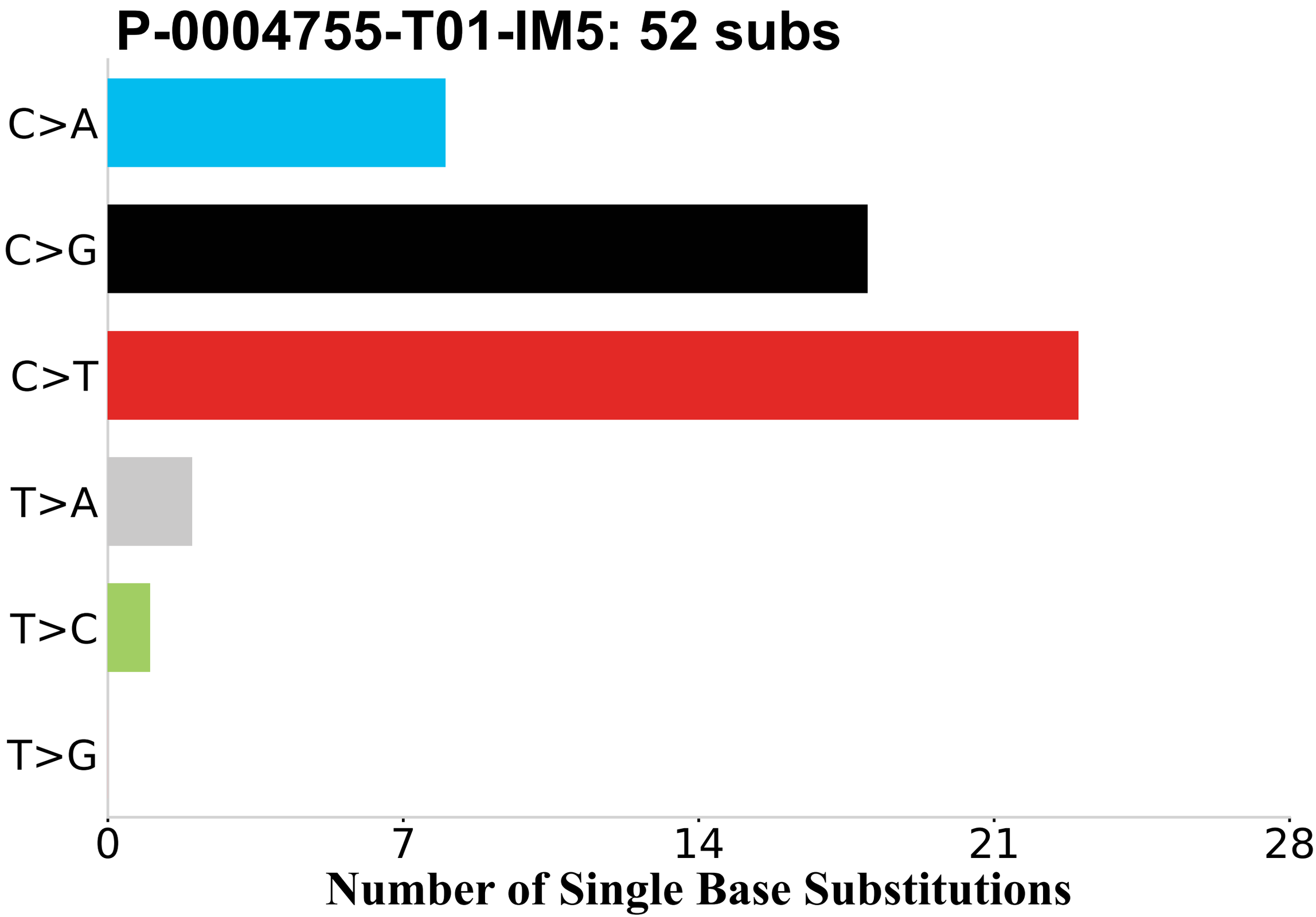

P-0004519-T01-IM5: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

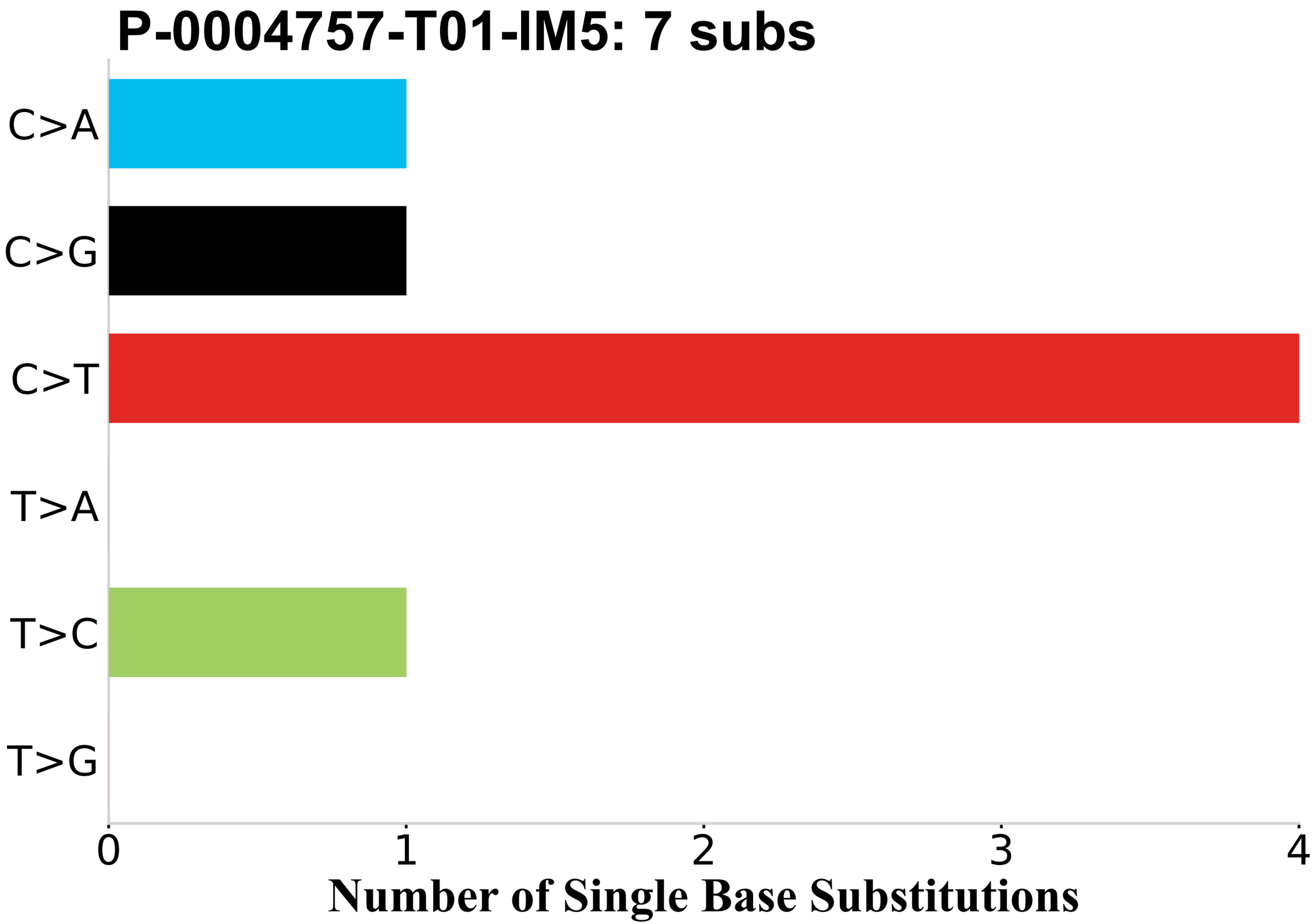

P-0004564-T01-IM5: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

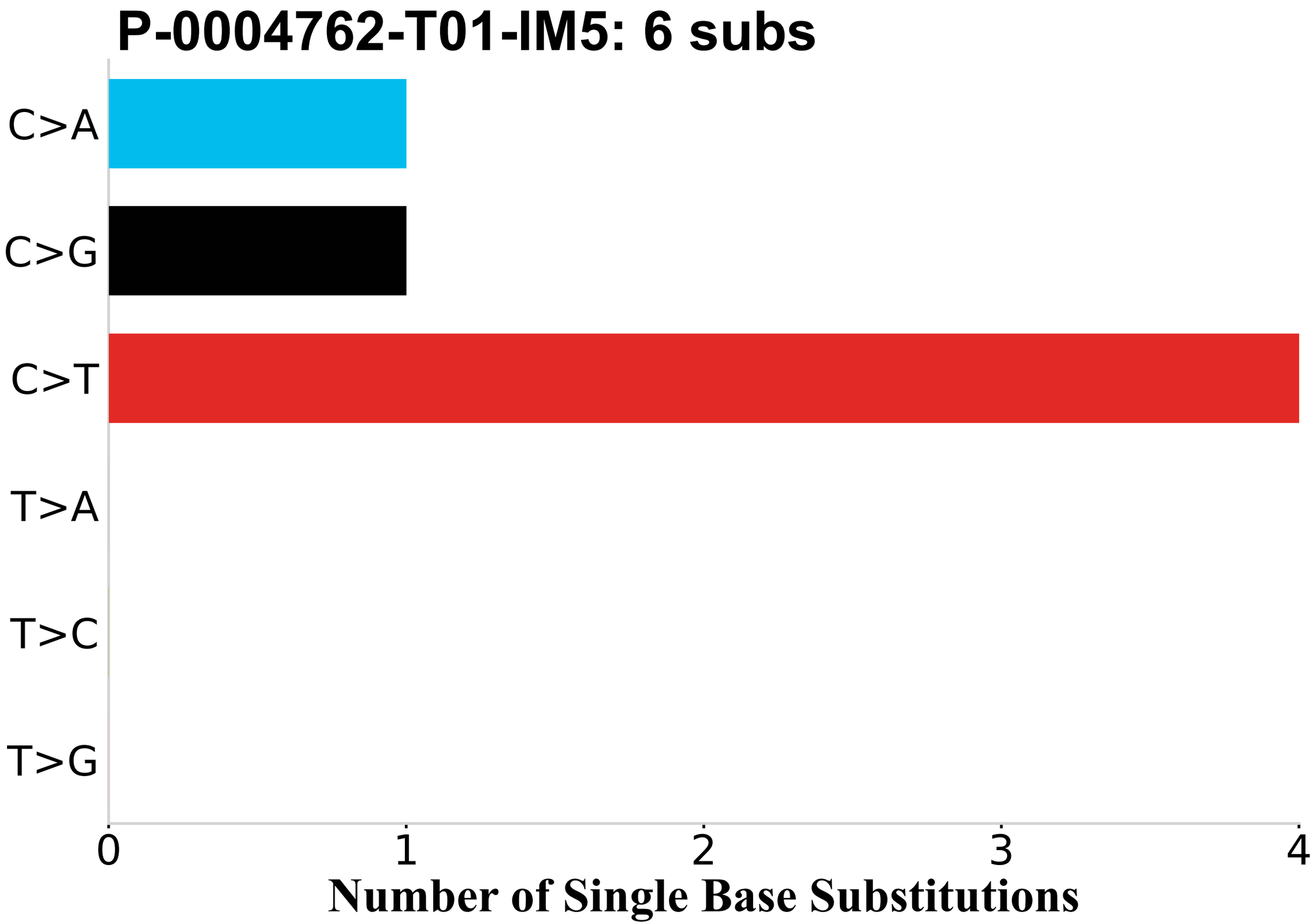

P-0004567-T01-IM5: 39 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions

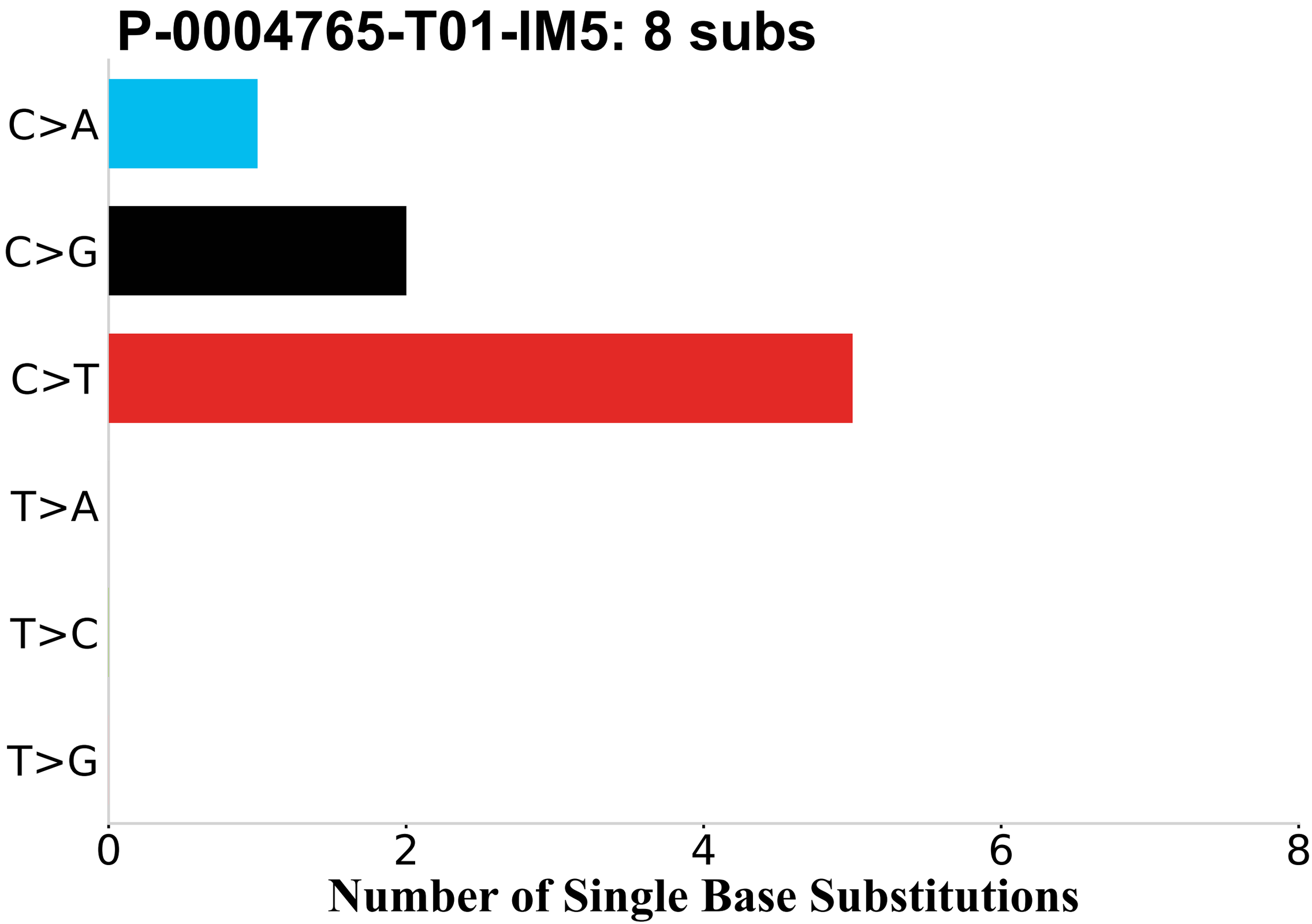

P-0004618-T02-IM5: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

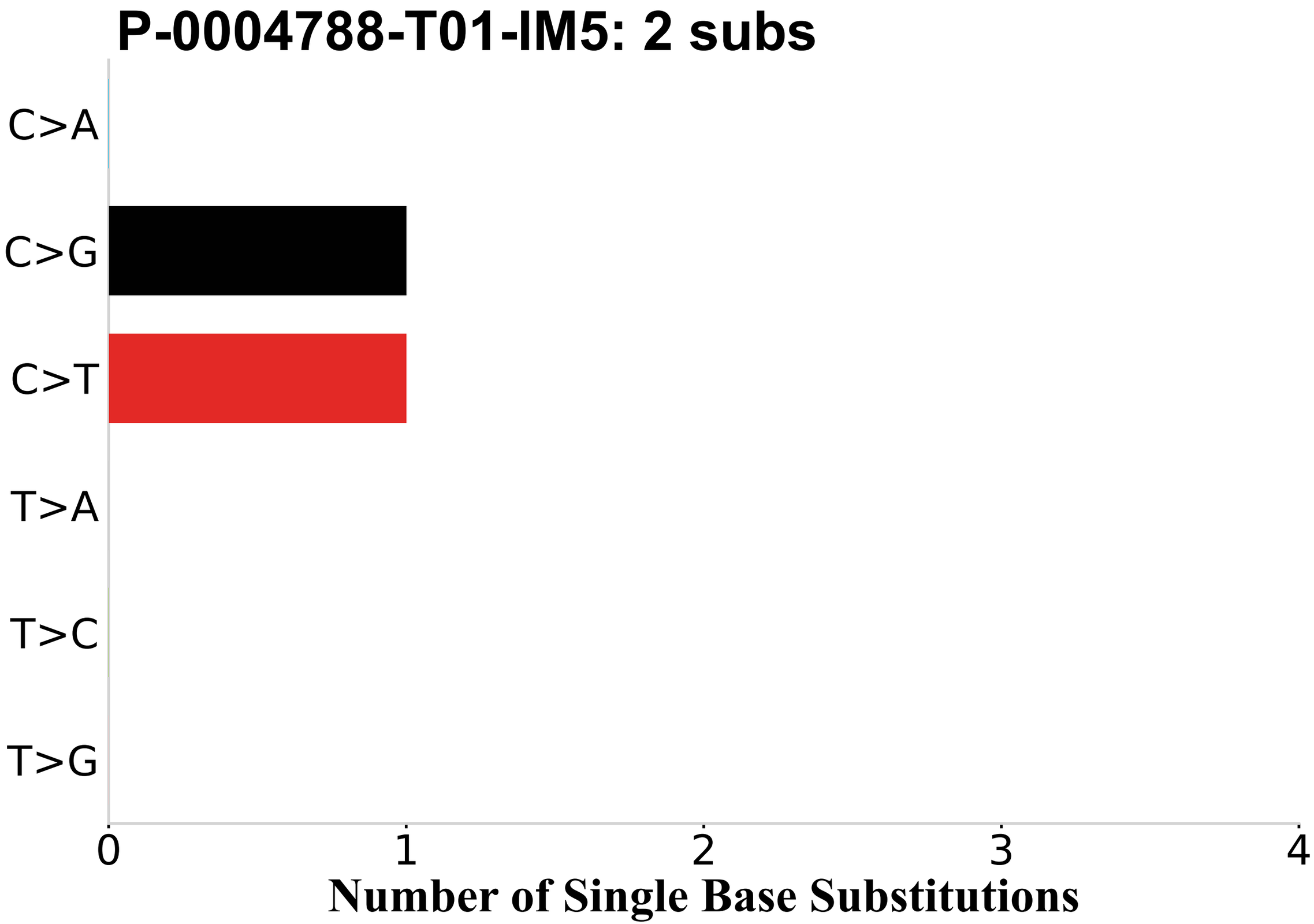

P-0004622-T02-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

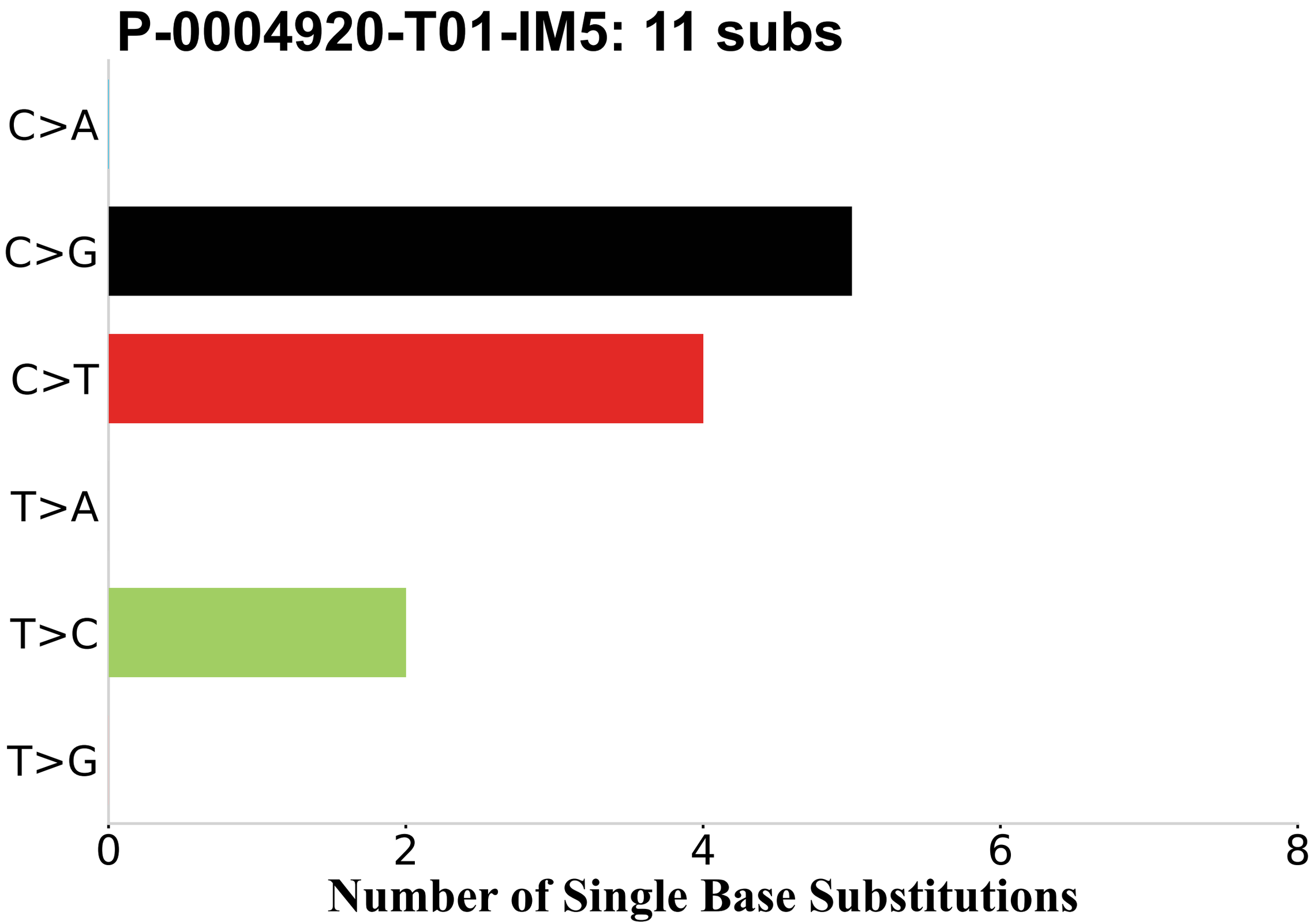

P-0004755-T01-IM5: 52 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0004757-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004762-T01-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004765-T01-IM5: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0004788-T01-IM5: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004920-T01-IM5: 11 subs
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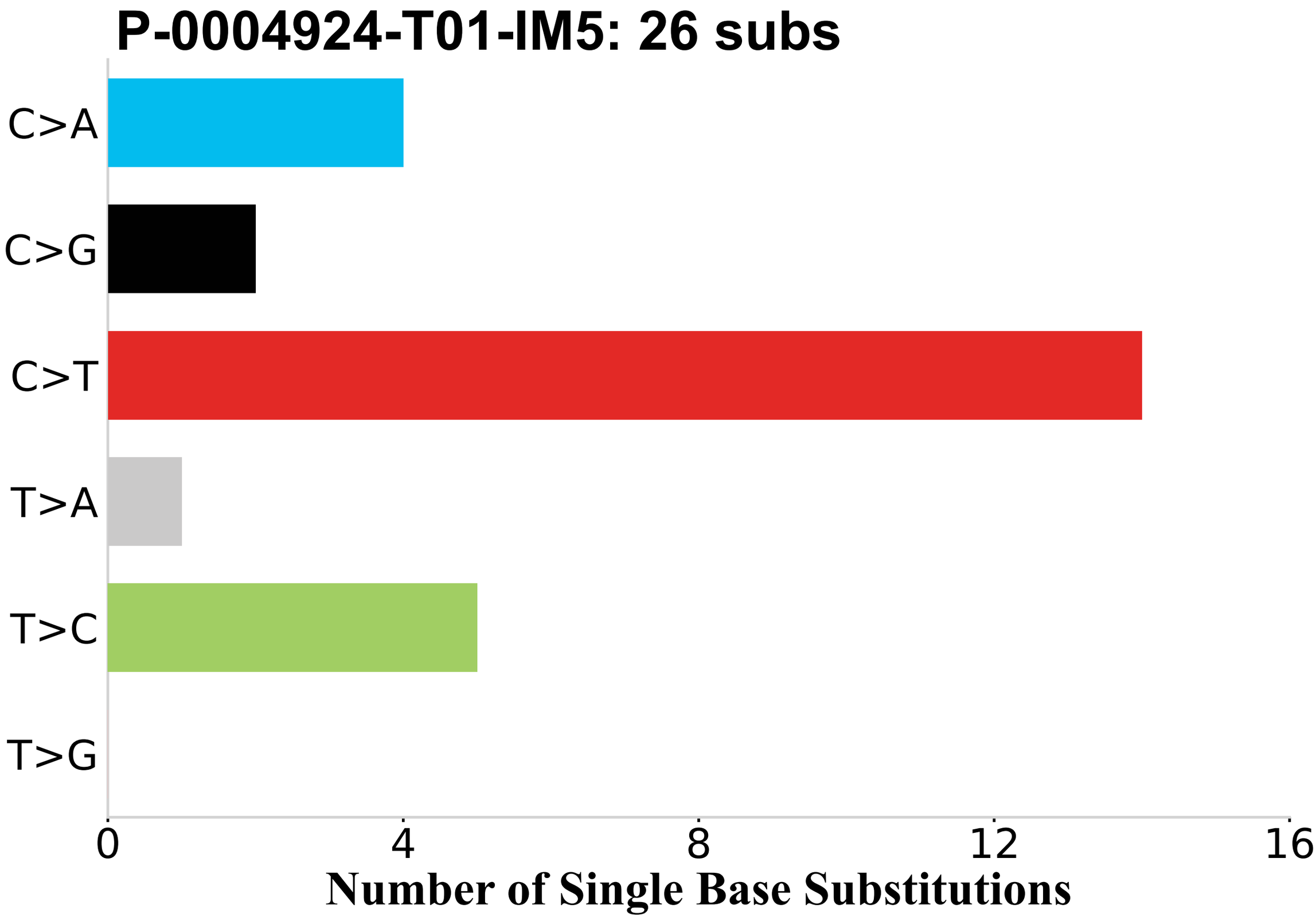
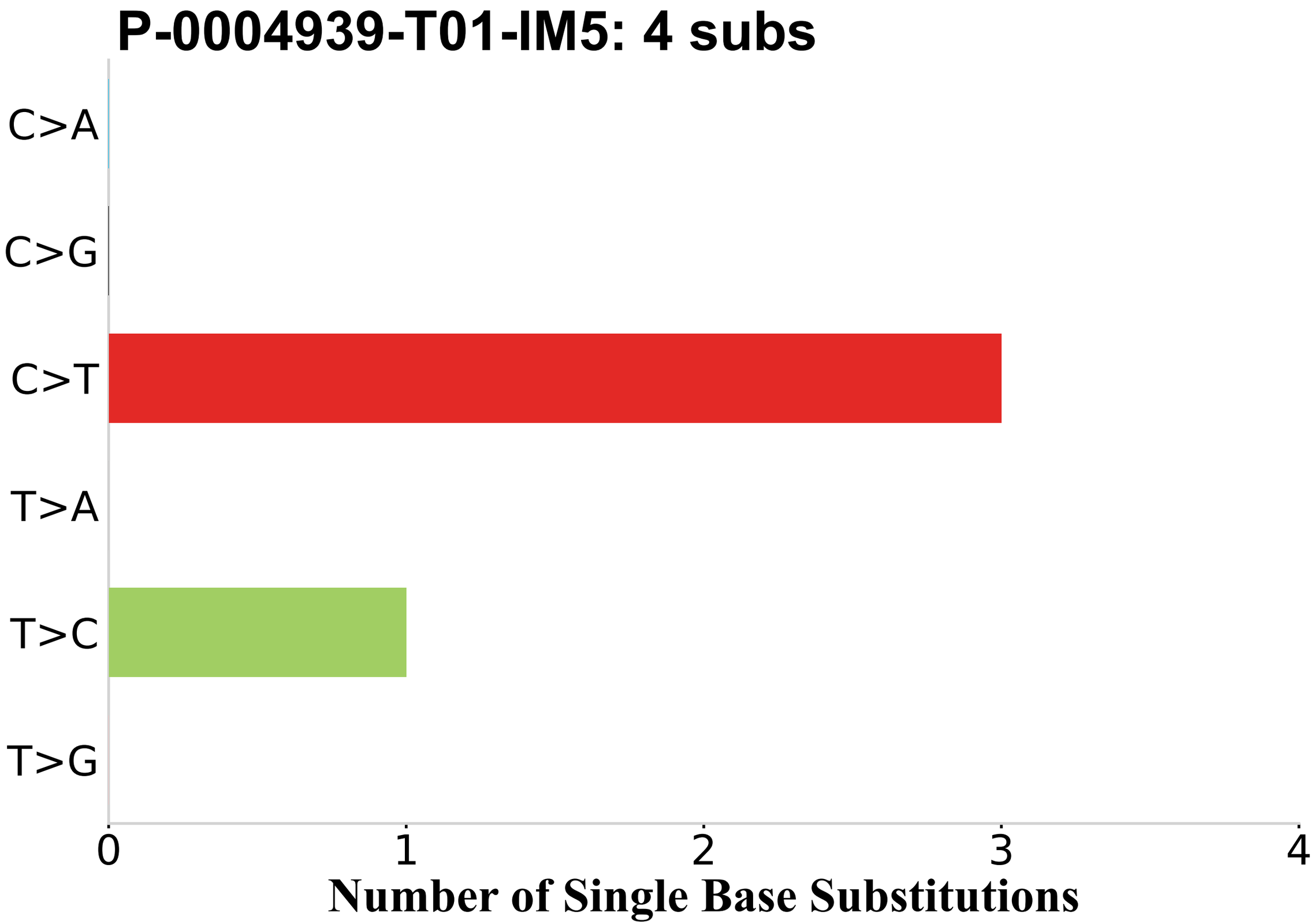
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0004924-T01-IM5: 26 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0004939-T01-IM5: 4 subs
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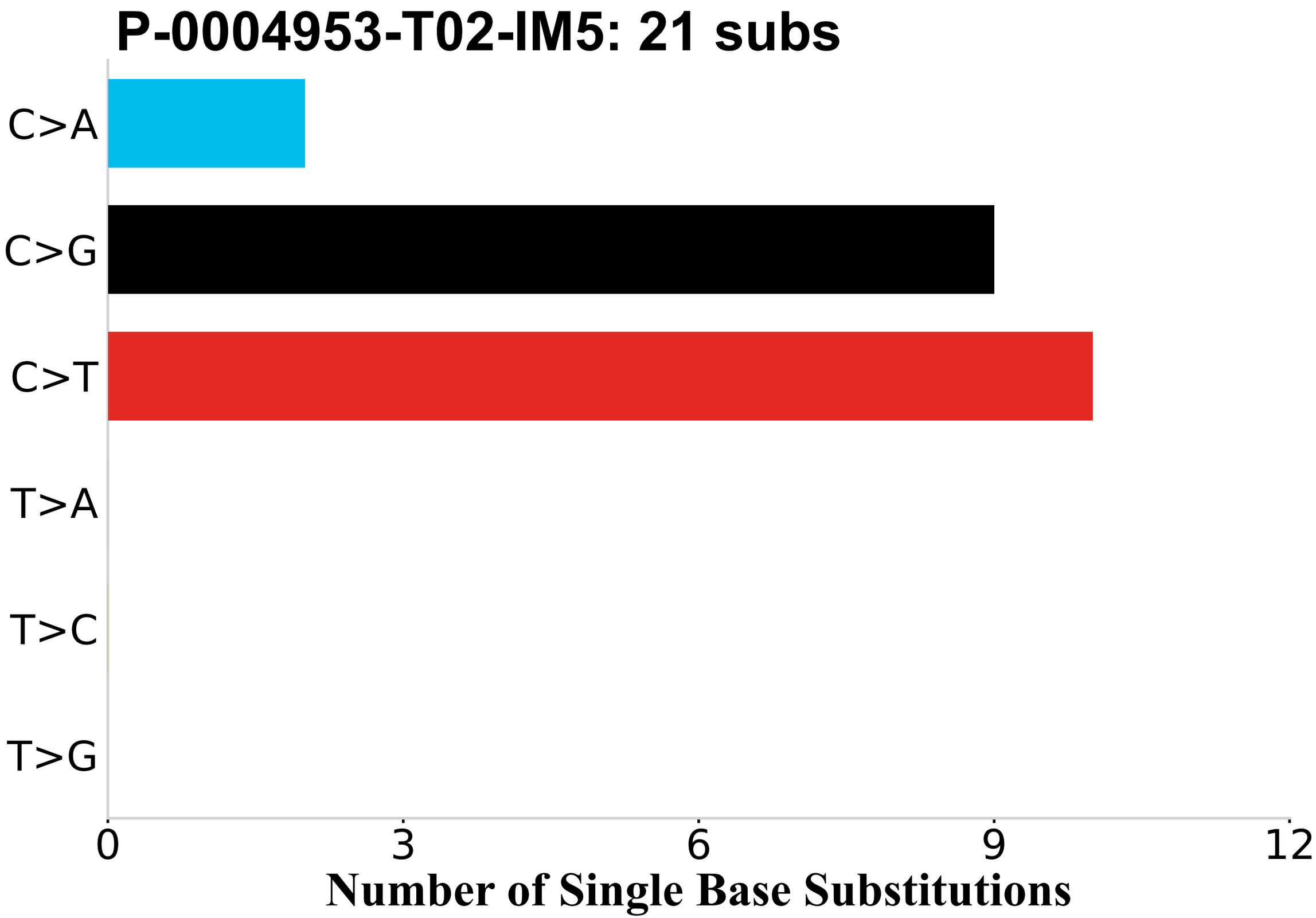
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0004953-T02-IM5: 21 subs
C>A
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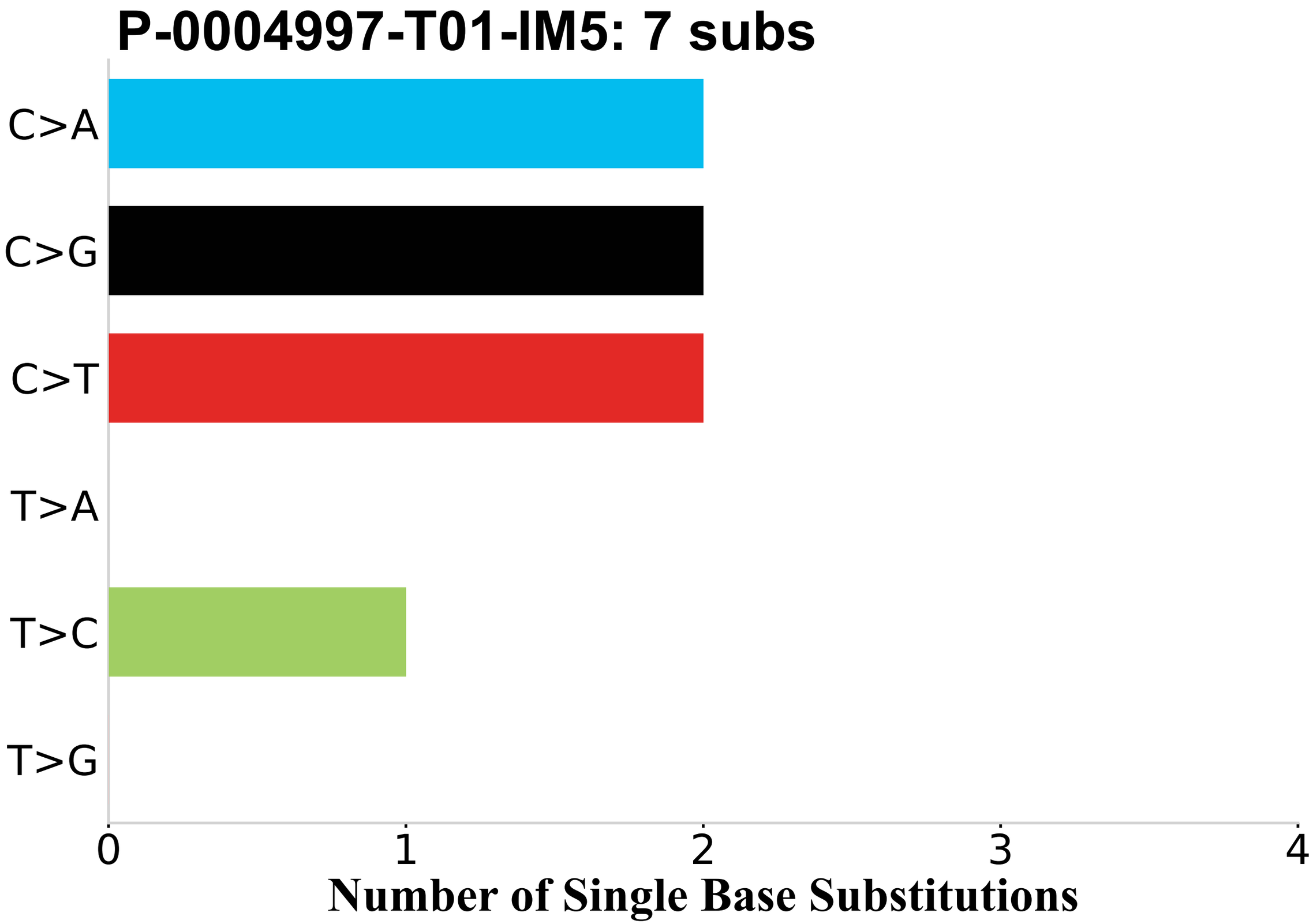
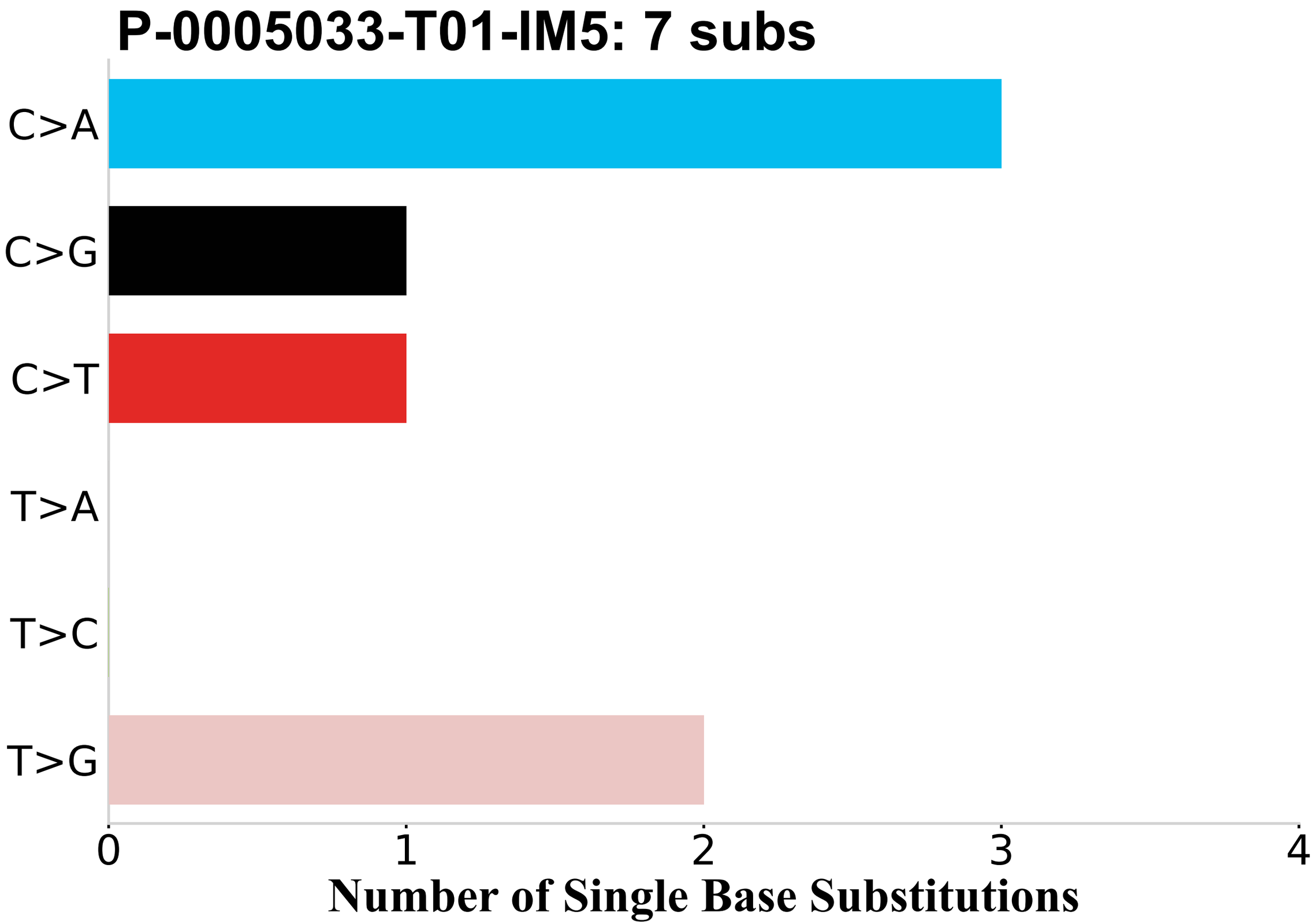
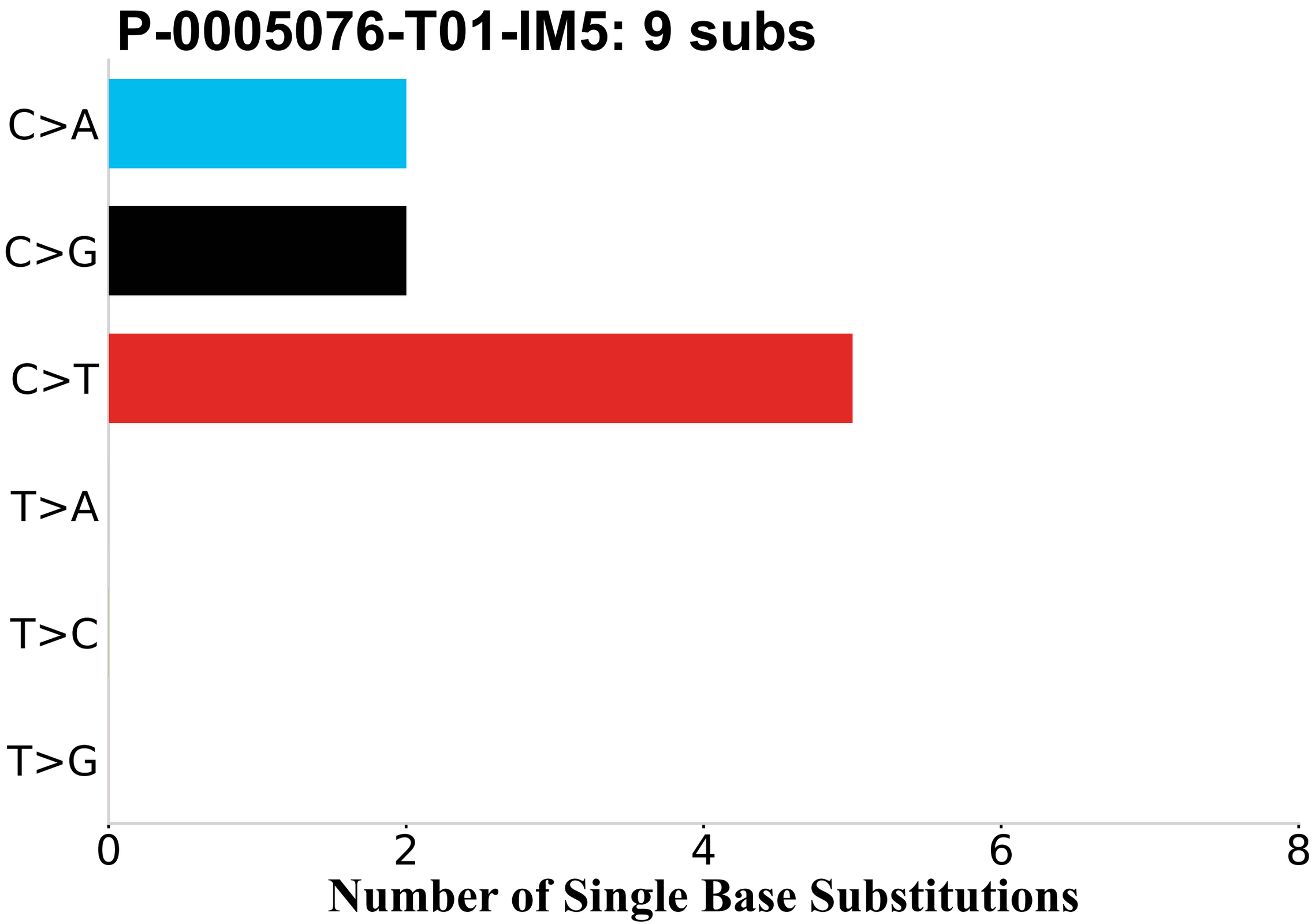
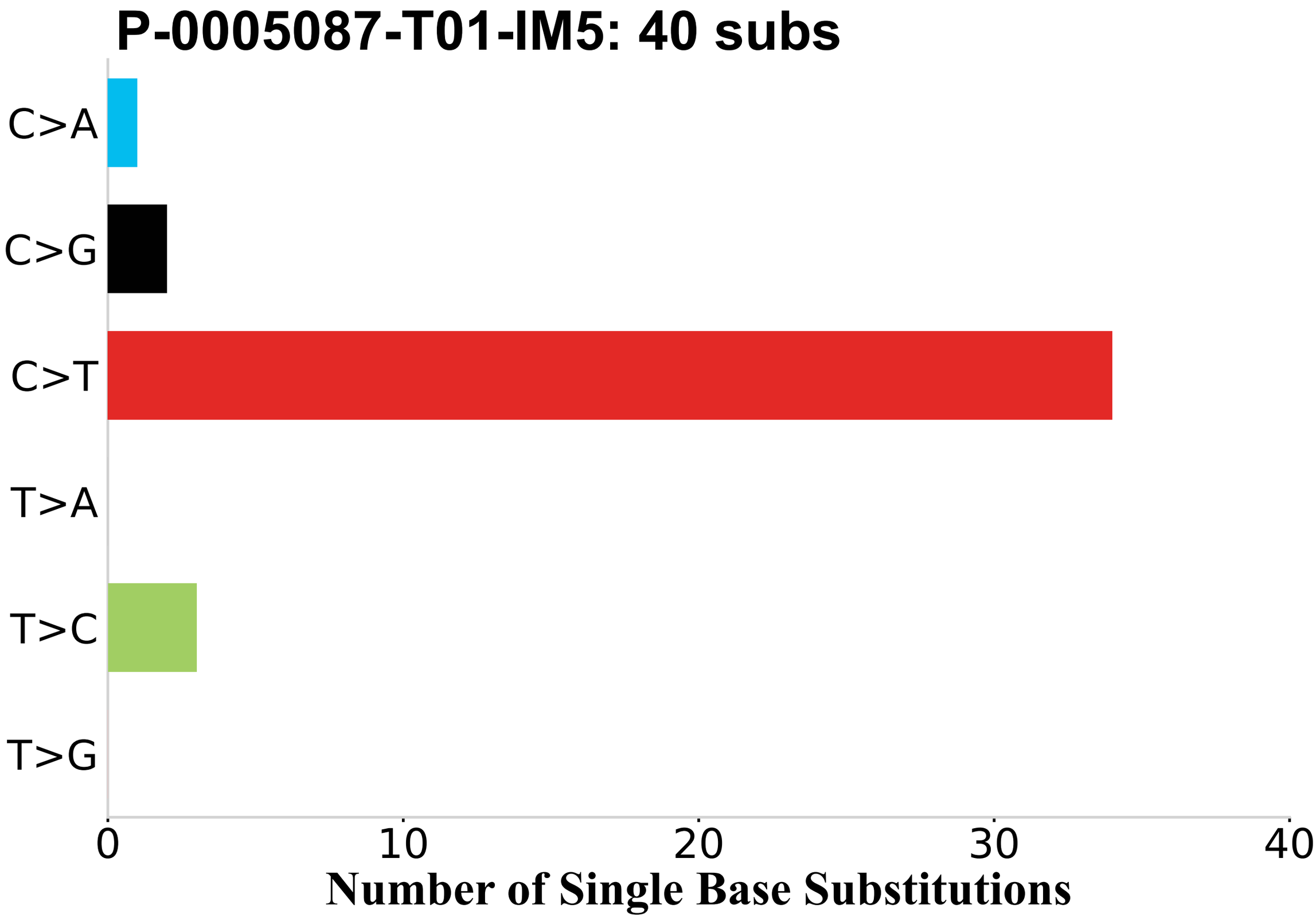
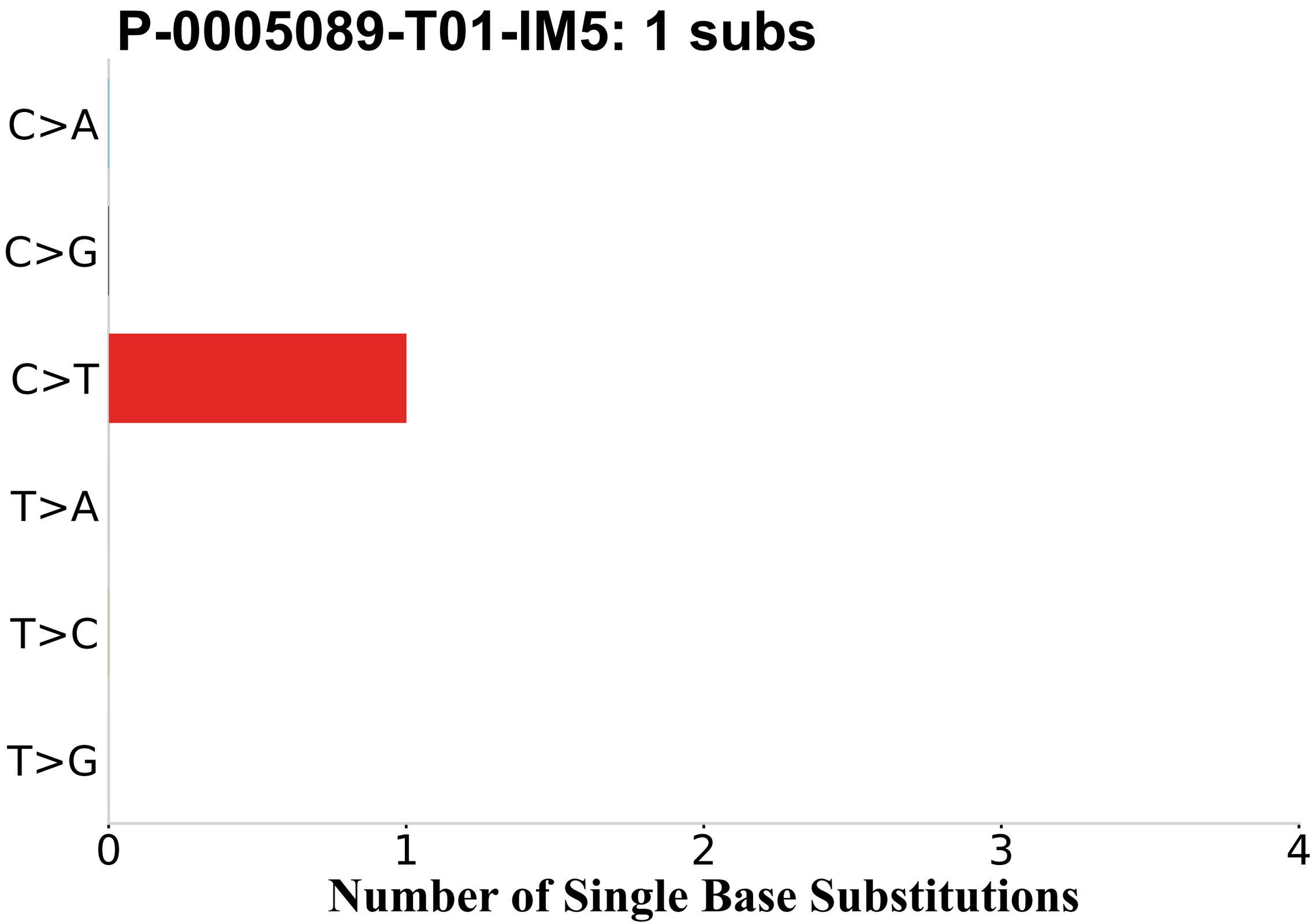
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

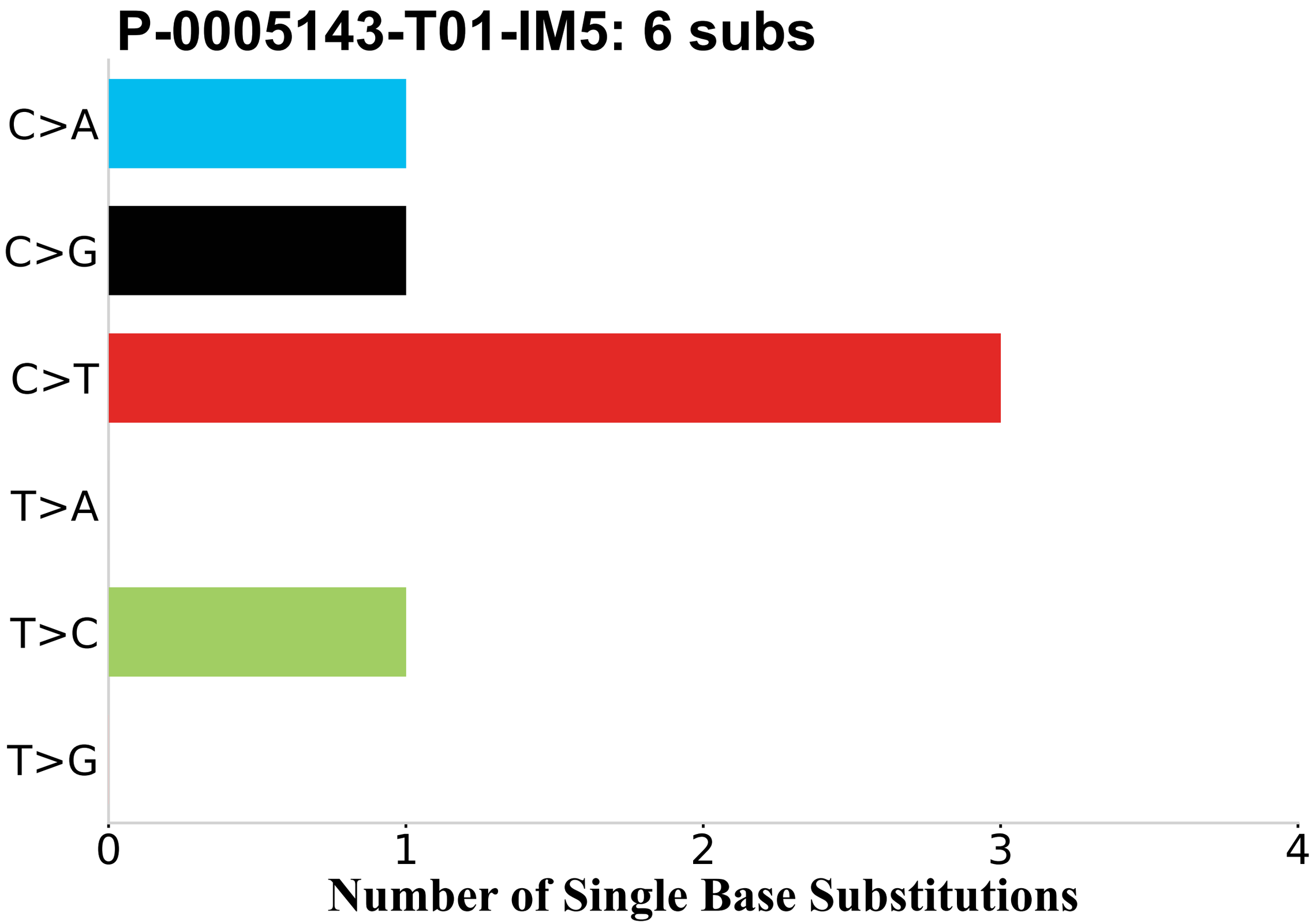

P-0004997-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005033-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005076-T01-IM5: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0005087-T01-IM5: 40 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
10
20
30
40
Number of Single Base Substitutions


P-0005089-T01-IM5: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005143-T01-IM5: 6 subs
C>A
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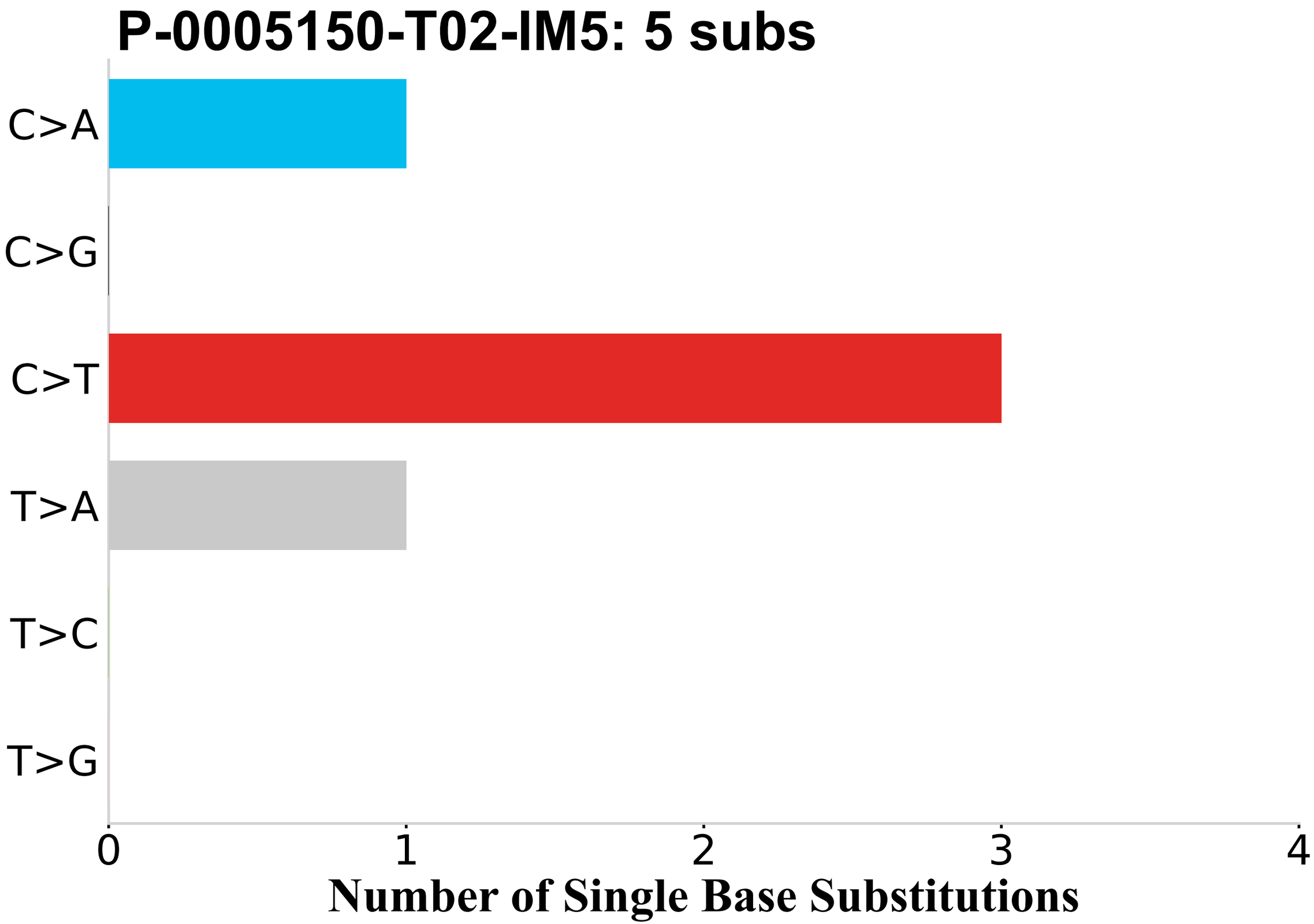
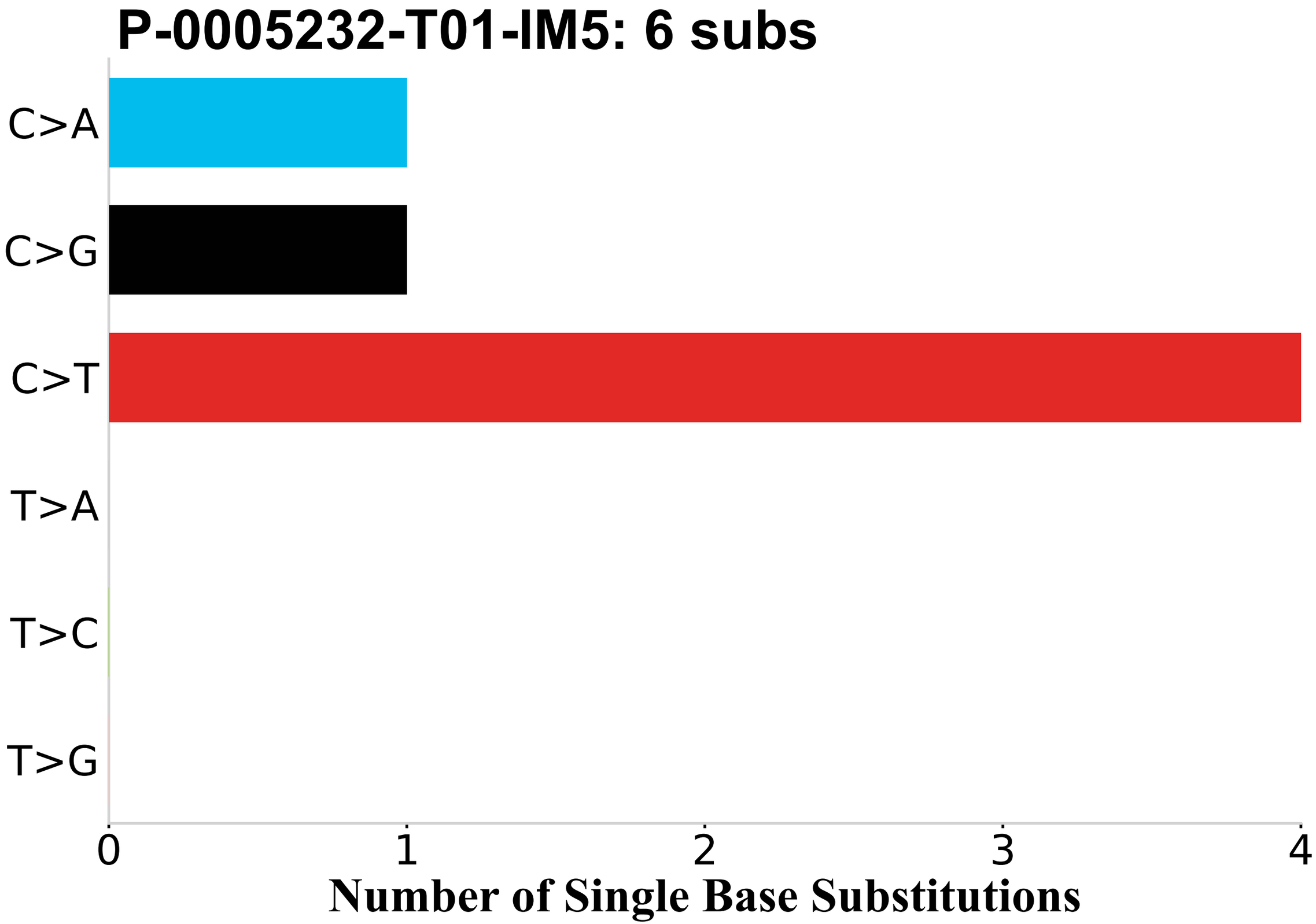
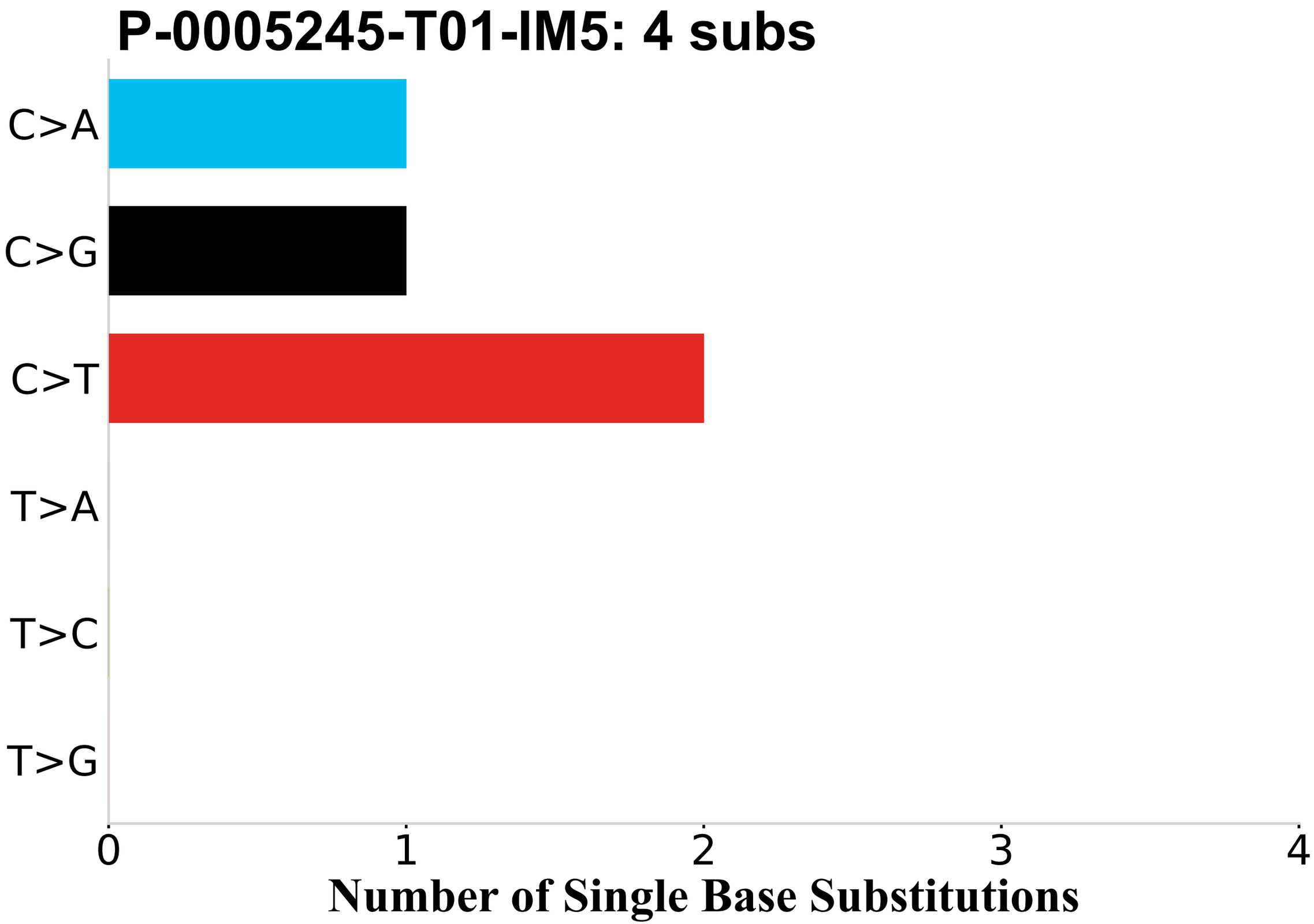
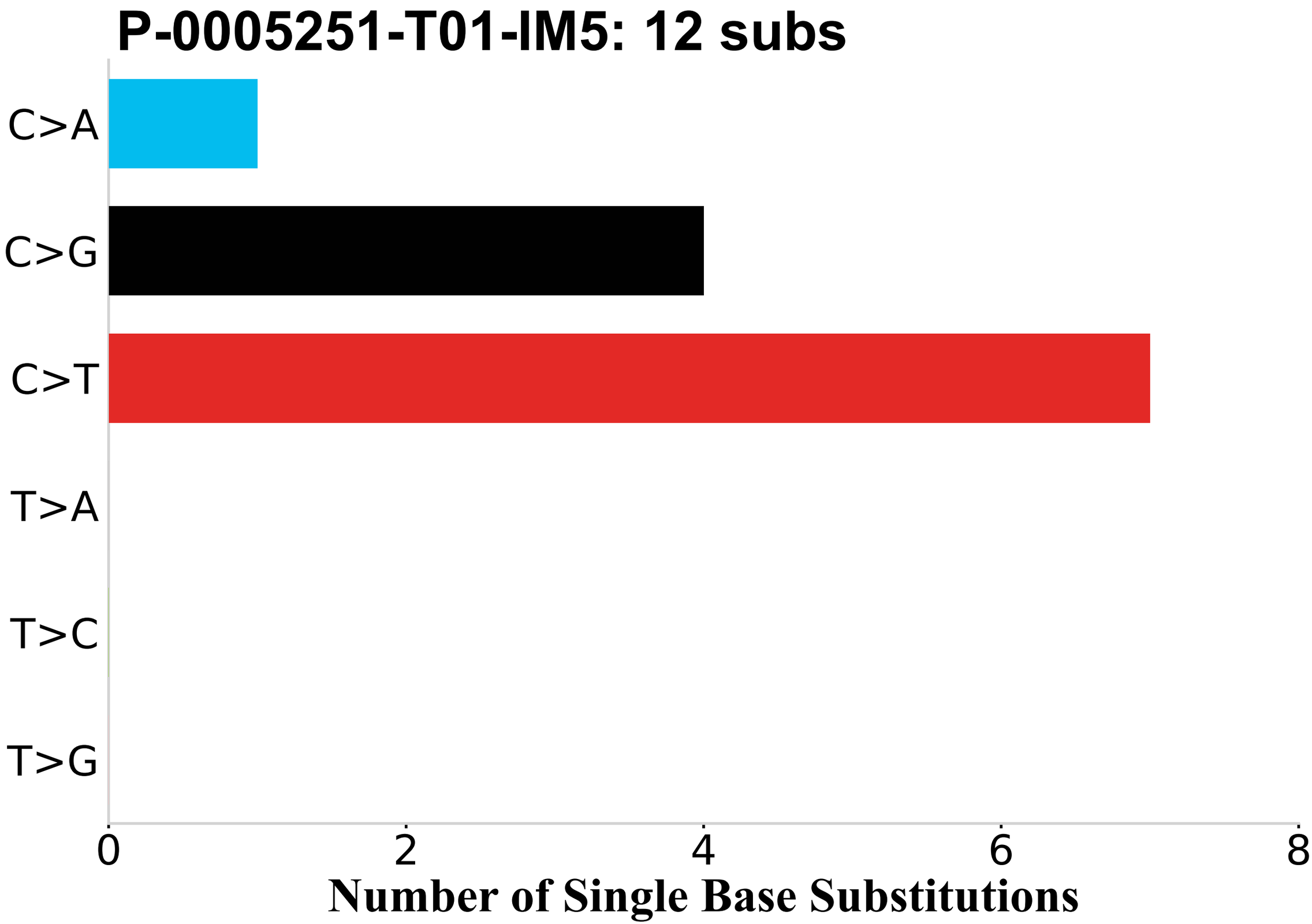
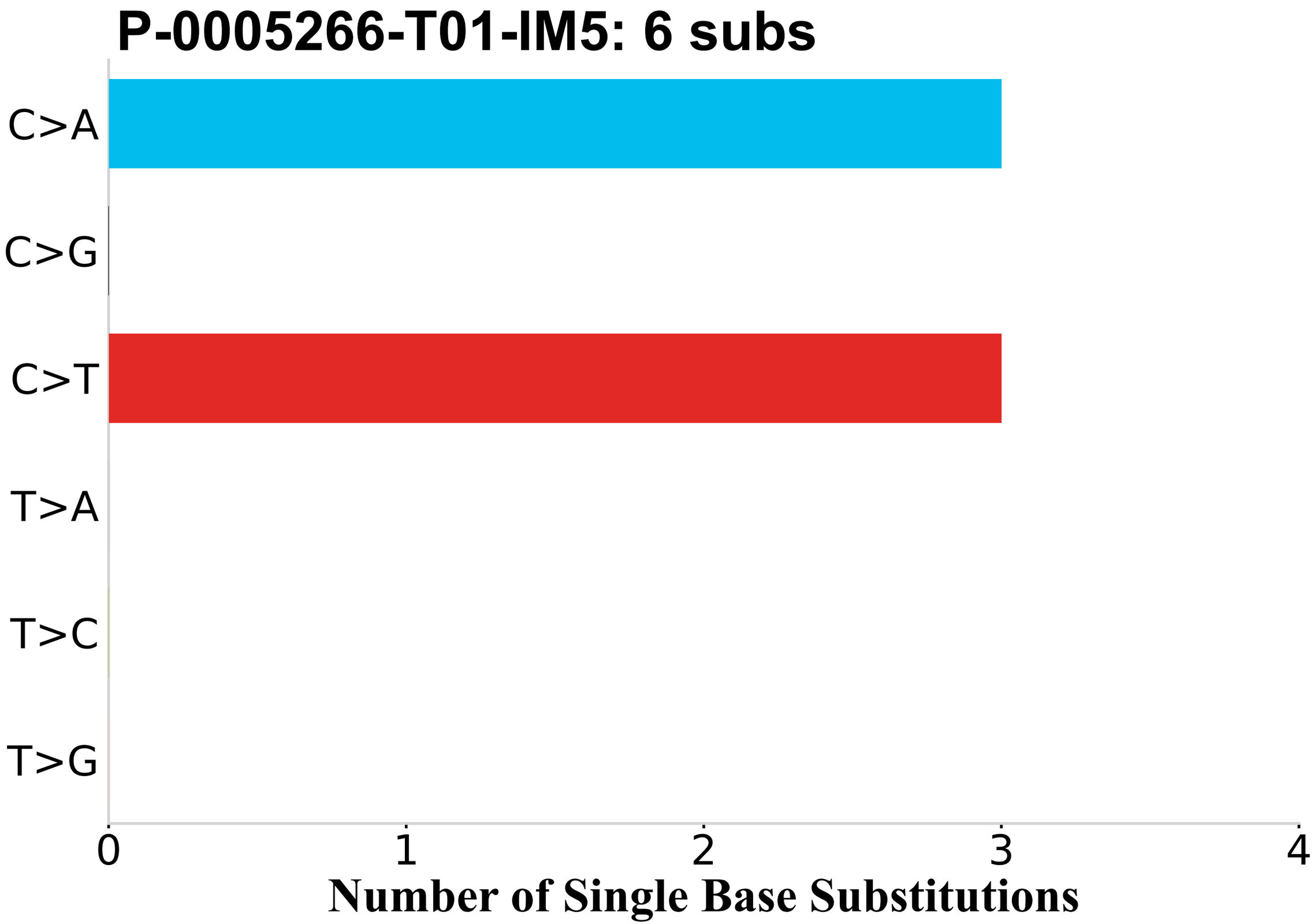
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005150-T02-IM5: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005232-T01-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005245-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005251-T01-IM5: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0005266-T01-IM5: 6 subs
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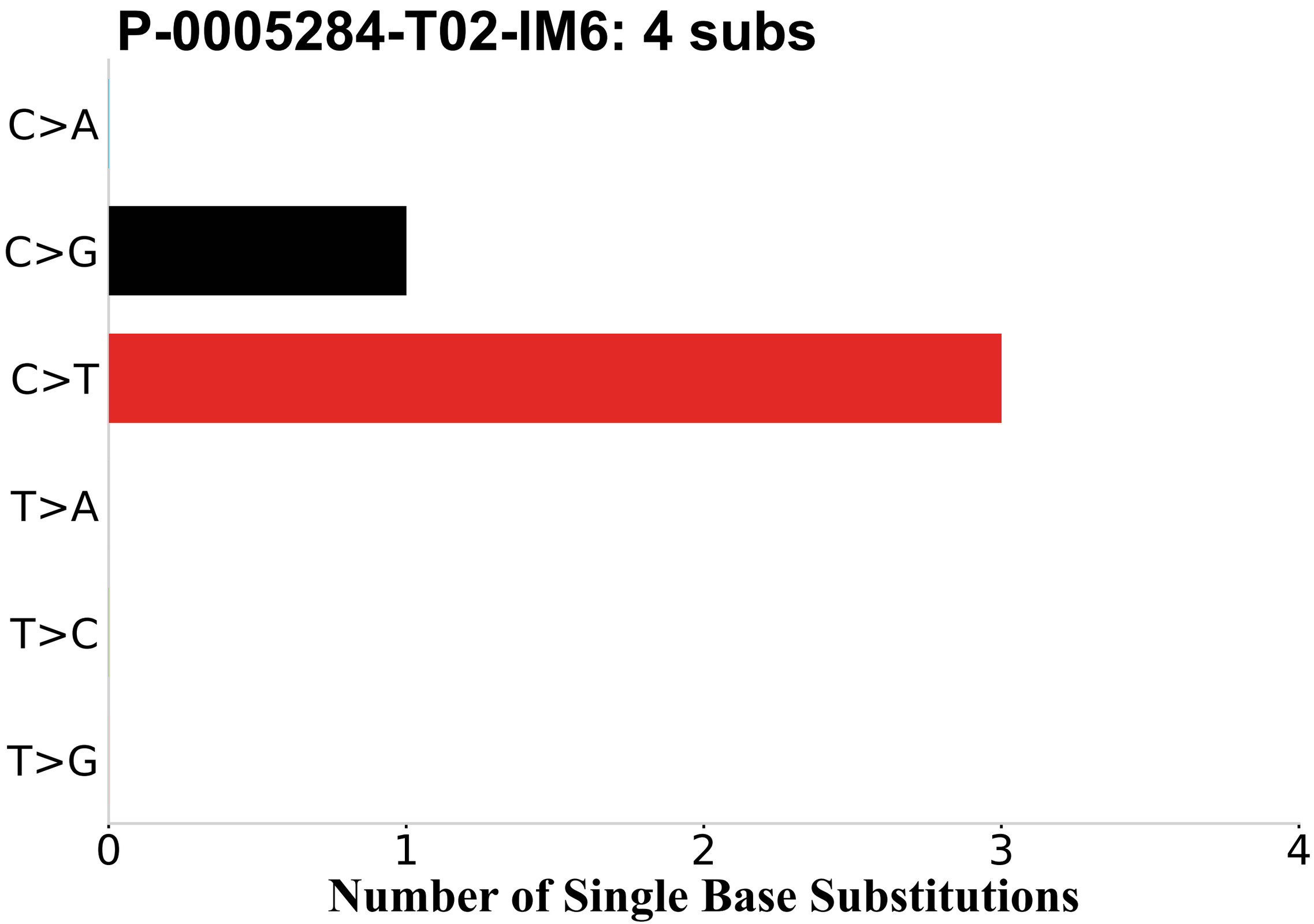
Number of Single Base Substitutions


P-0005284-T02-IM6: 4 subs
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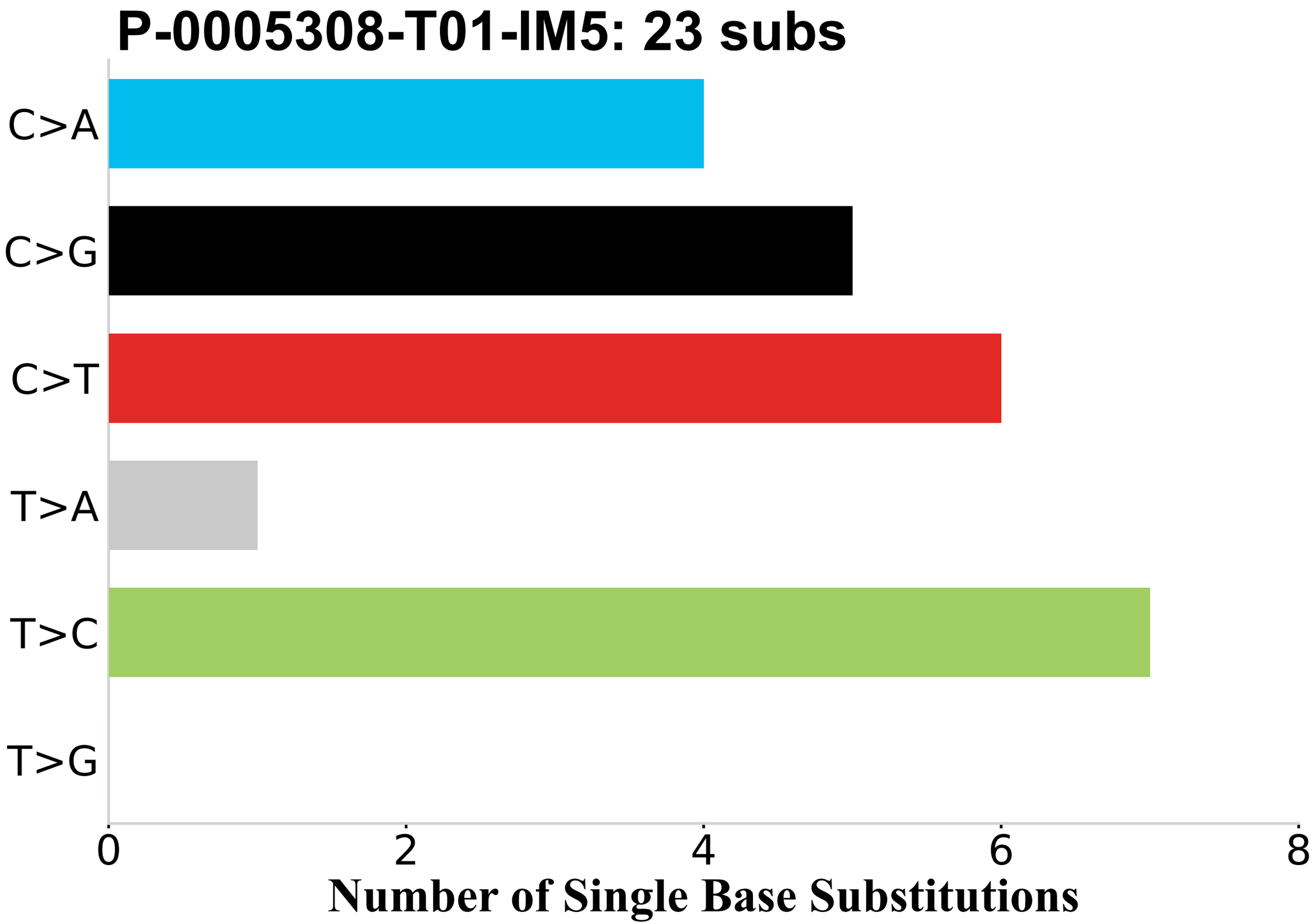
Number of Single Base Substitutions


P-0005308-T01-IM5: 23 subs
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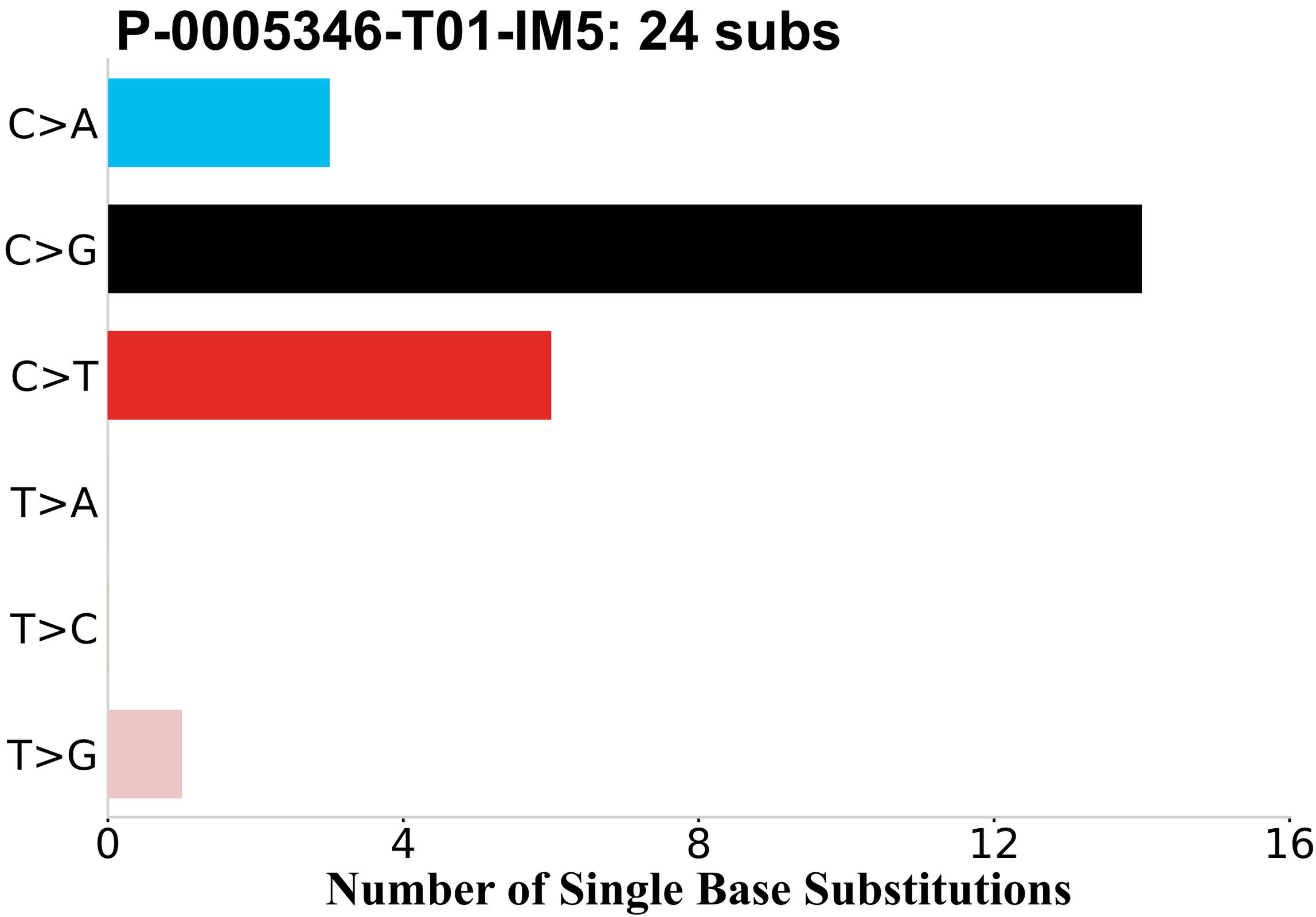
Number of Single Base Substitutions


P-0005346-T01-IM5: 24 subs
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12
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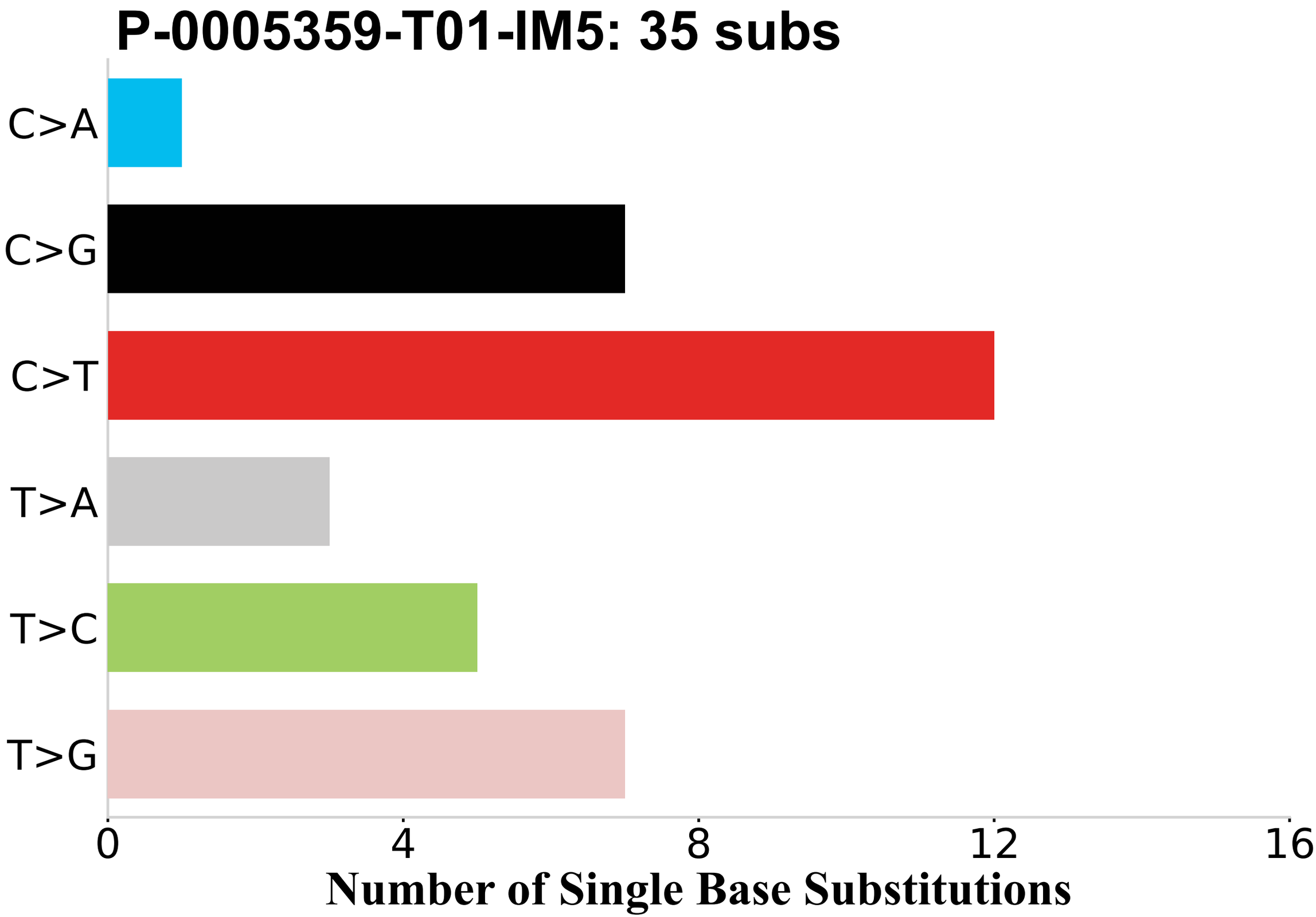
Number of Single Base Substitutions


P-0005359-T01-IM5: 35 subs
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T>G
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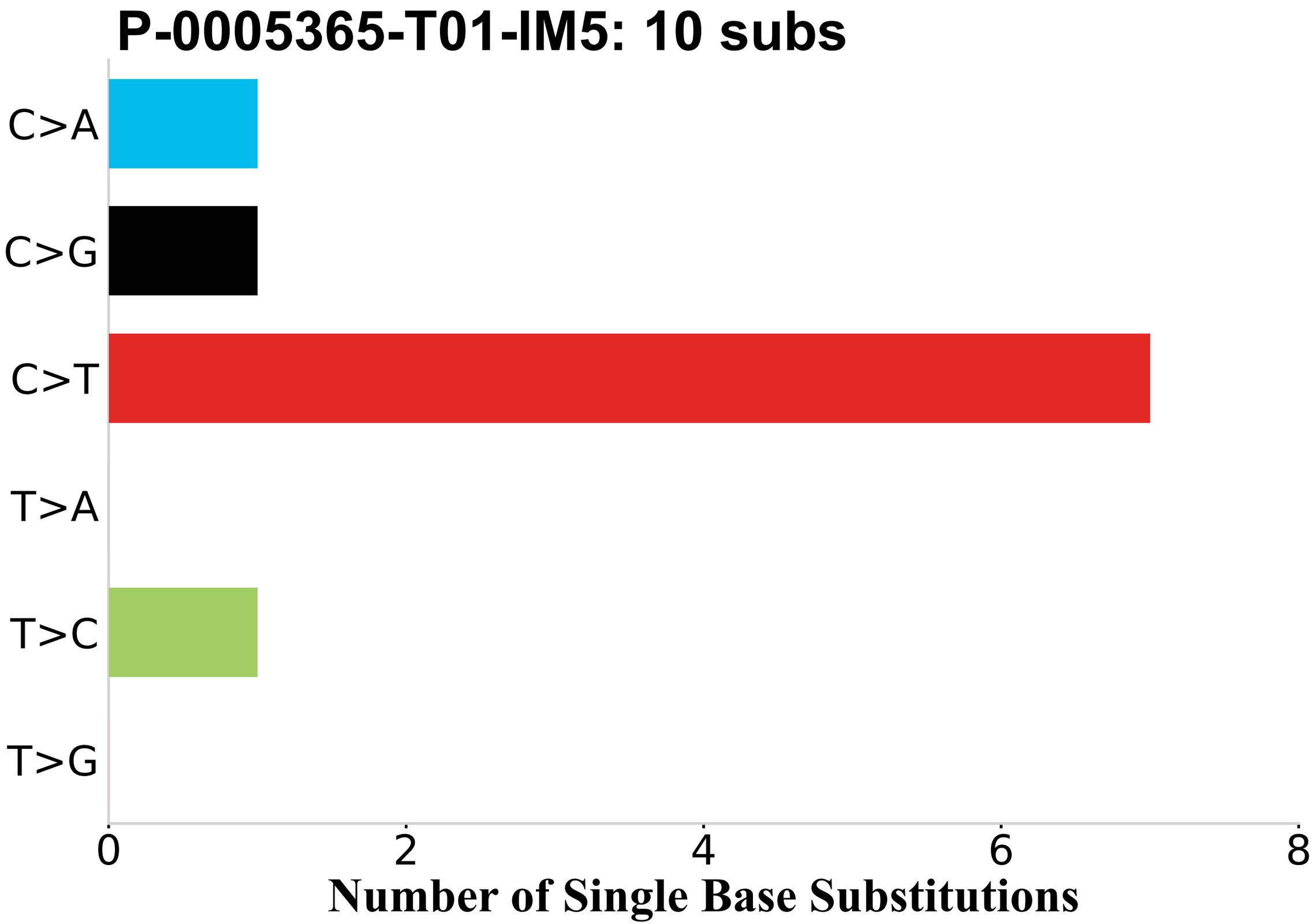
12
16
Number of Single Base Substitutions


P-0005365-T01-IM5: 10 subs
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T>G
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6
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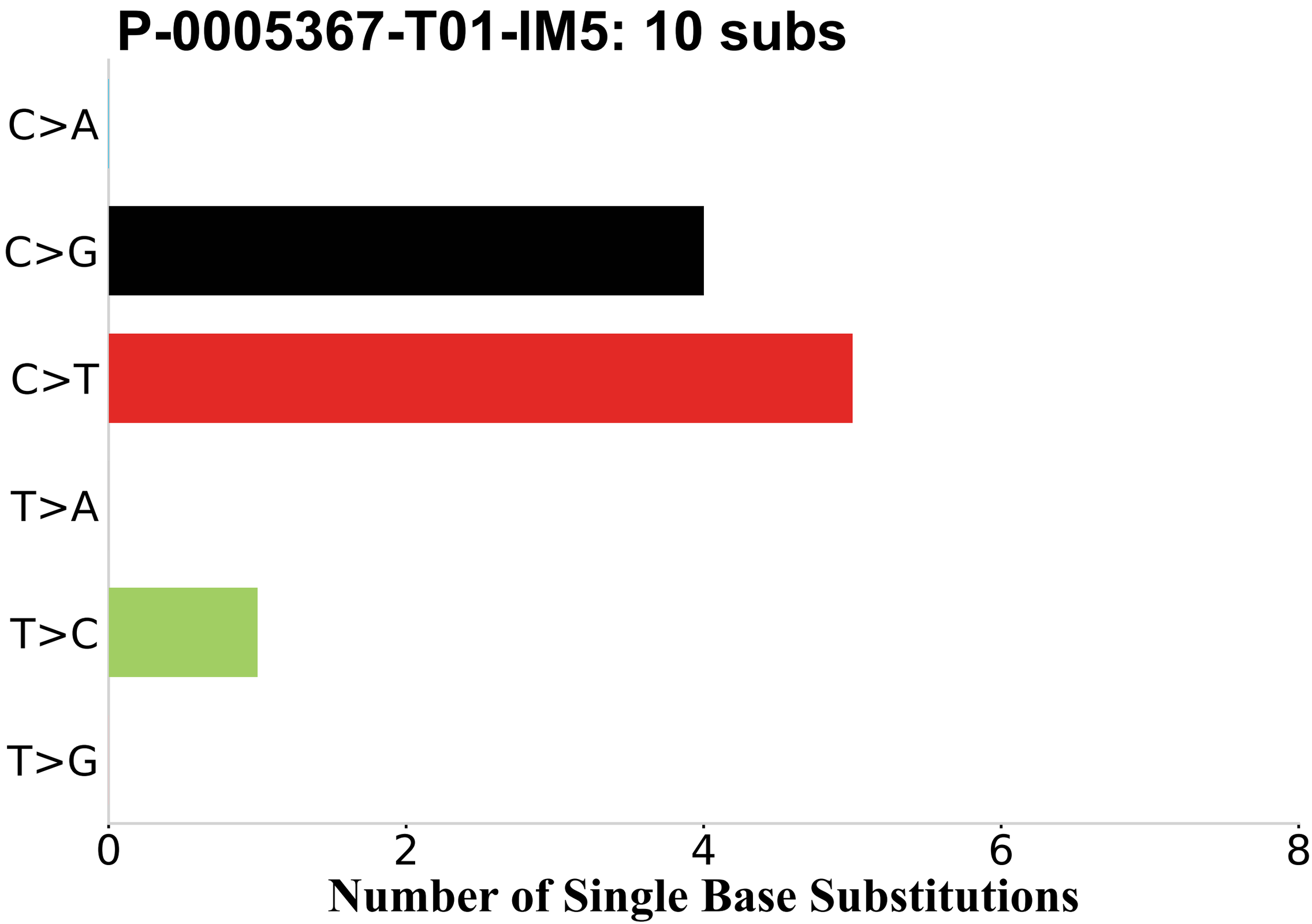
Number of Single Base Substitutions


P-0005367-T01-IM5: 10 subs
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T>G
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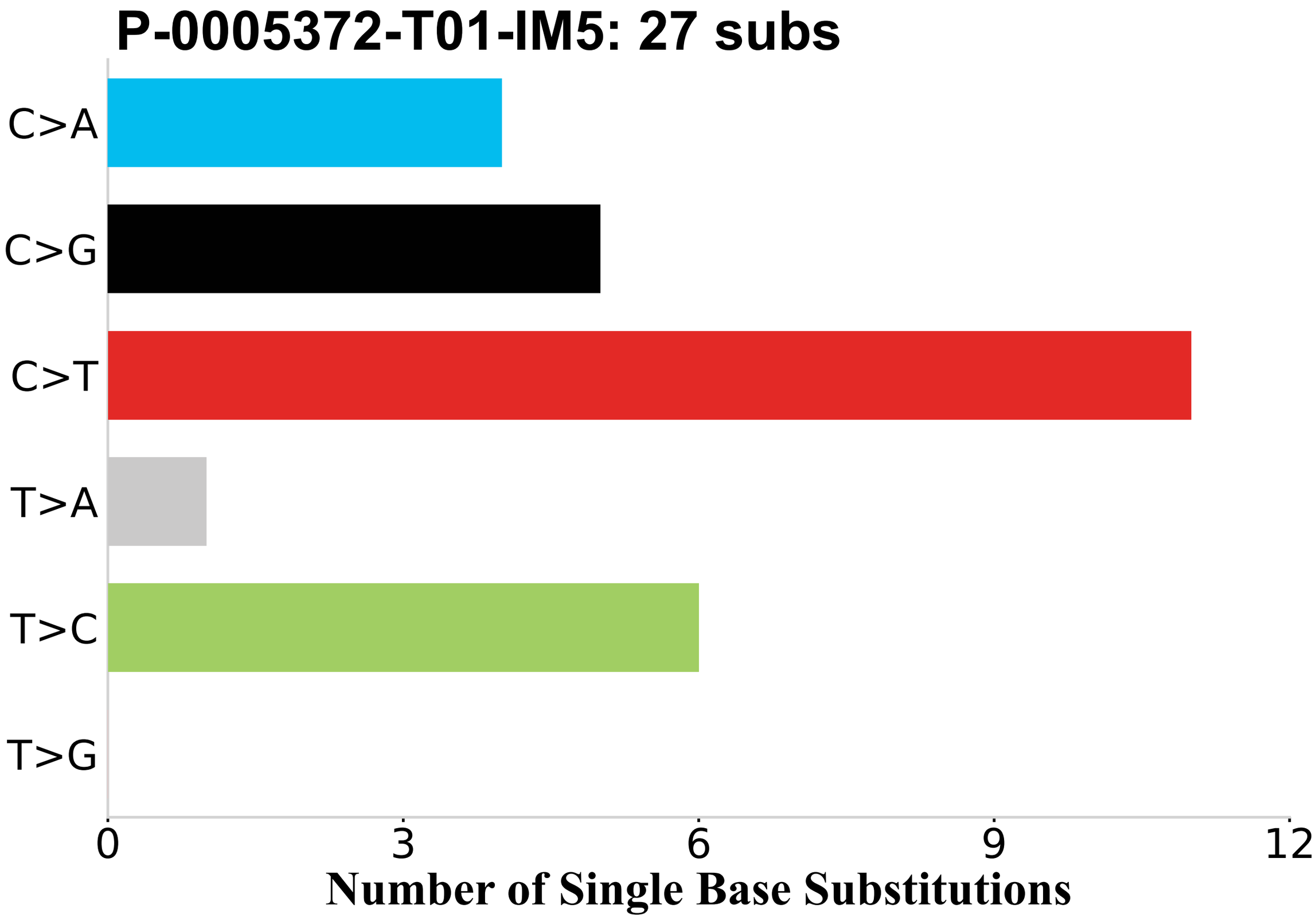
2
4
6
8
Number of Single Base Substitutions


P-0005372-T01-IM5: 27 subs
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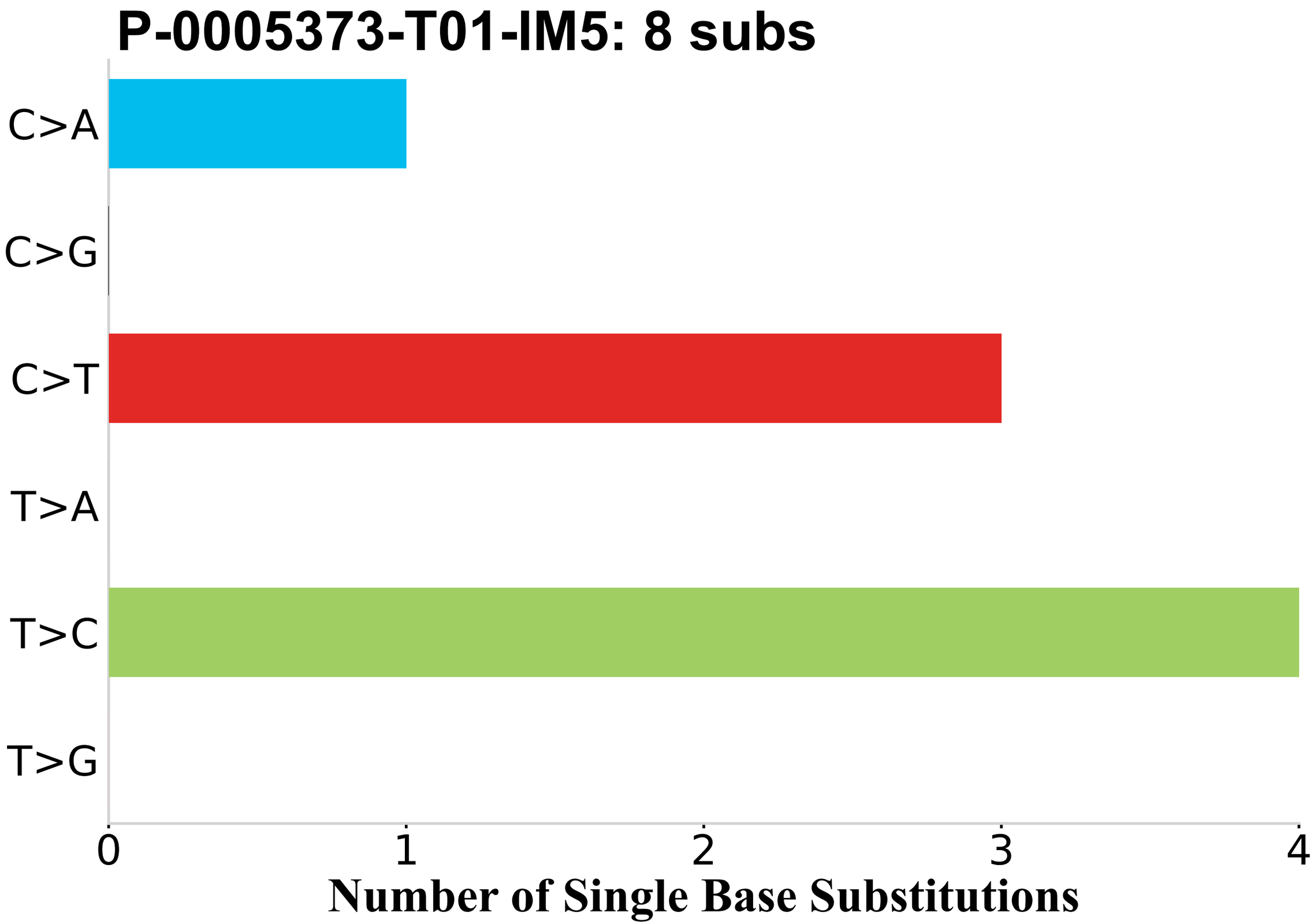
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0005373-T01-IM5: 8 subs
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T>G
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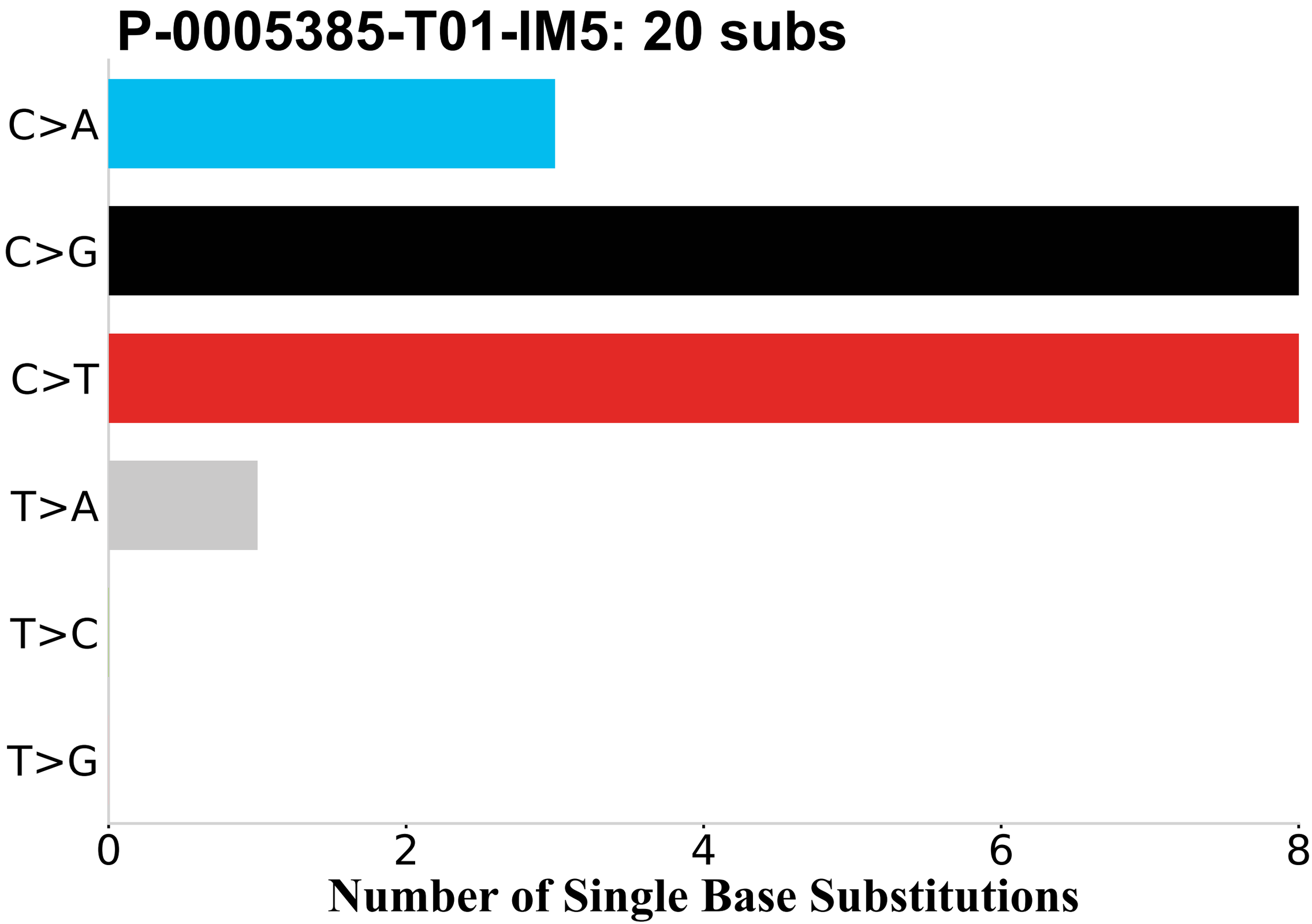
1
2
3
4
Number of Single Base Substitutions


P-0005385-T01-IM5: 20 subs
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T>C
T>G
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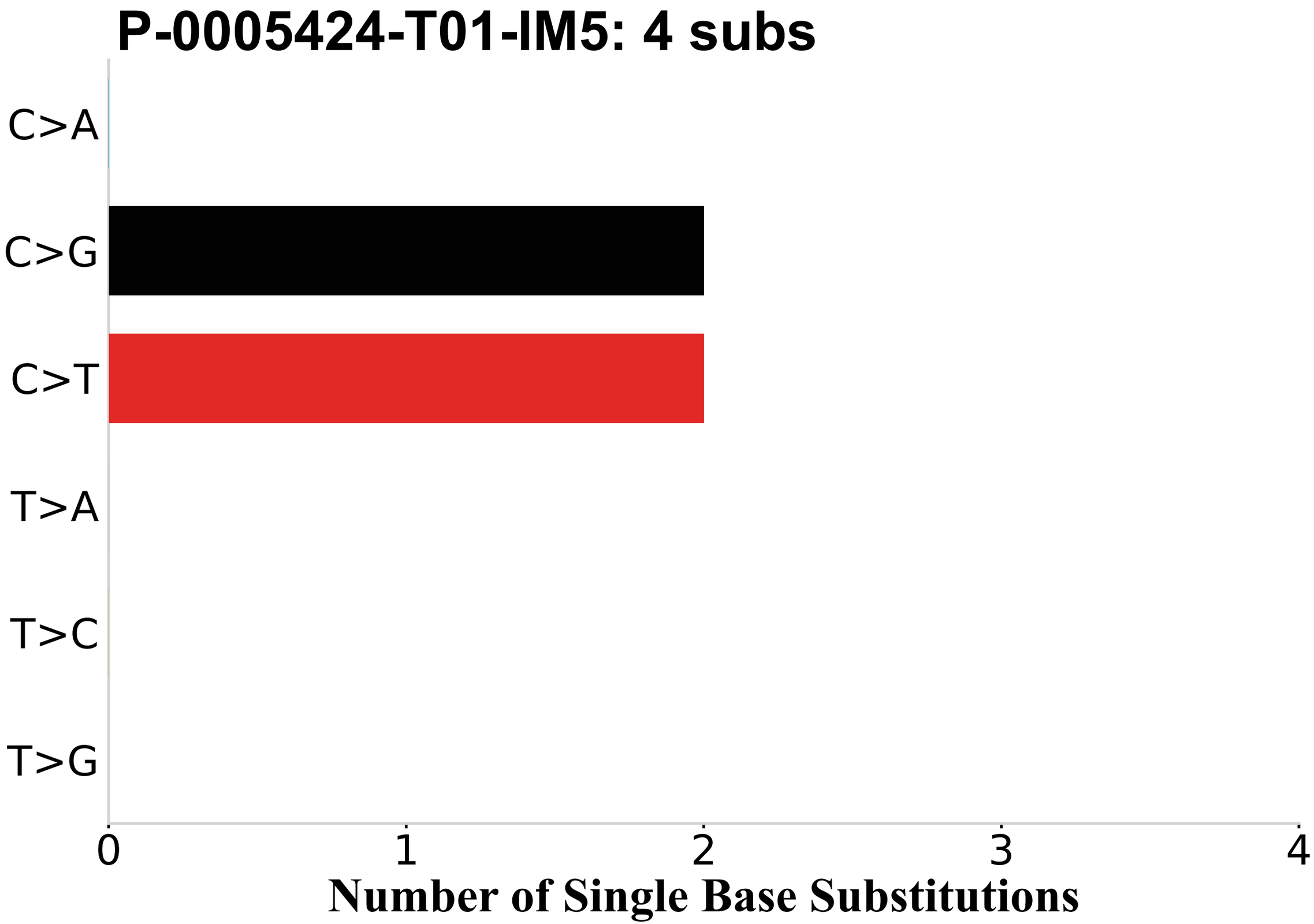
2
4
6
8
Number of Single Base Substitutions


P-0005424-T01-IM5: 4 subs
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C>G
C>T
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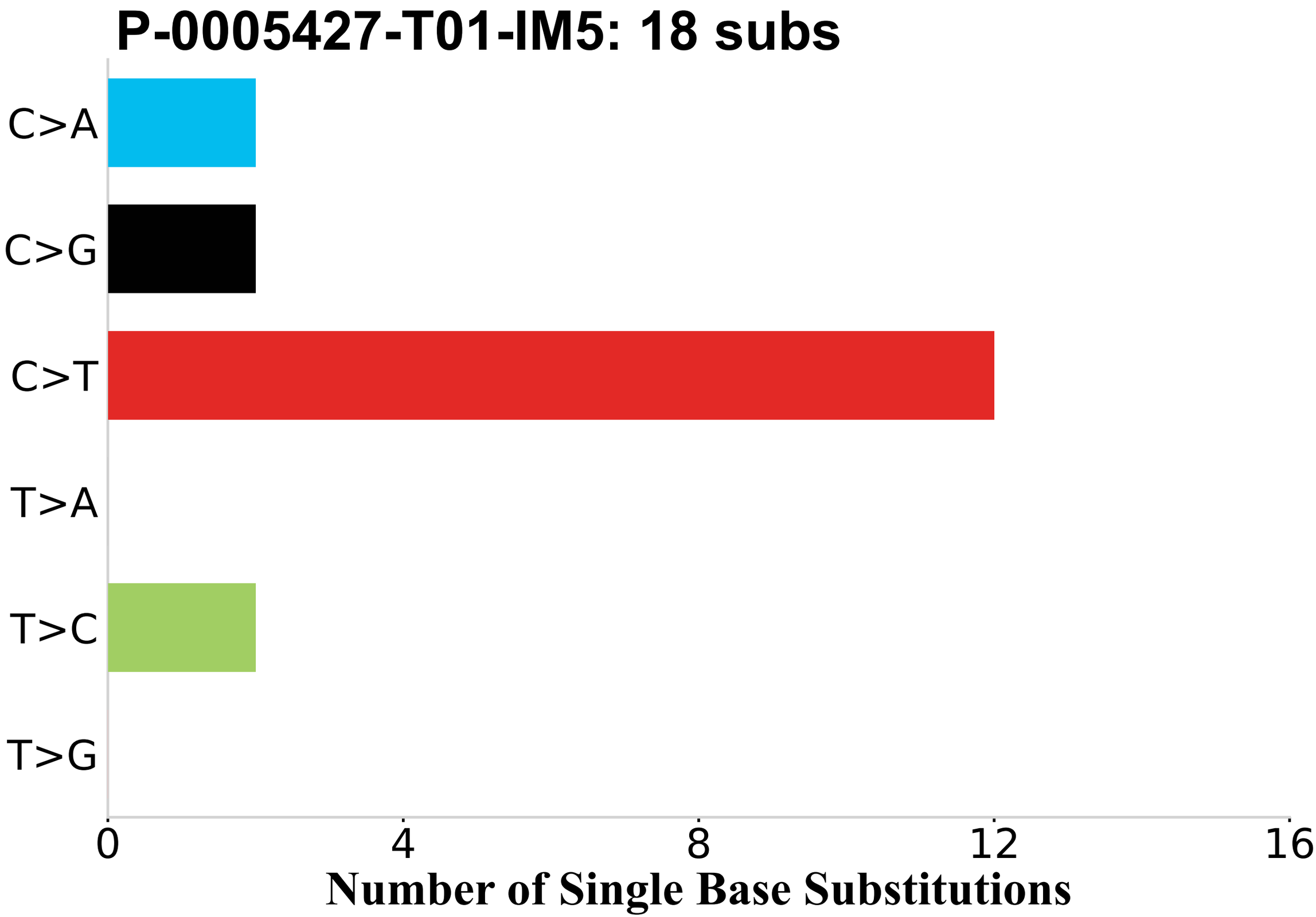
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005427-T01-IM5: 18 subs
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C>G
C>T
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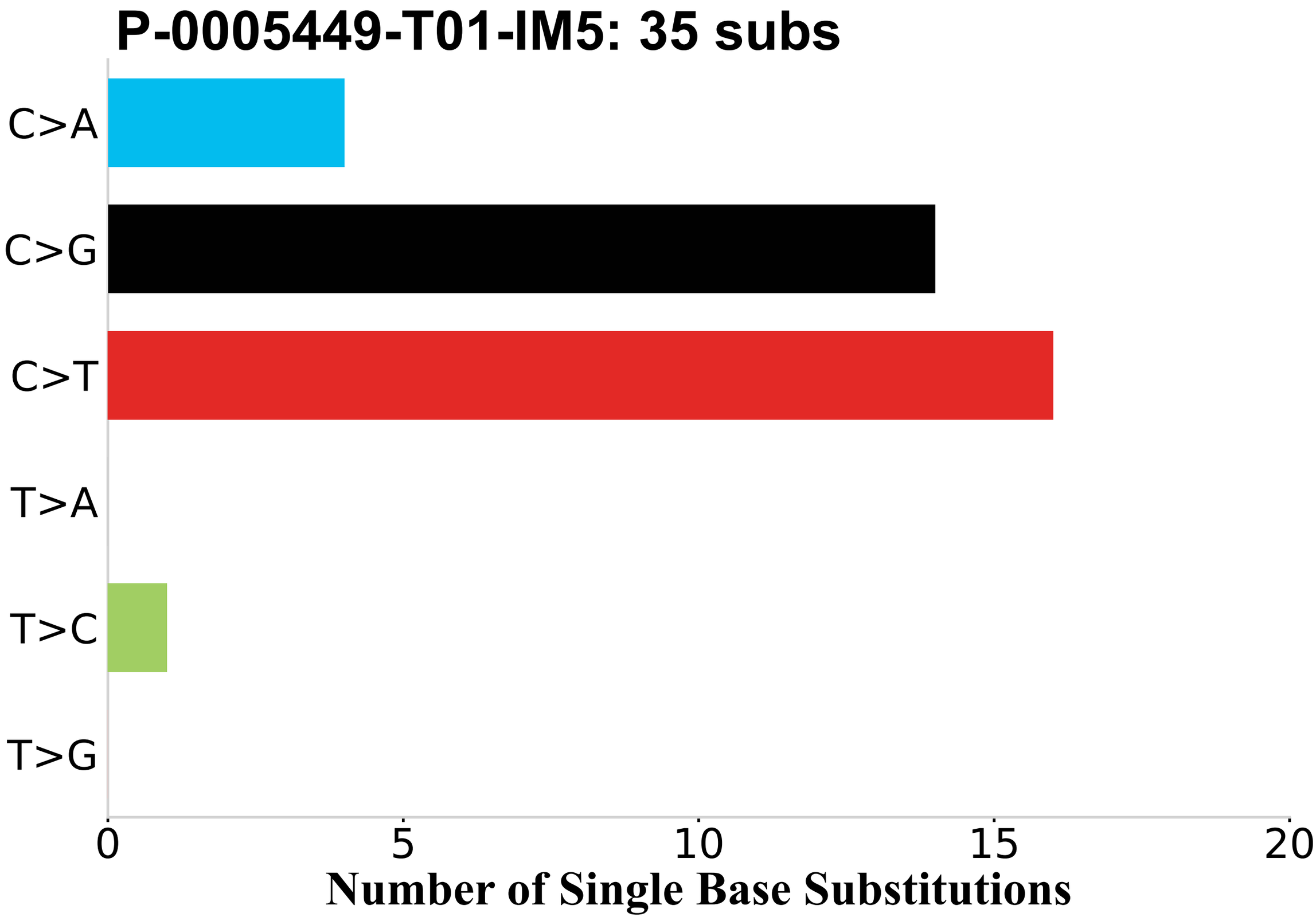
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0005449-T01-IM5: 35 subs
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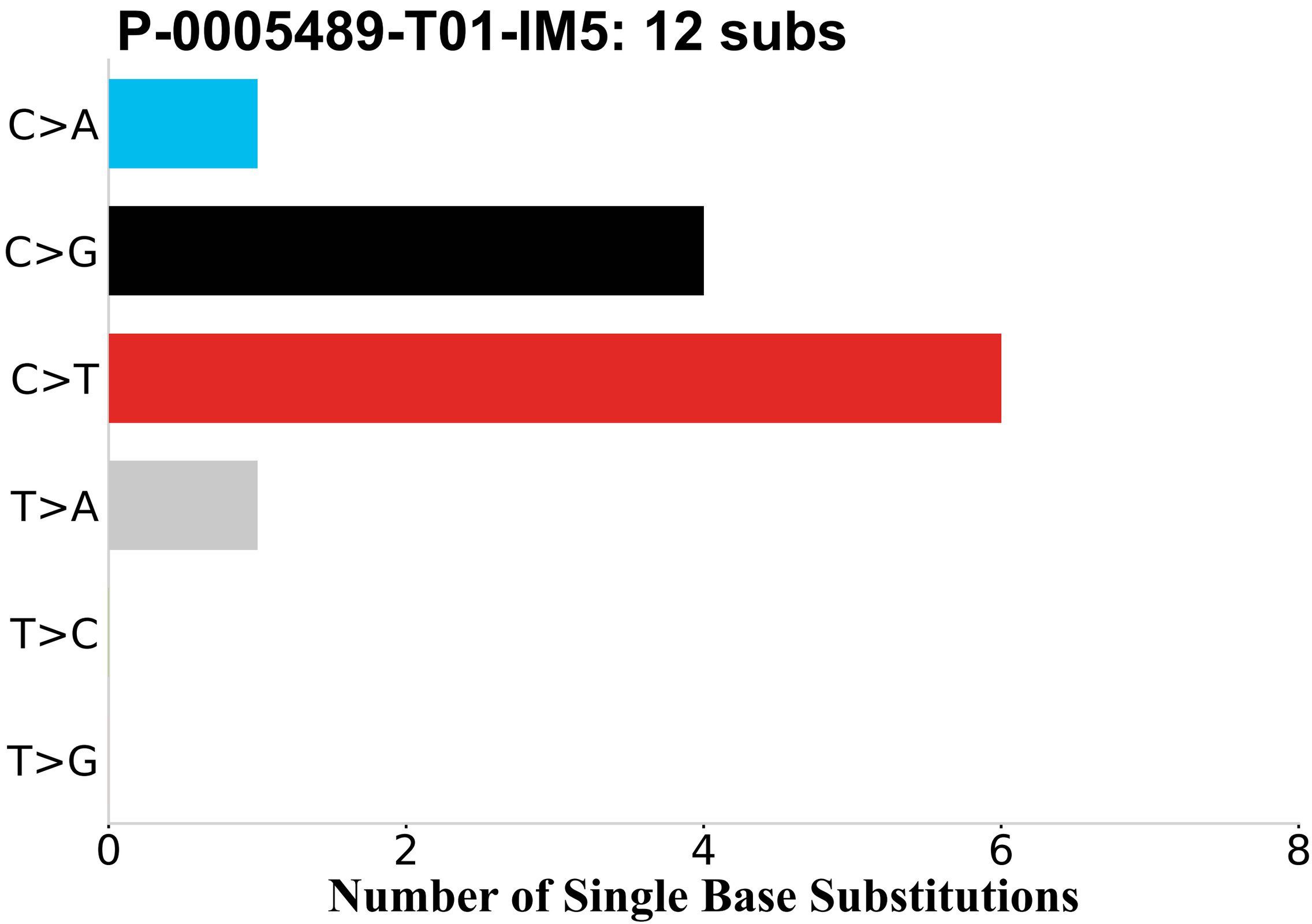
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0005489-T01-IM5: 12 subs
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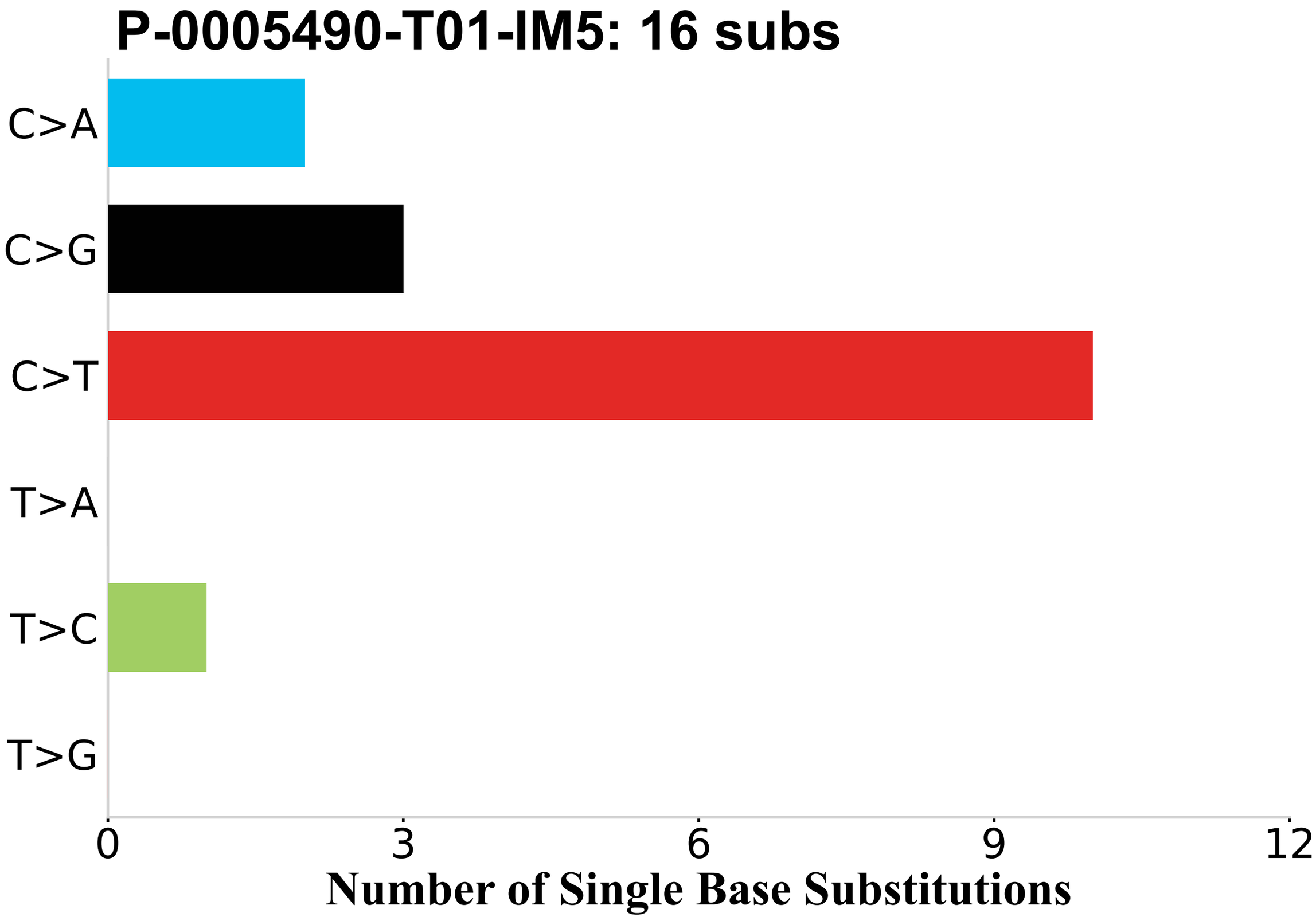
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0005490-T01-IM5: 16 subs
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C>T
T>A
T>C
T>G
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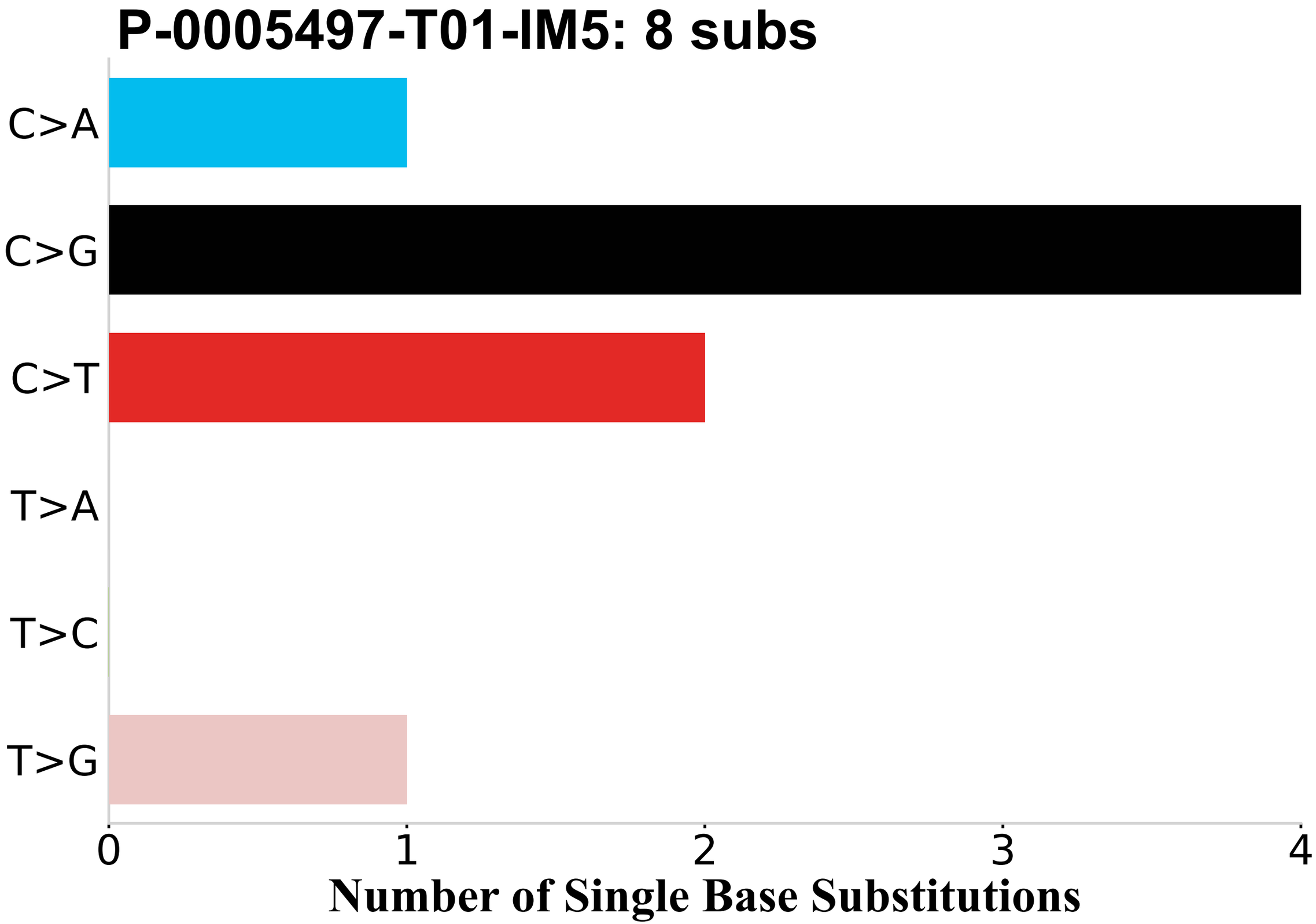
3
6
9
12
Number of Single Base Substitutions


P-0005497-T01-IM5: 8 subs
C>A
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T>C
T>G
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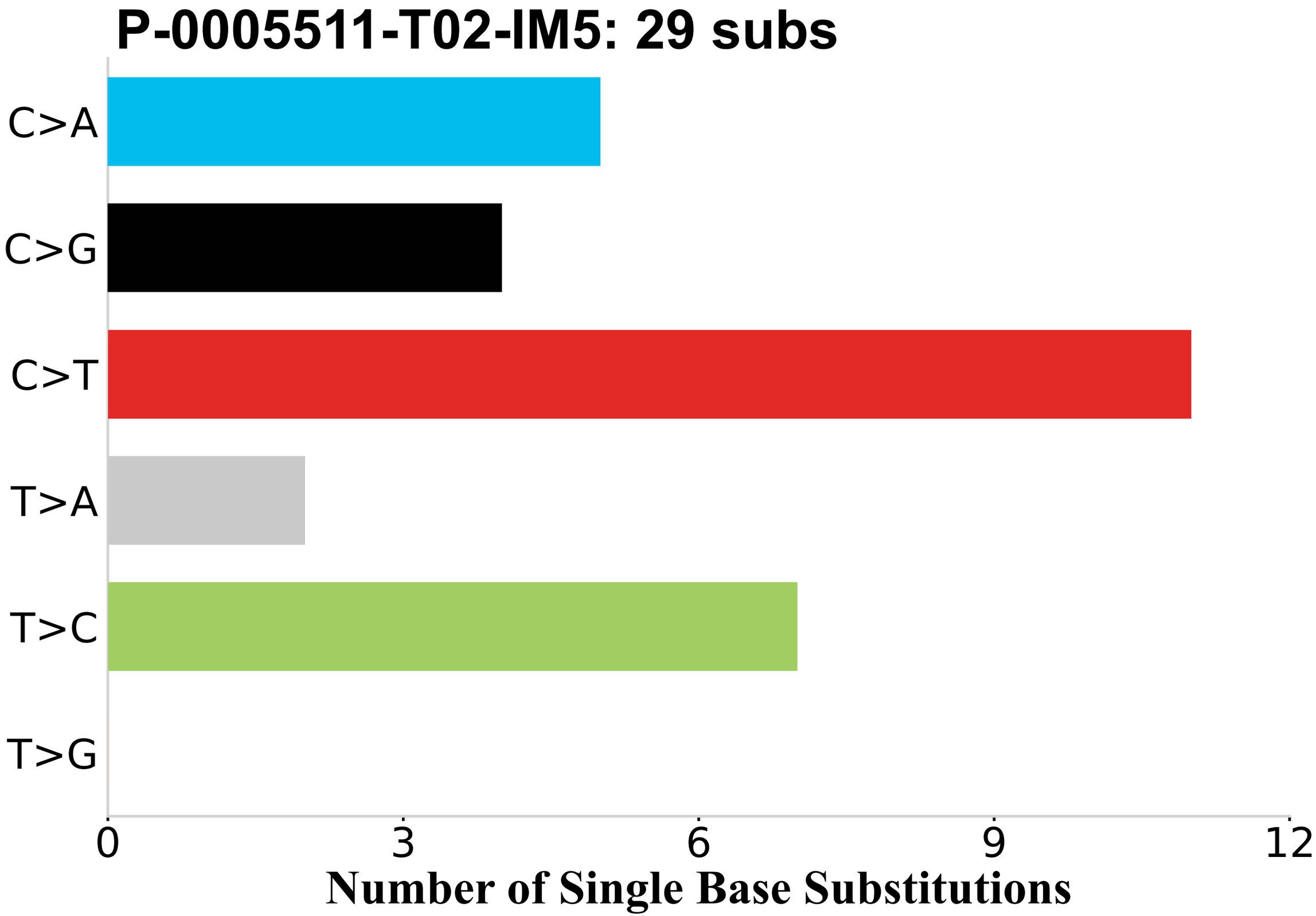
1
2
3
4
Number of Single Base Substitutions


P-0005511-T02-IM5: 29 subs
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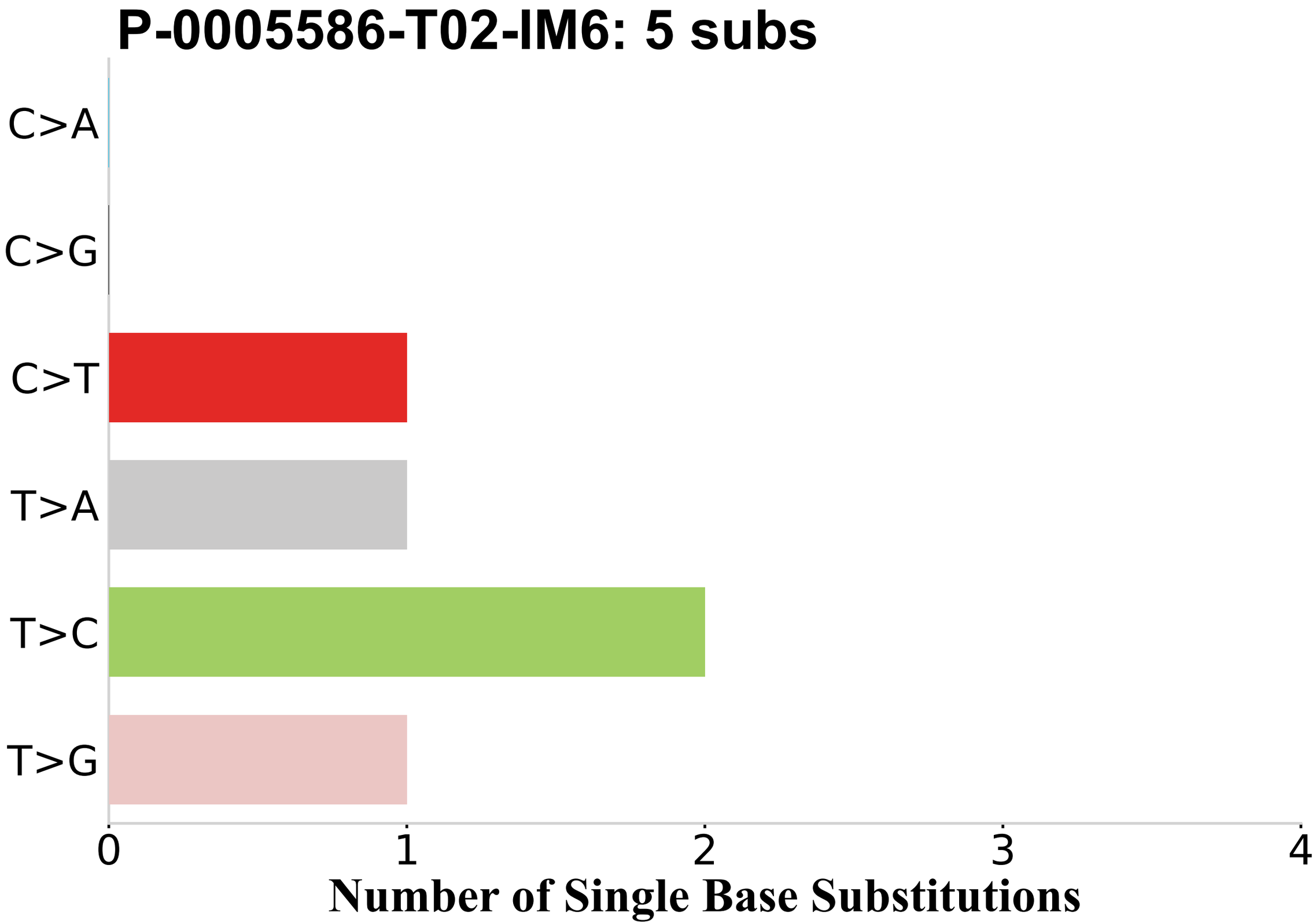
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0005586-T02-IM6: 5 subs
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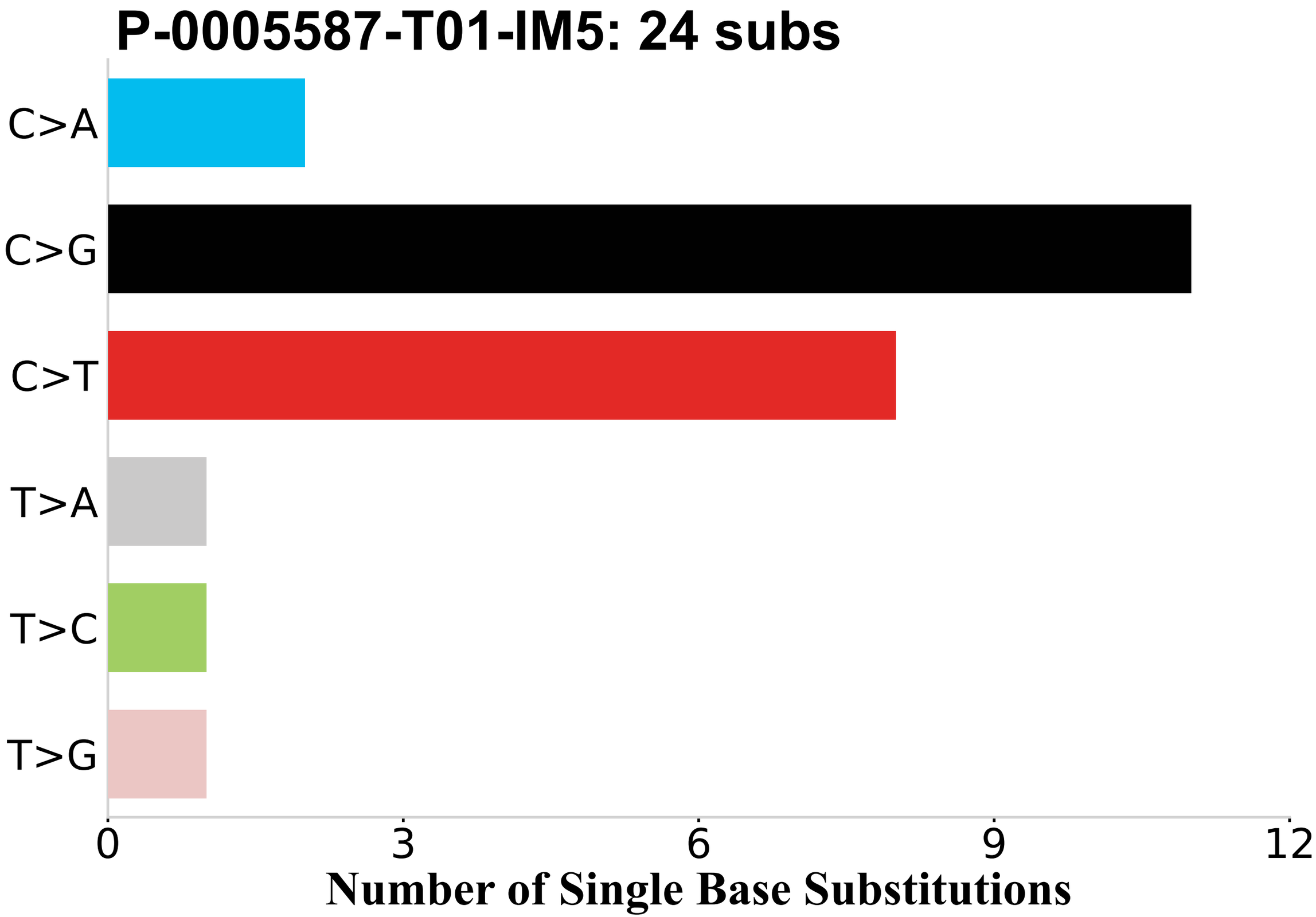
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0005587-T01-IM5: 24 subs
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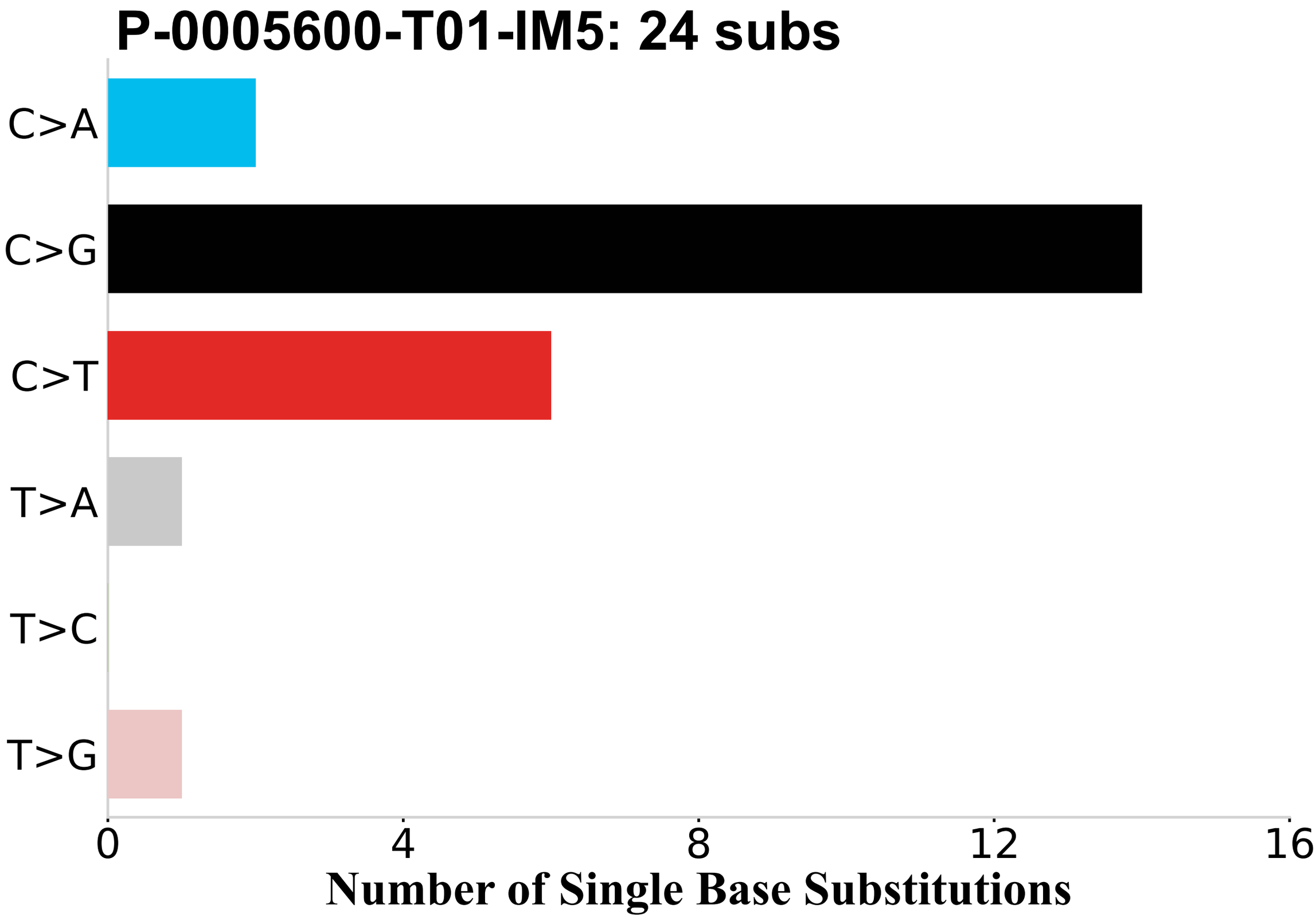
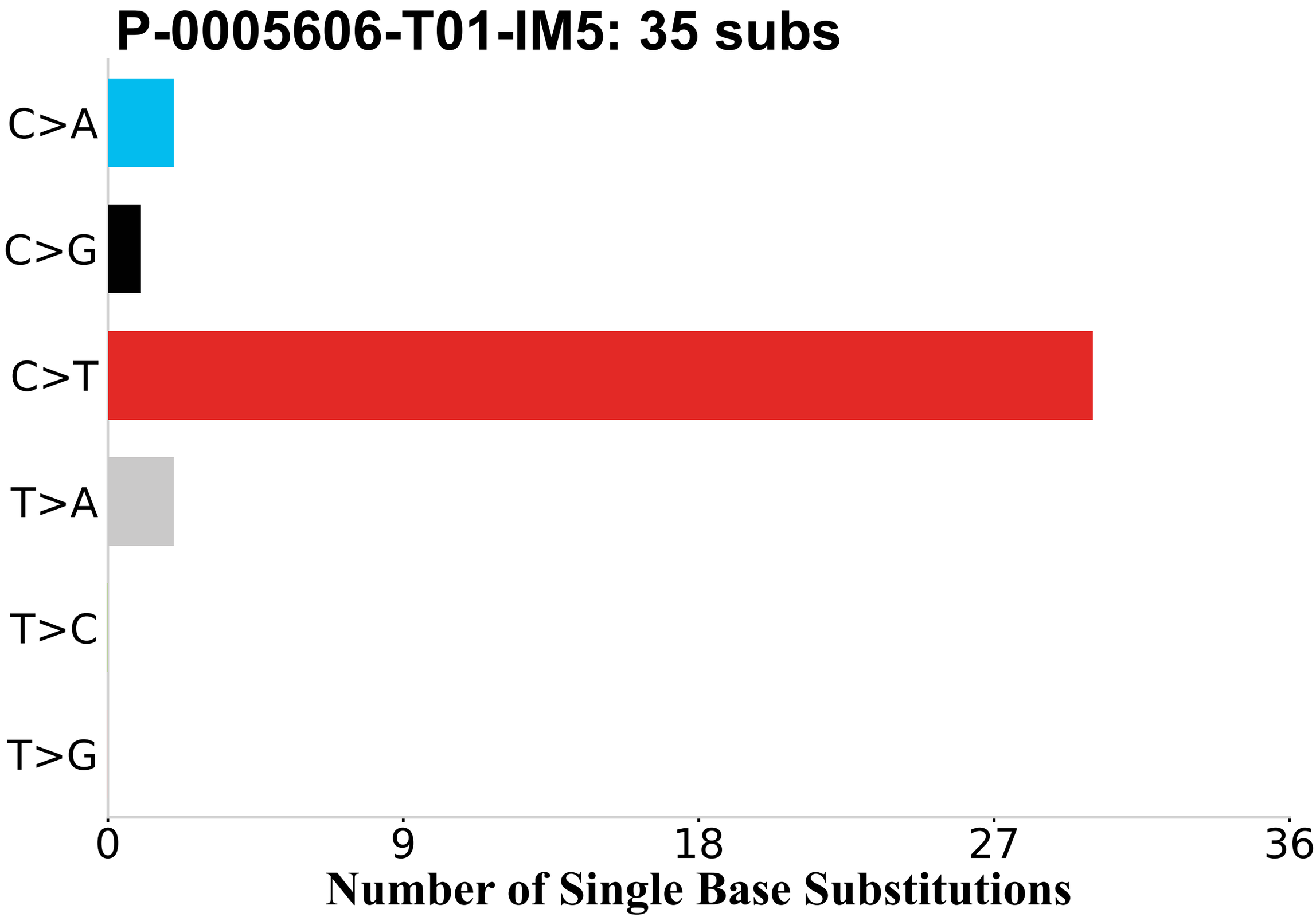
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0005600-T01-IM5: 24 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0005606-T01-IM5: 35 subs
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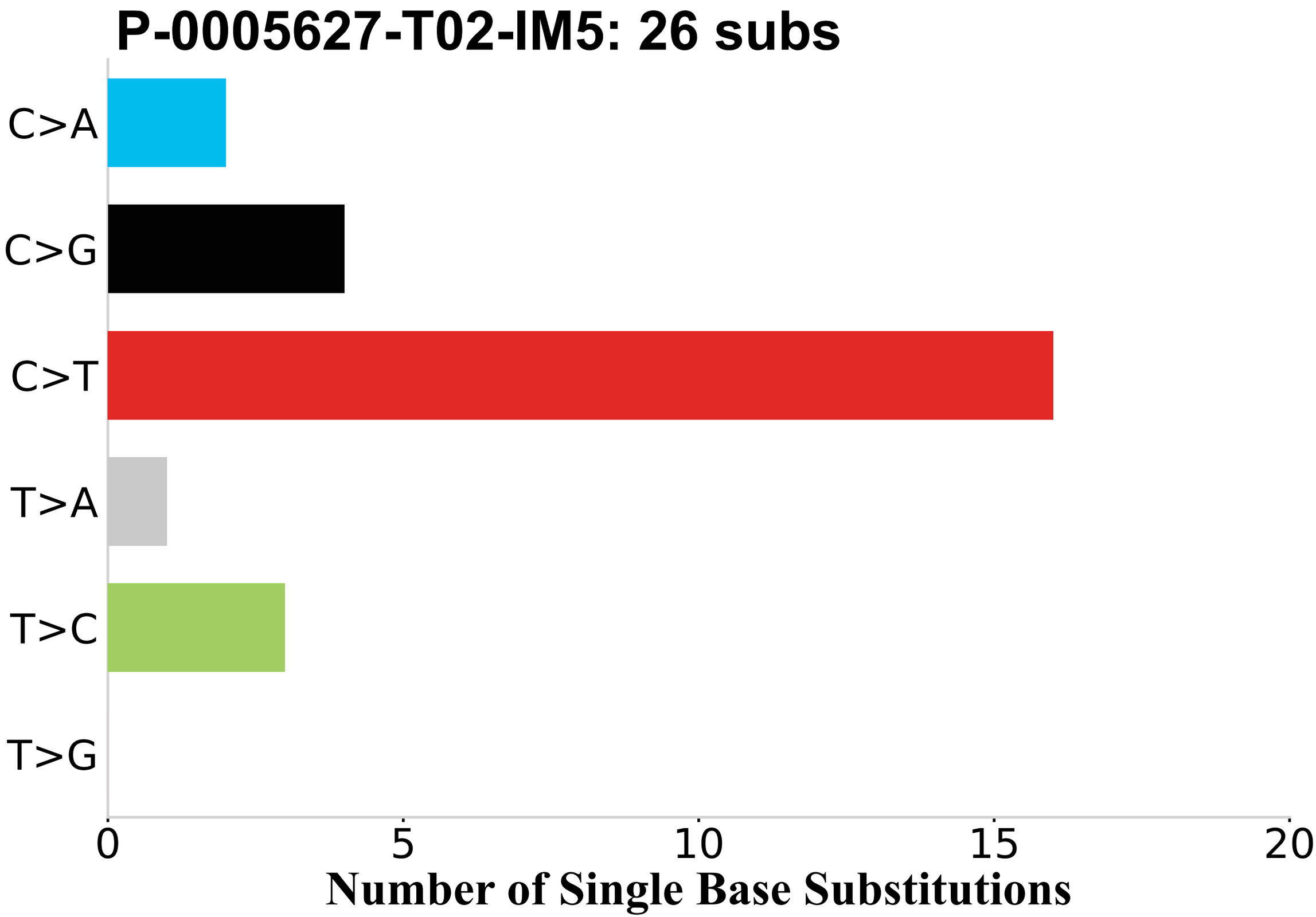
C>T
T>A
T>C
T>G
0
9
18
27
36
Number of Single Base Substitutions


P-0005627-T02-IM5: 26 subs
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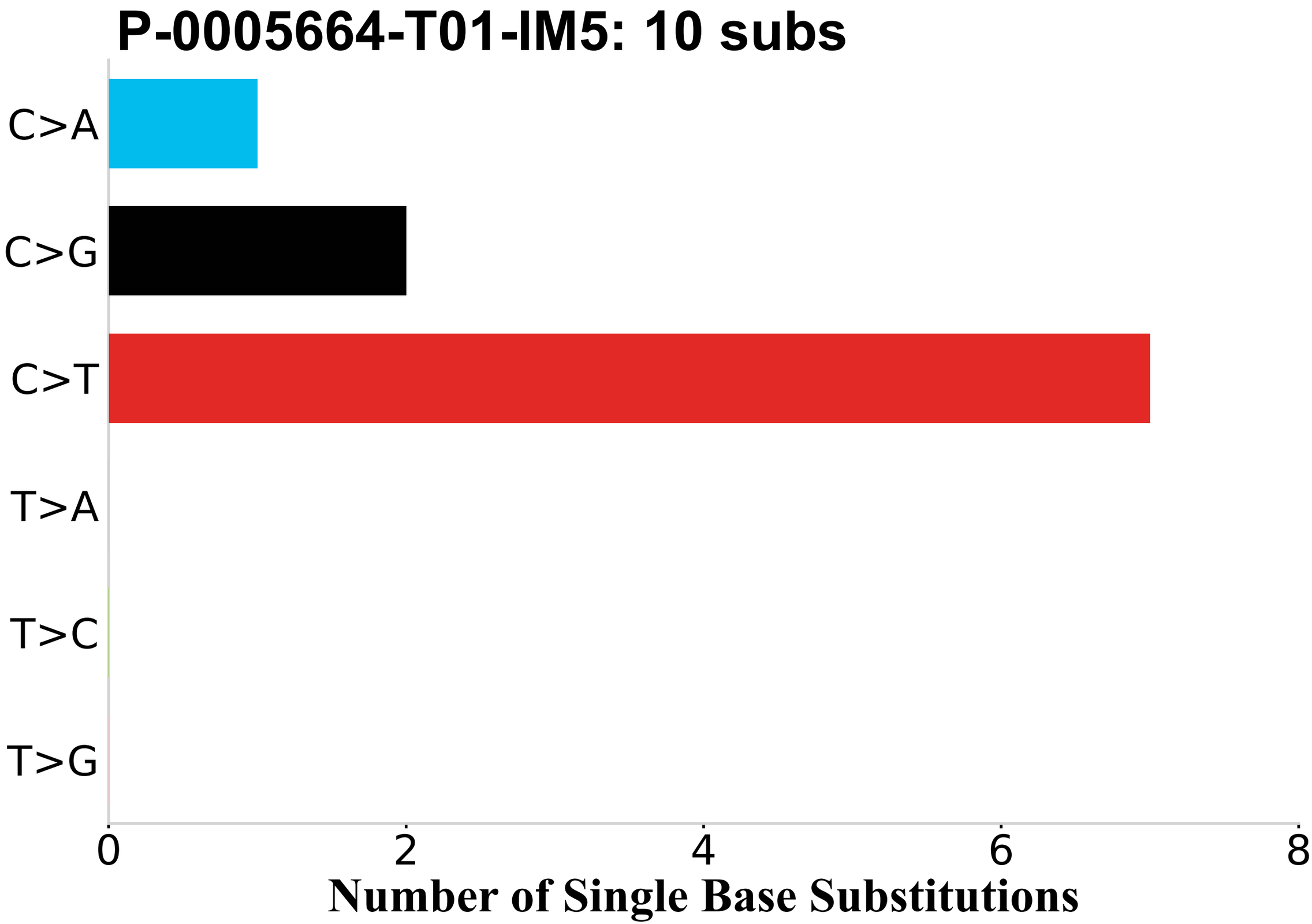
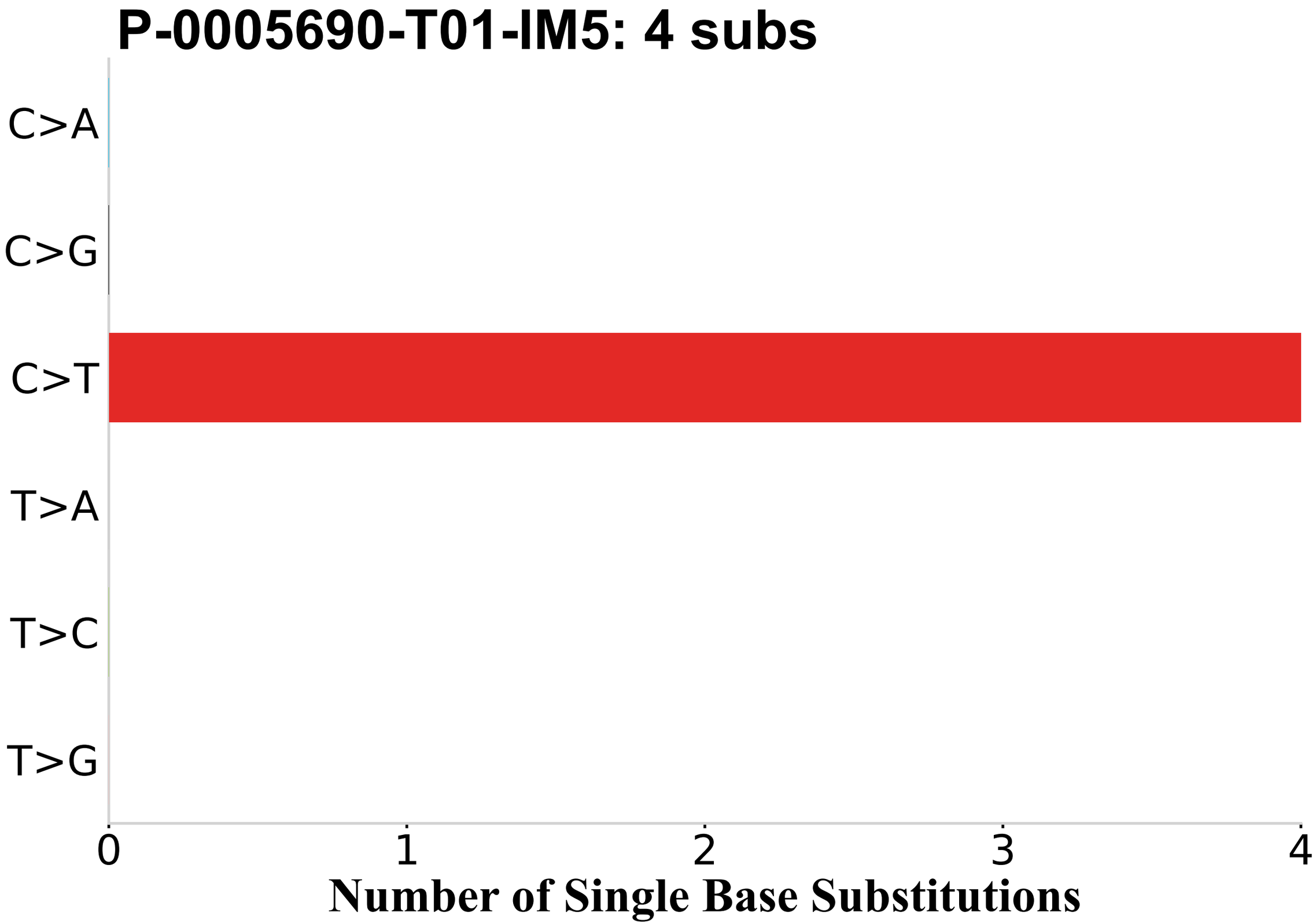
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0005664-T01-IM5: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0005690-T01-IM5: 4 subs
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C>T
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T>C
T>G
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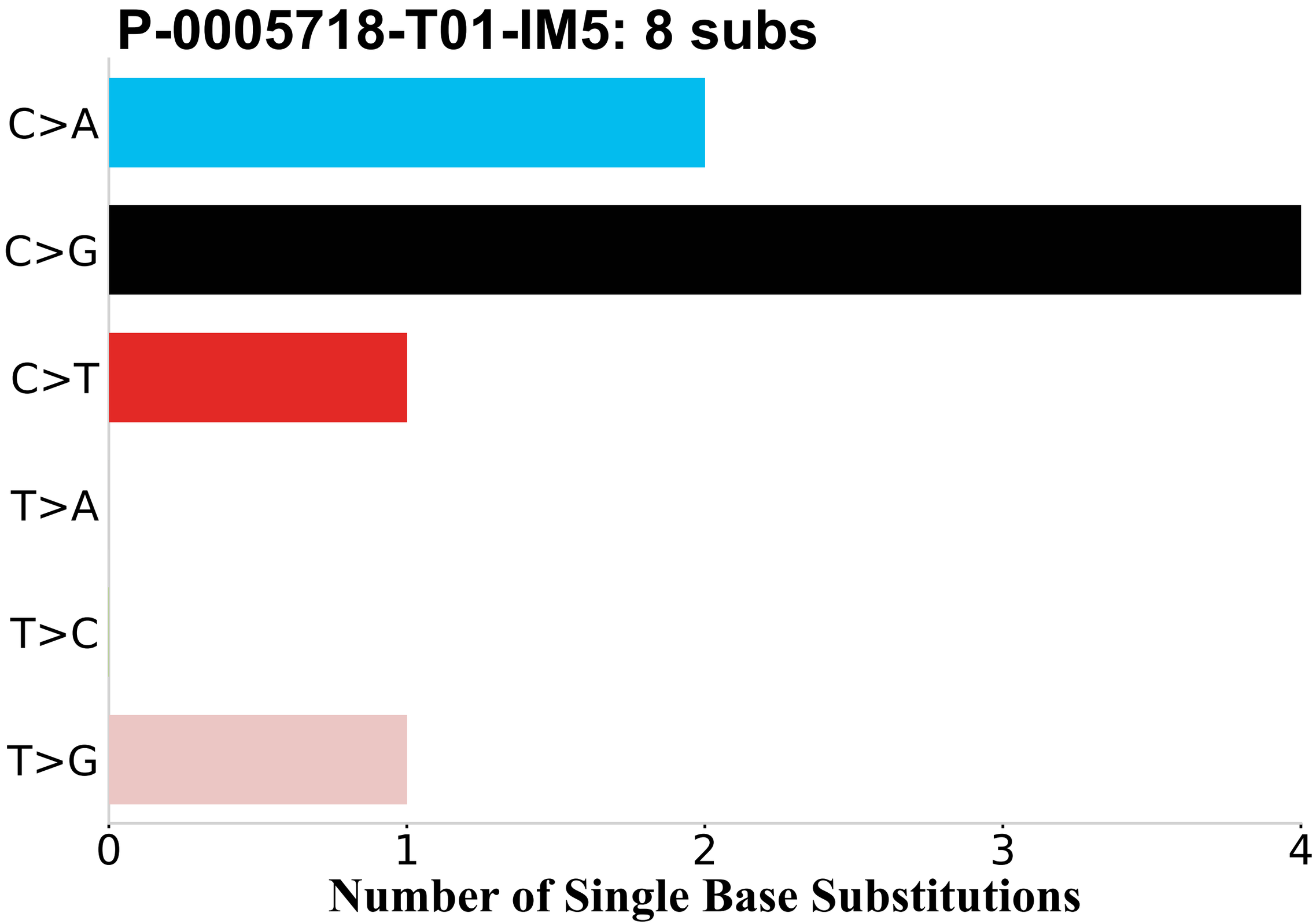
2
3
4
Number of Single Base Substitutions


P-0005718-T01-IM5: 8 subs
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C>T
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T>C
T>G
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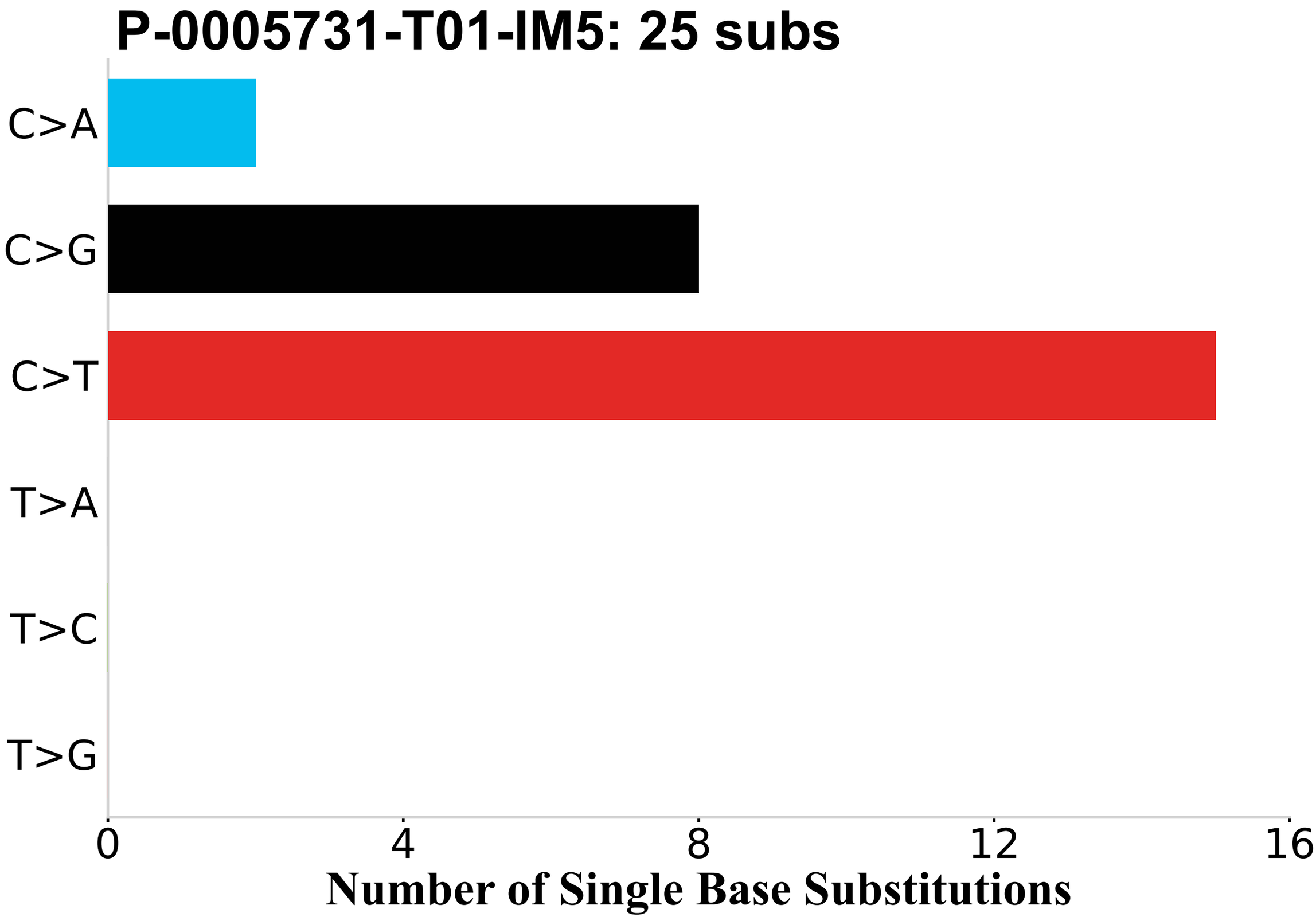
2
3
4
Number of Single Base Substitutions


P-0005731-T01-IM5: 25 subs
C>A
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C>T
T>A
T>C
T>G
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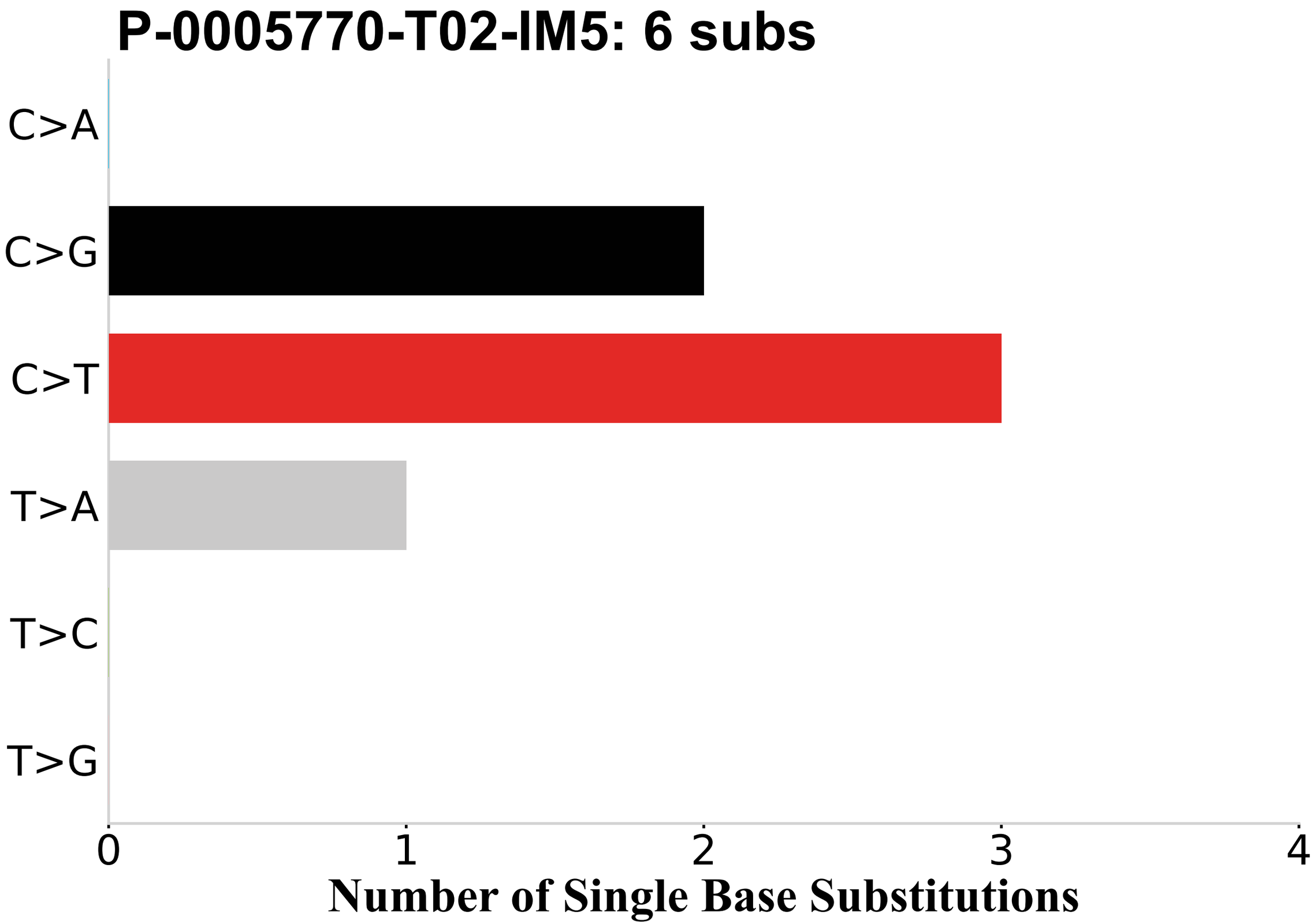
4
8
12
16
Number of Single Base Substitutions


P-0005770-T02-IM5: 6 subs
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T>G
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1
2
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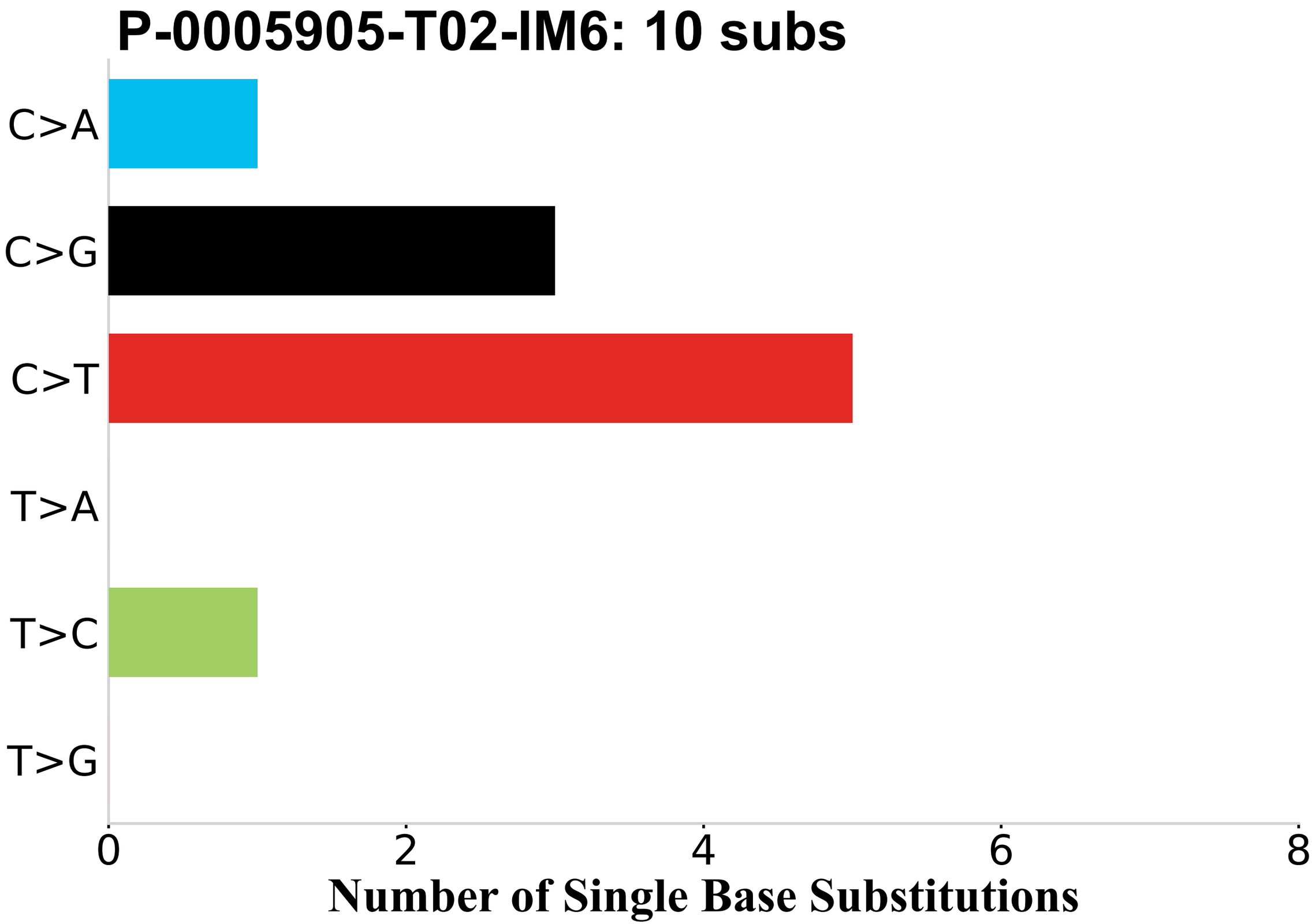
4
Number of Single Base Substitutions


P-0005905-T02-IM6: 10 subs
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T>C
T>G
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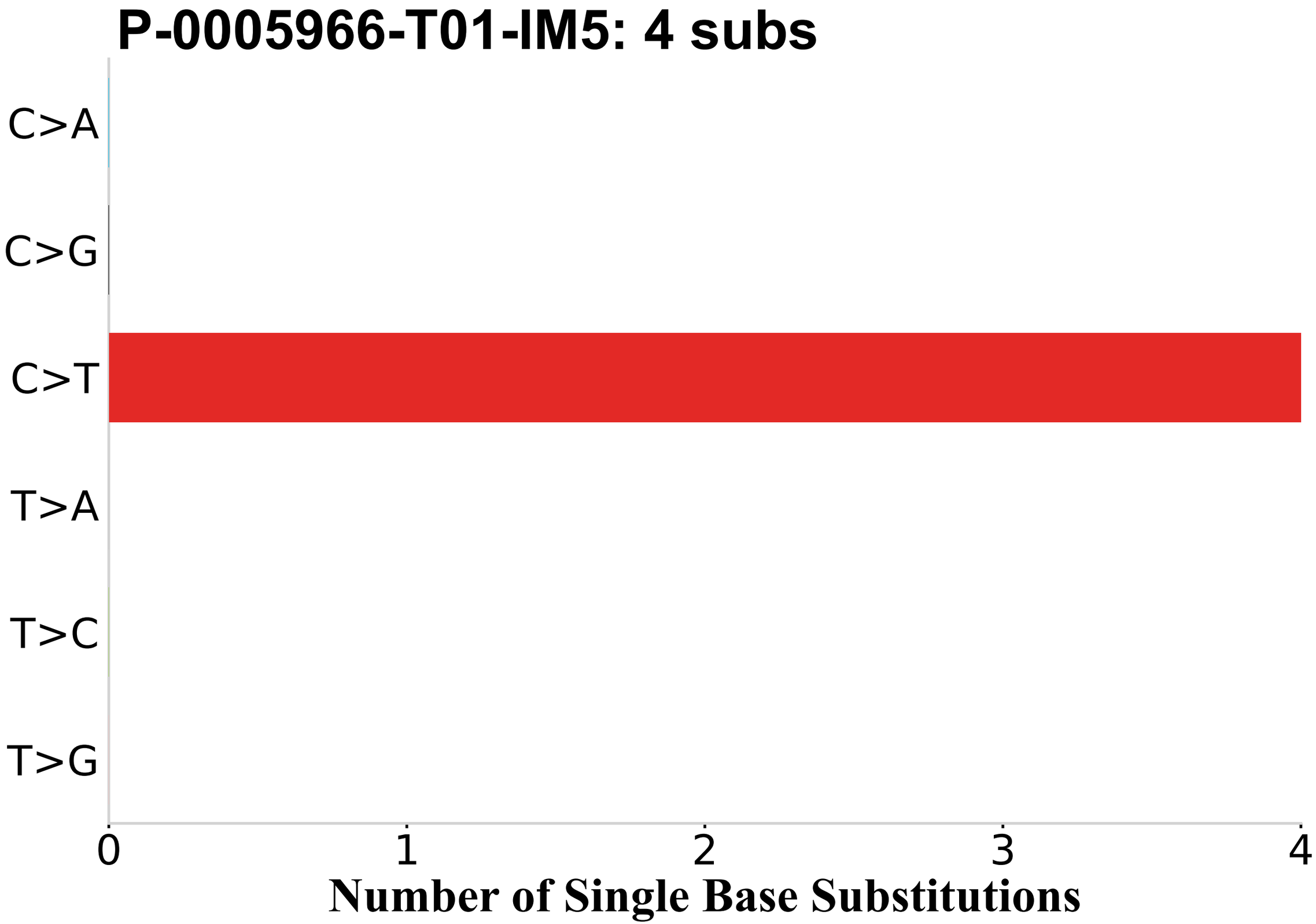
2
4
6
8
Number of Single Base Substitutions


P-0005966-T01-IM5: 4 subs
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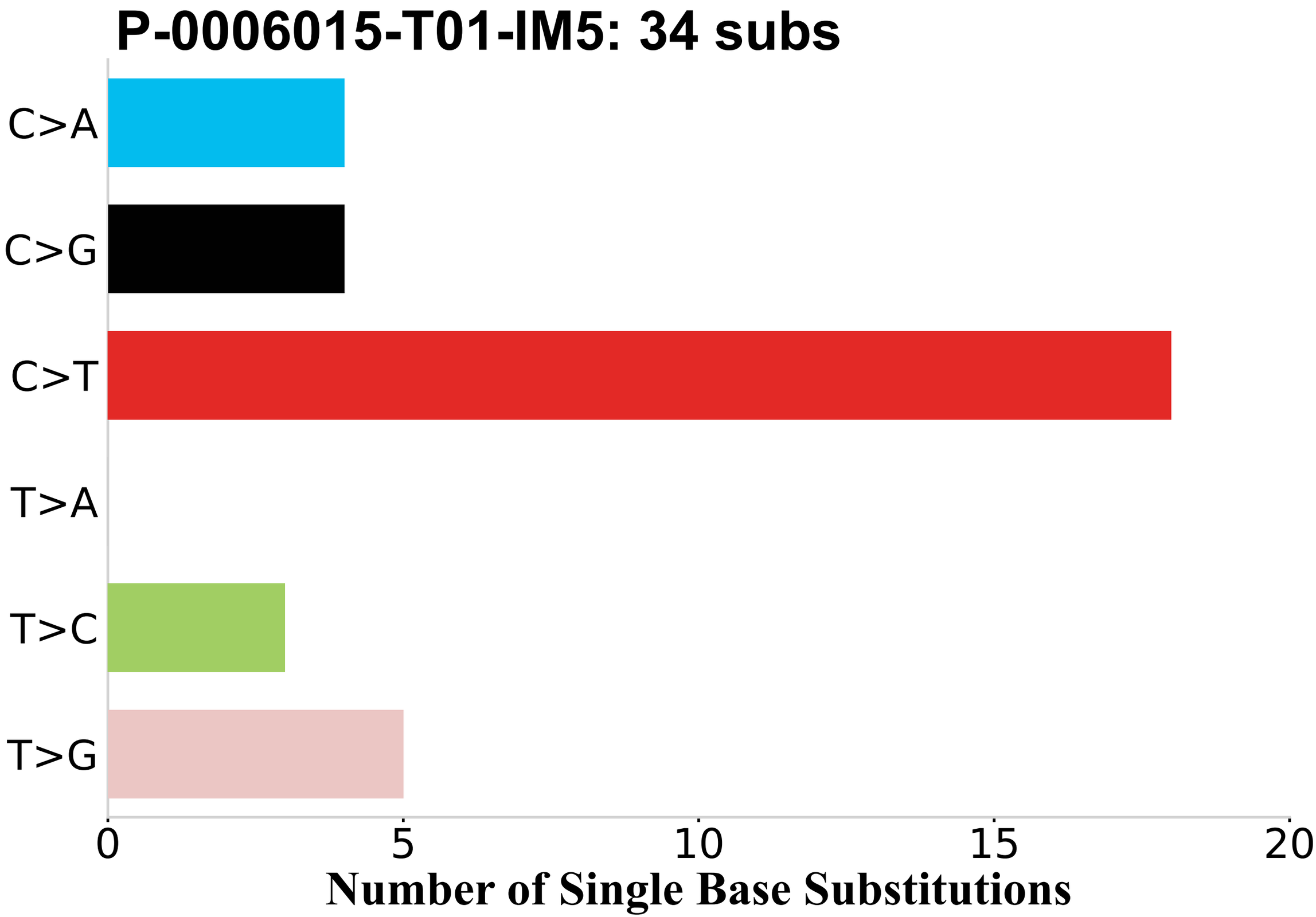
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0006015-T01-IM5: 34 subs
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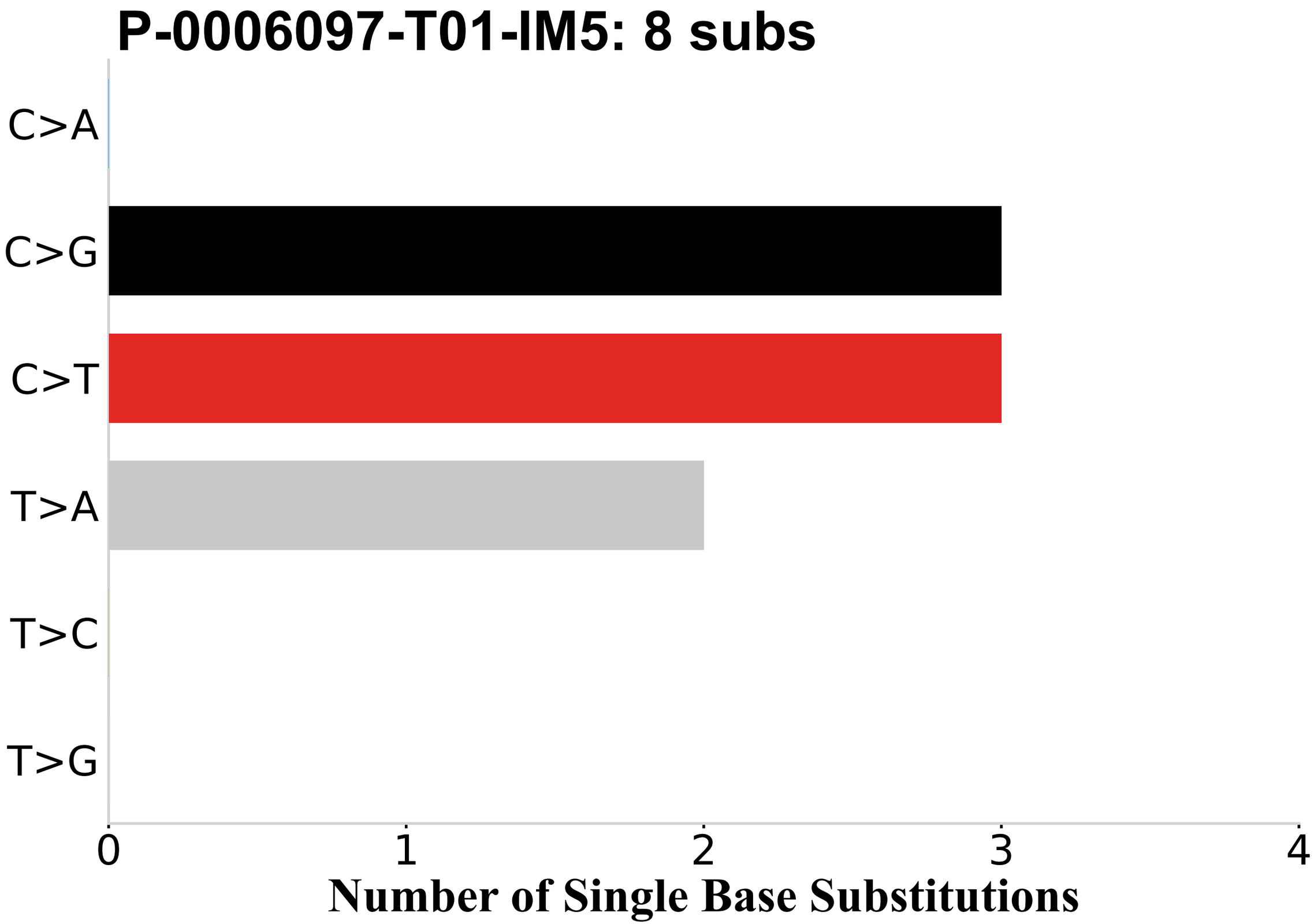
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0006097-T01-IM5: 8 subs
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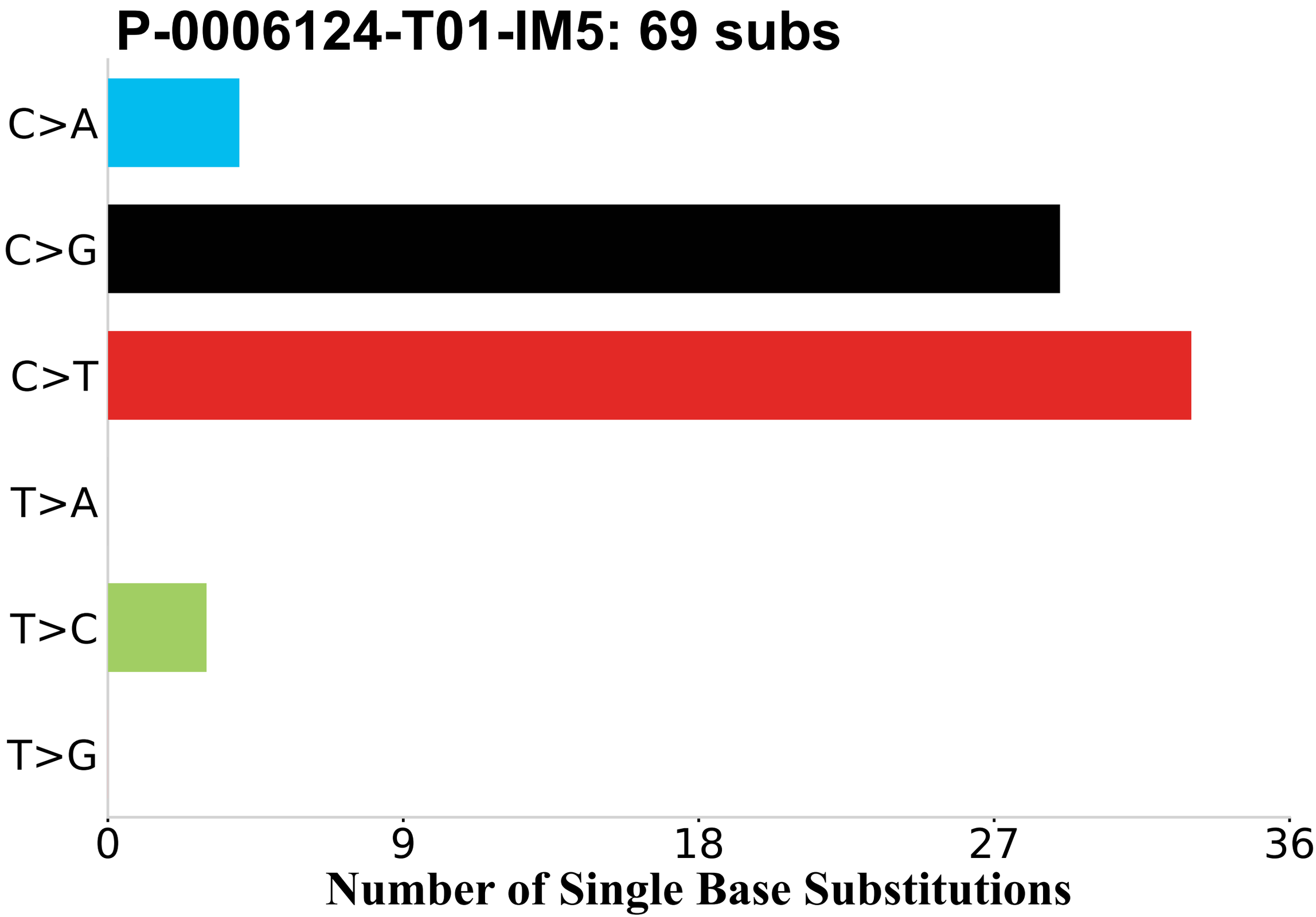
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0006124-T01-IM5: 69 subs
C>A
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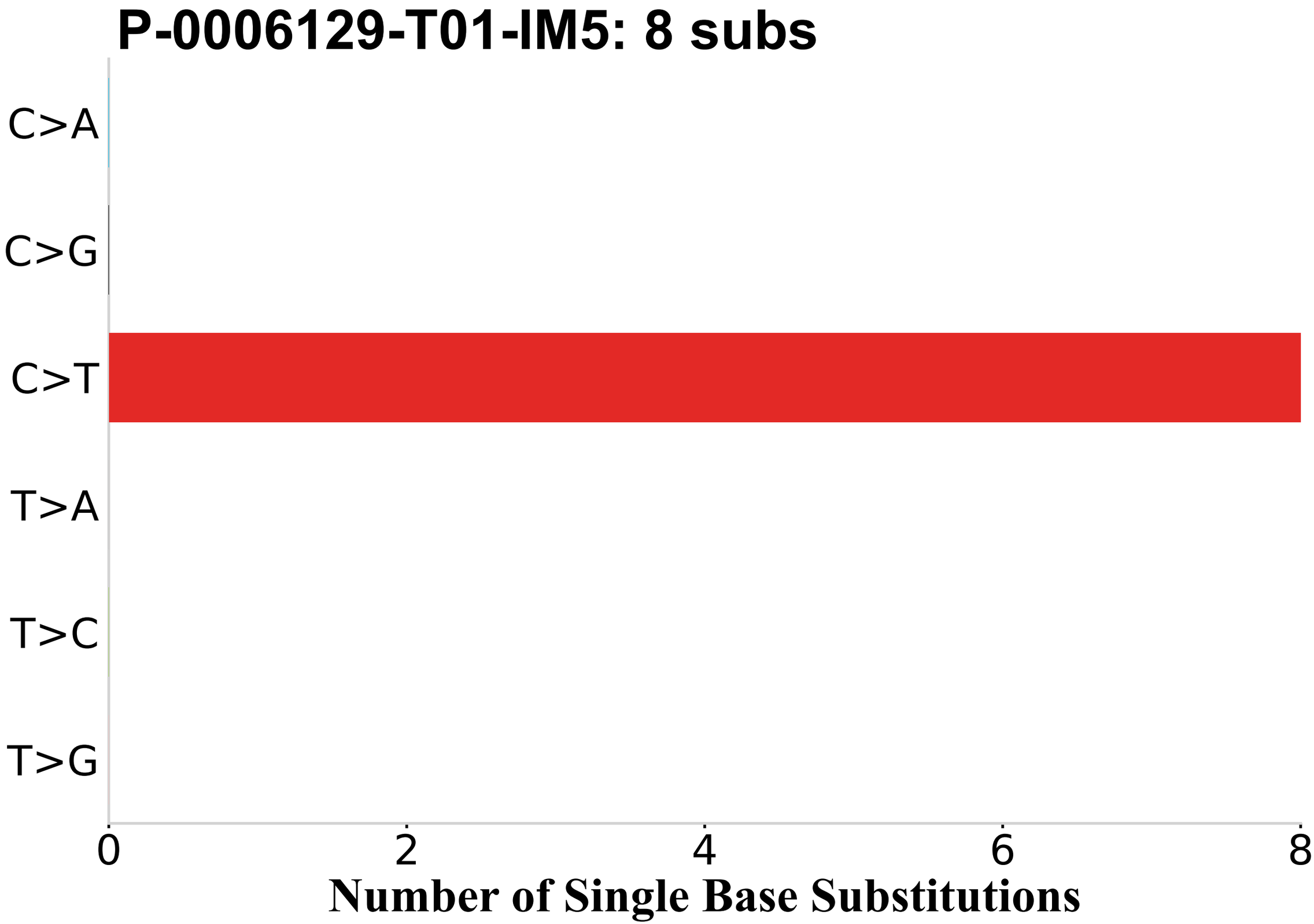
T>C
T>G
0
9
18
27
36
Number of Single Base Substitutions


P-0006129-T01-IM5: 8 subs
C>A
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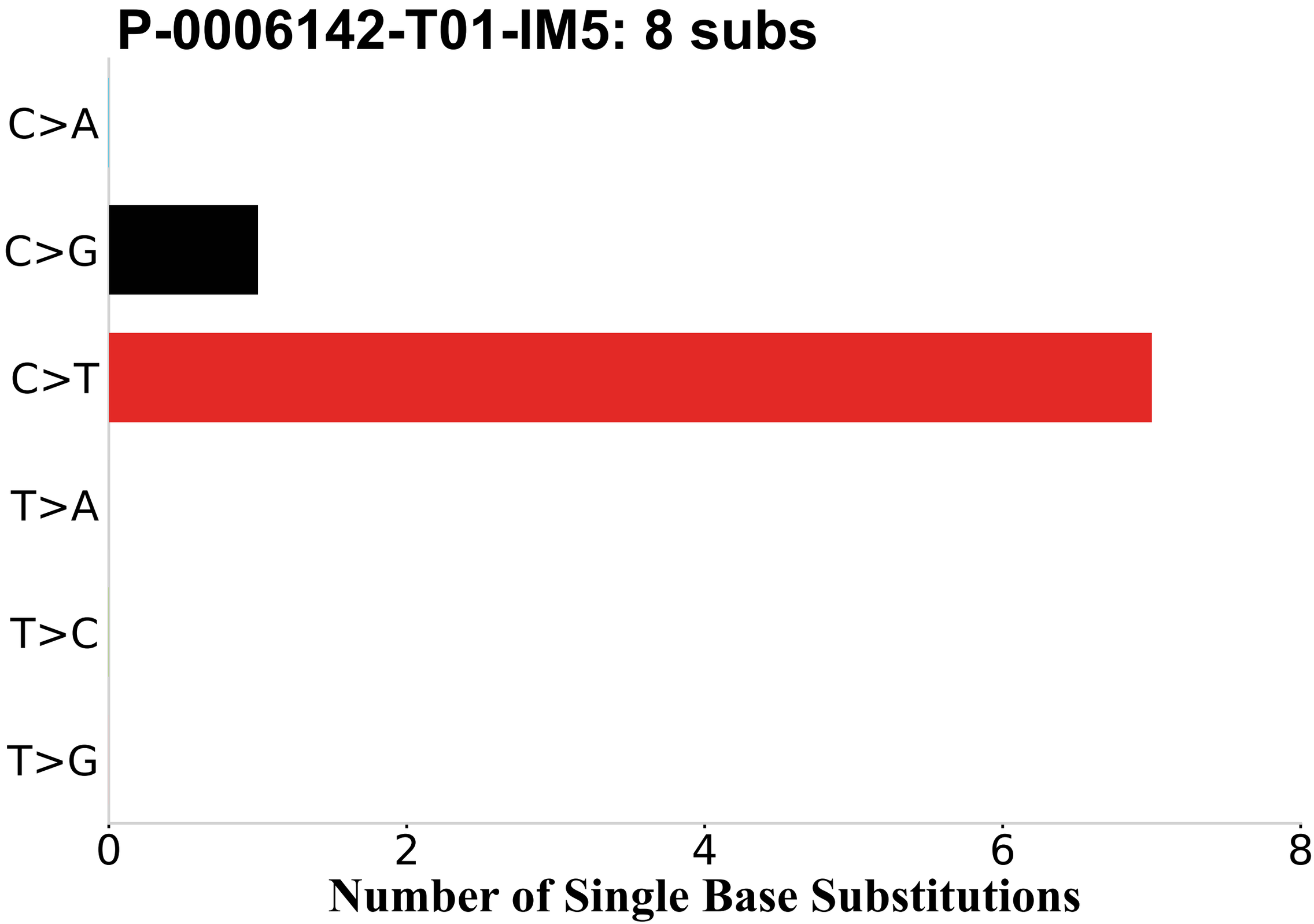
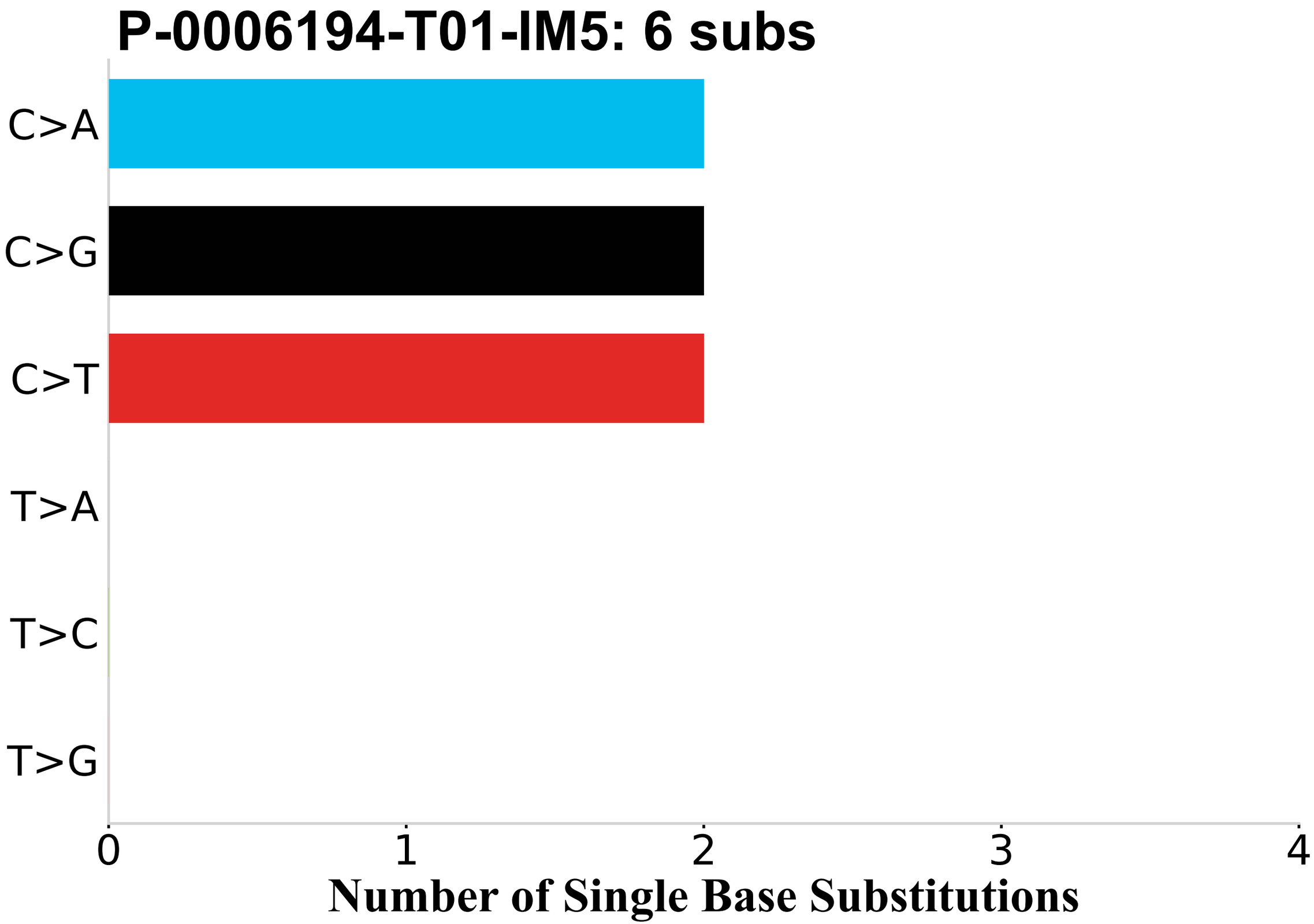
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0006142-T01-IM5: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0006194-T01-IM5: 6 subs
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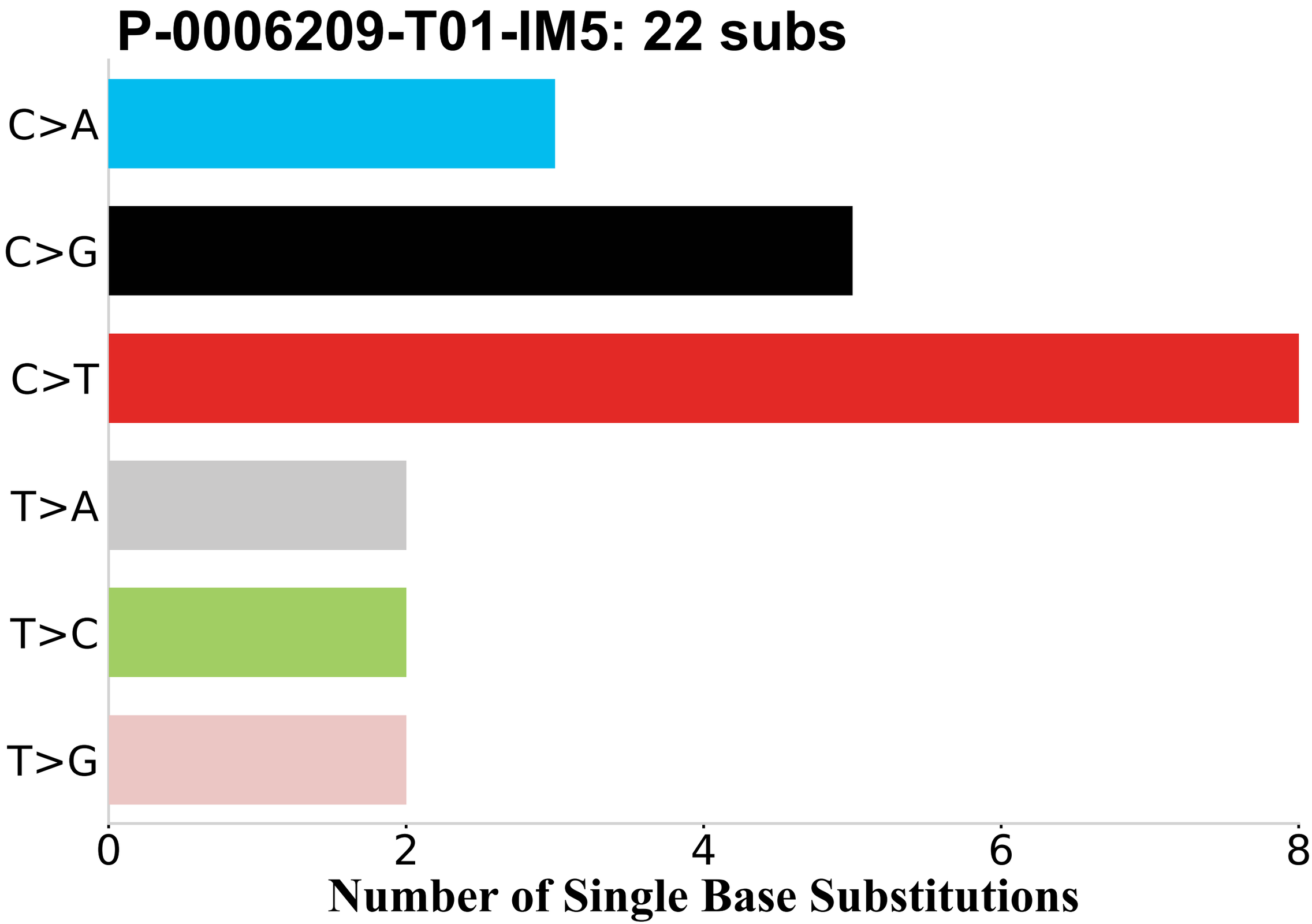
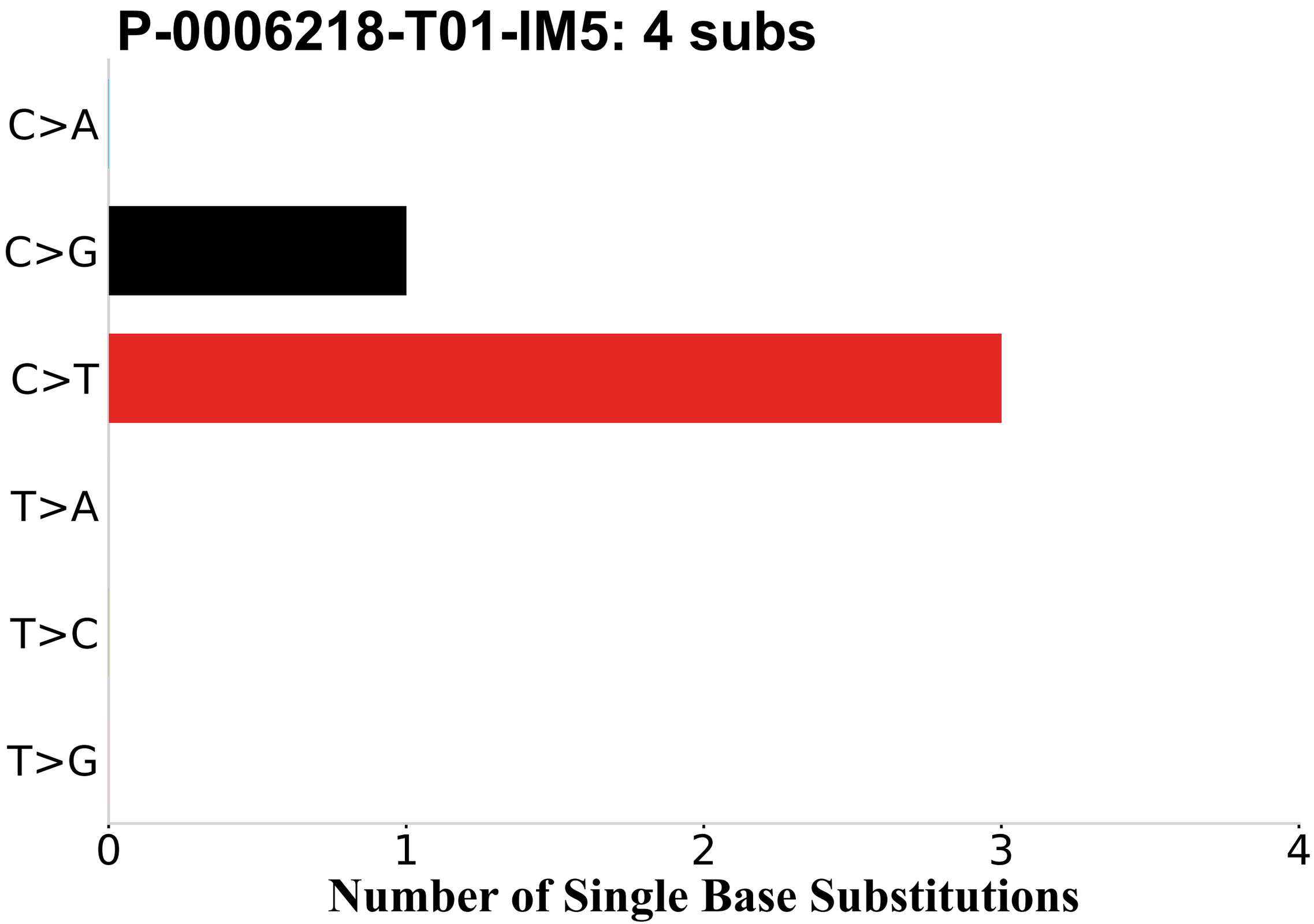
1
2
3
4
Number of Single Base Substitutions


P-0006209-T01-IM5: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0006218-T01-IM5: 4 subs
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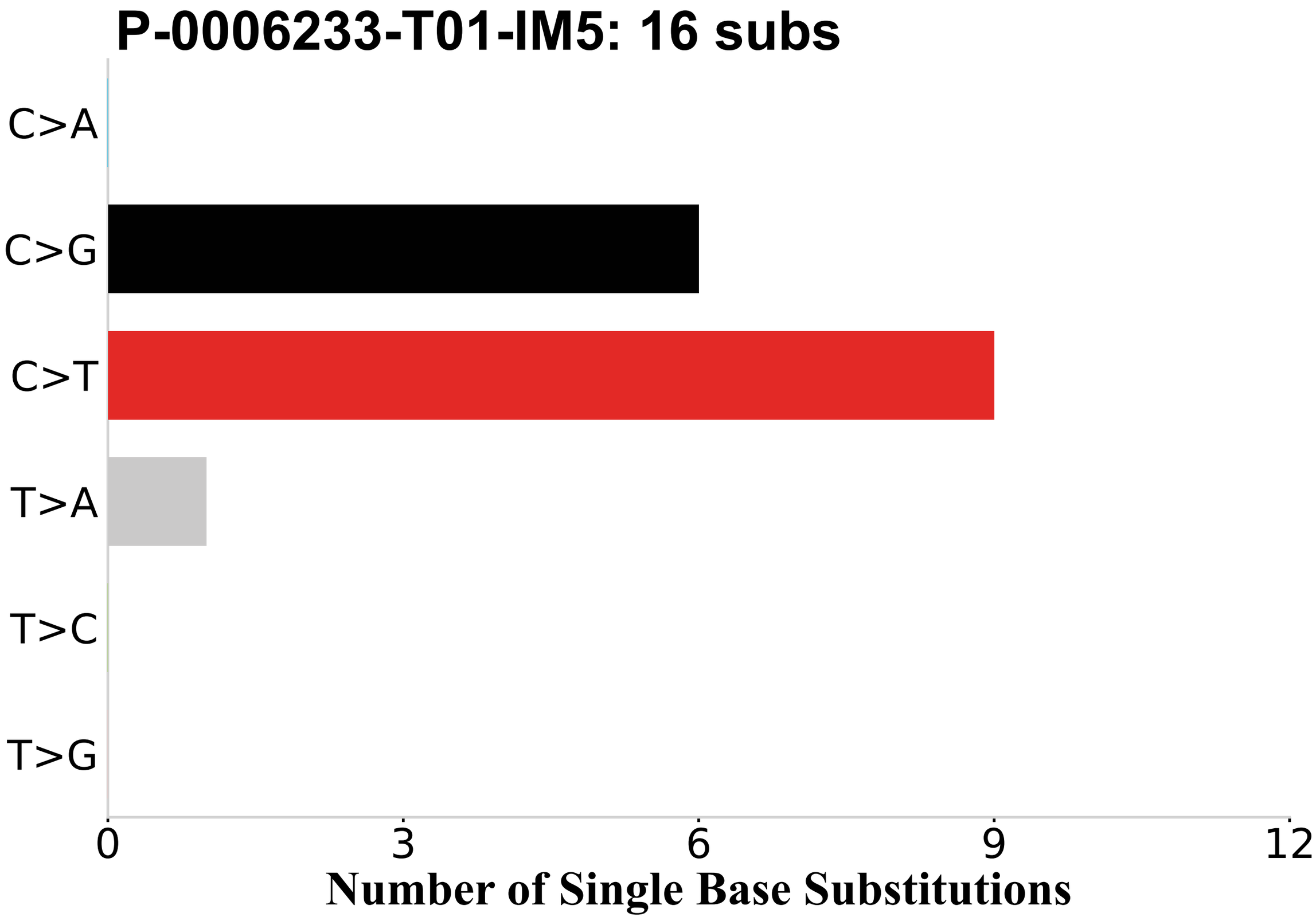
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0006233-T01-IM5: 16 subs
C>A
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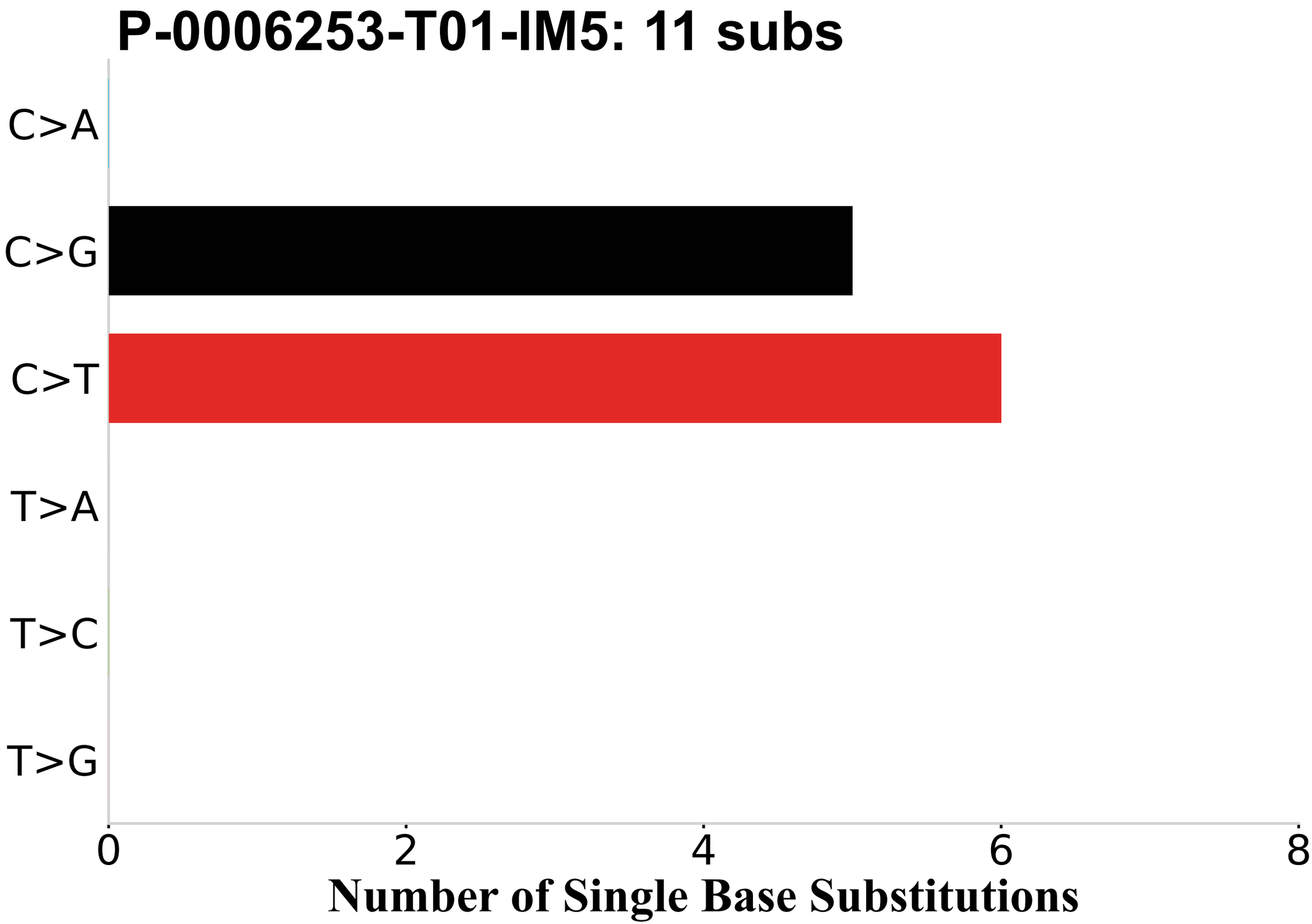
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0006253-T01-IM5: 11 subs
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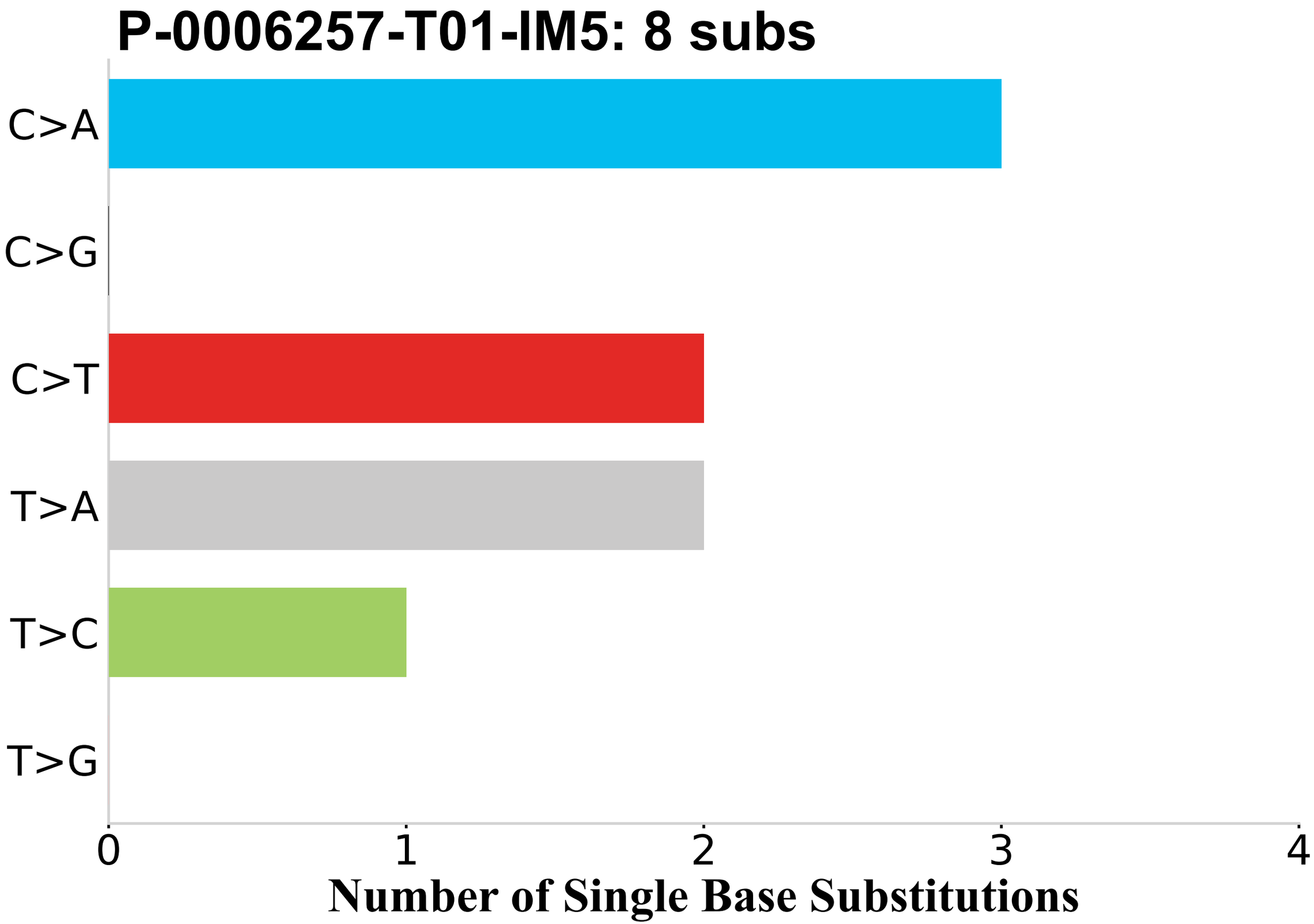
6
8
Number of Single Base Substitutions


P-0006257-T01-IM5: 8 subs
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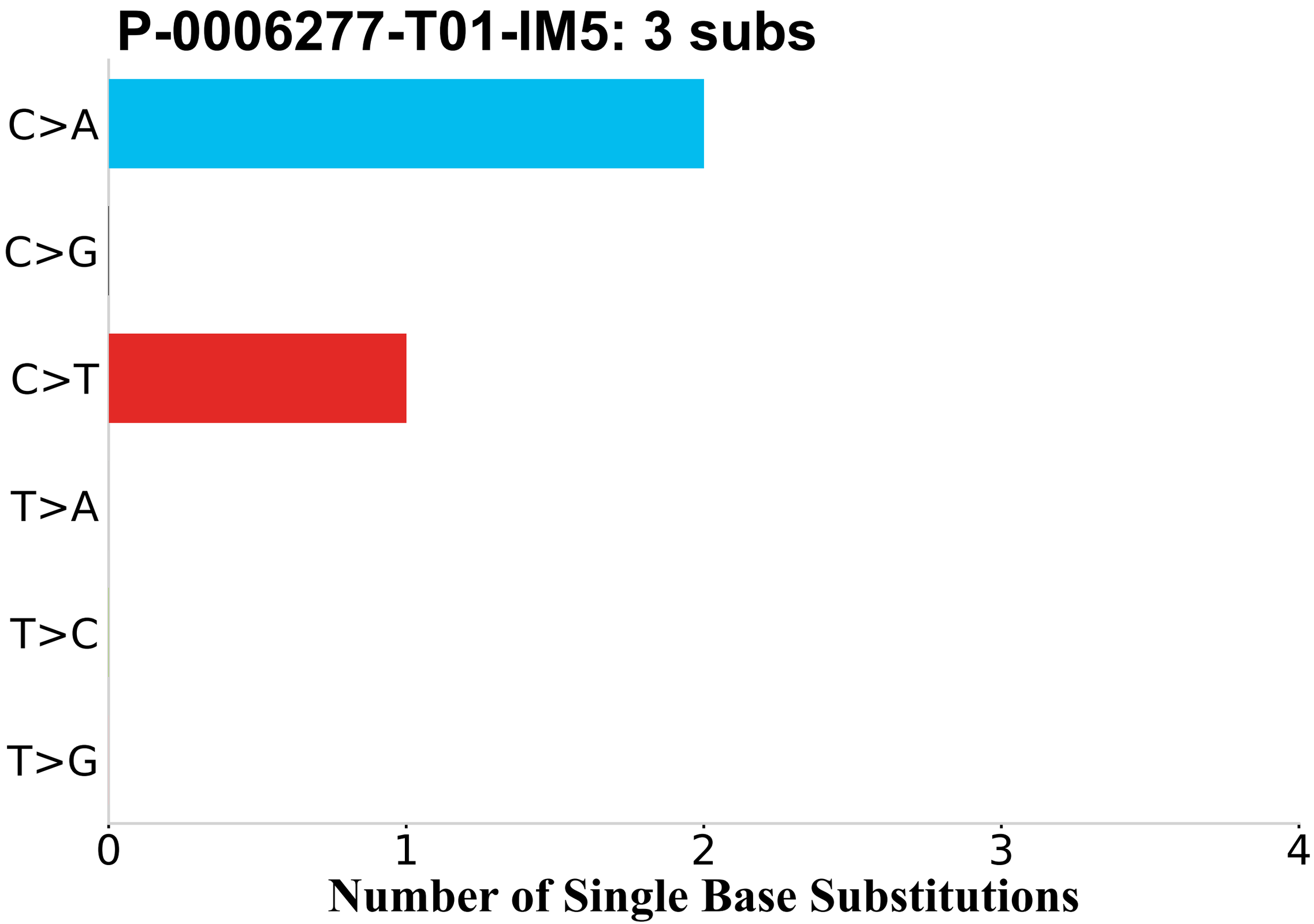
Number of Single Base Substitutions


P-0006277-T01-IM5: 3 subs
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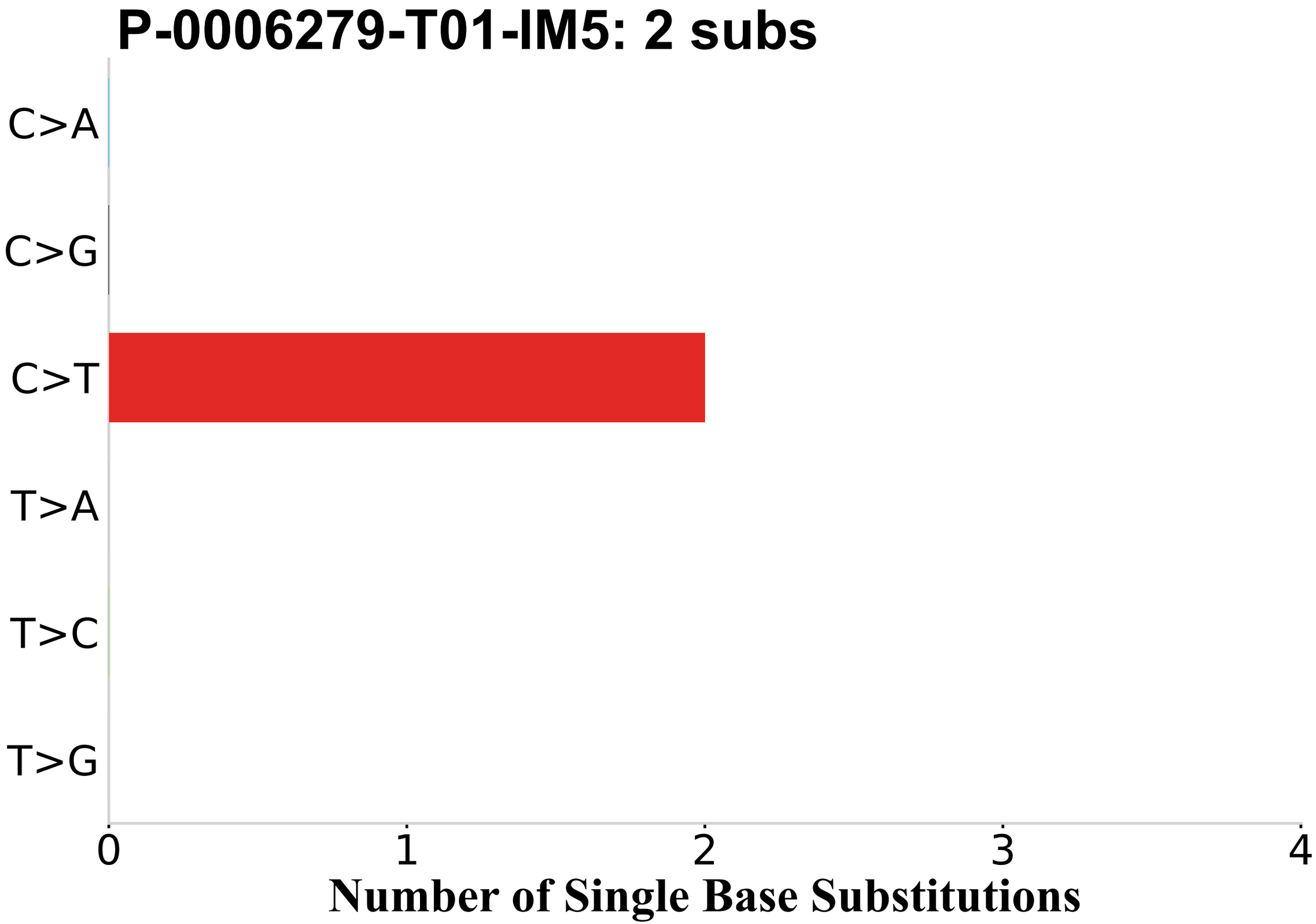
Number of Single Base Substitutions


P-0006279-T01-IM5: 2 subs
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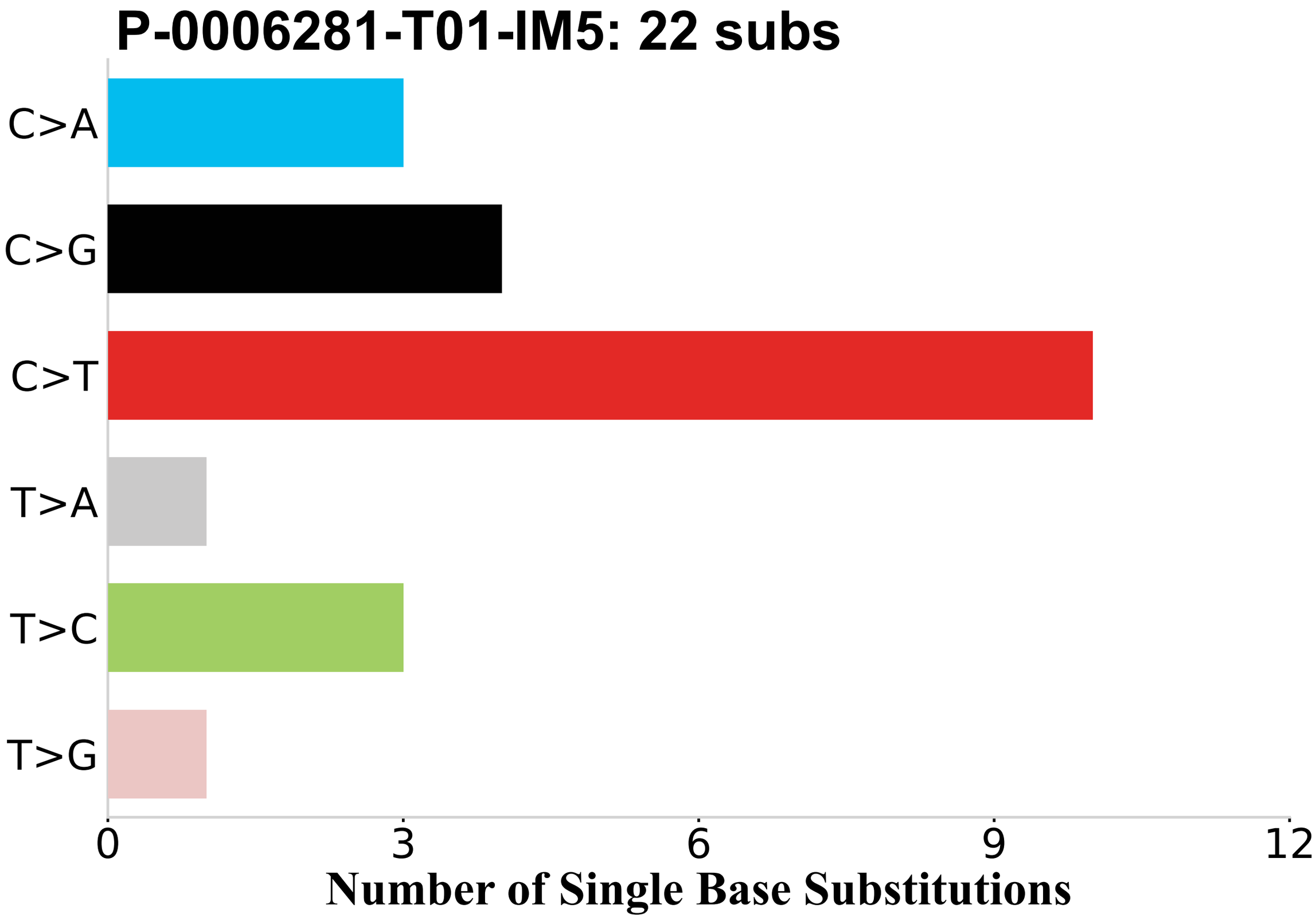
3
4
Number of Single Base Substitutions


P-0006281-T01-IM5: 22 subs
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T>G
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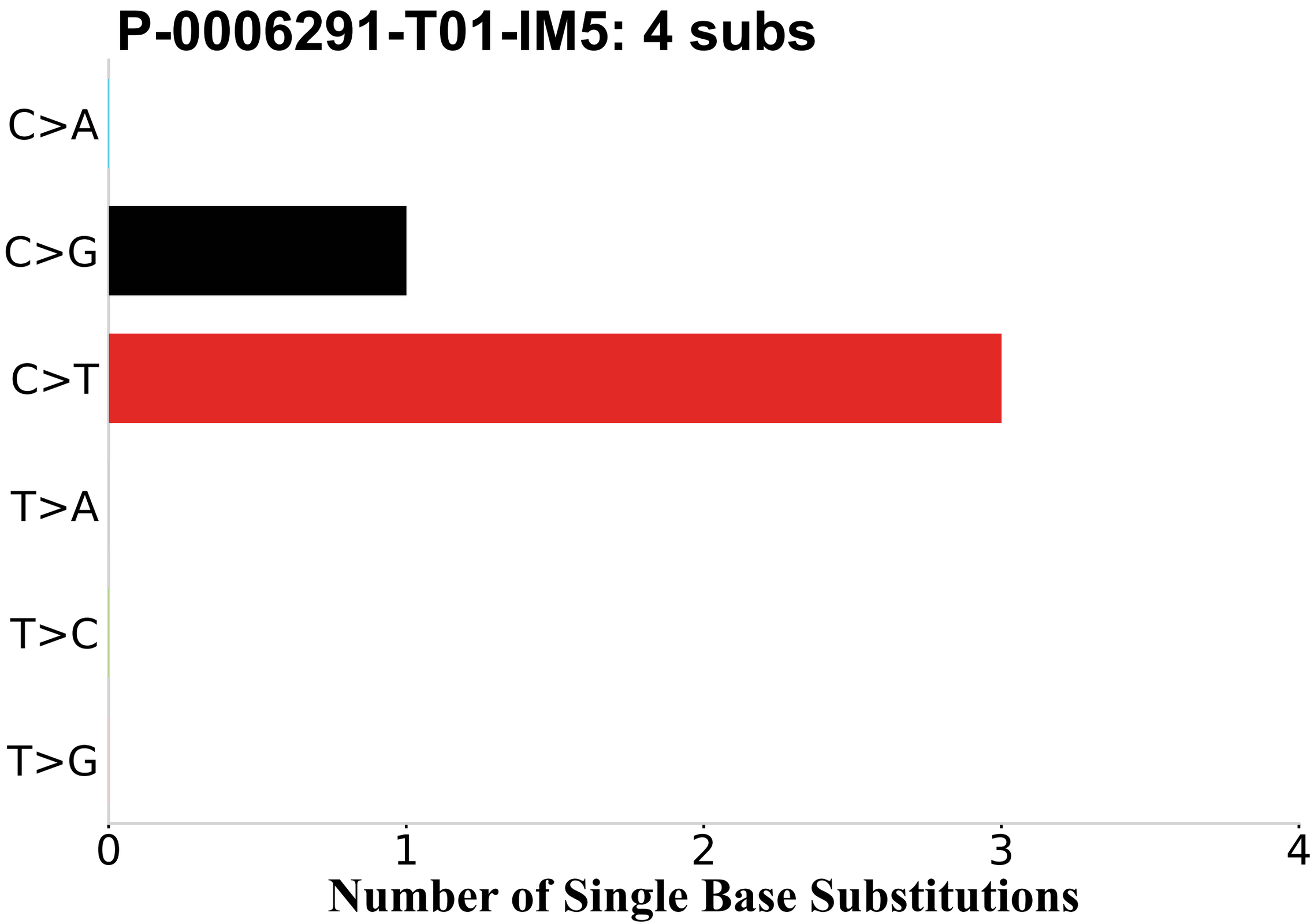
3
6
9
12
Number of Single Base Substitutions


P-0006291-T01-IM5: 4 subs
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T>G
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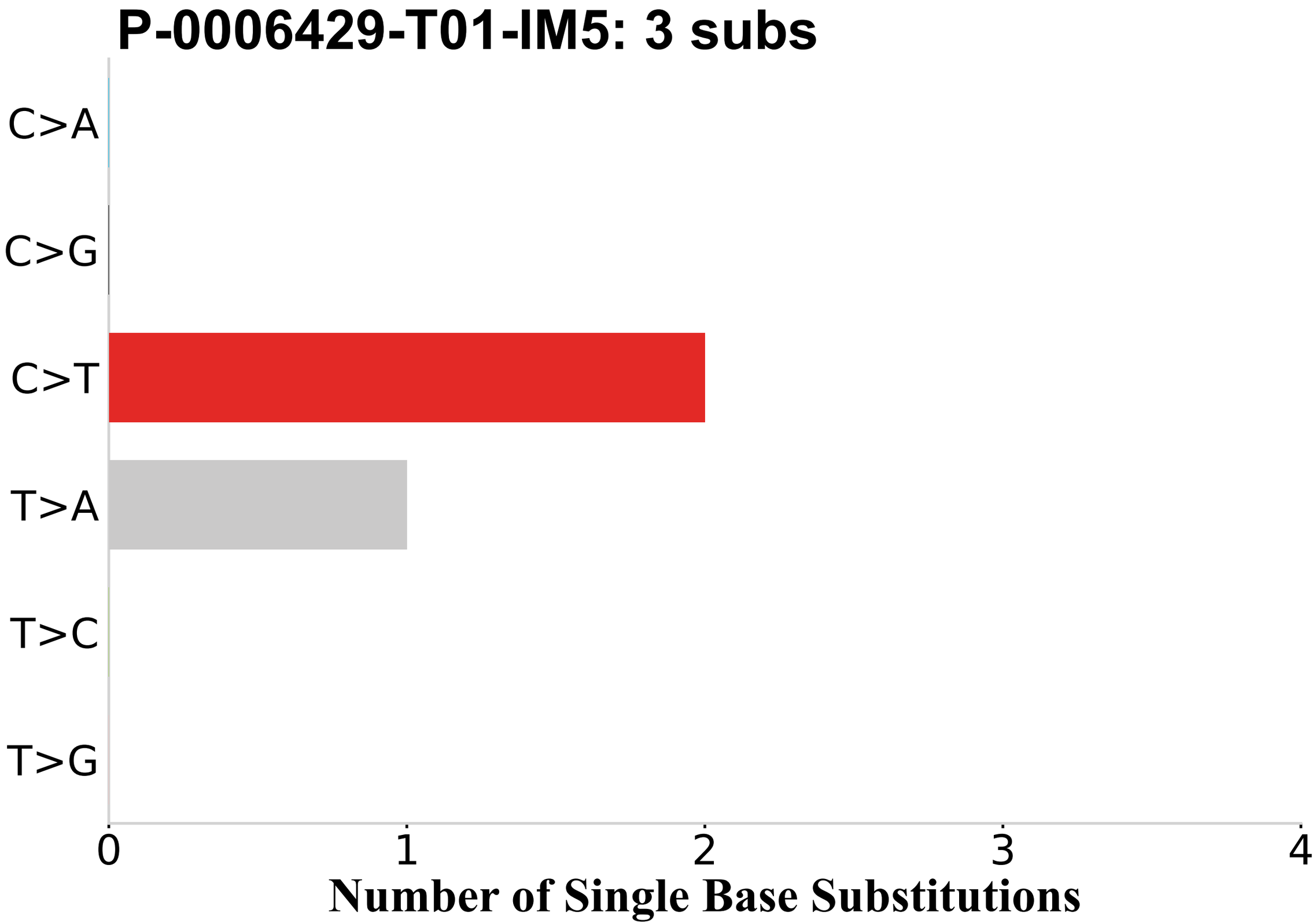
3
4
Number of Single Base Substitutions


P-0006429-T01-IM5: 3 subs
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T>C
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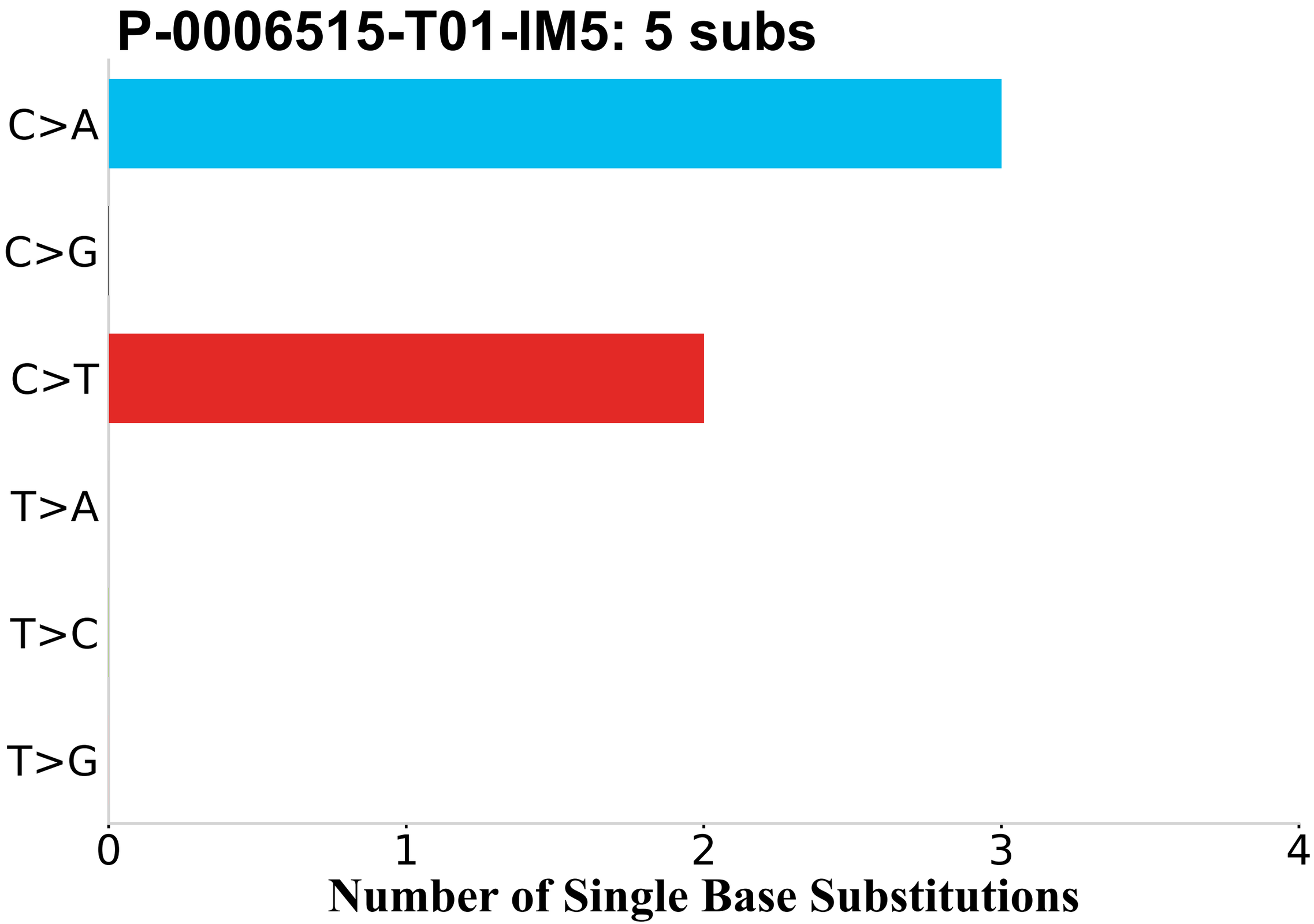
1
2
3
4
Number of Single Base Substitutions


P-0006515-T01-IM5: 5 subs
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T>G
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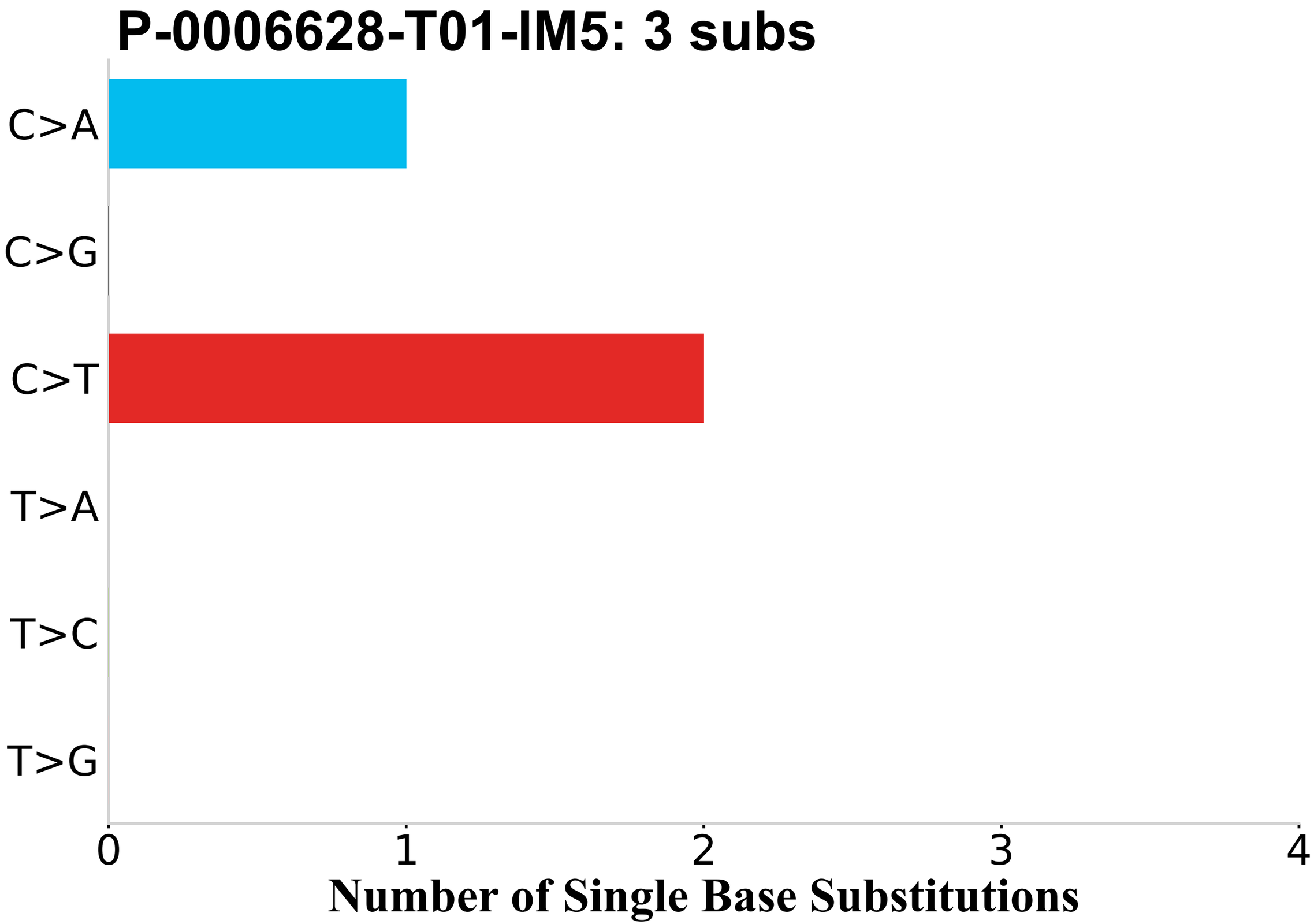
2
3
4
Number of Single Base Substitutions


P-0006628-T01-IM5: 3 subs
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T>G
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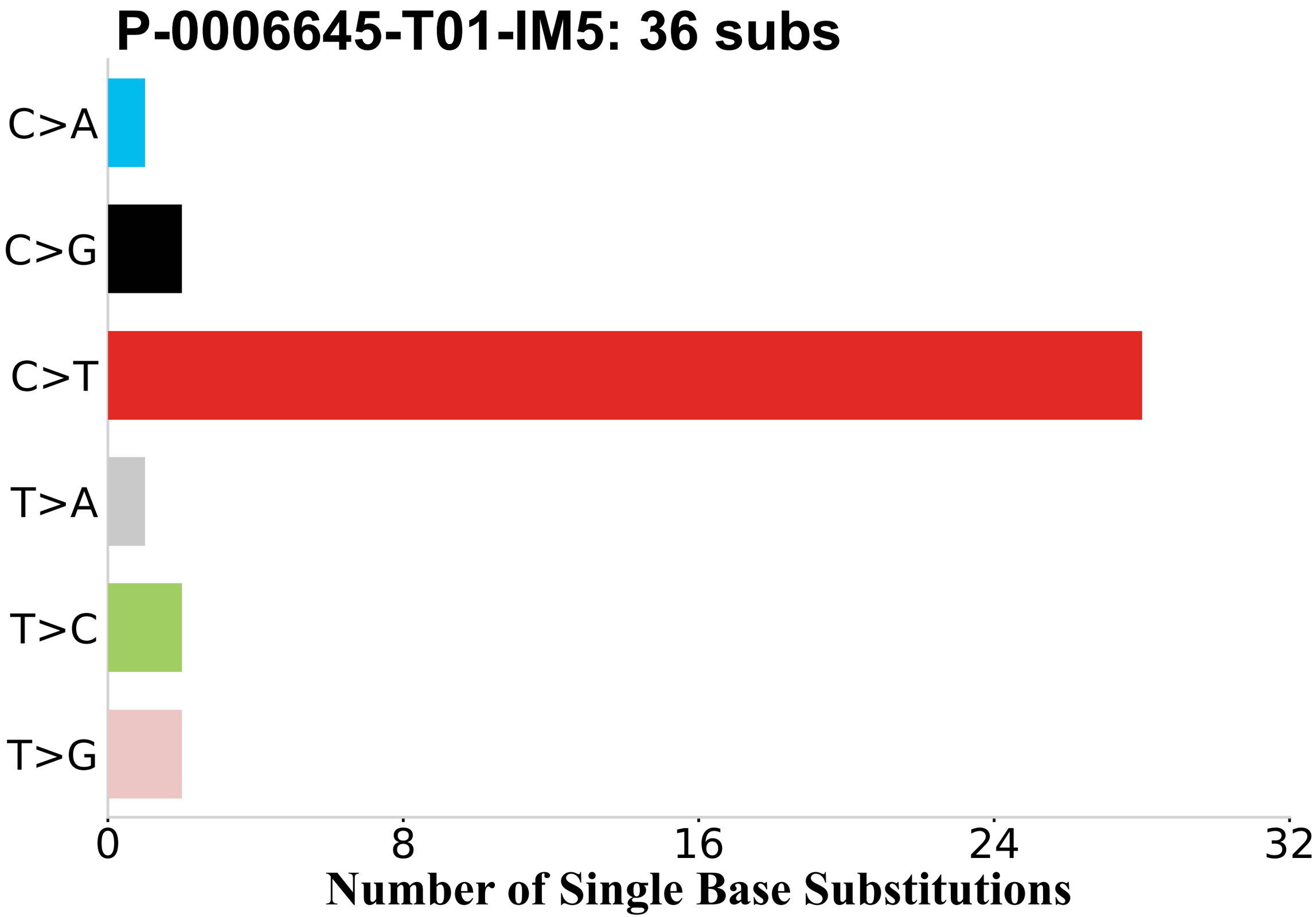
1
2
3
4
Number of Single Base Substitutions


P-0006645-T01-IM5: 36 subs
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T>A
T>C
T>G
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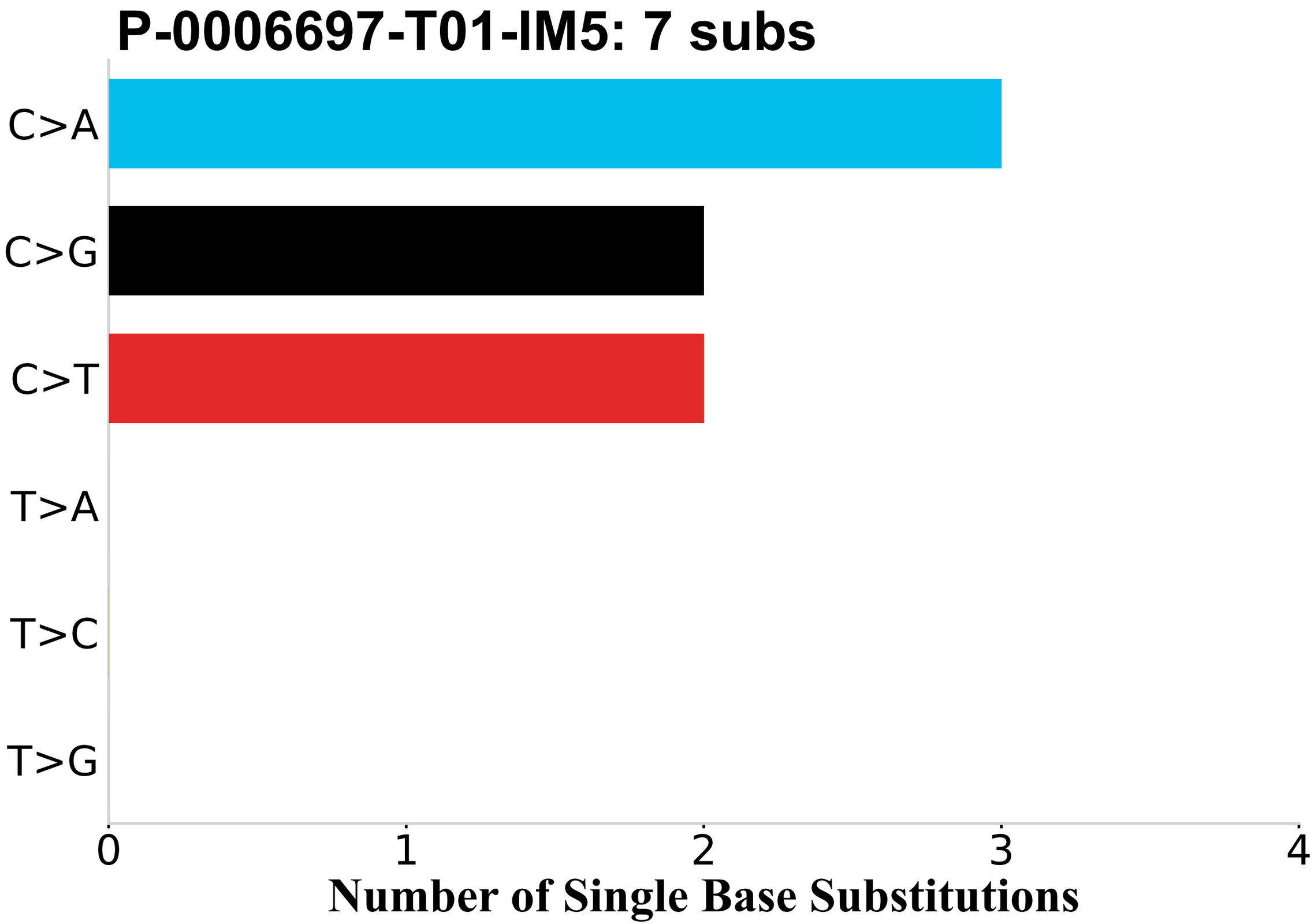
8
16
24
32
Number of Single Base Substitutions


P-0006697-T01-IM5: 7 subs
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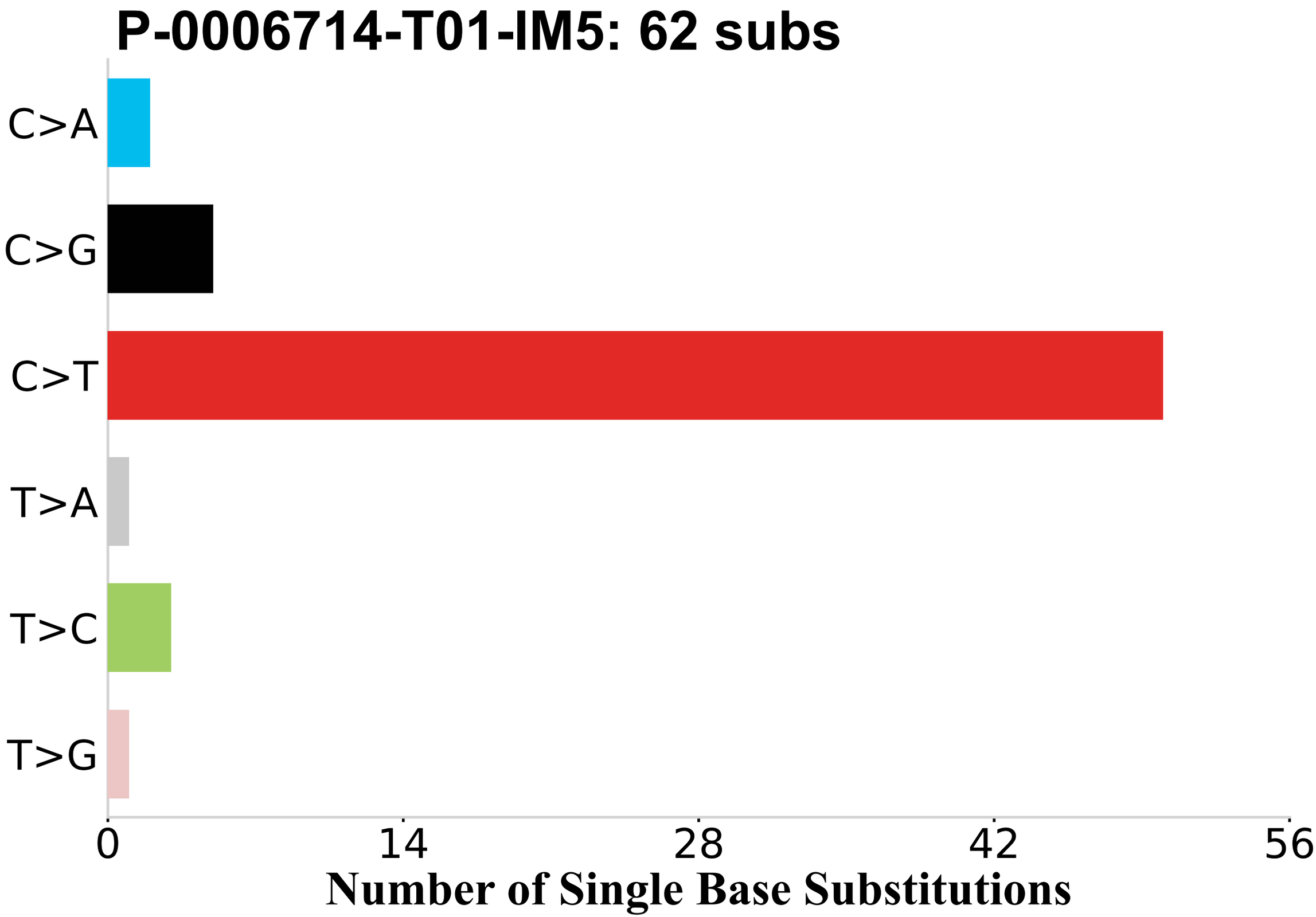
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0006714-T01-IM5: 62 subs
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C>T
T>A
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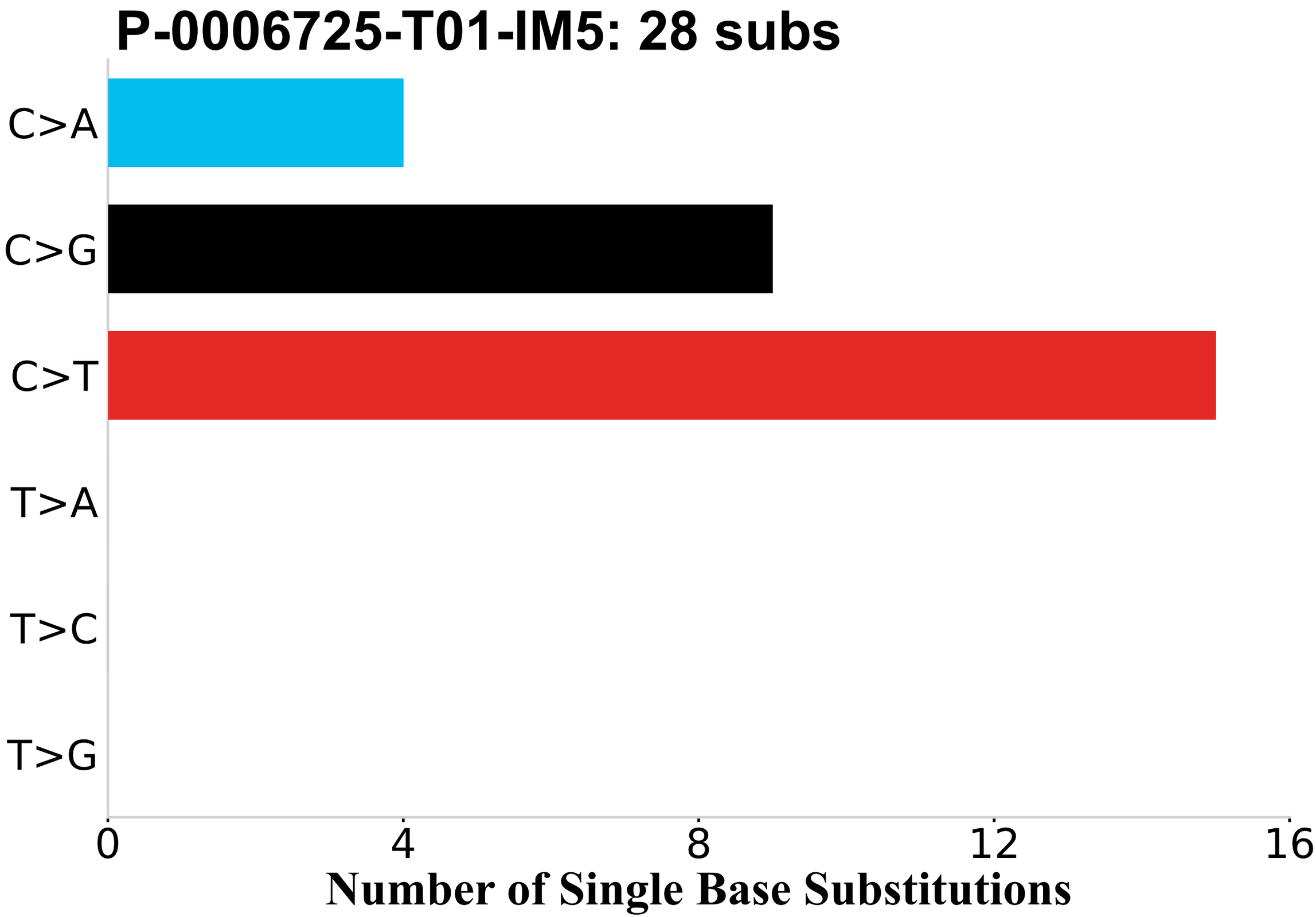
T>G
0
14
28
42
56
Number of Single Base Substitutions


P-0006725-T01-IM5: 28 subs
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C>T
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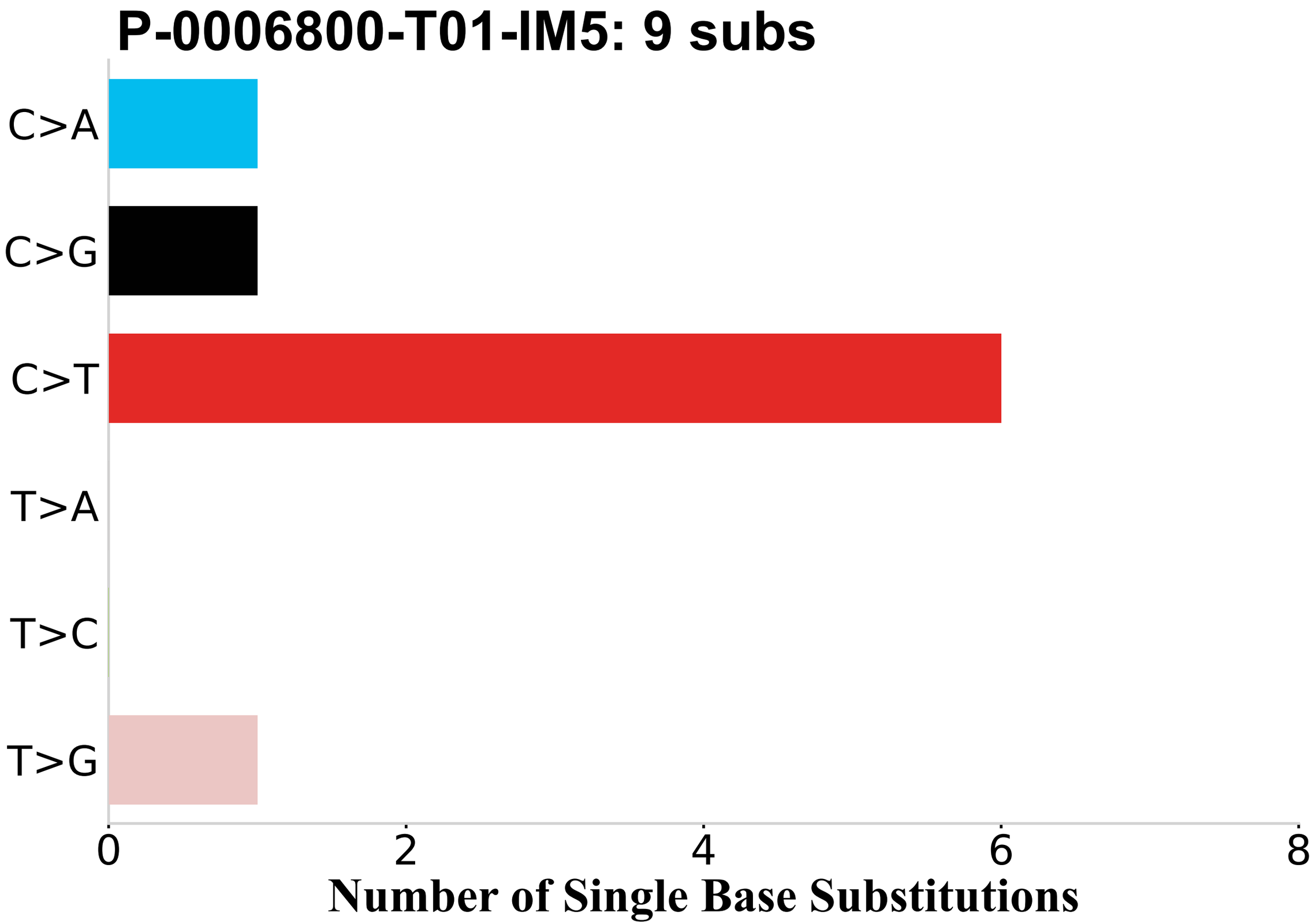
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0006800-T01-IM5: 9 subs
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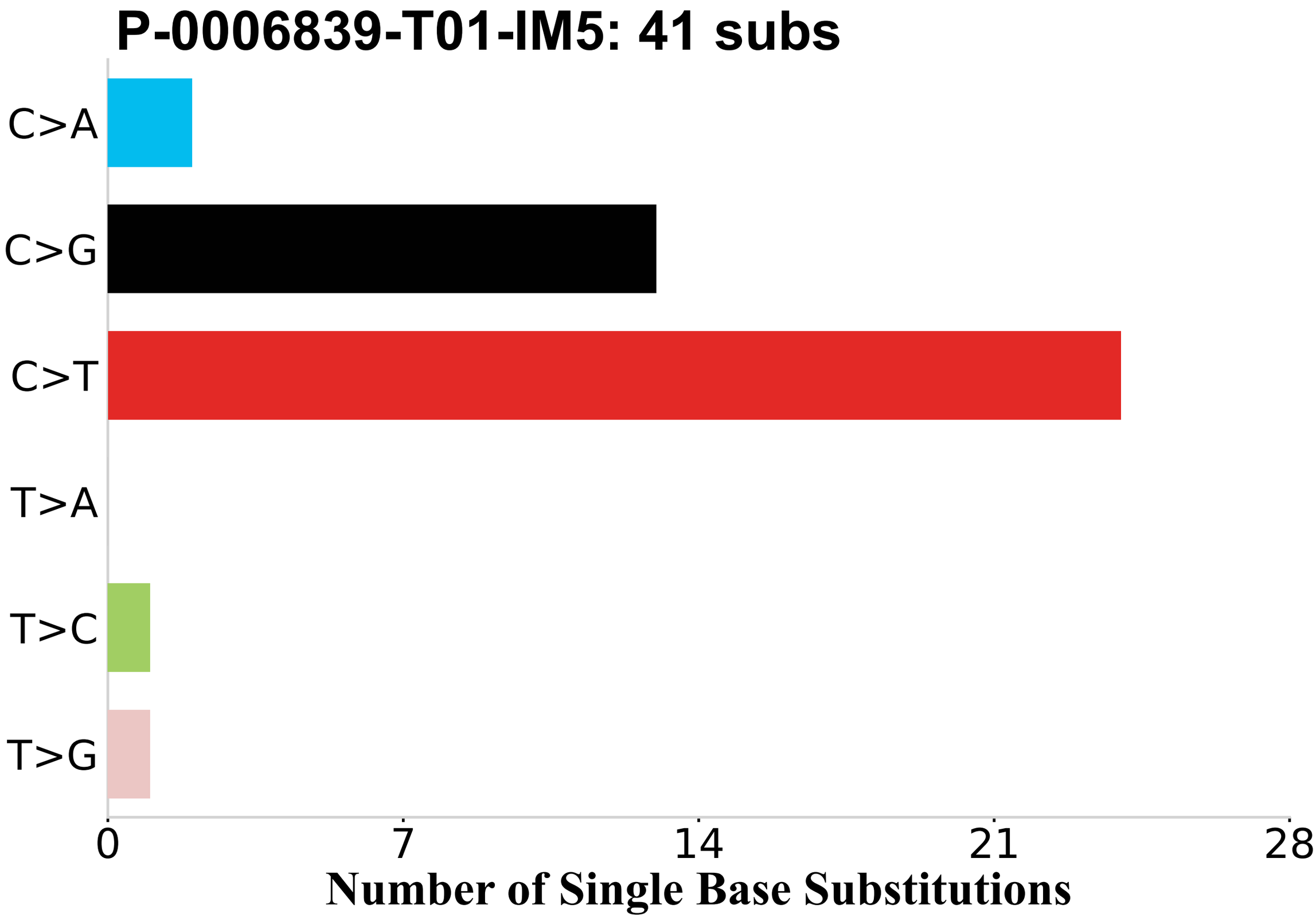
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0006839-T01-IM5: 41 subs
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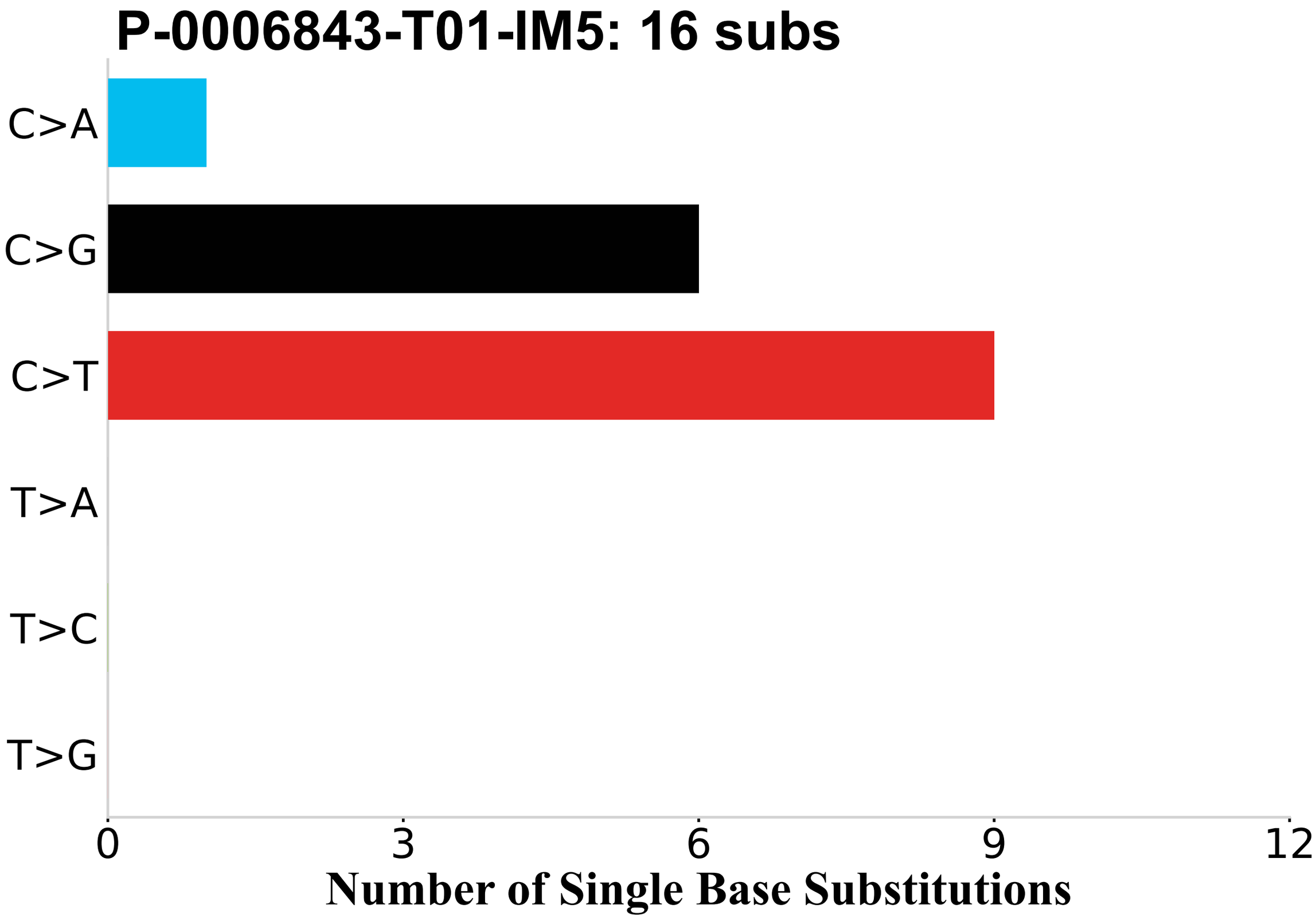
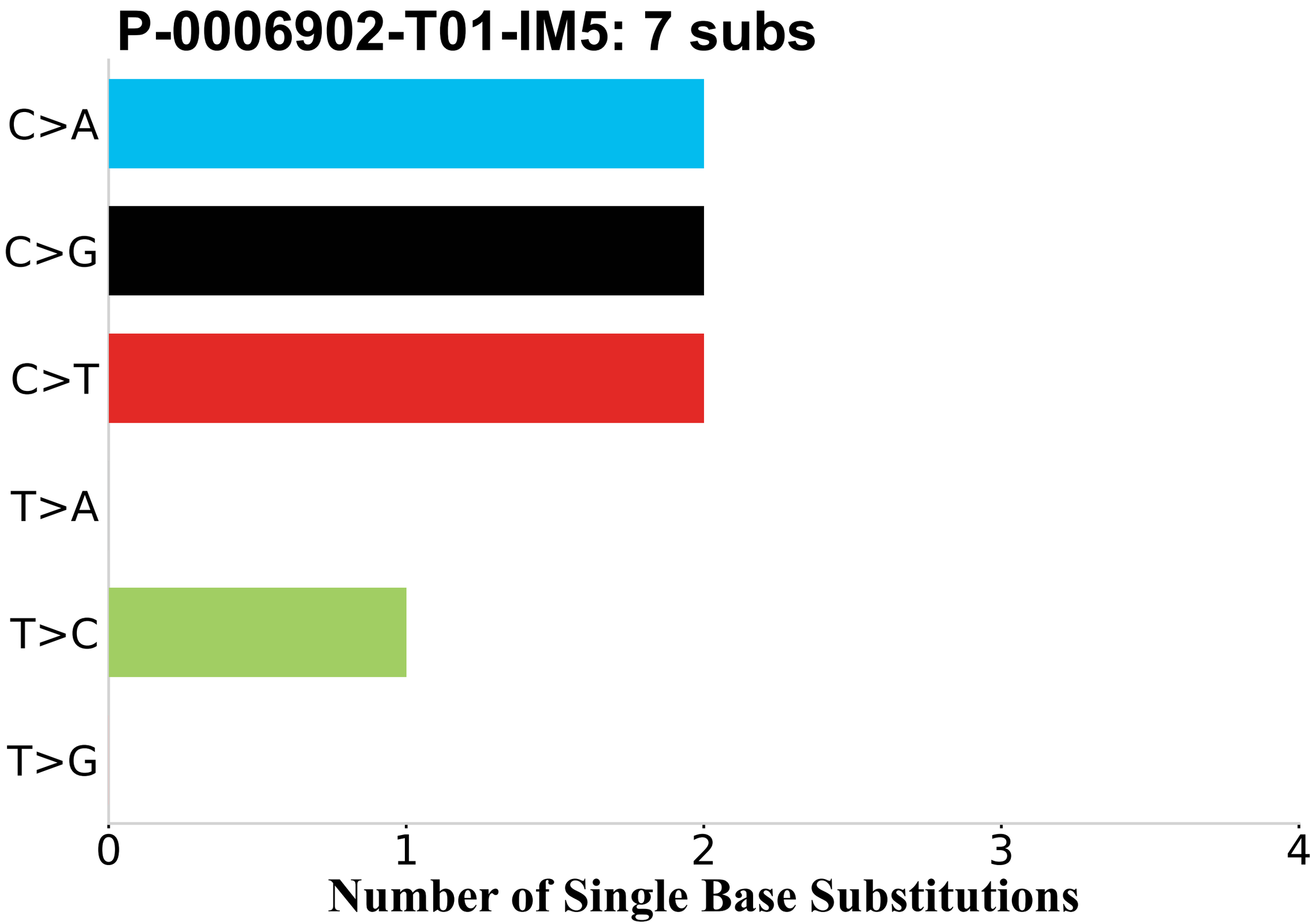
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0006843-T01-IM5: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0006902-T01-IM5: 7 subs
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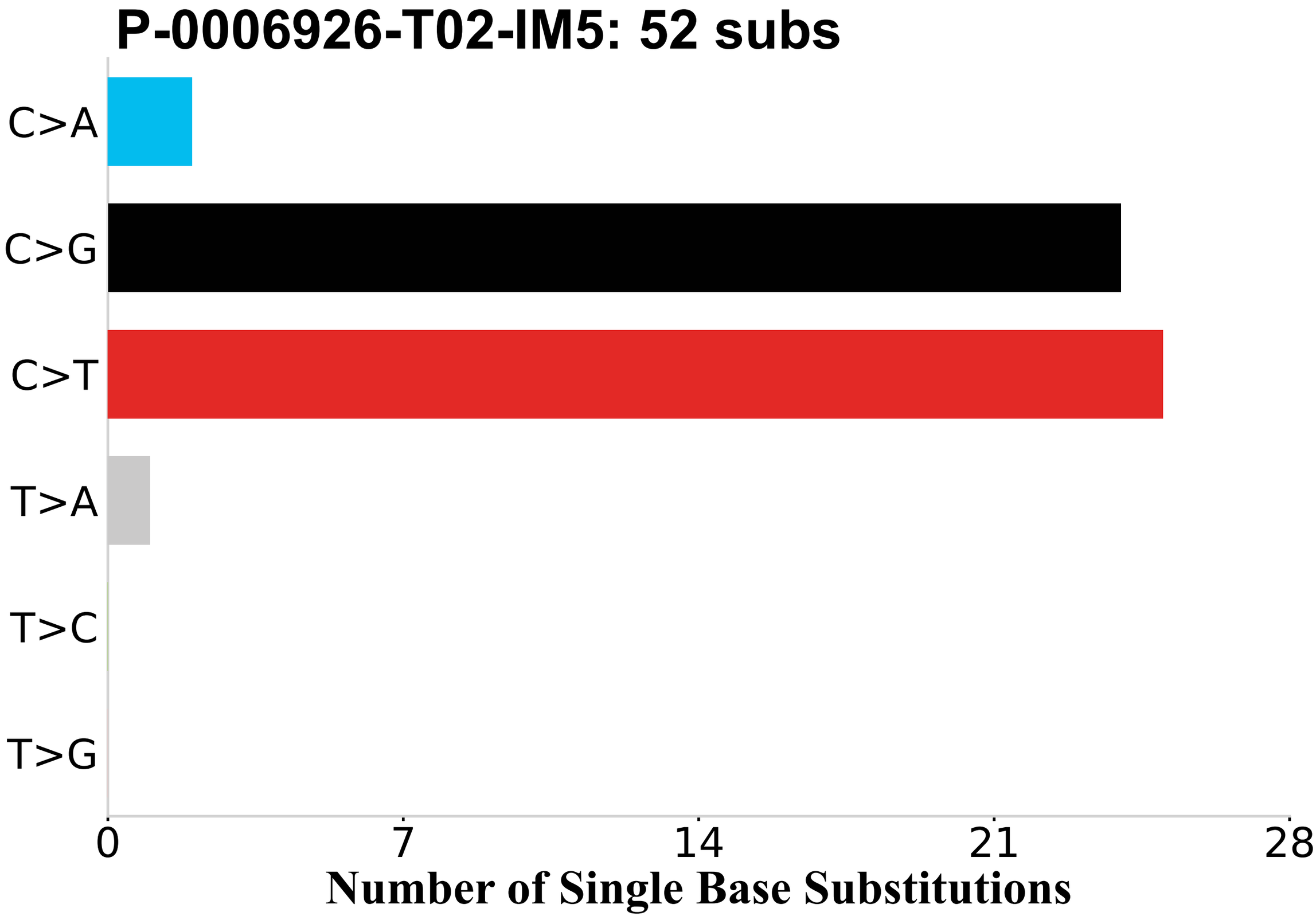
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0006926-T02-IM5: 52 subs
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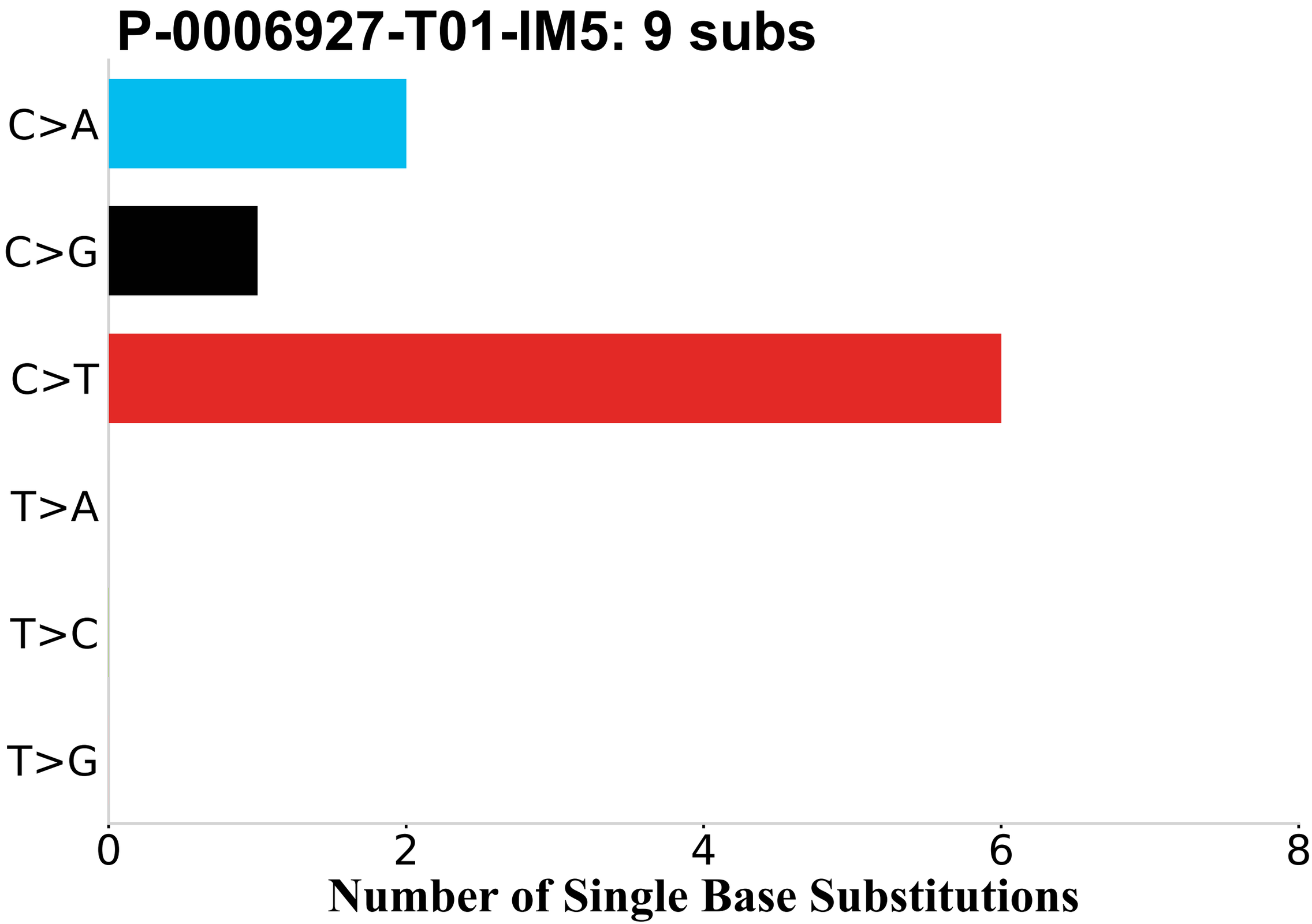
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0006927-T01-IM5: 9 subs
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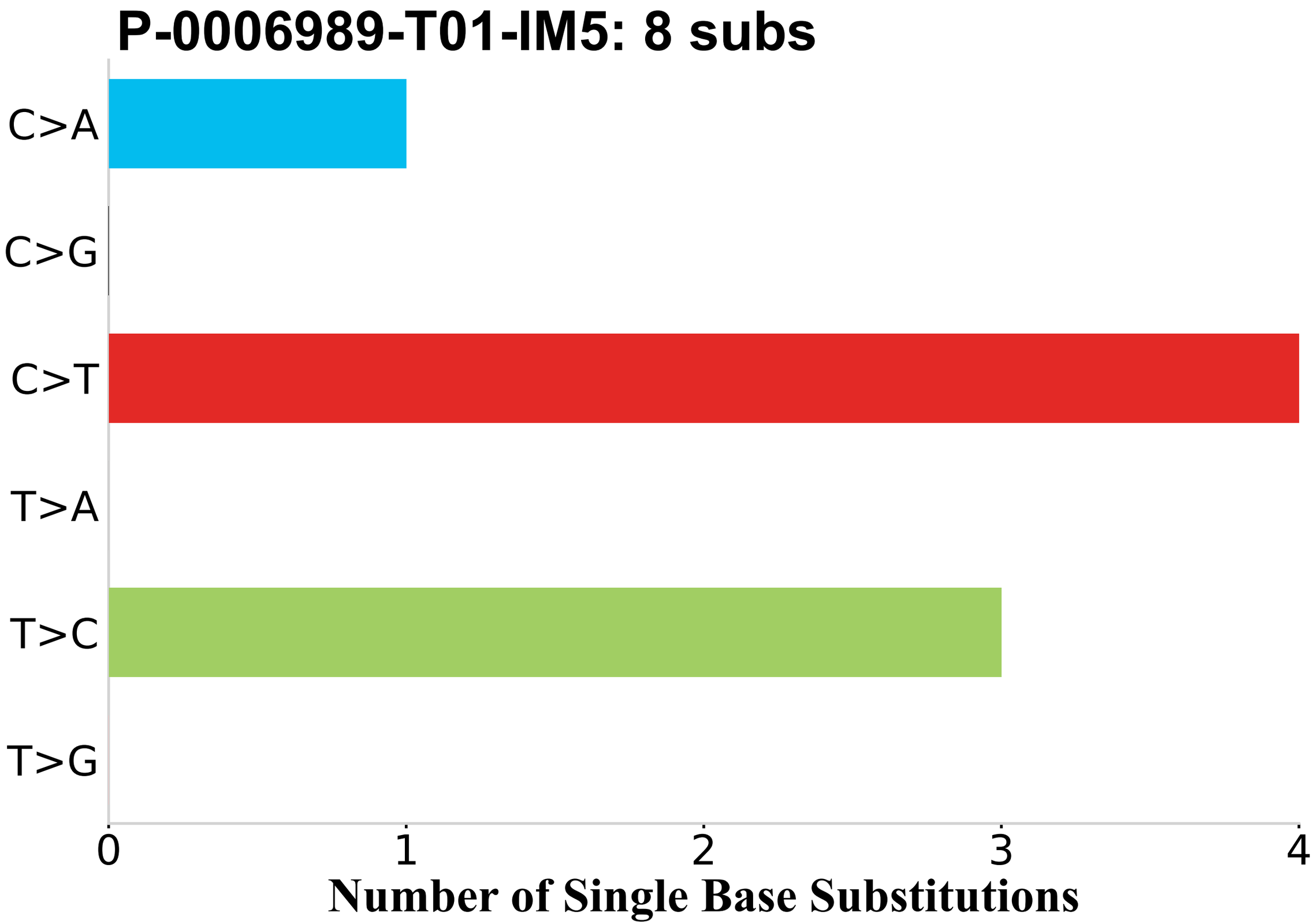
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0006989-T01-IM5: 8 subs
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C>T
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T>C
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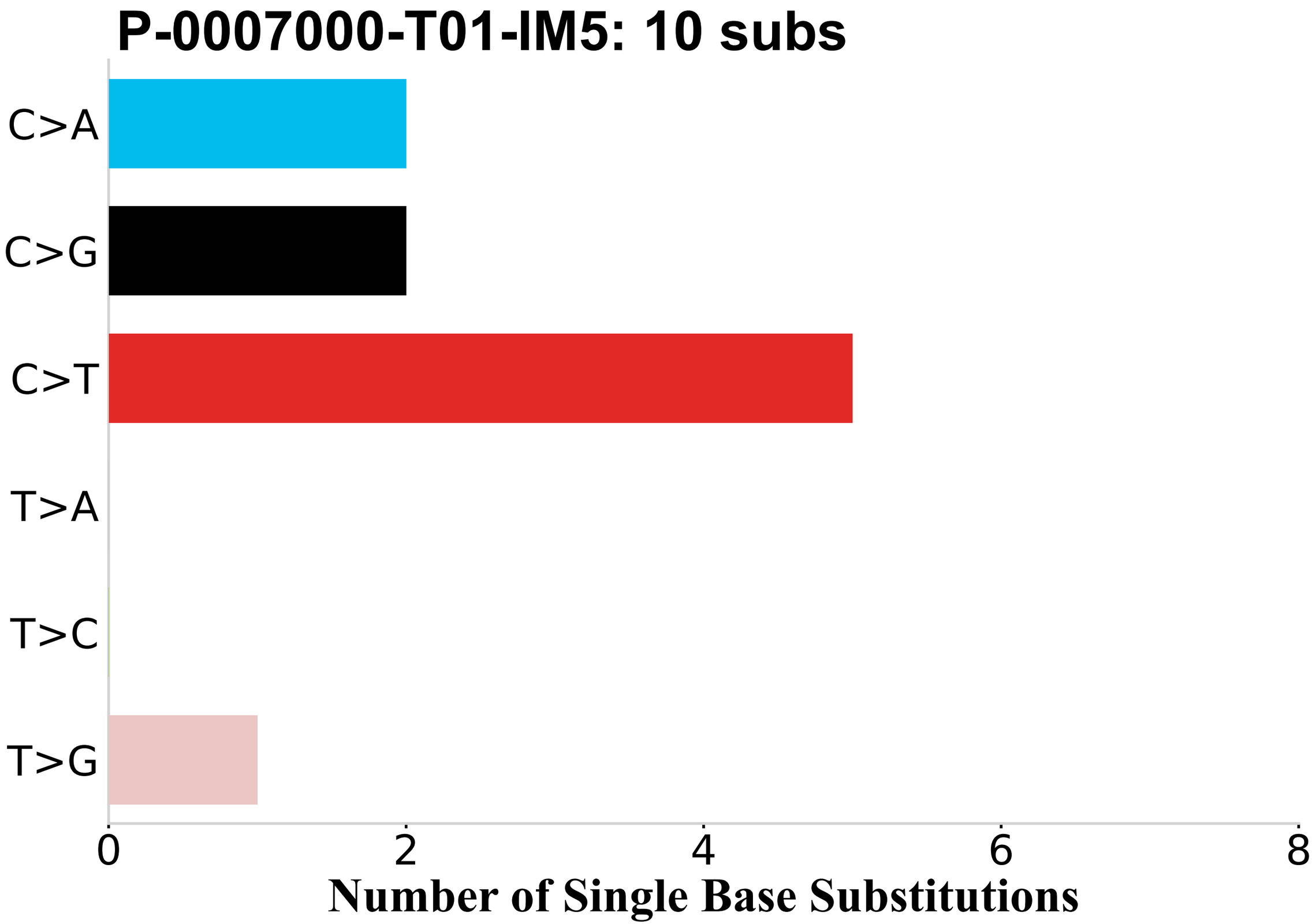
0
1
2
3
4
Number of Single Base Substitutions


P-0007000-T01-IM5: 10 subs
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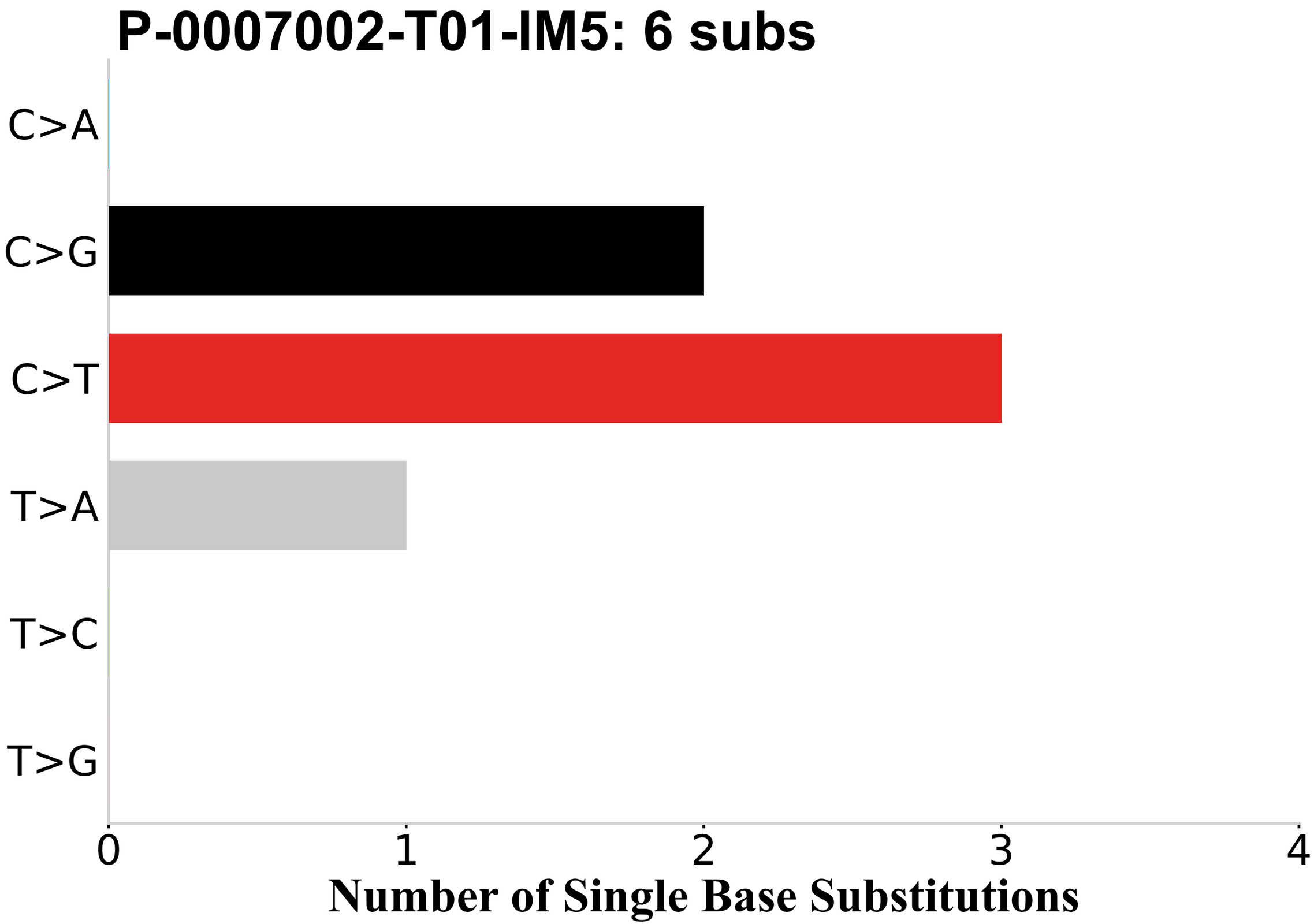
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0007002-T01-IM5: 6 subs
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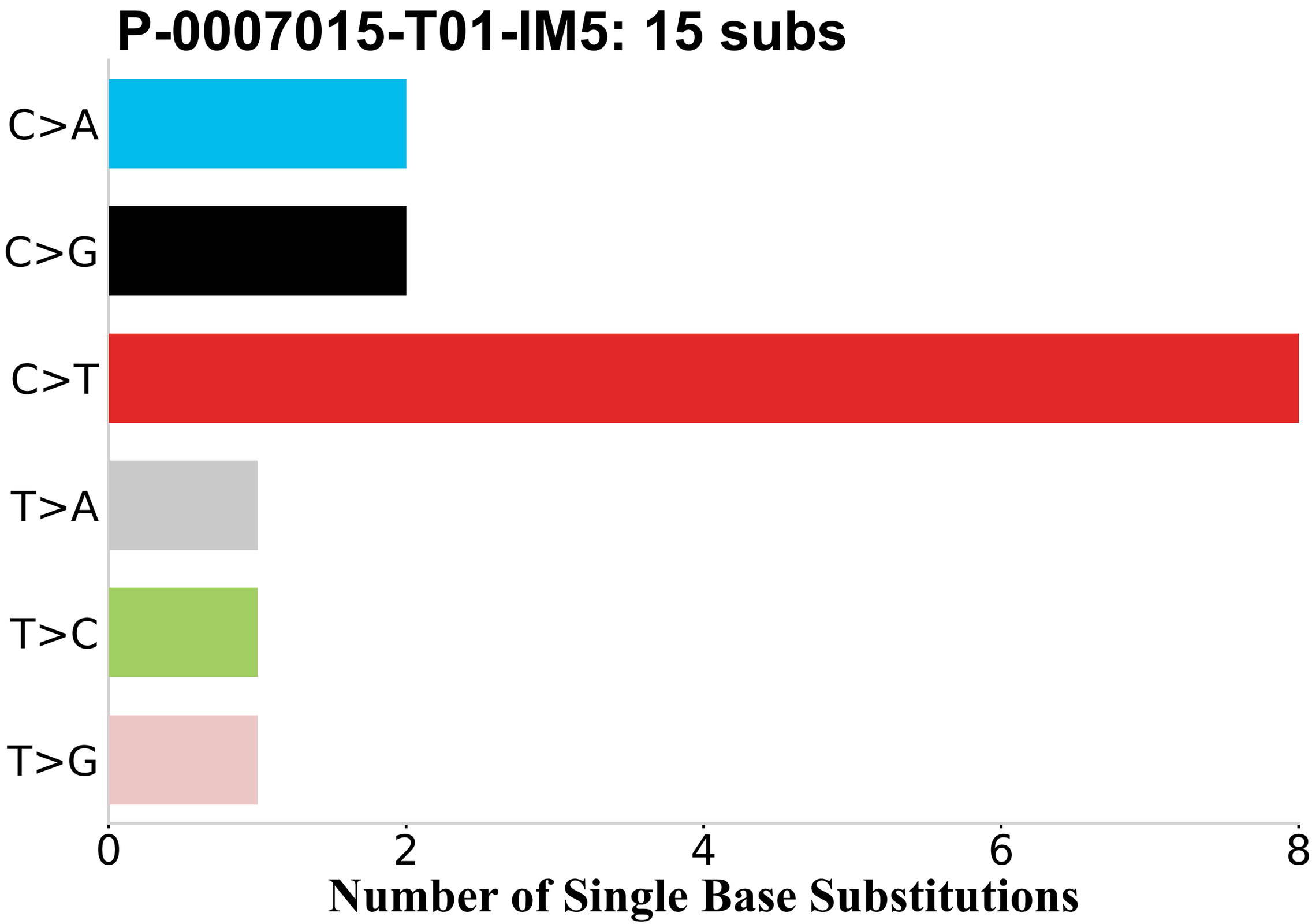
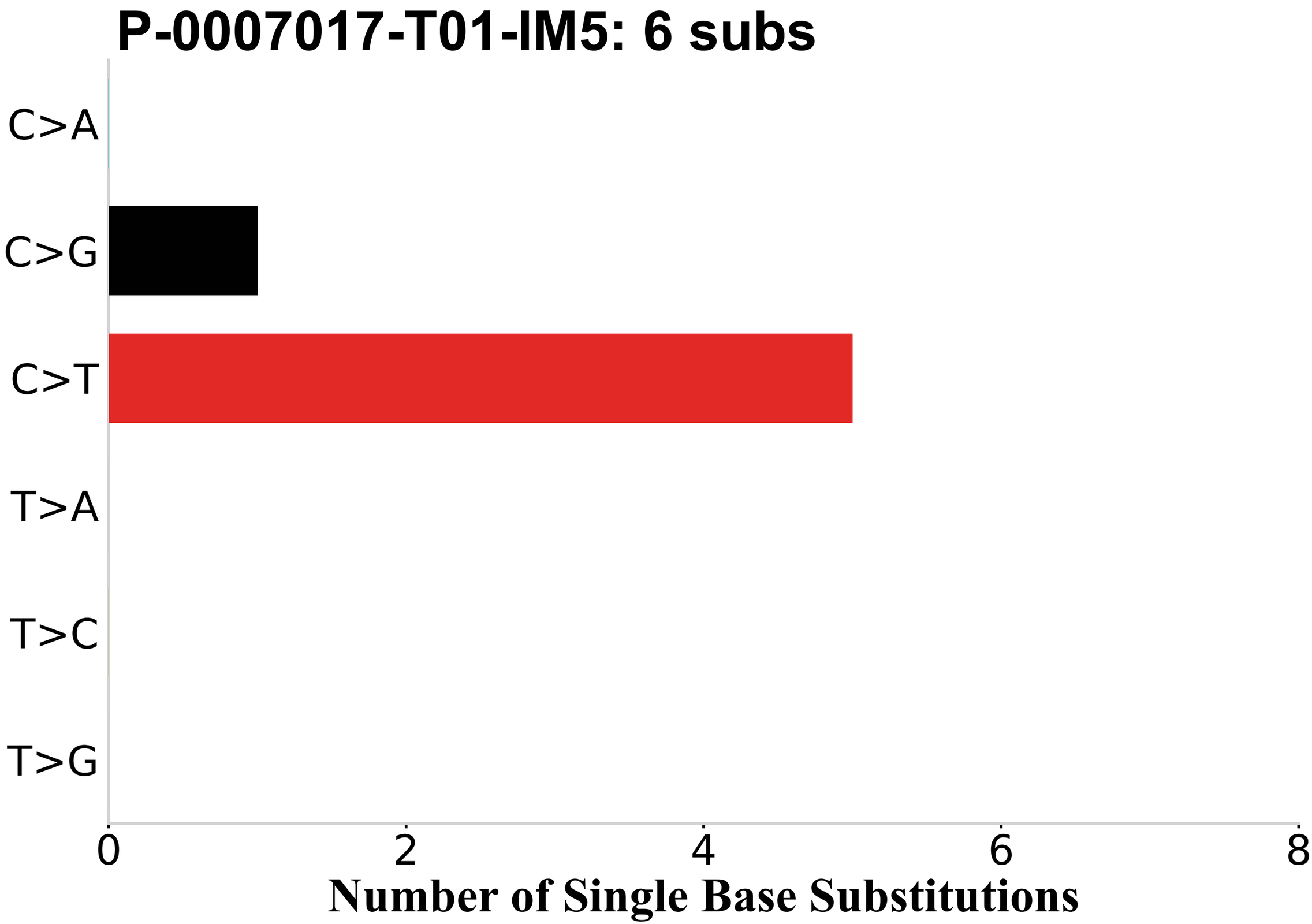
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007015-T01-IM5: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0007017-T01-IM5: 6 subs
C>A
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T>C
T>G
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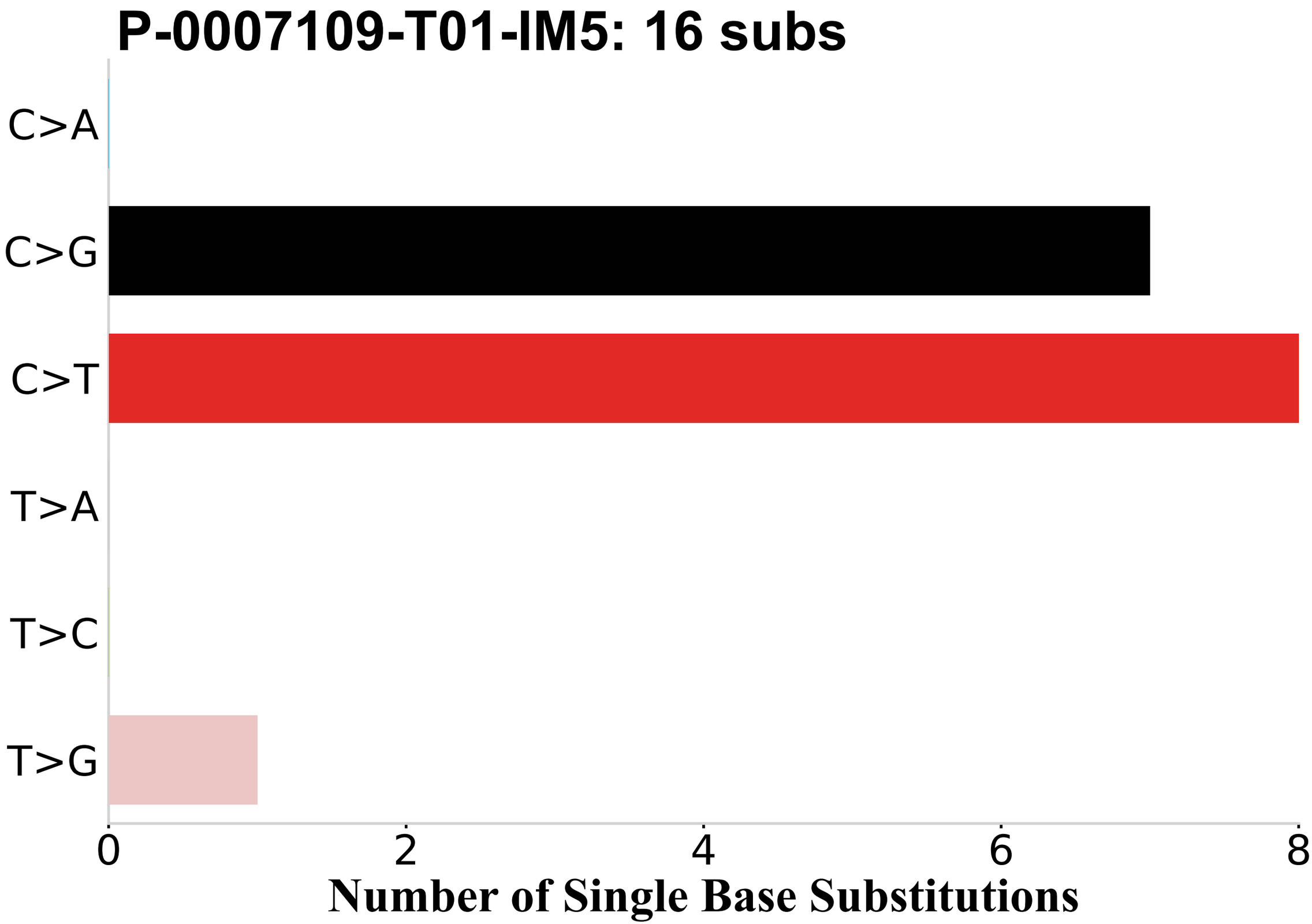
4
6
8
Number of Single Base Substitutions


P-0007109-T01-IM5: 16 subs
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T>C
T>G
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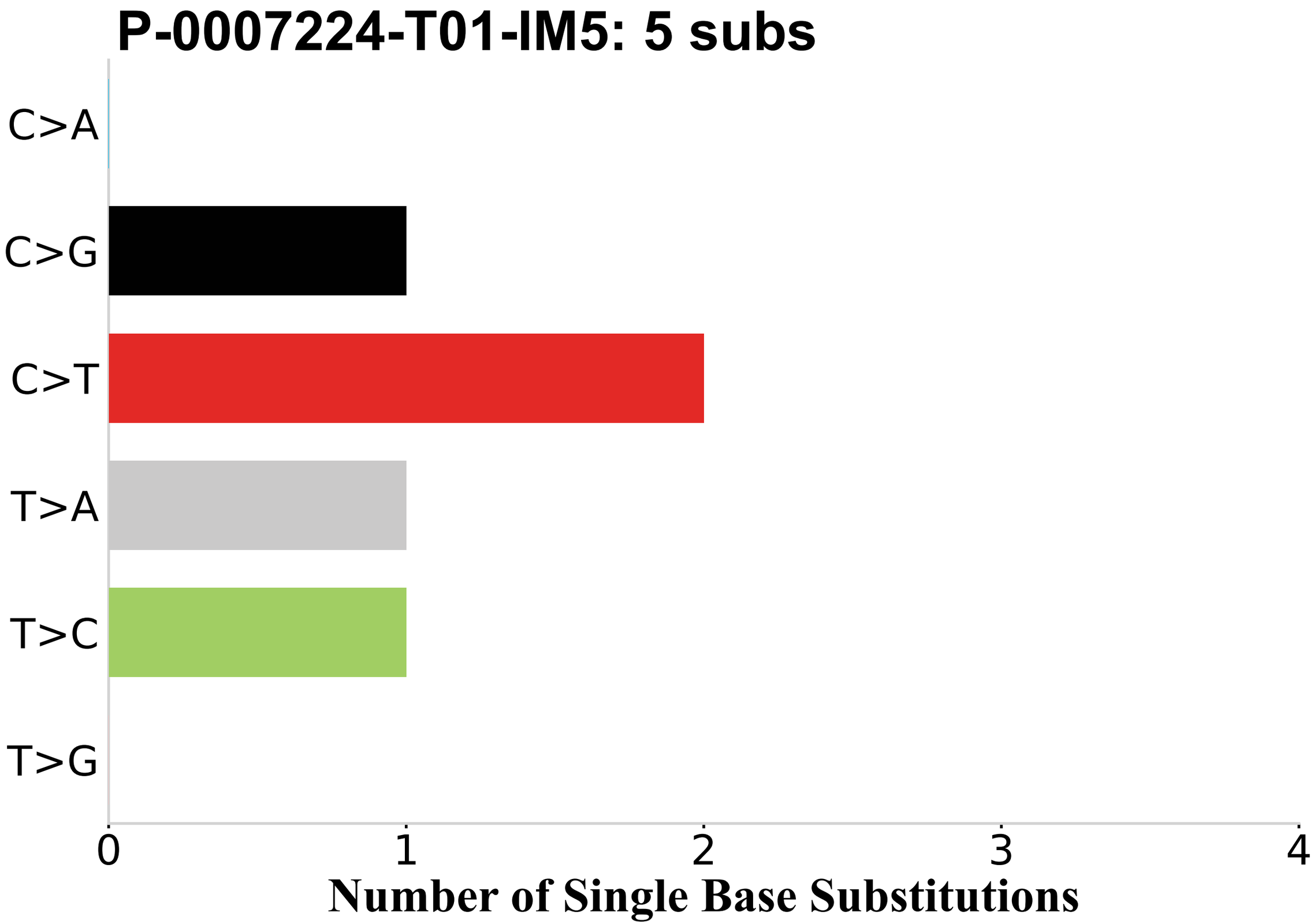
4
6
8
Number of Single Base Substitutions


P-0007224-T01-IM5: 5 subs
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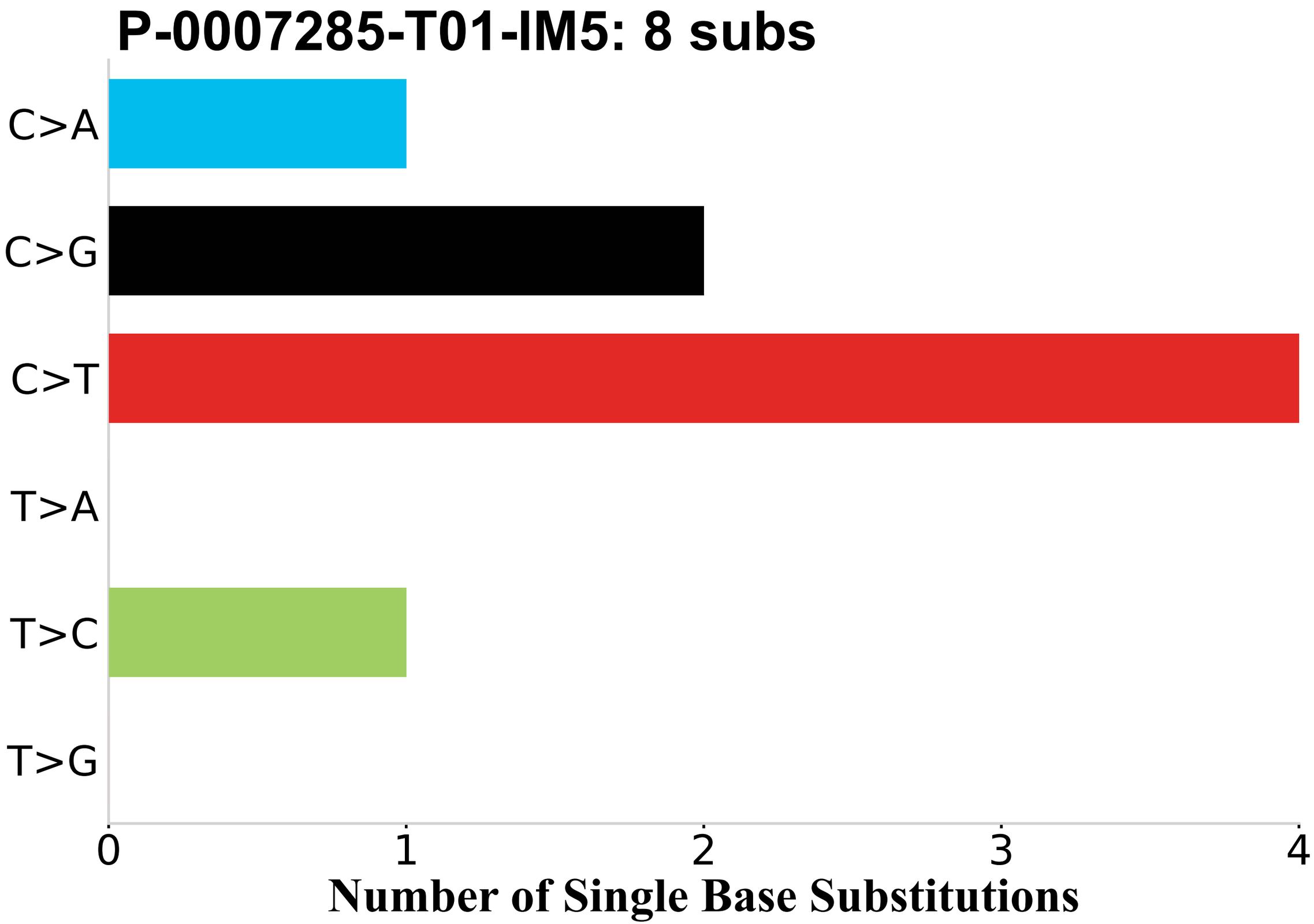
2
3
4
Number of Single Base Substitutions


P-0007285-T01-IM5: 8 subs
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T>G
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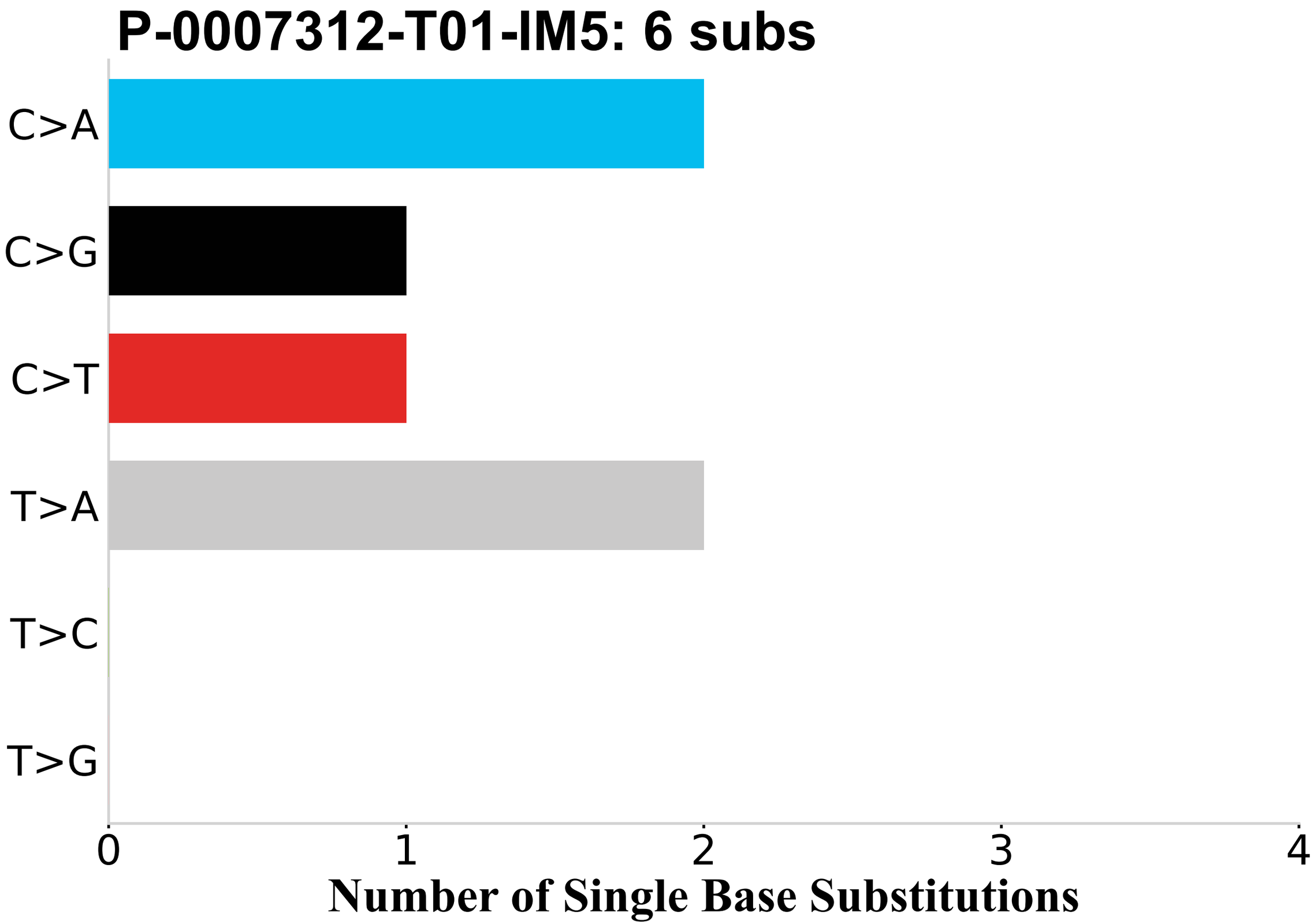
2
3
4
Number of Single Base Substitutions


P-0007312-T01-IM5: 6 subs
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T>C
T>G
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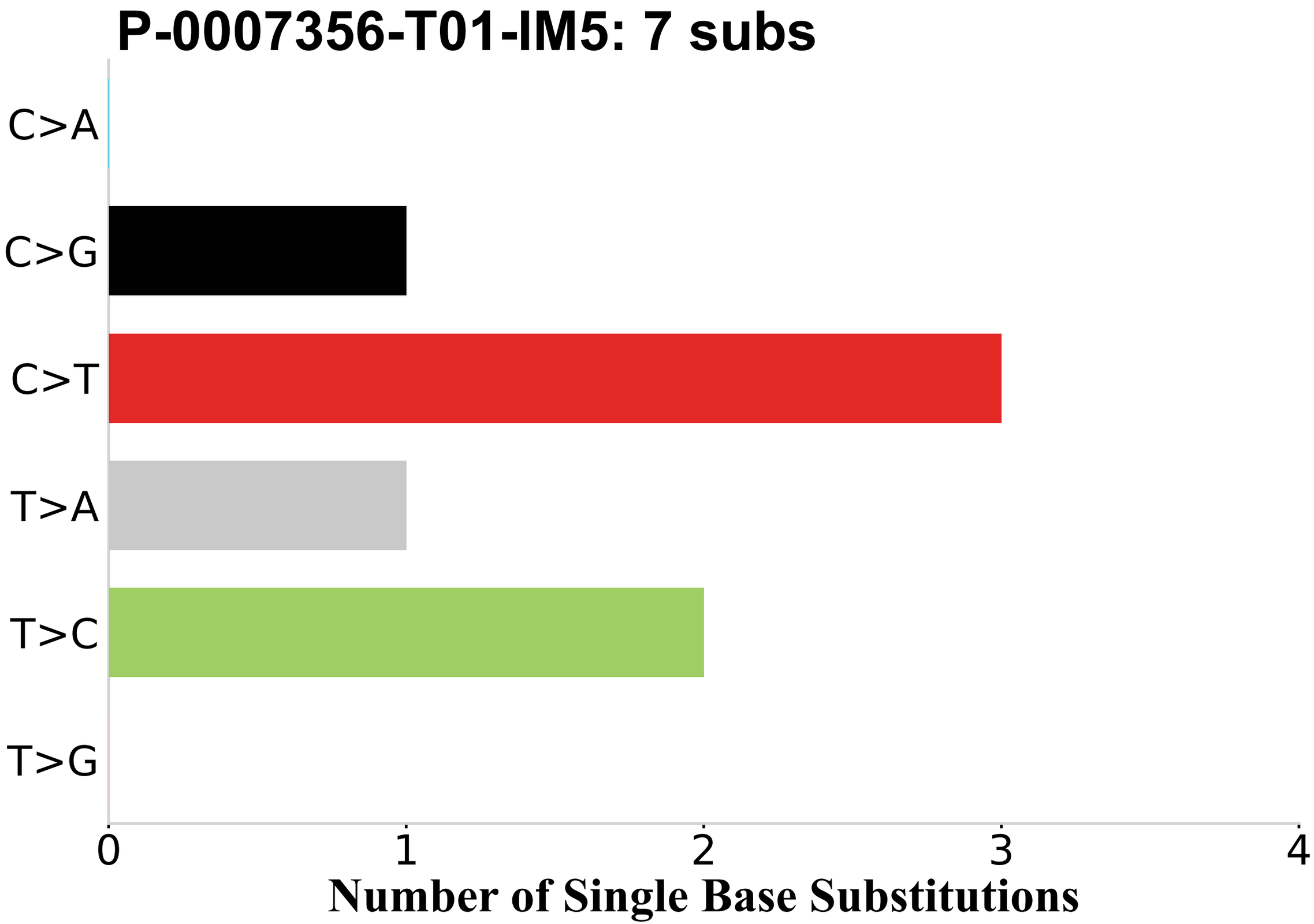
1
2
3
4
Number of Single Base Substitutions


P-0007356-T01-IM5: 7 subs
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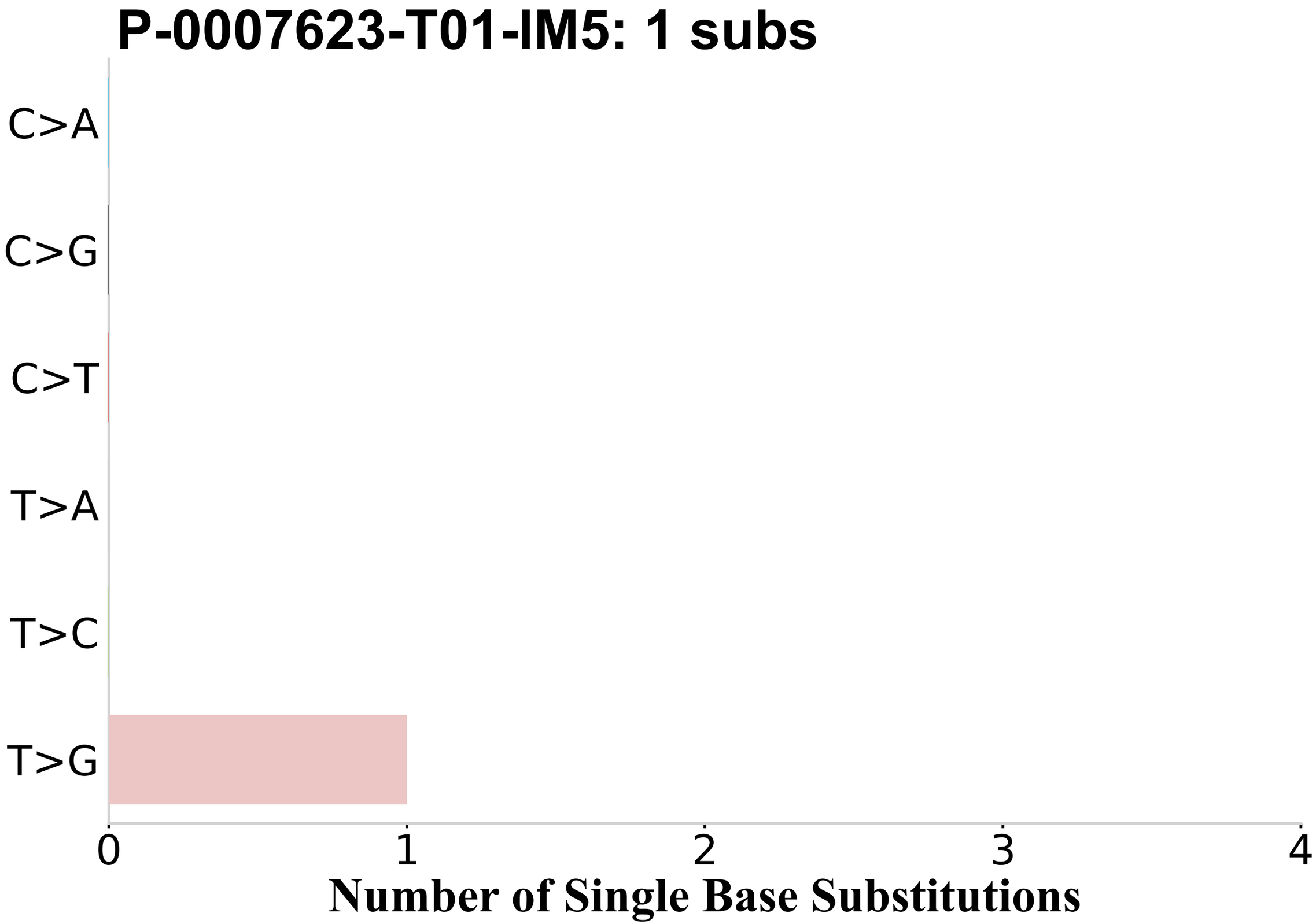
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007623-T01-IM5: 1 subs
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C>G
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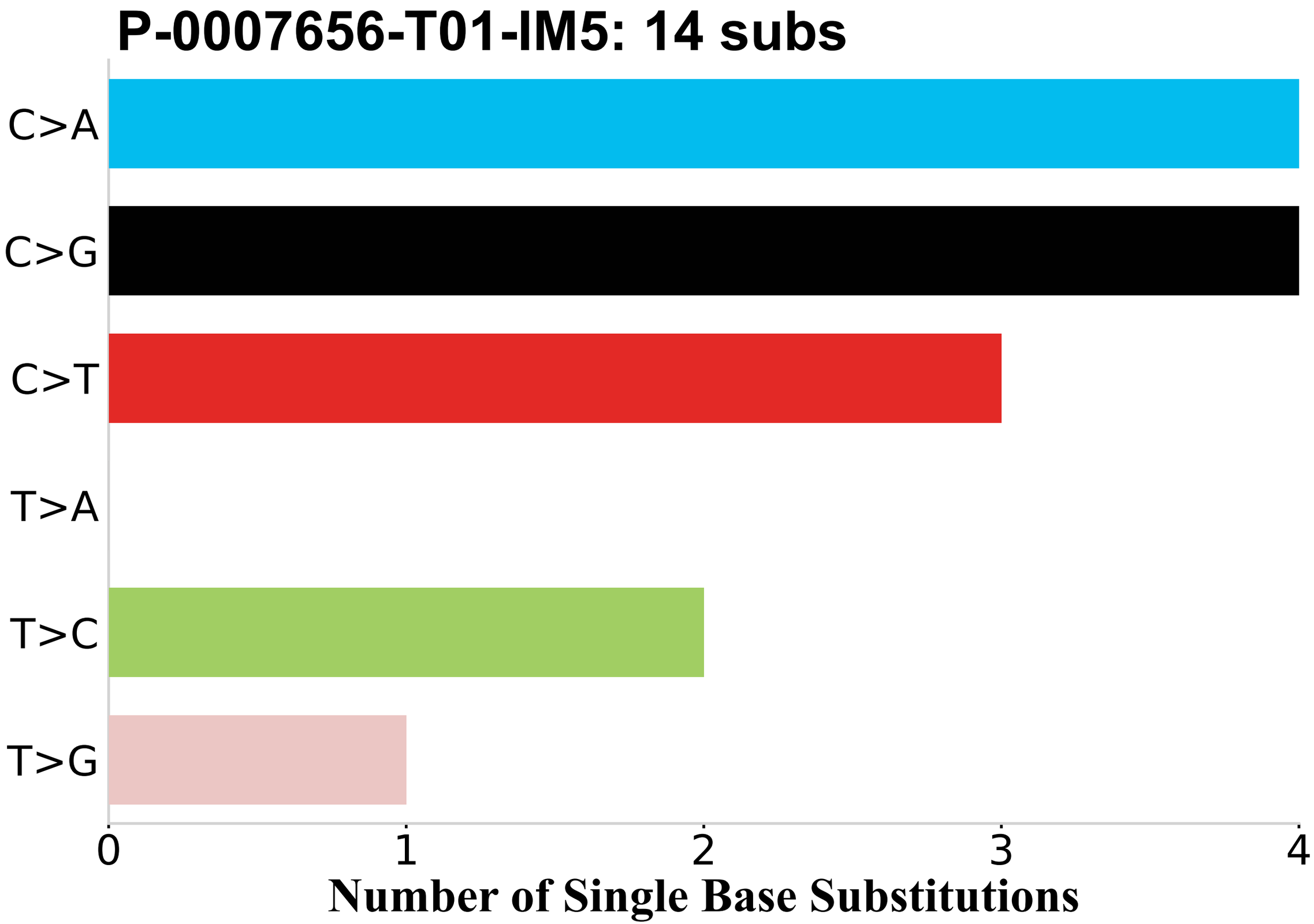
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007656-T01-IM5: 14 subs
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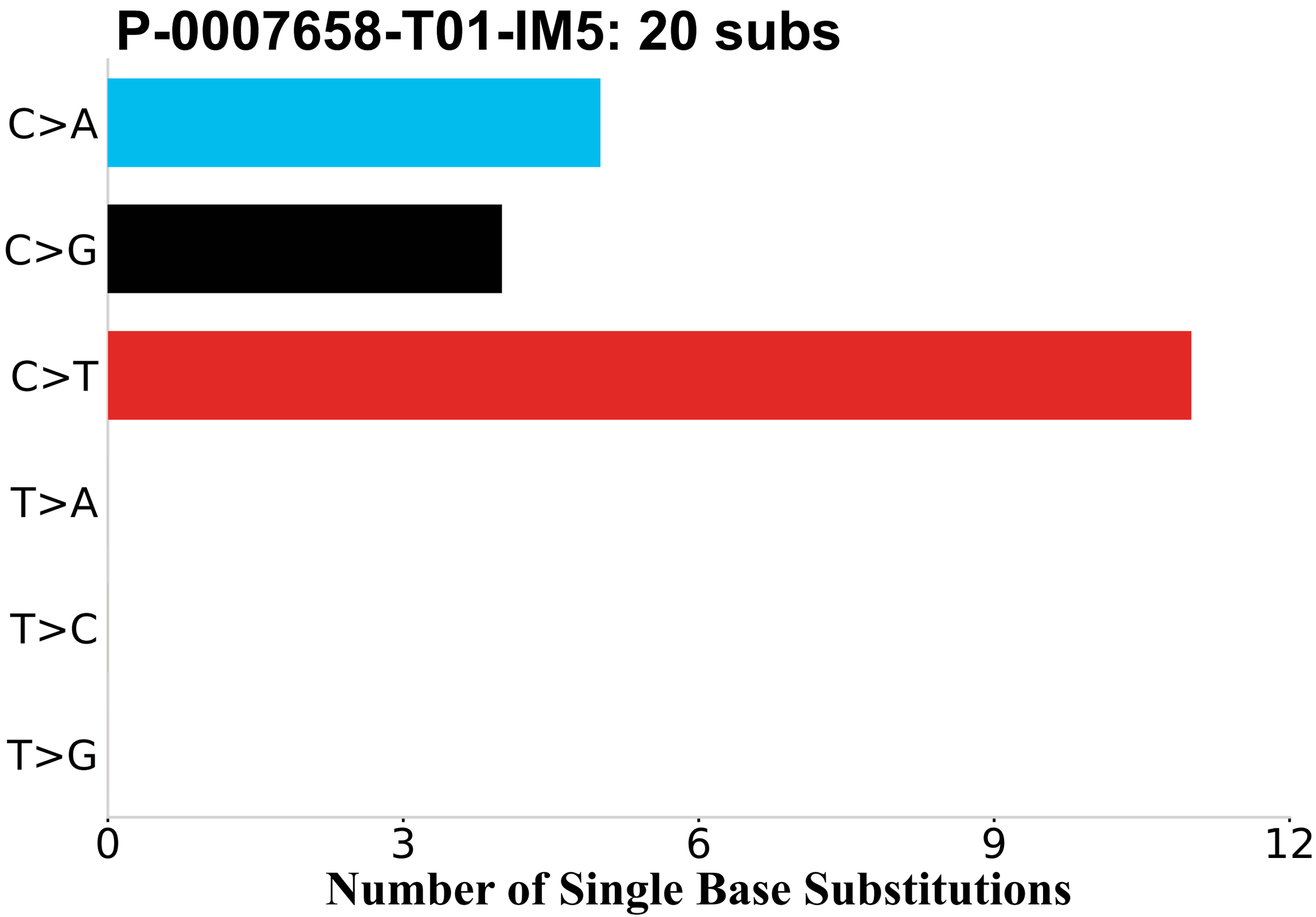
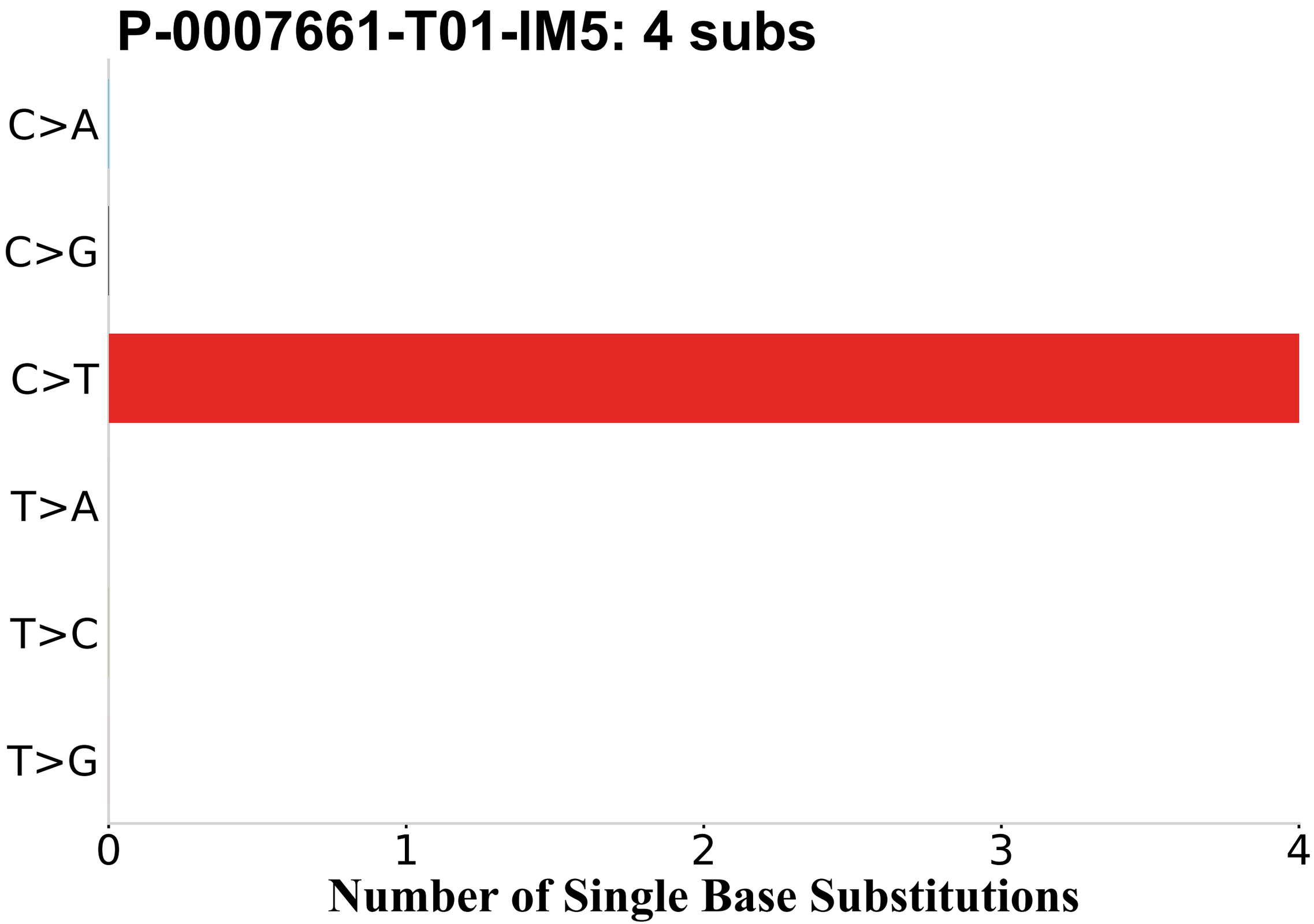
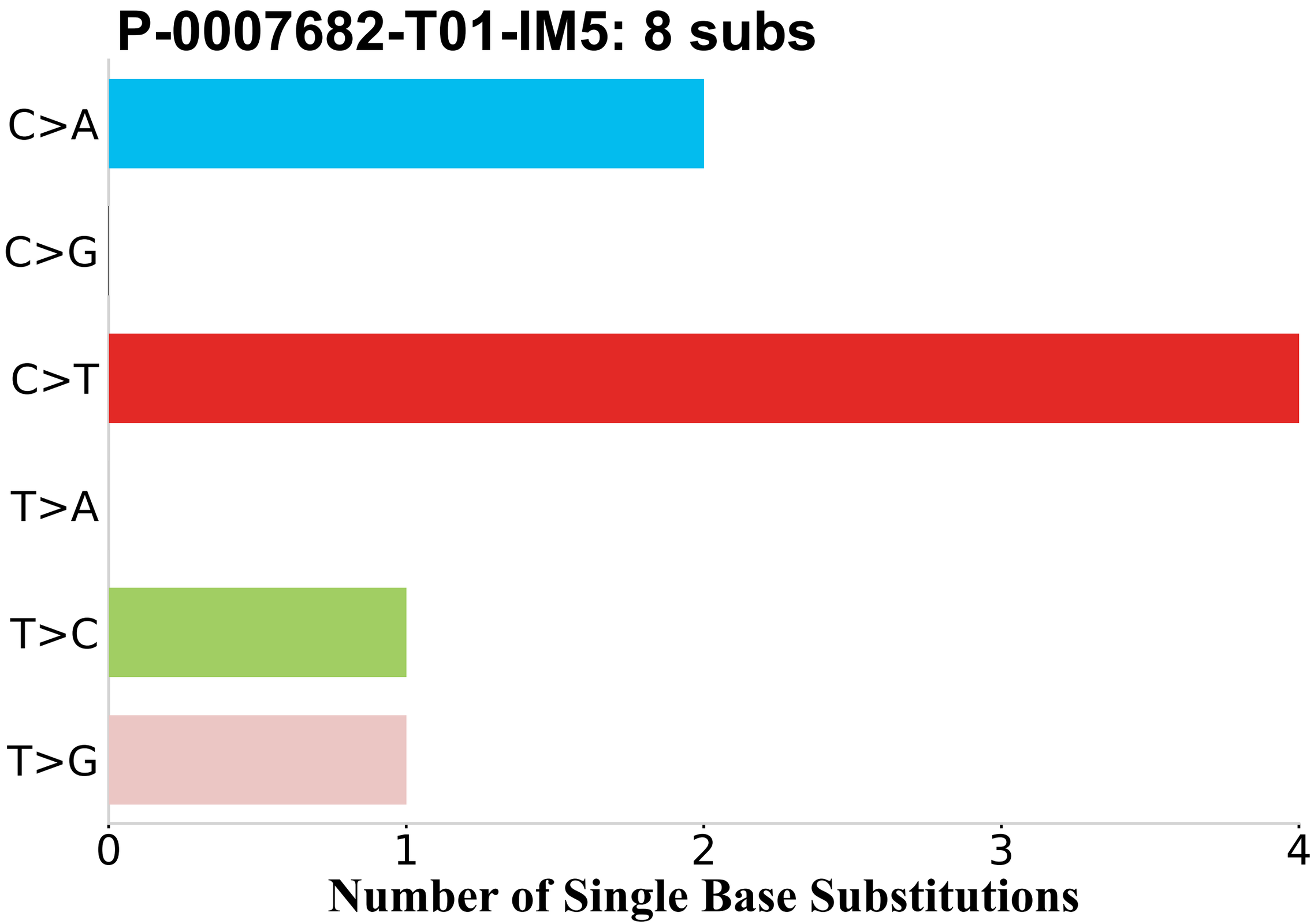
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007658-T01-IM5: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0007661-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007682-T01-IM5: 8 subs
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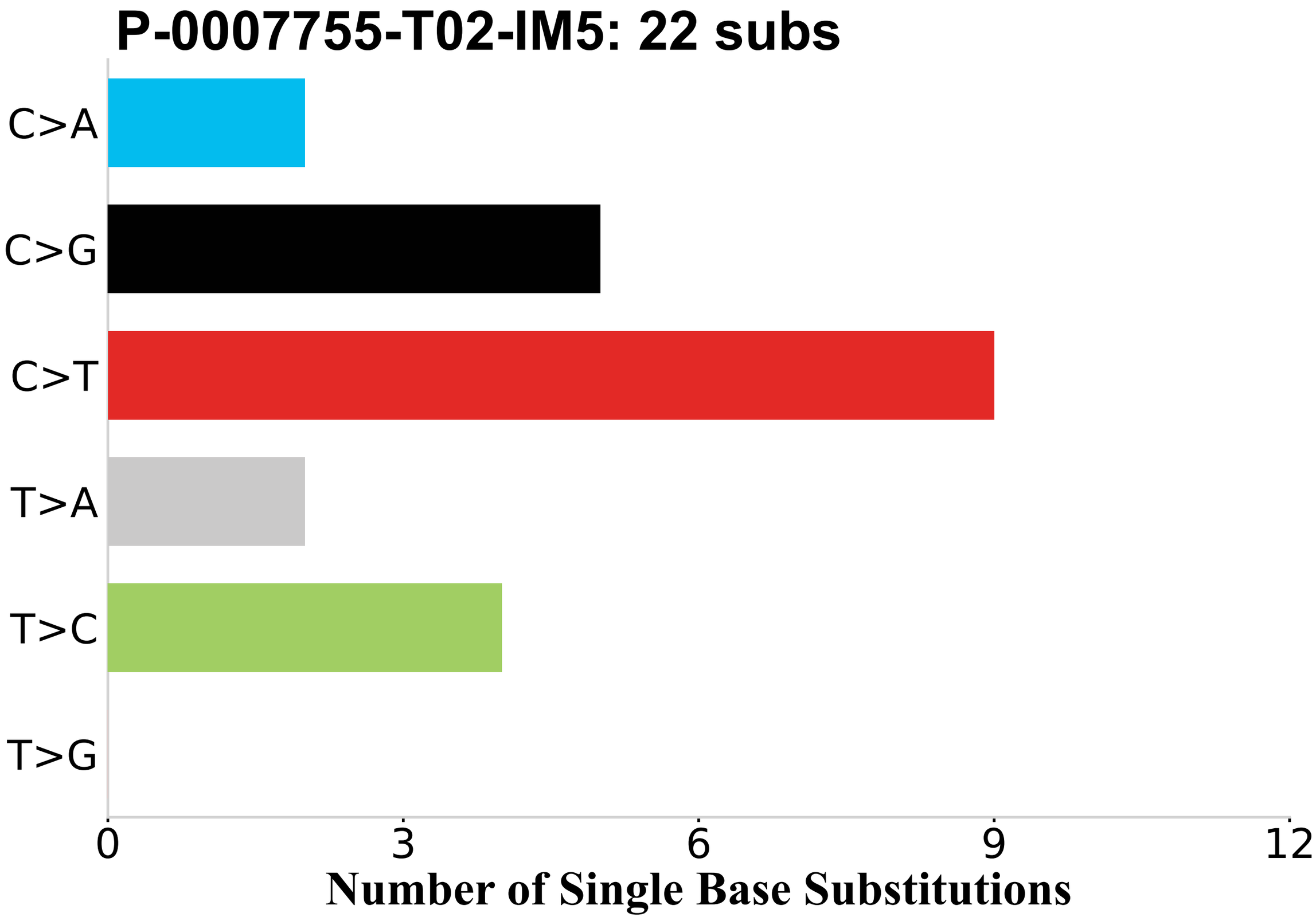
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007755-T02-IM5: 22 subs
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C>T
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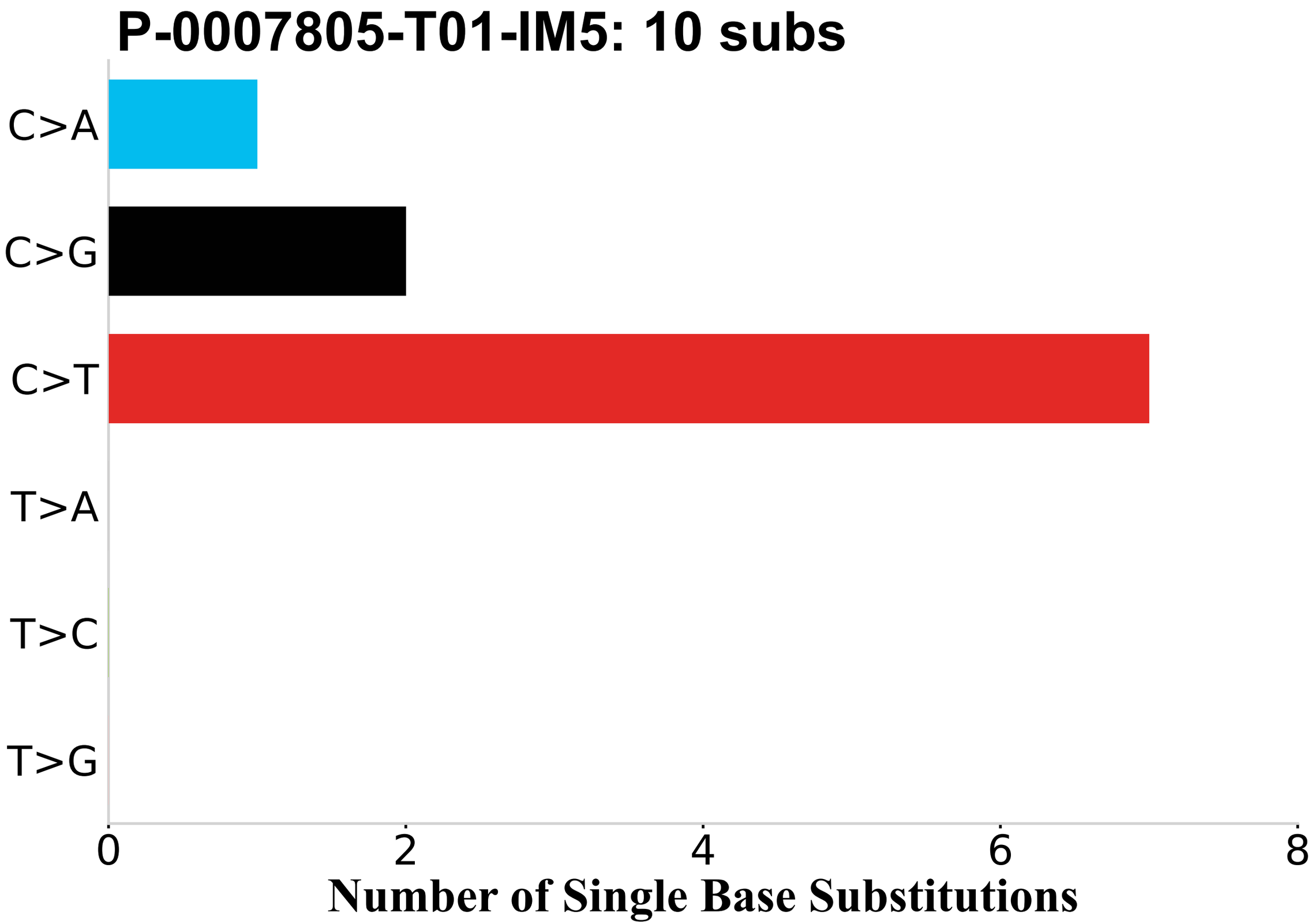
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0007805-T01-IM5: 10 subs
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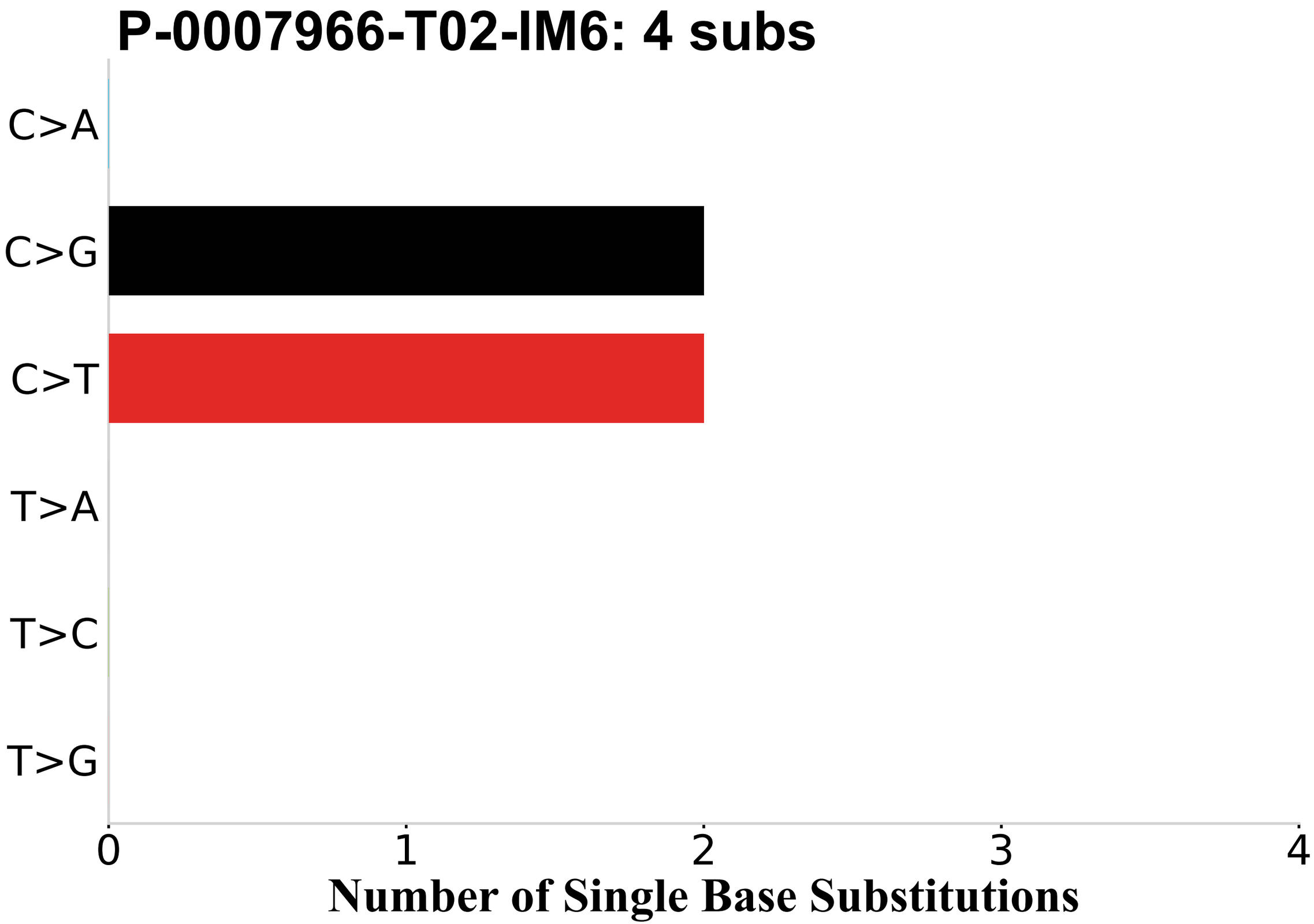
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0007966-T02-IM6: 4 subs
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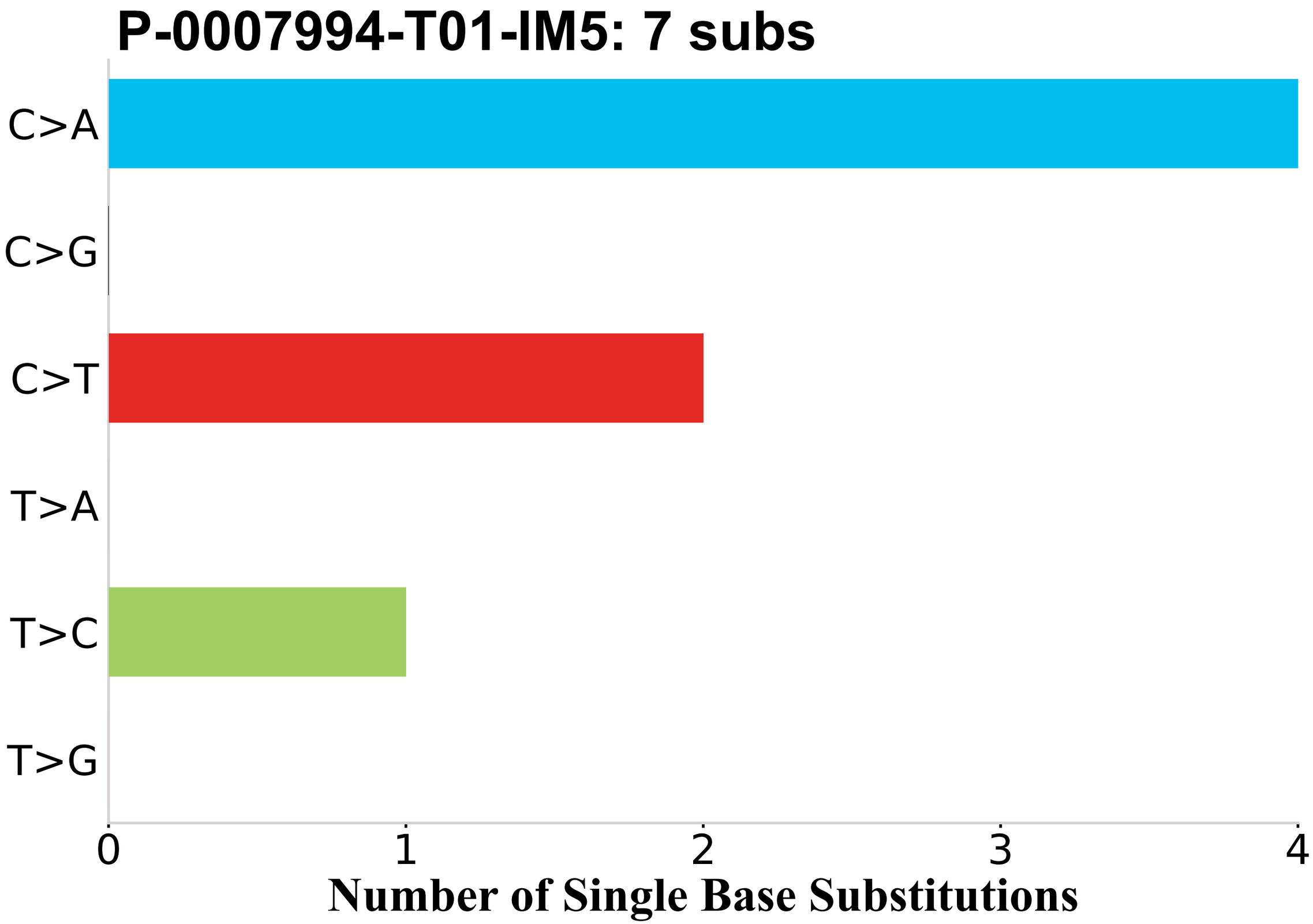
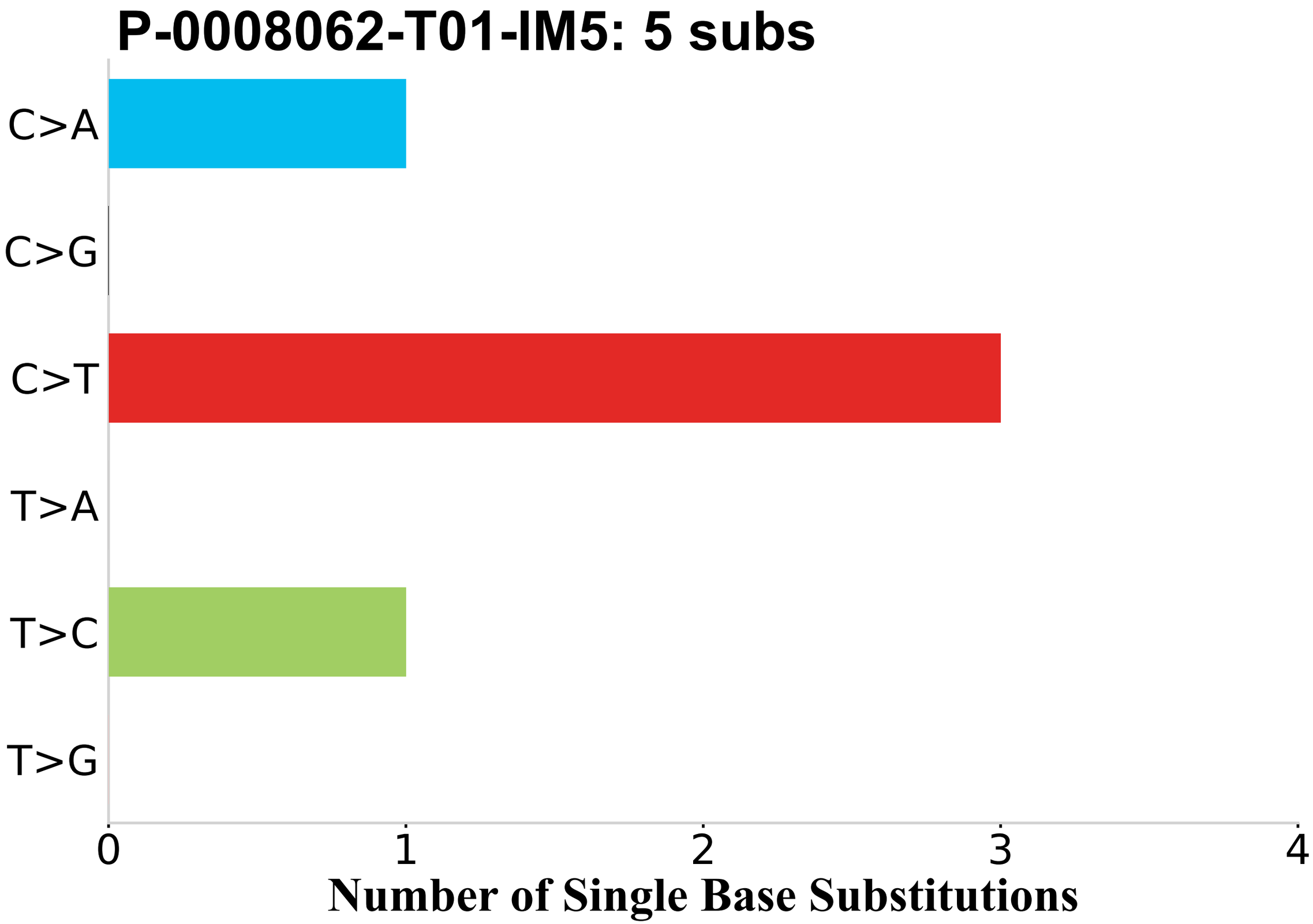
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0007994-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0008062-T01-IM5: 5 subs
C>A
C>G
C>T
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T>C
T>G
0
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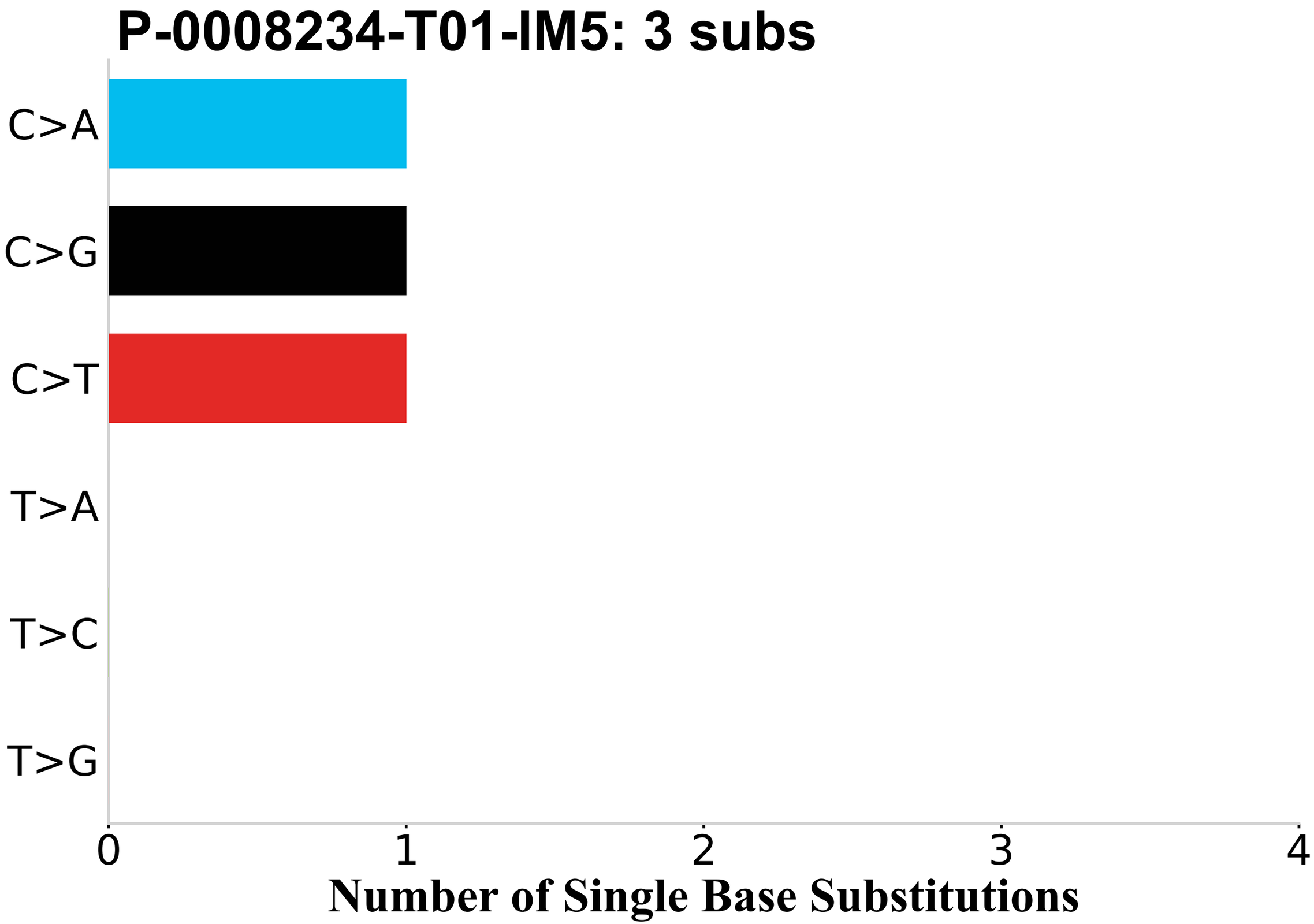
2
3
4
Number of Single Base Substitutions


P-0008234-T01-IM5: 3 subs
C>A
C>G
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T>C
T>G
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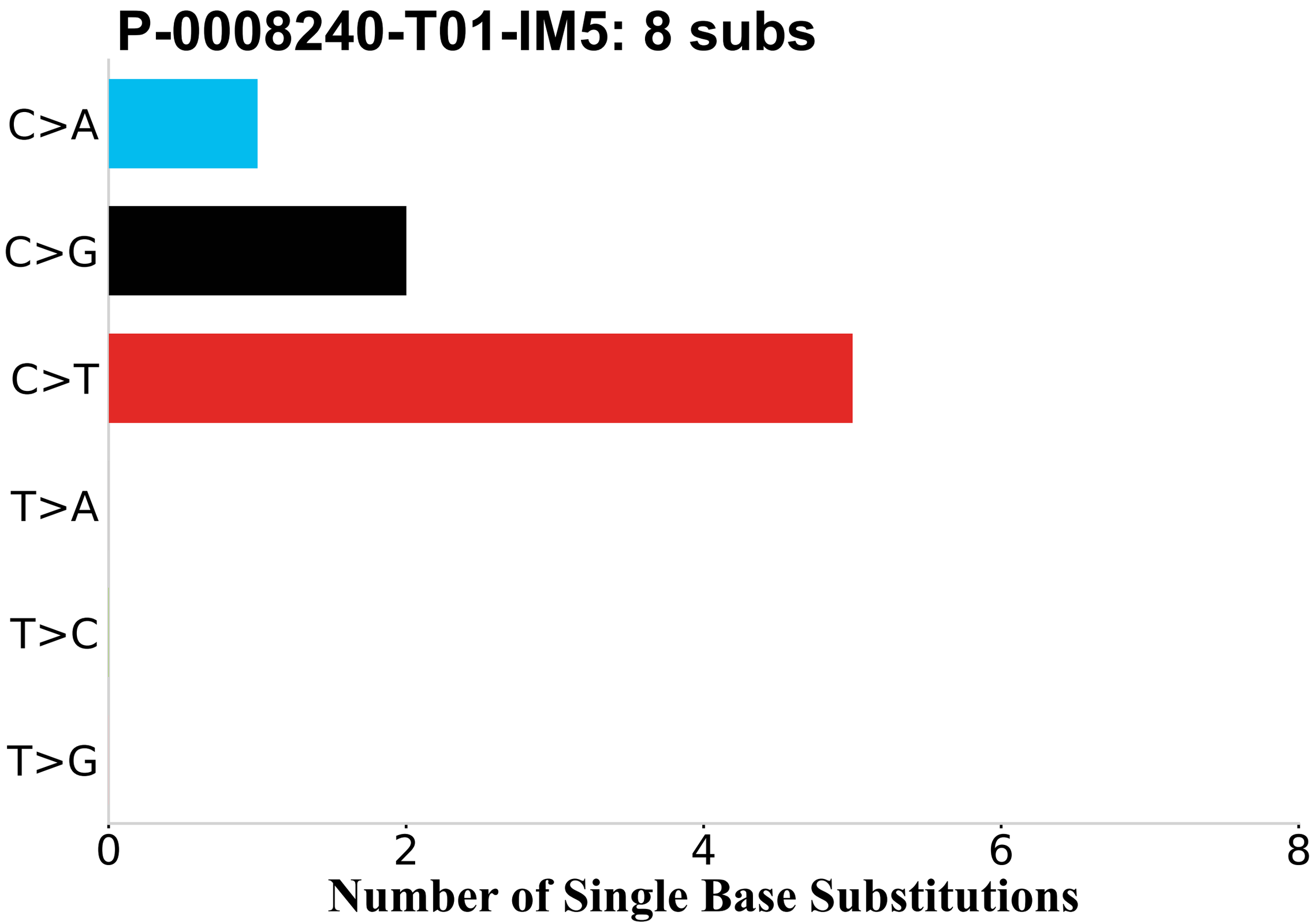
1
2
3
4
Number of Single Base Substitutions


P-0008240-T01-IM5: 8 subs
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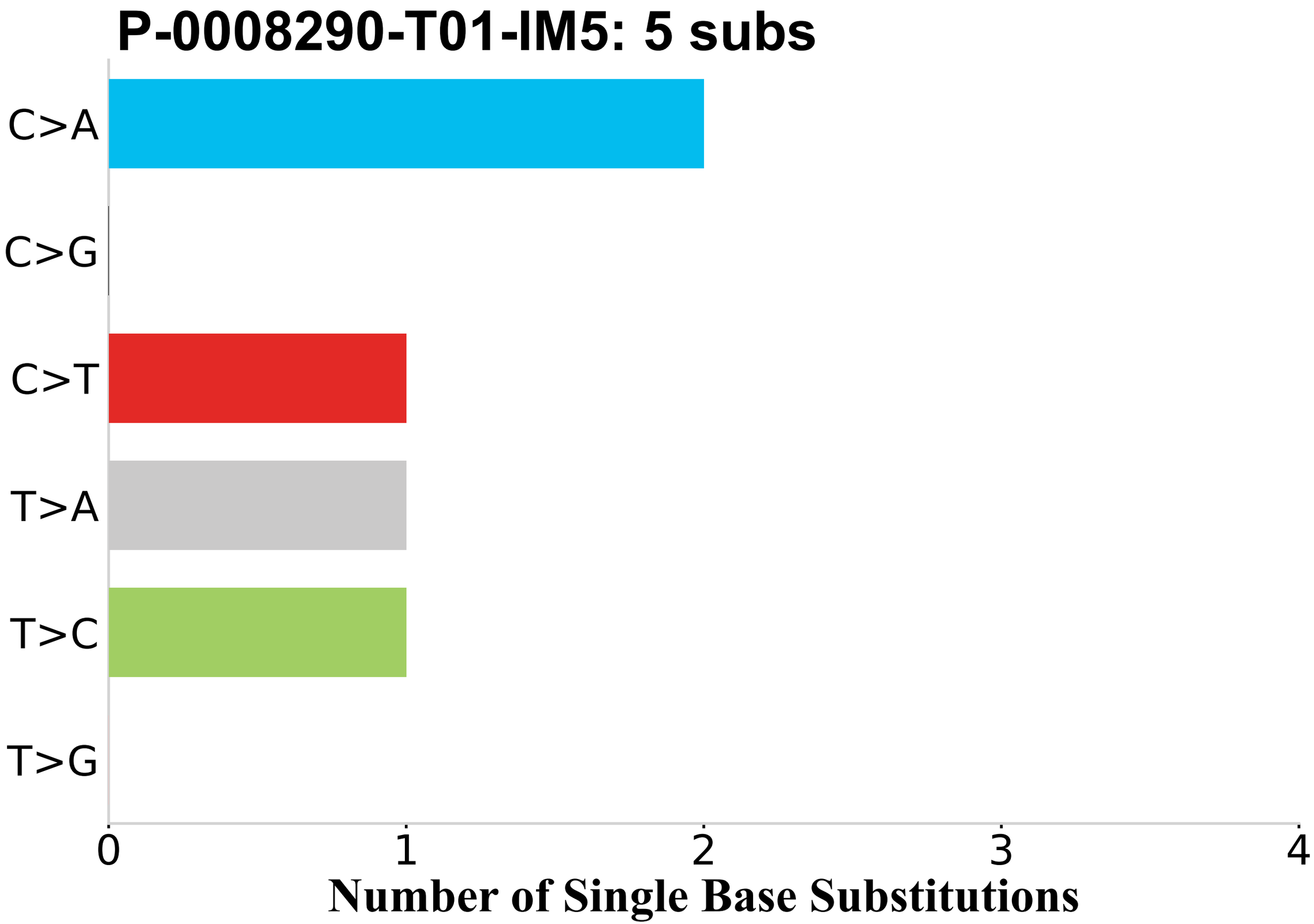
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0008290-T01-IM5: 5 subs
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C>T
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T>C
T>G
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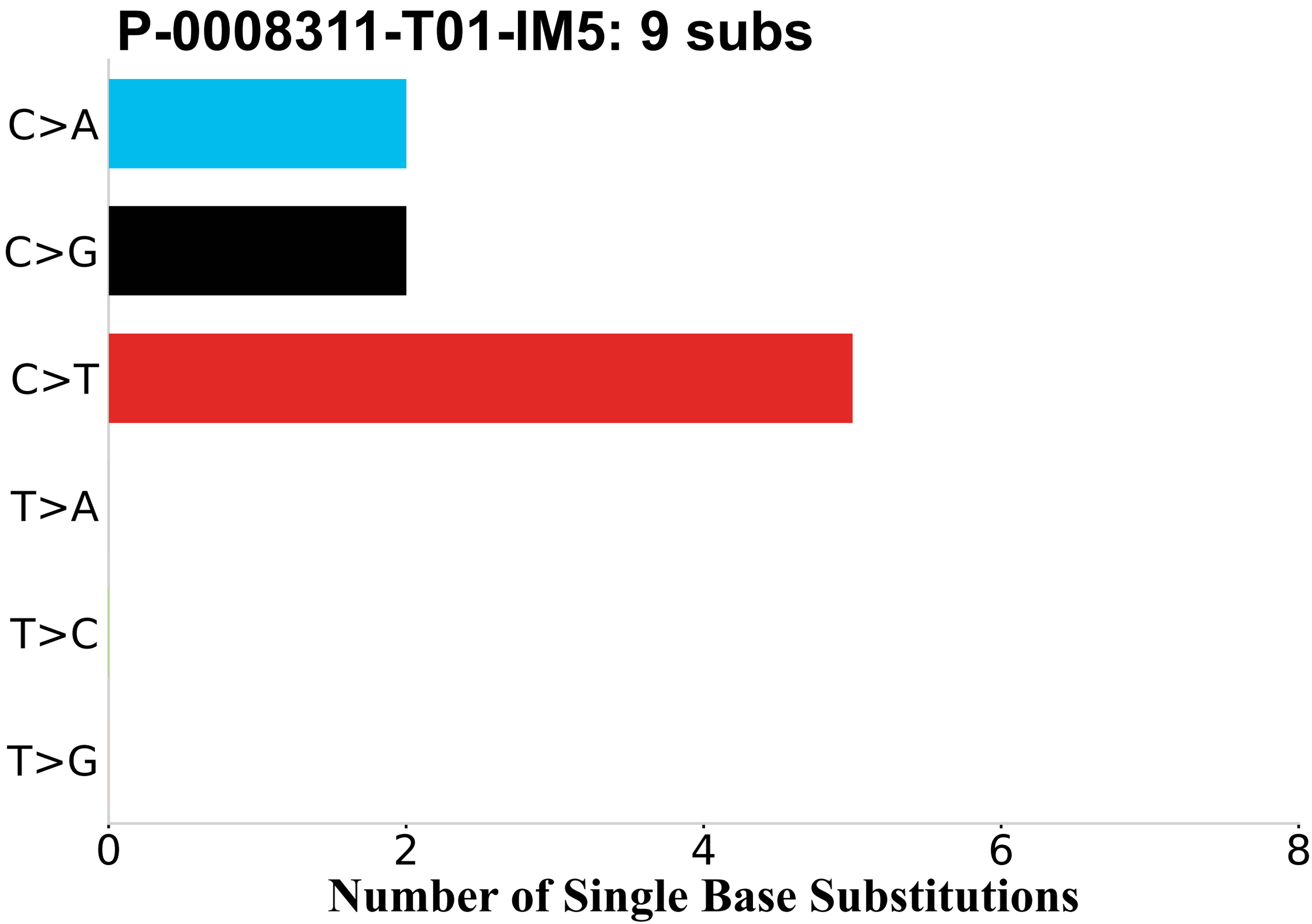
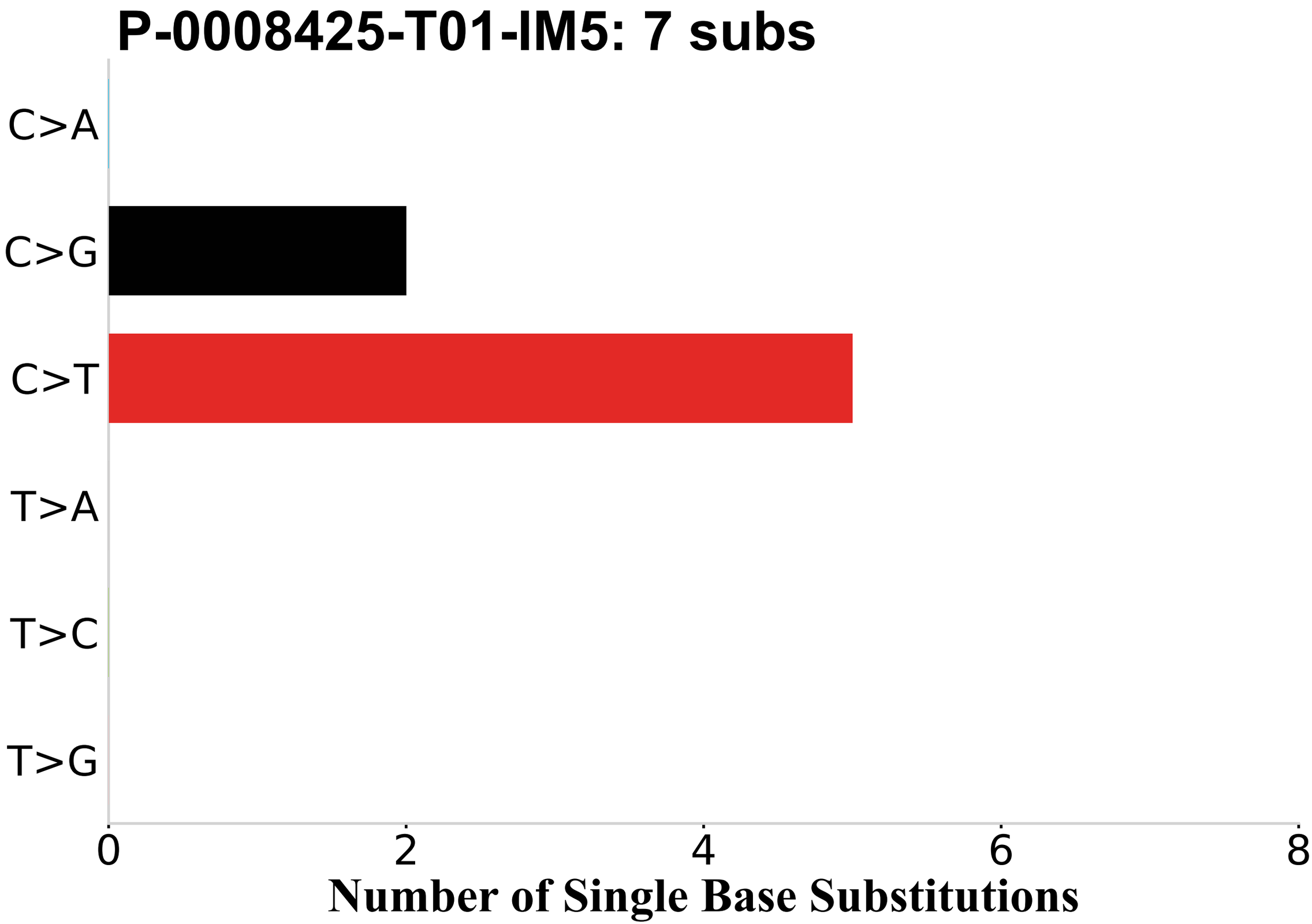
3
4
Number of Single Base Substitutions


P-0008311-T01-IM5: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0008425-T01-IM5: 7 subs
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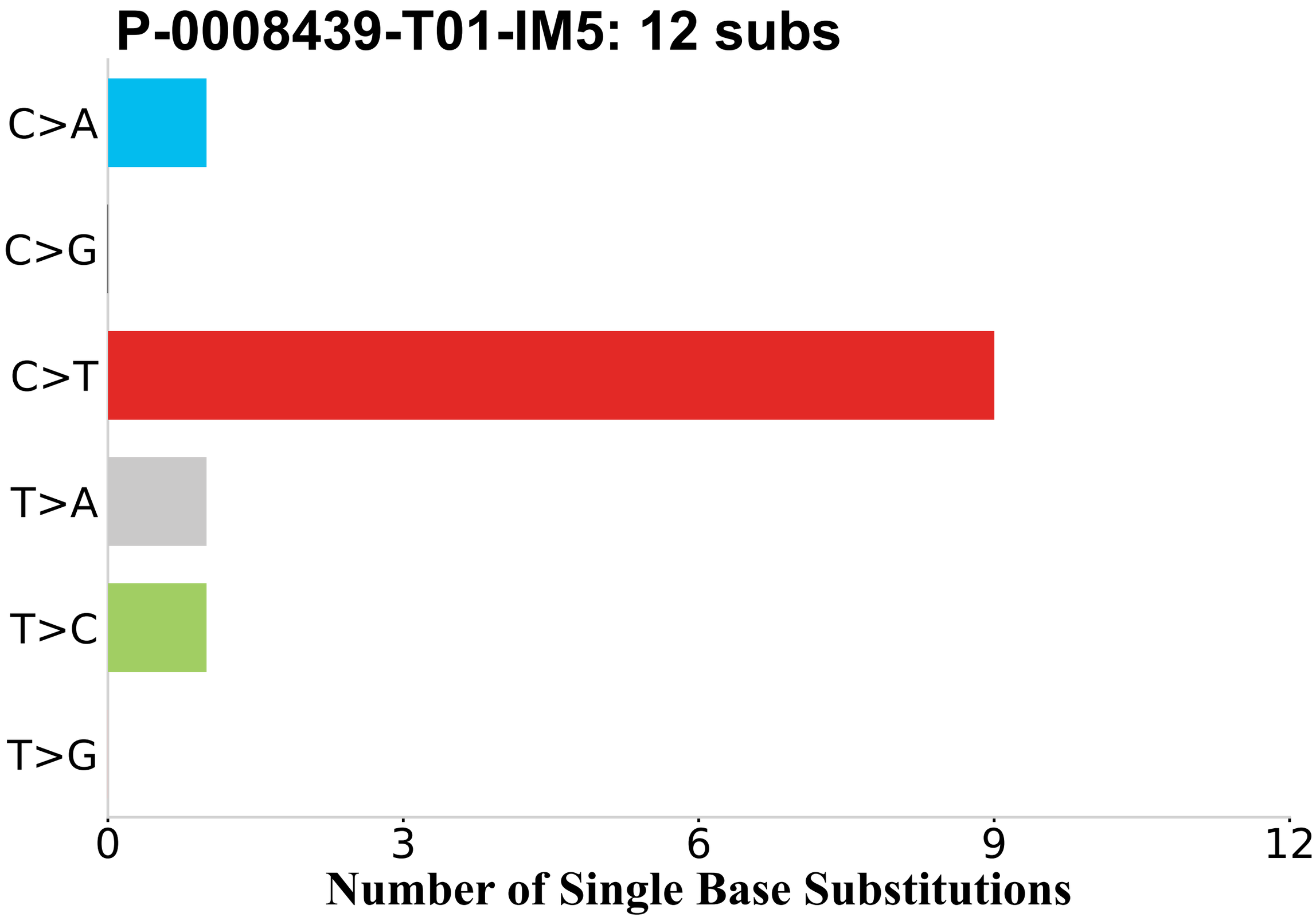
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0008439-T01-IM5: 12 subs
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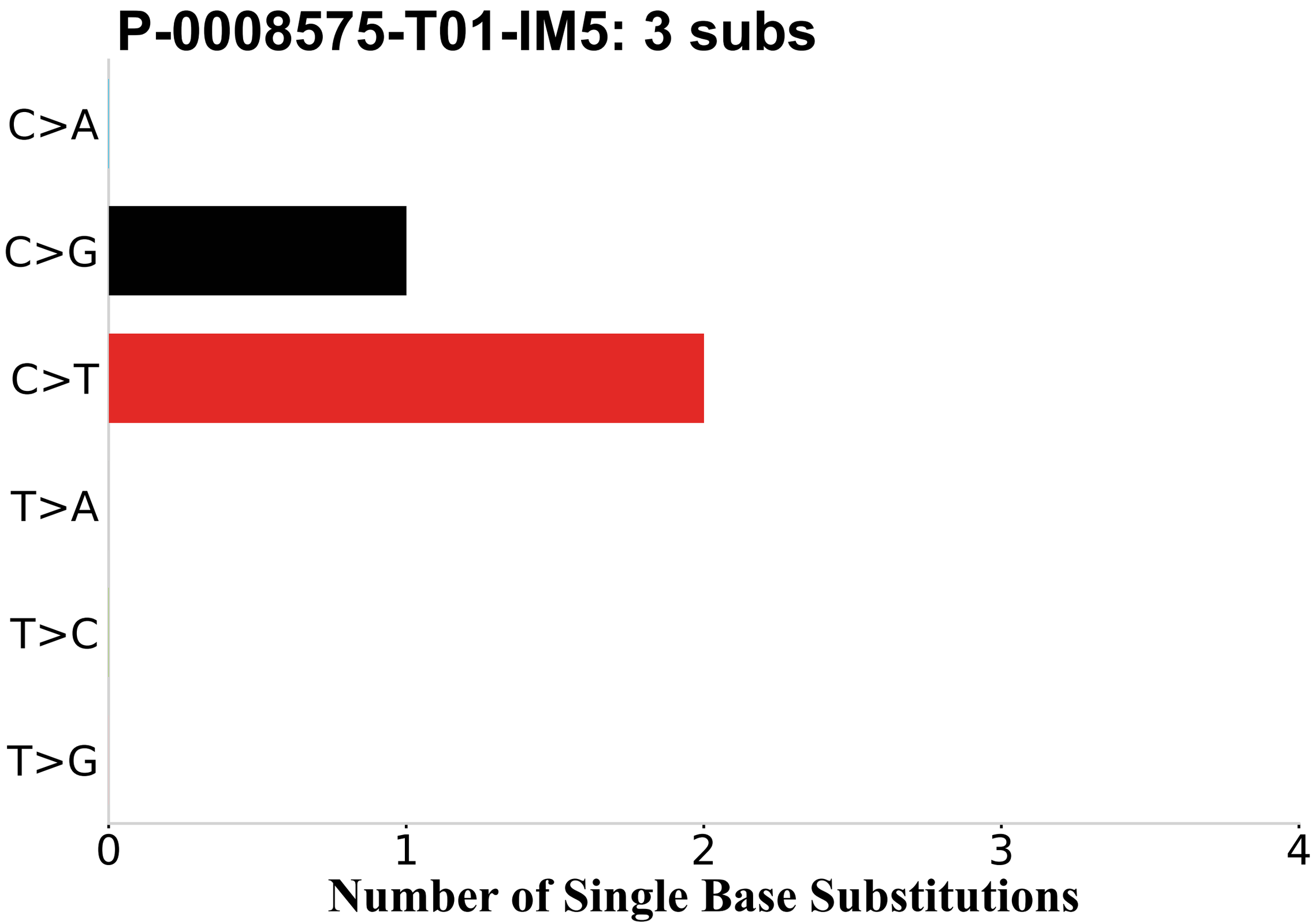
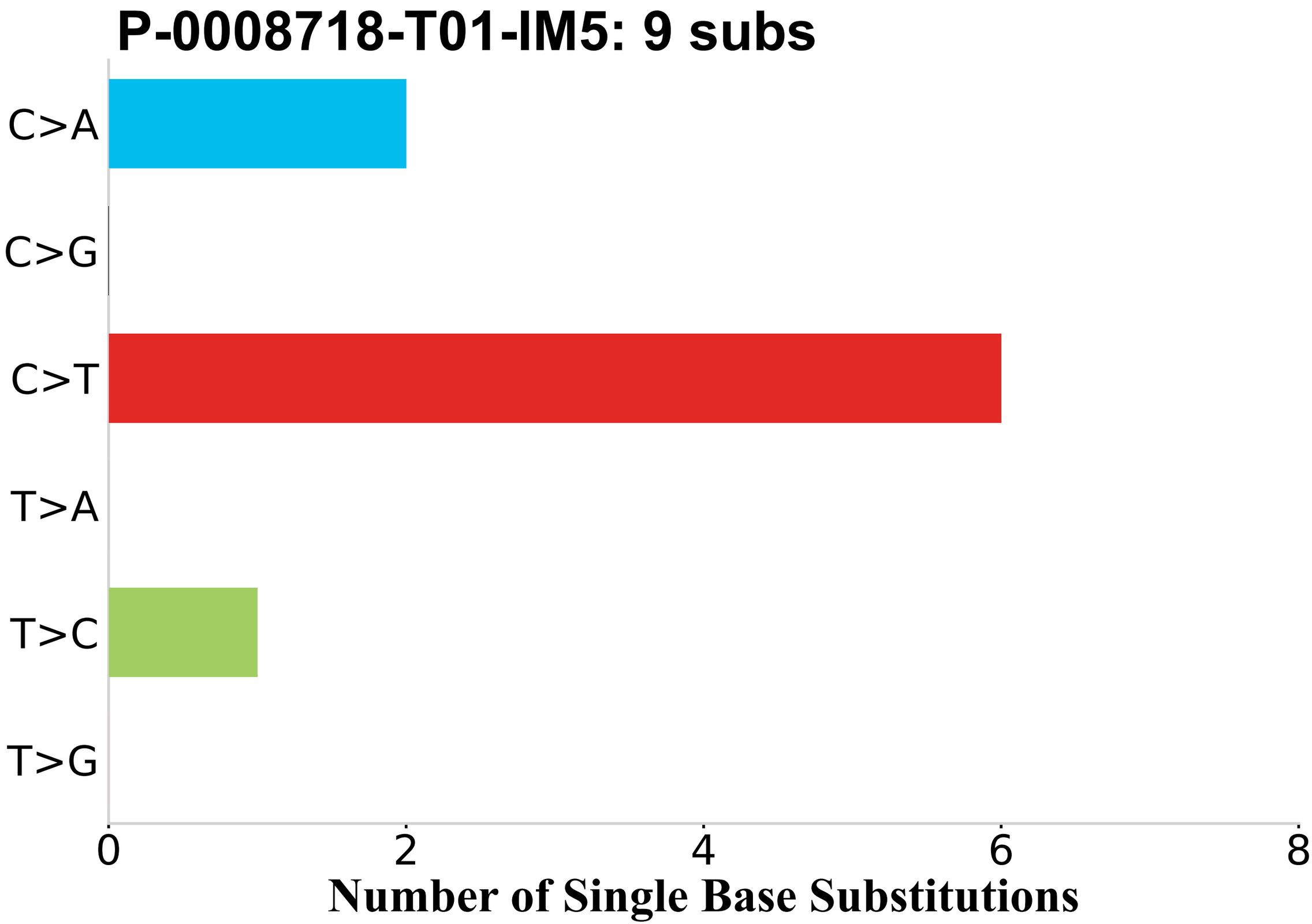
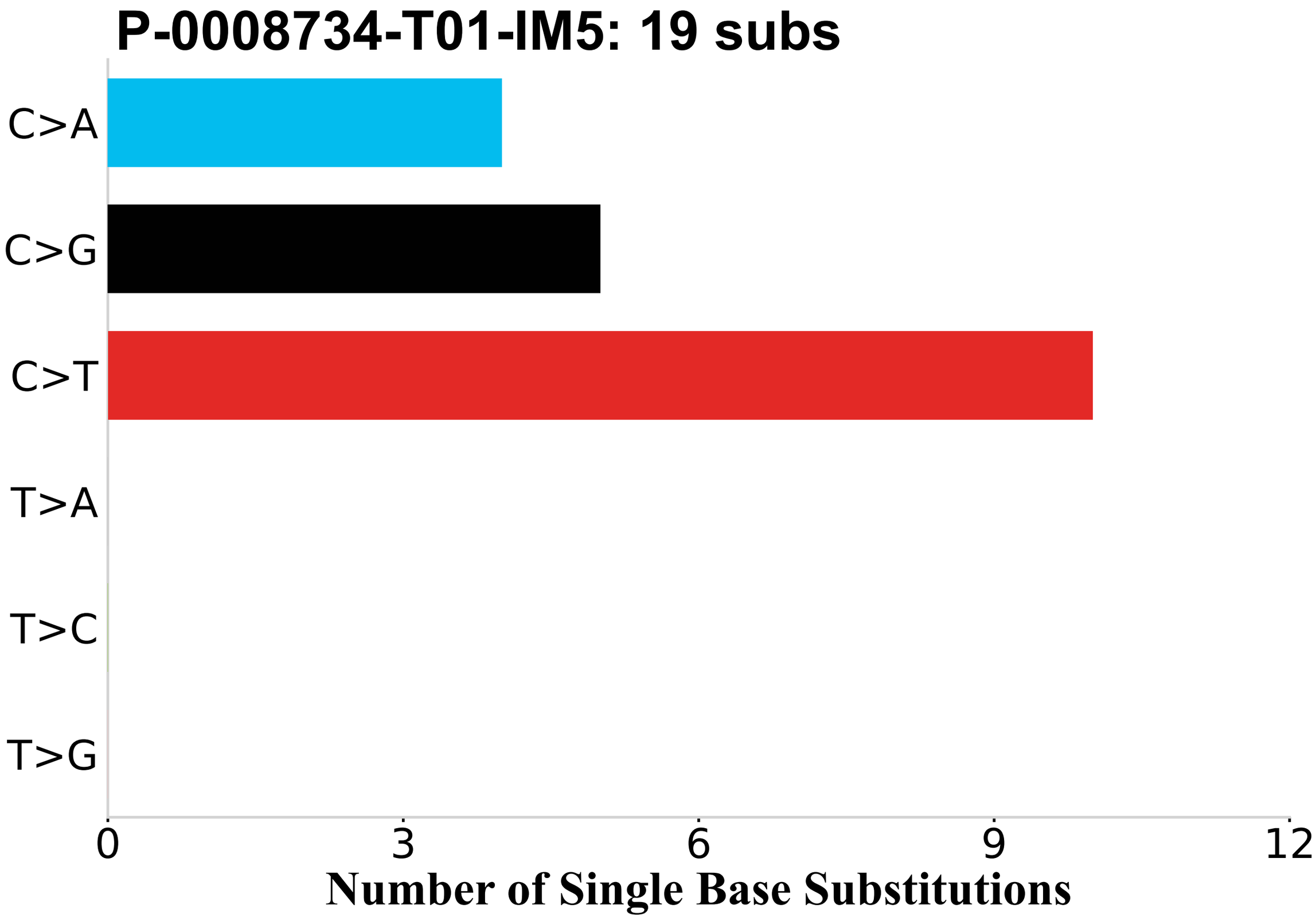
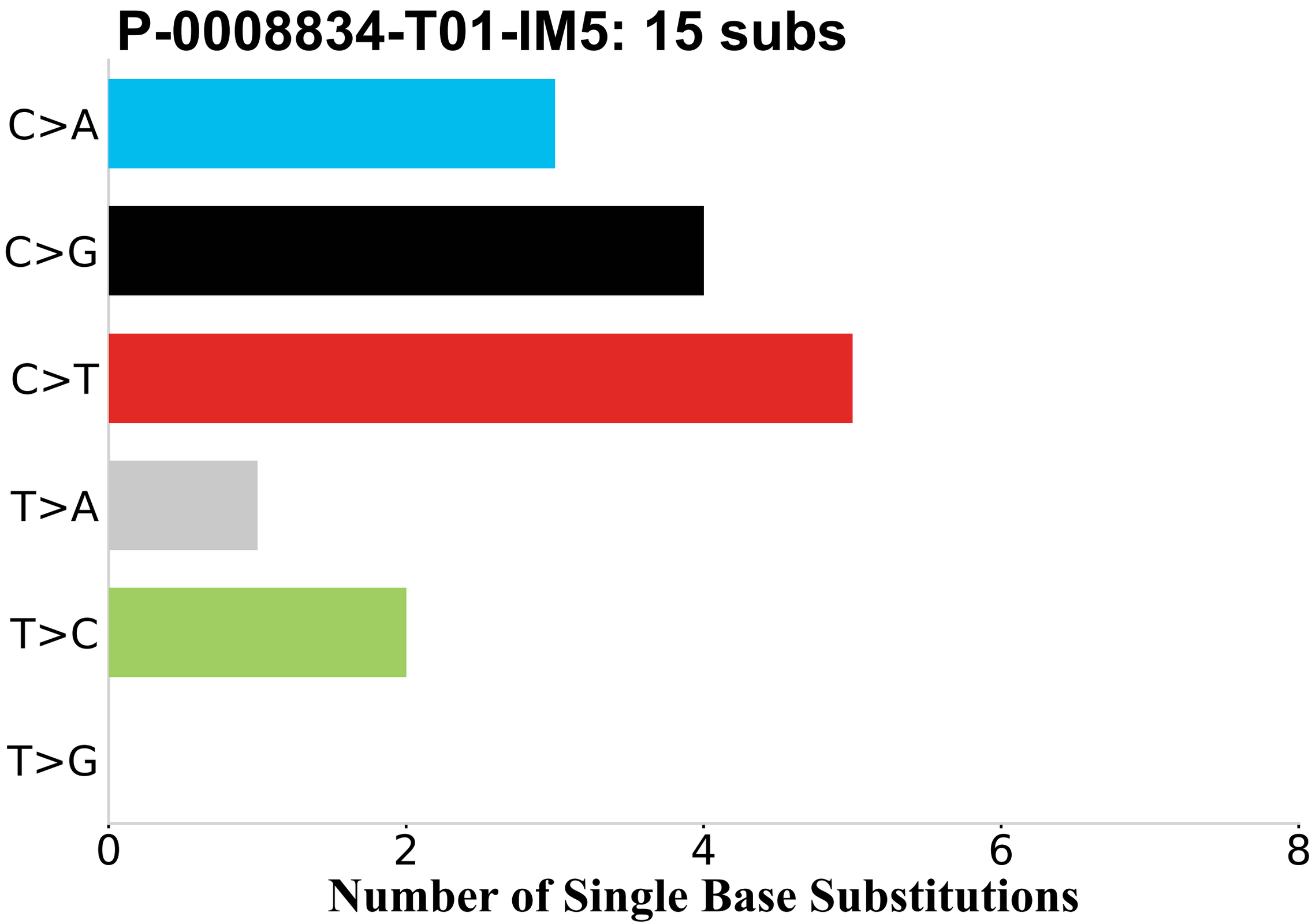
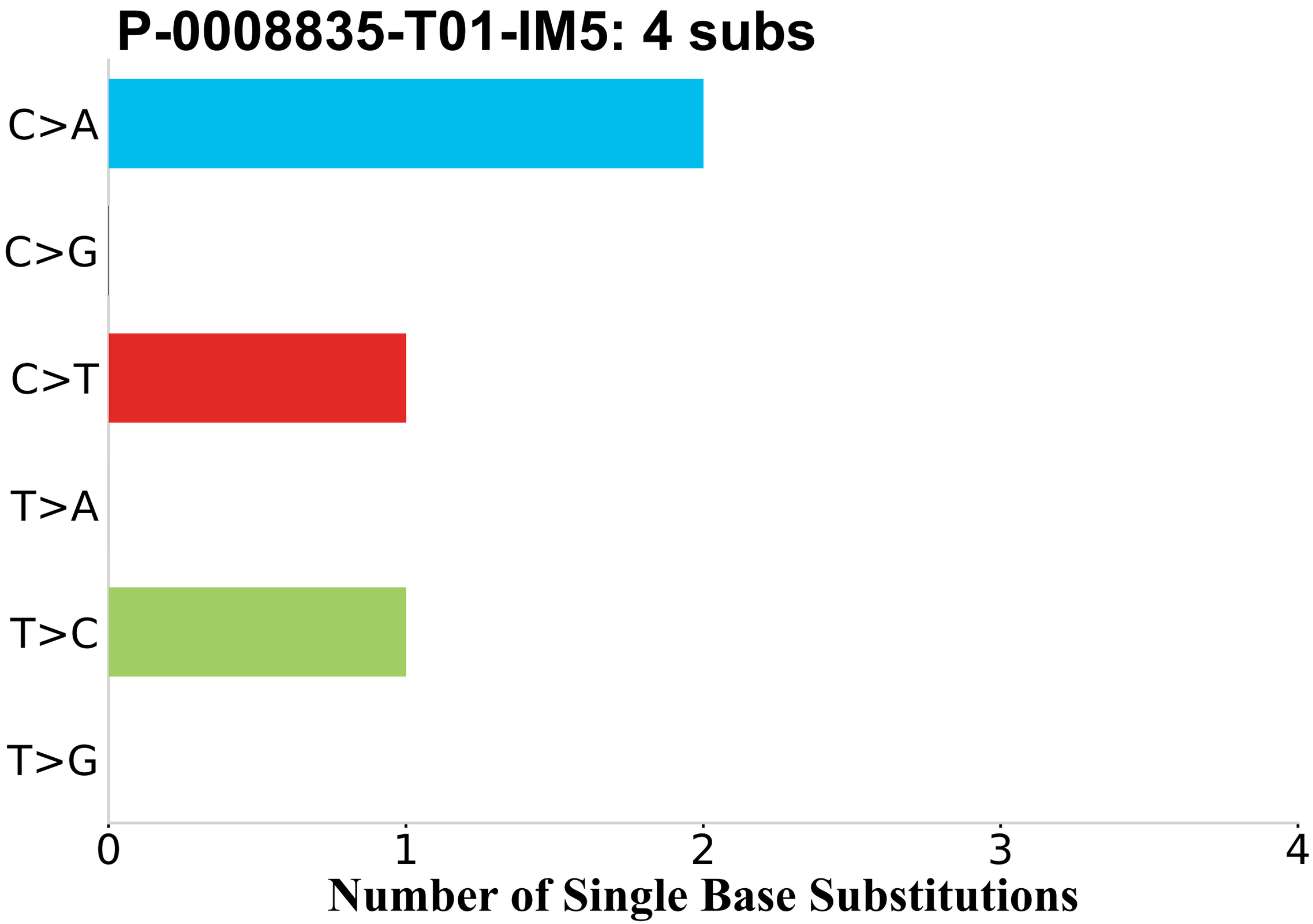
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

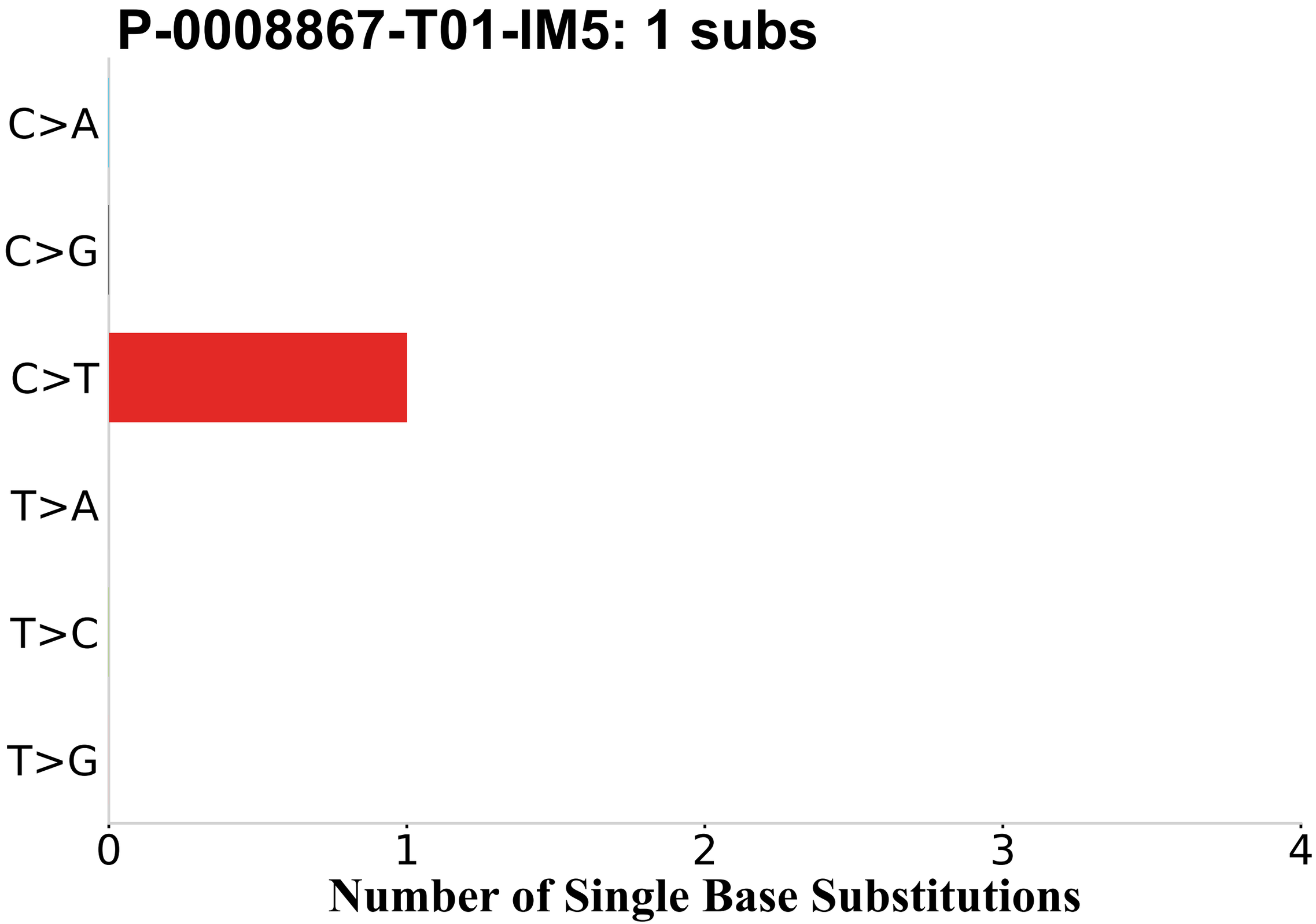

P-0008575-T01-IM5: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

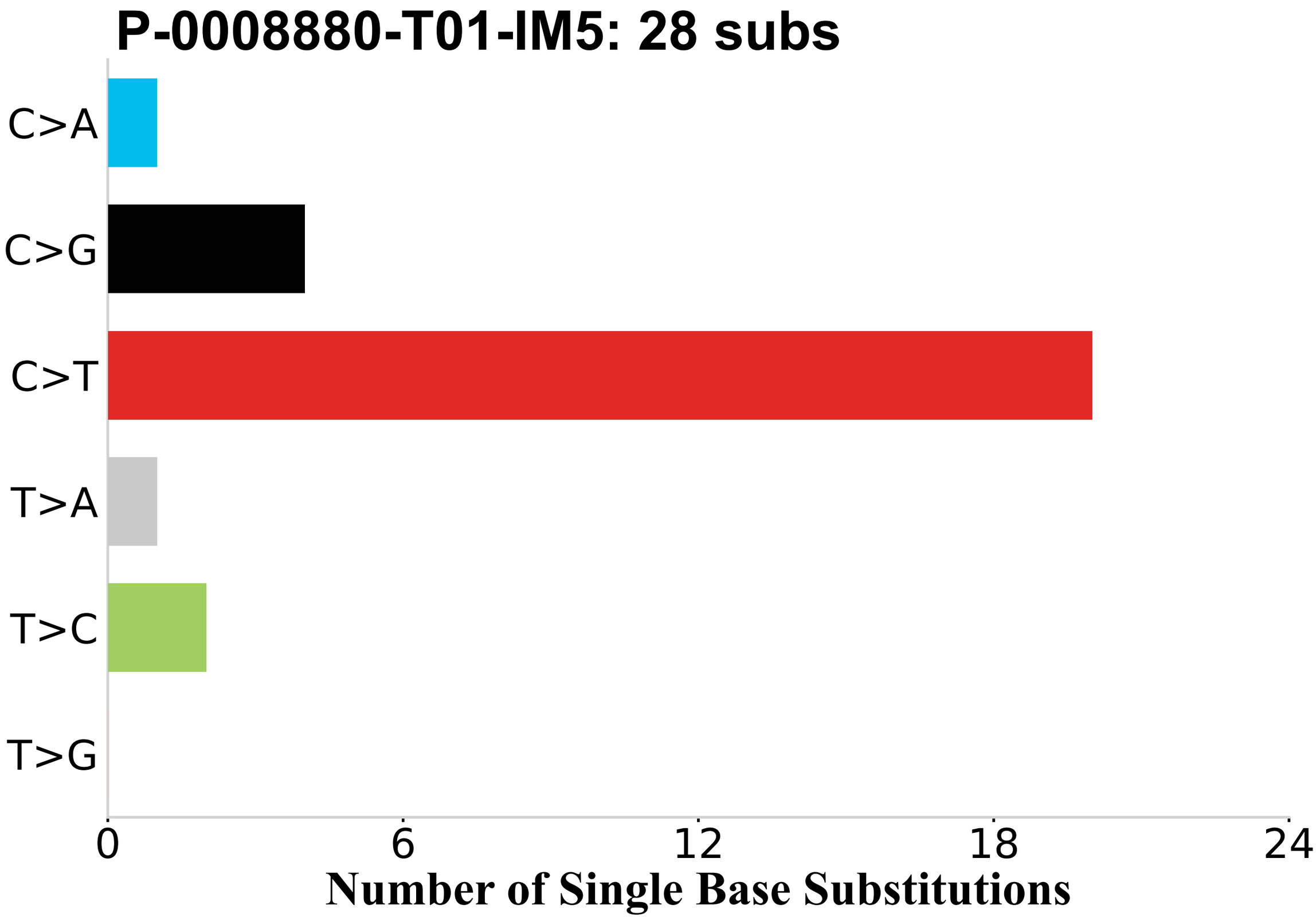

P-0008718-T01-IM5: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

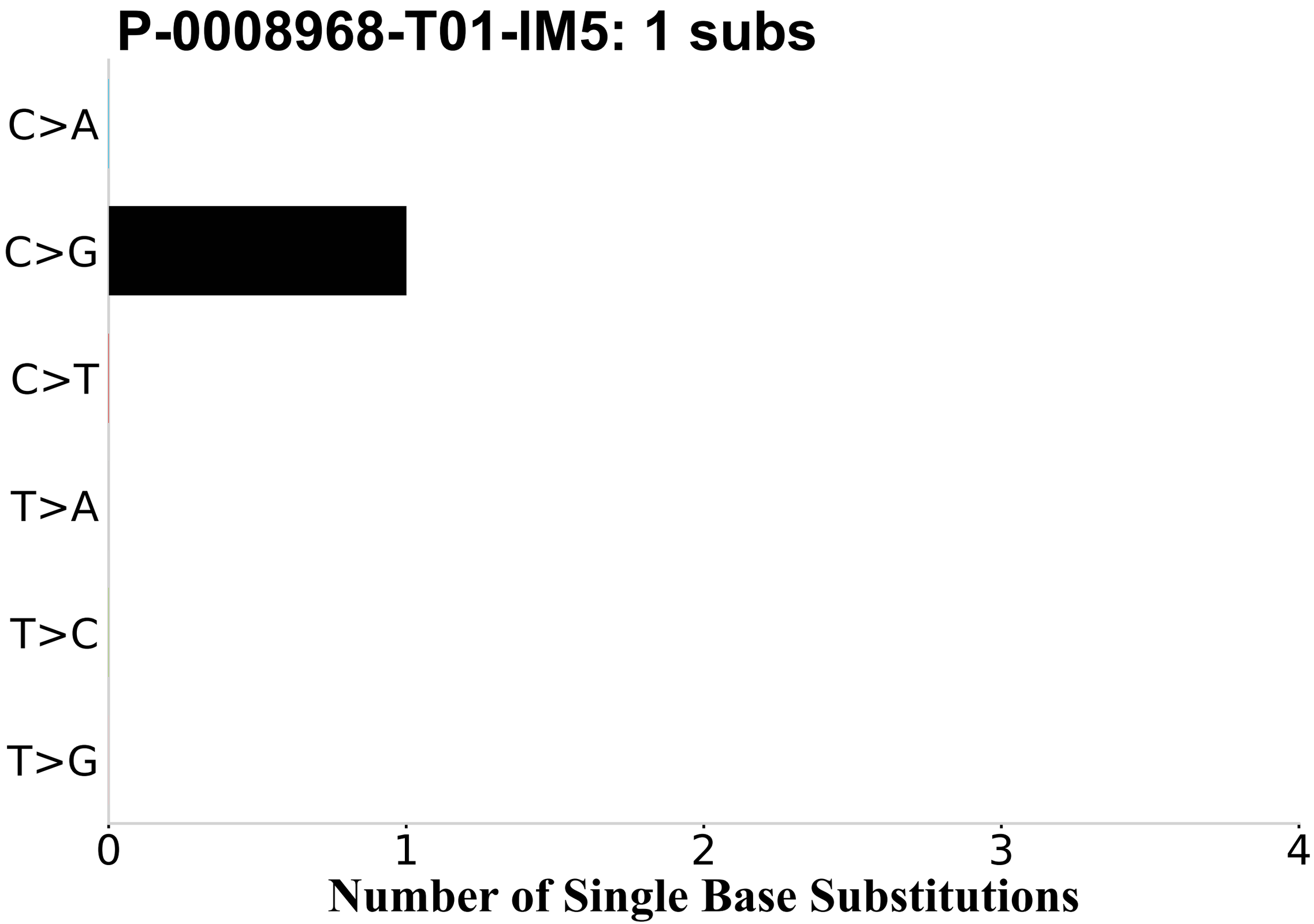

P-0008734-T01-IM5: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

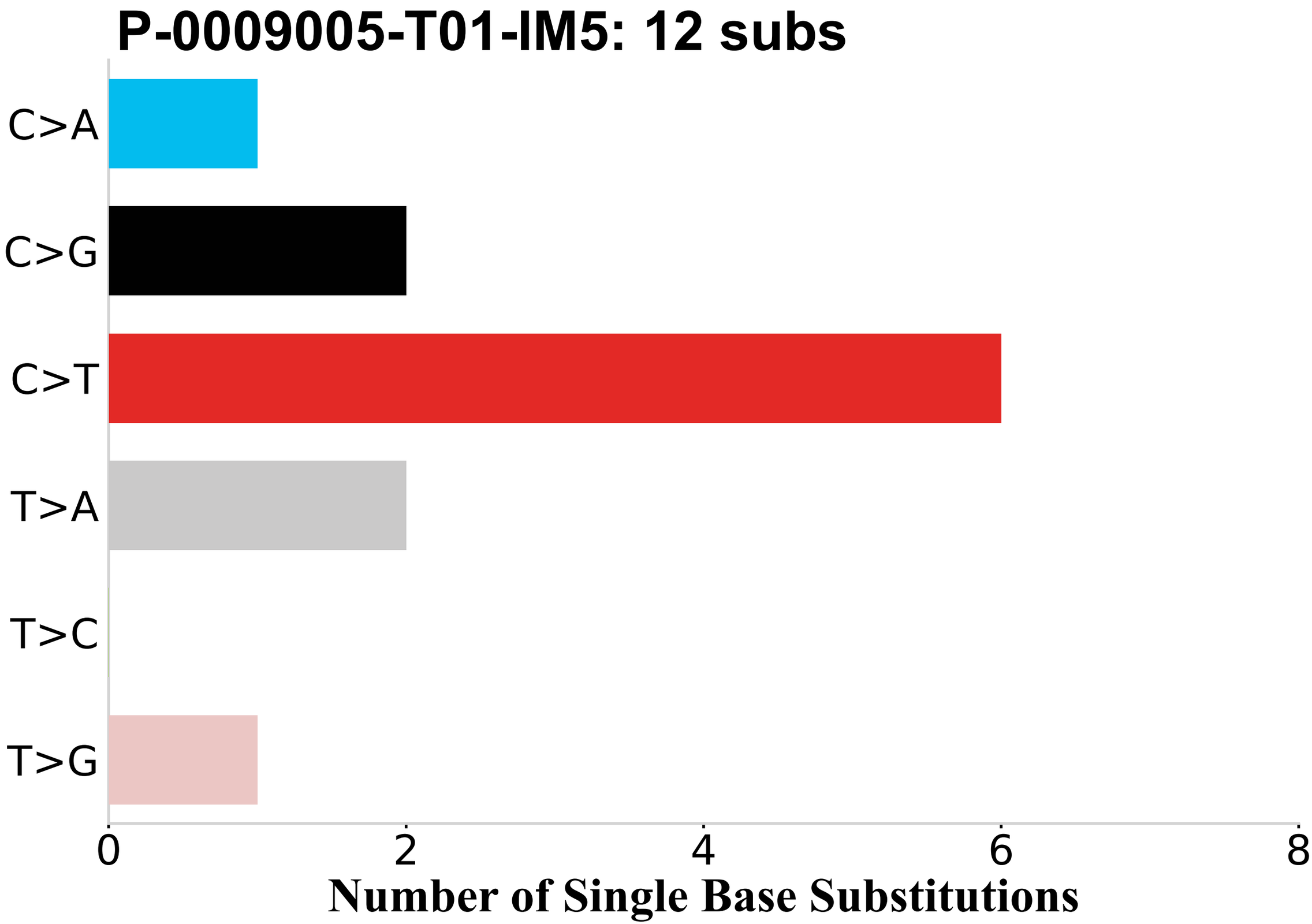

P-0008834-T01-IM5: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

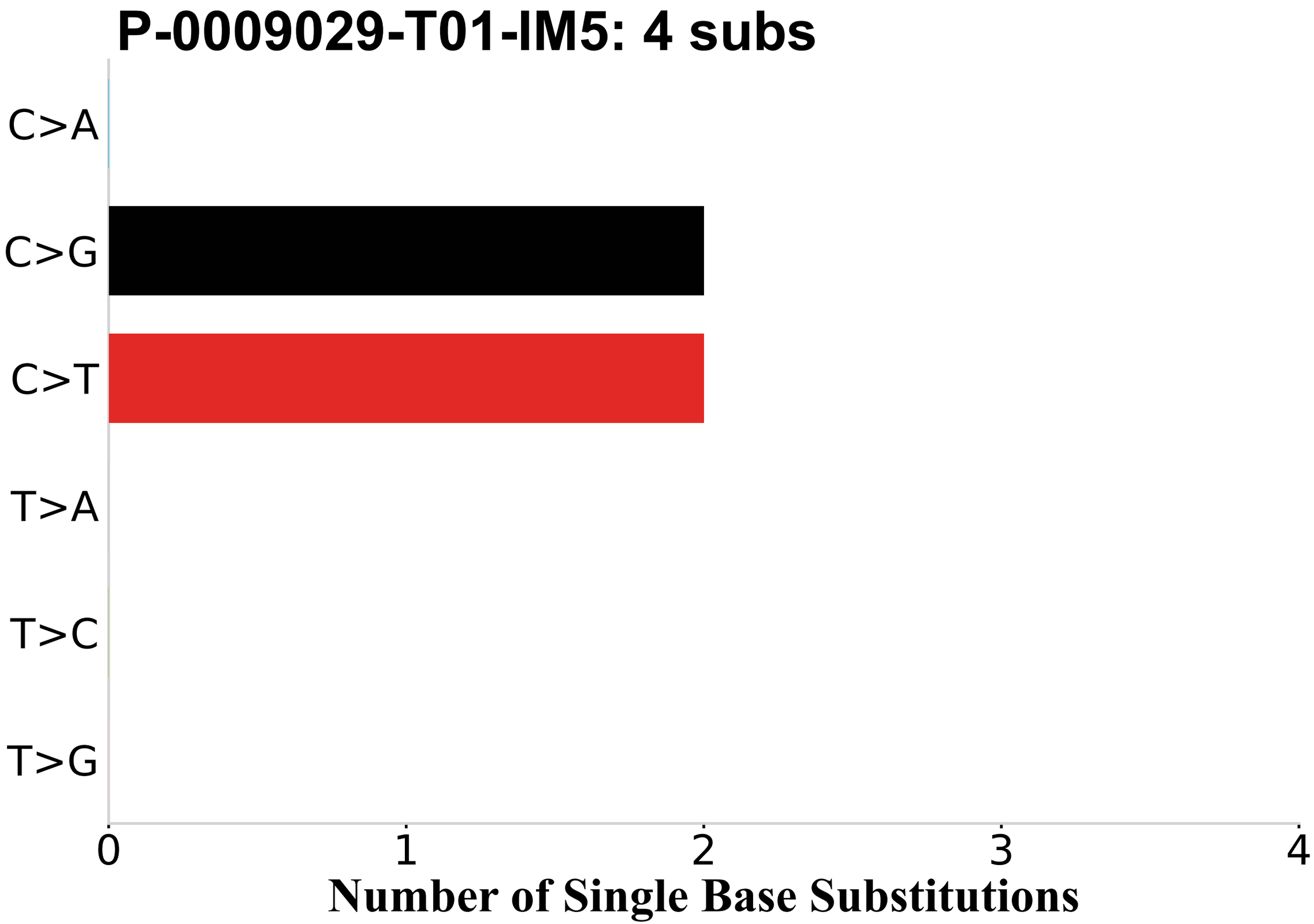

P-0008835-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

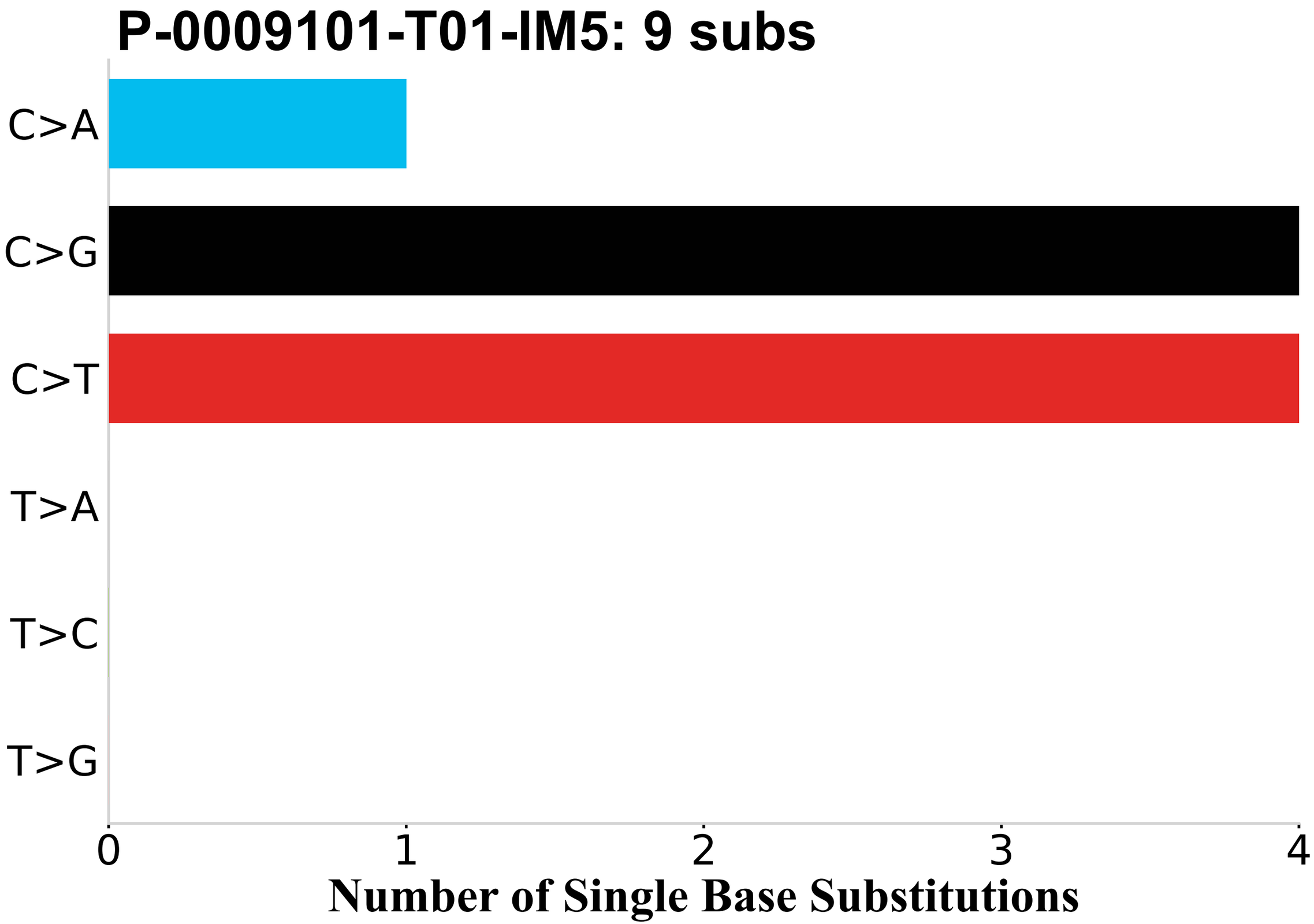

P-0008867-T01-IM5: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

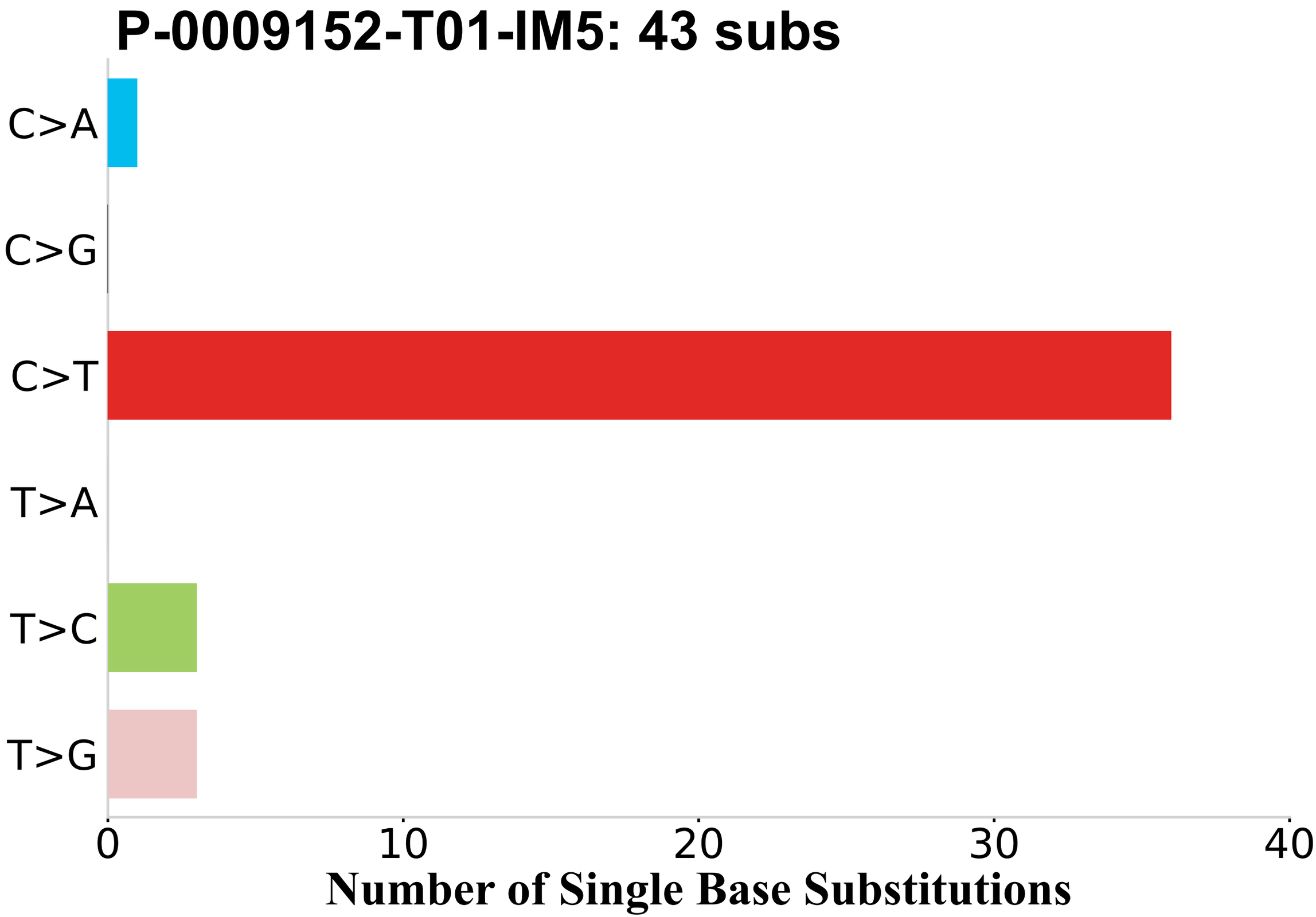

P-0008880-T01-IM5: 28 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions

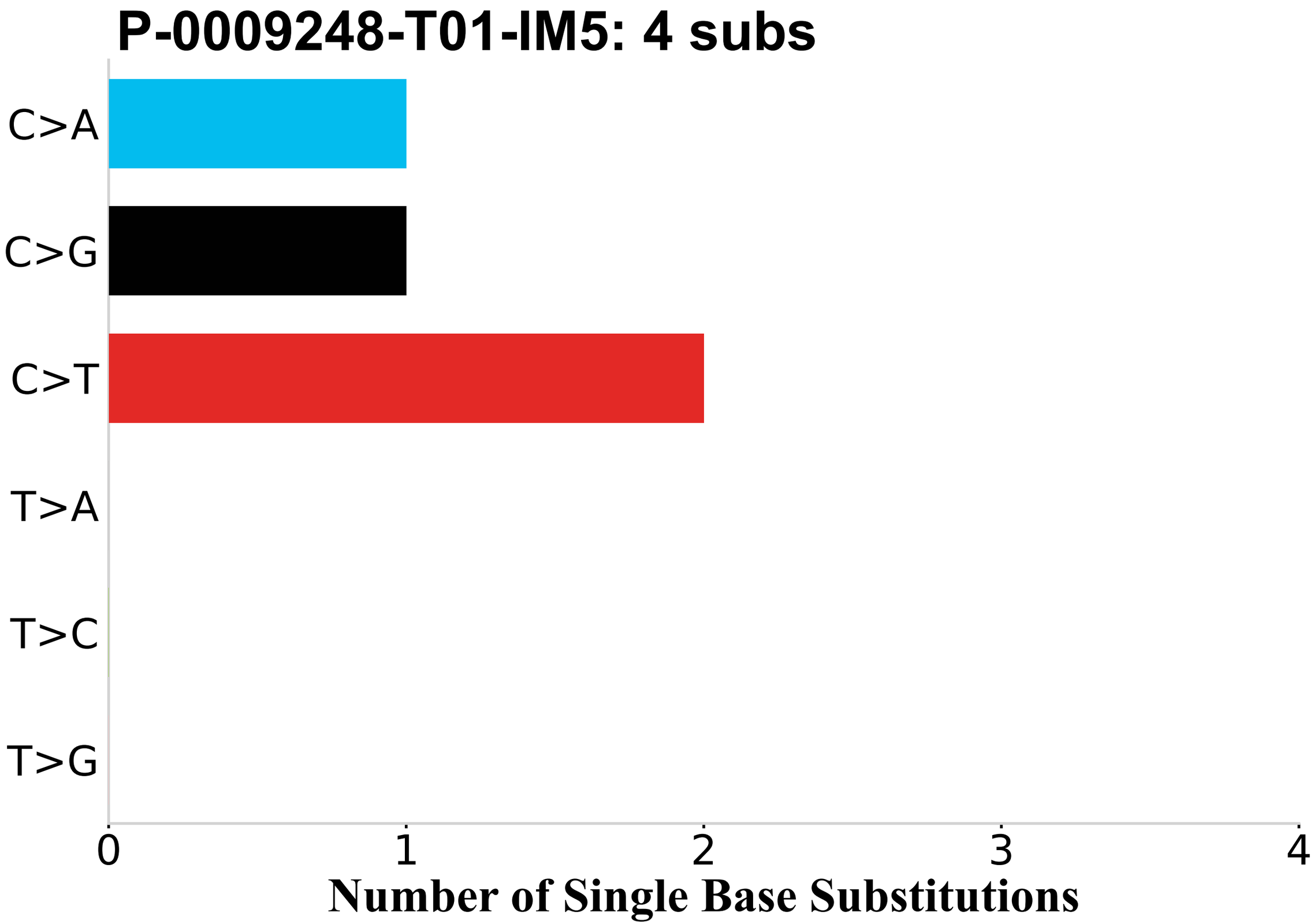

P-0008968-T01-IM5: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

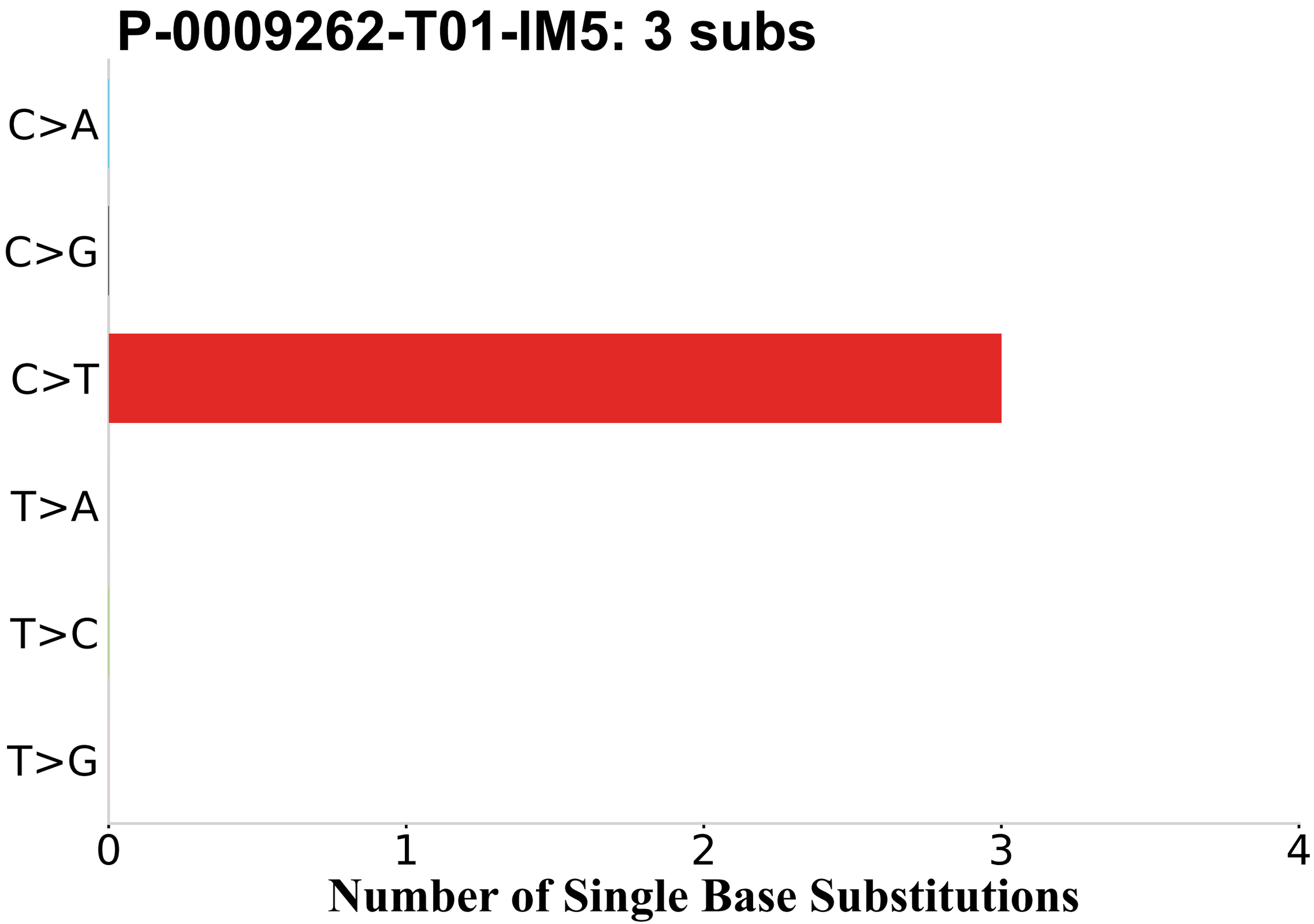

P-0009005-T01-IM5: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

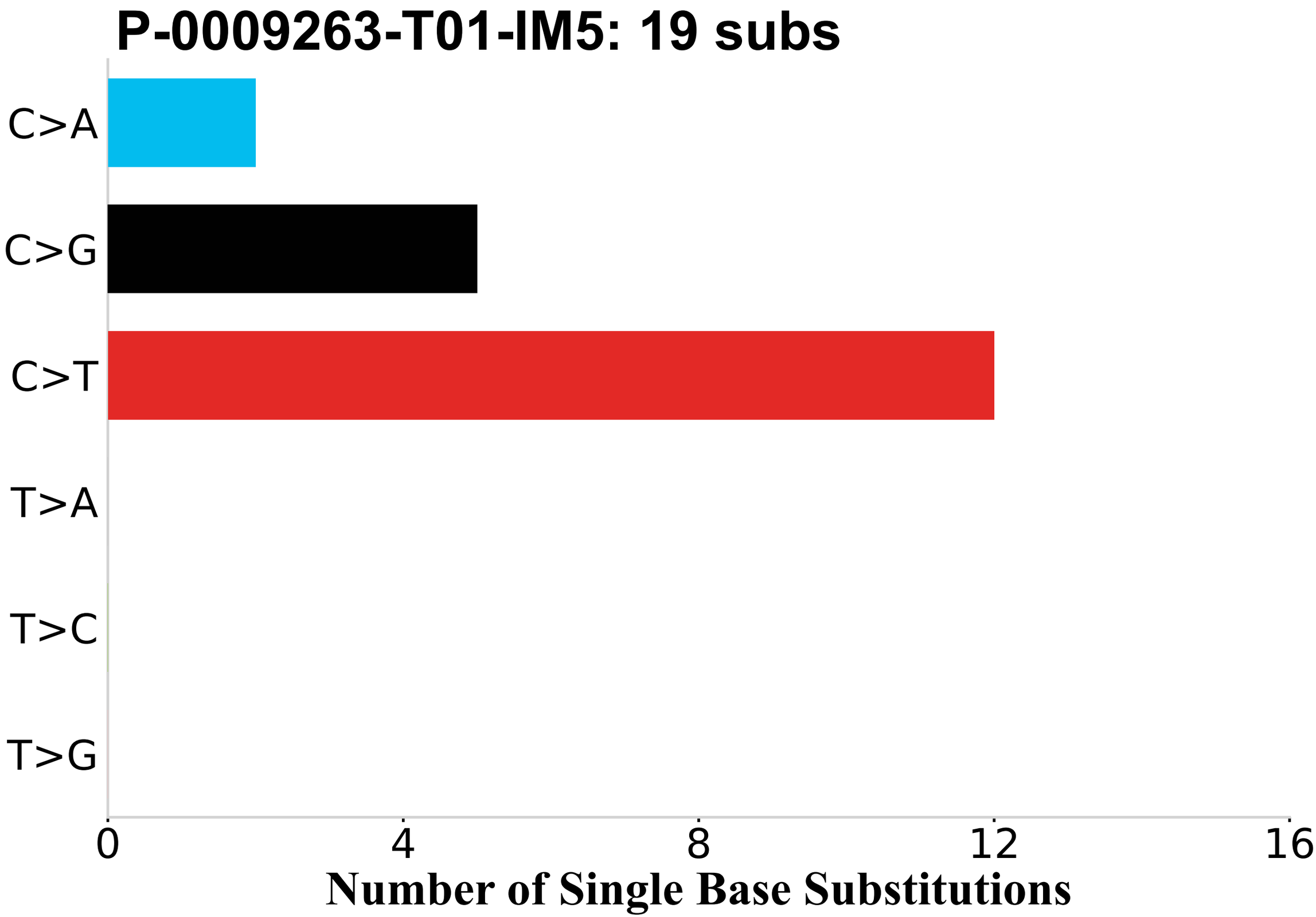

P-0009029-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

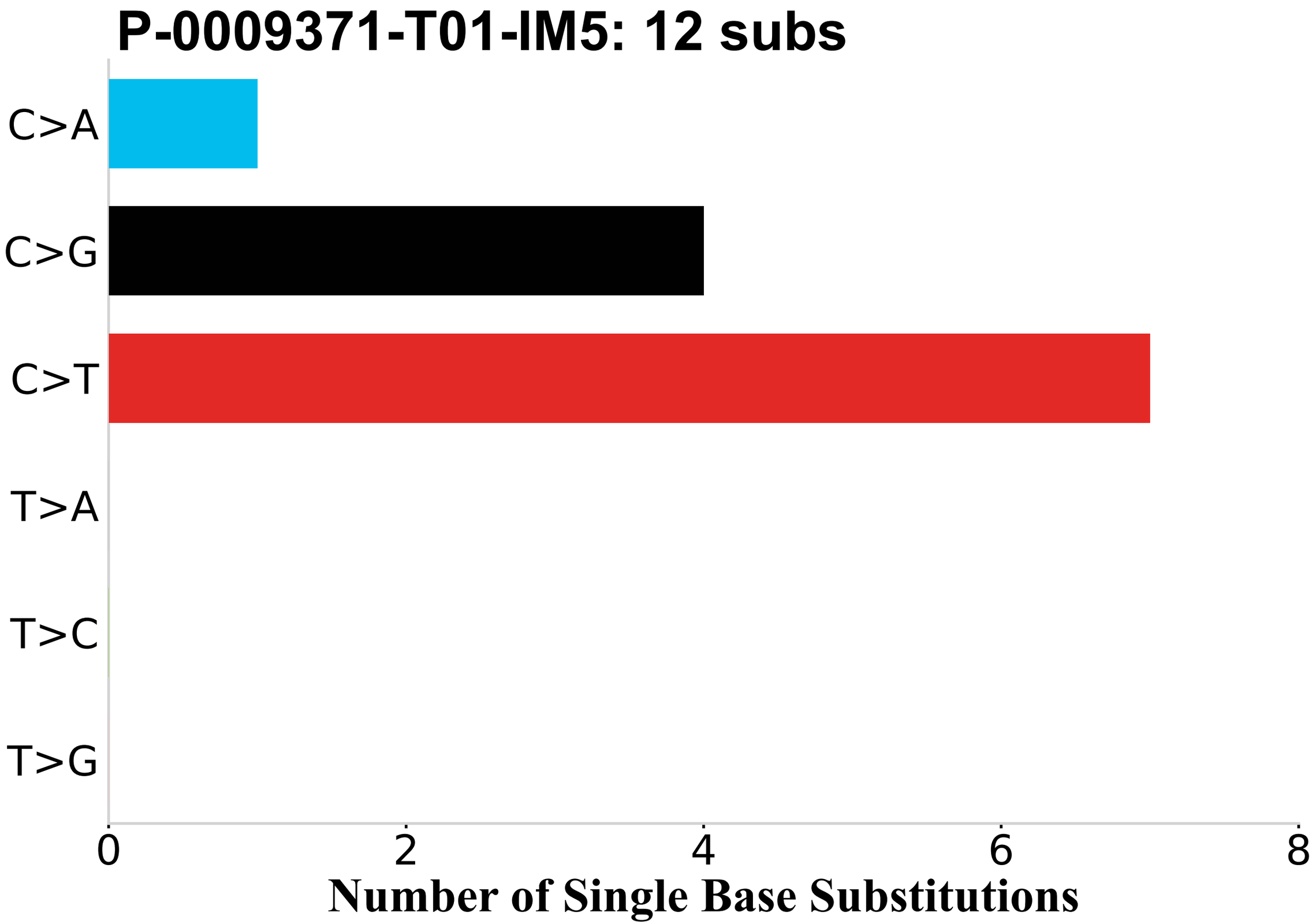

P-0009101-T01-IM5: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

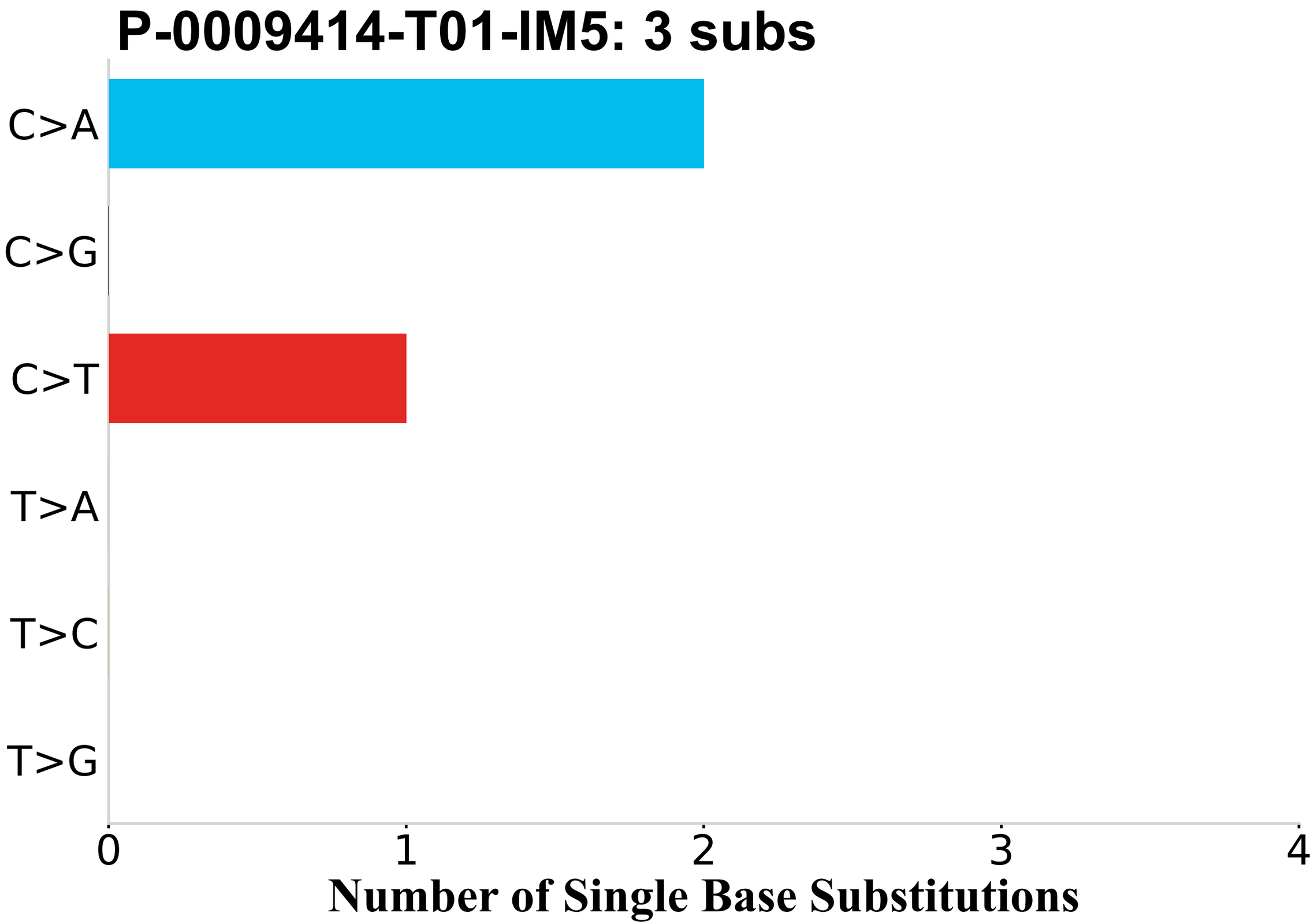

P-0009152-T01-IM5: 43 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
10
20
30
40
Number of Single Base Substitutions


P-0009248-T01-IM5: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0009262-T01-IM5: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0009263-T01-IM5: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0009371-T01-IM5: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0009414-T01-IM5: 3 subs
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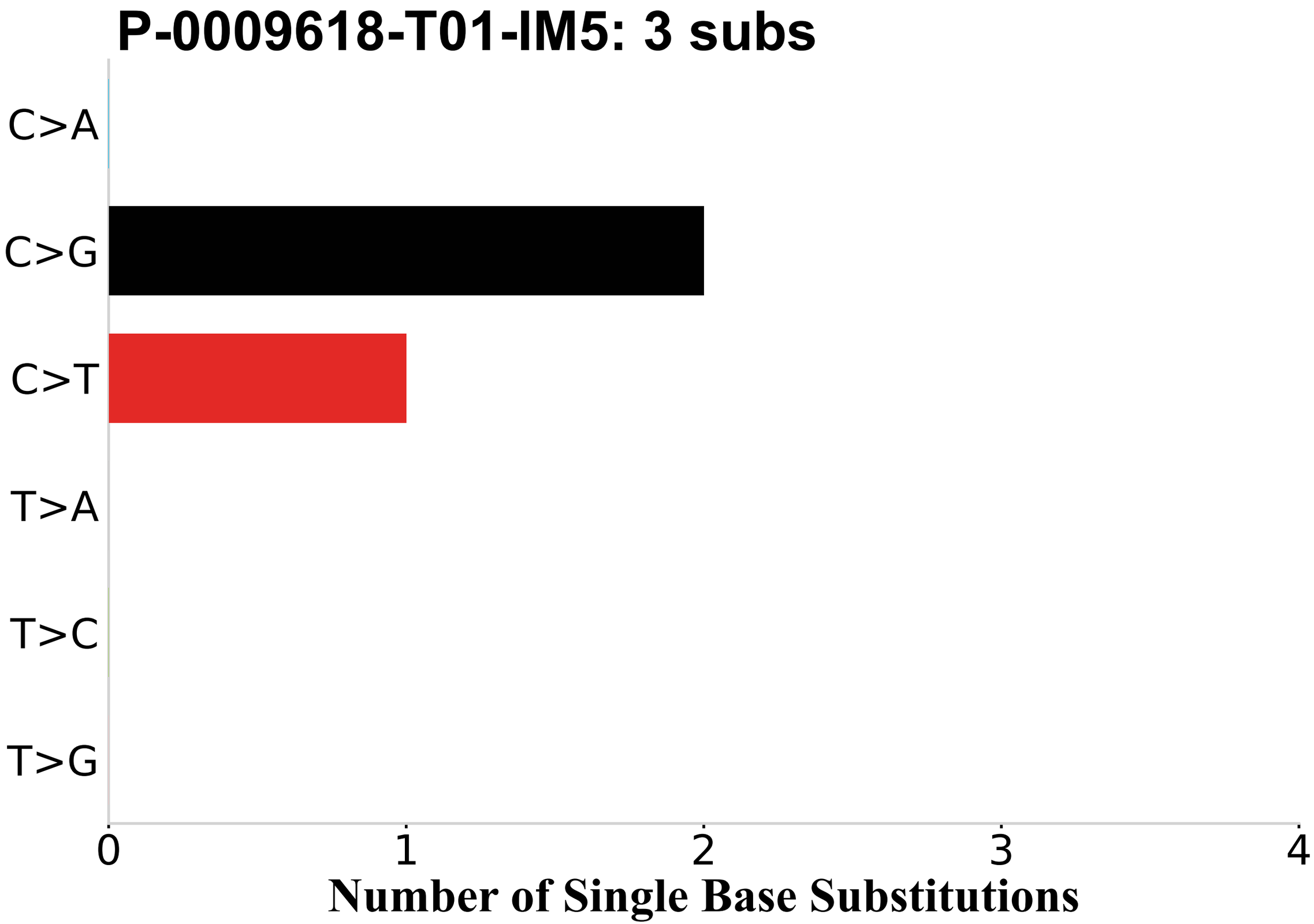
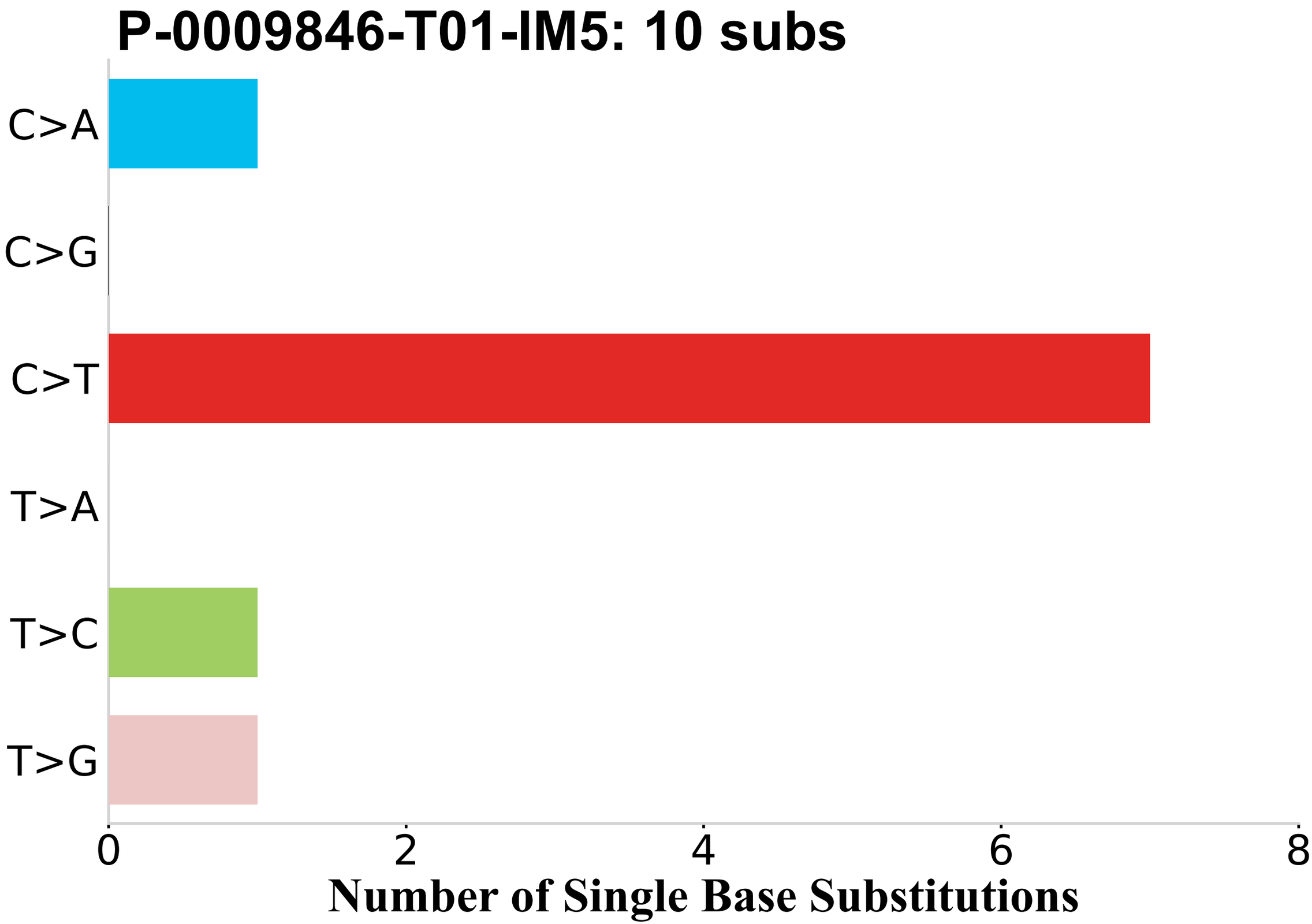
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0009618-T01-IM5: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0009846-T01-IM5: 10 subs
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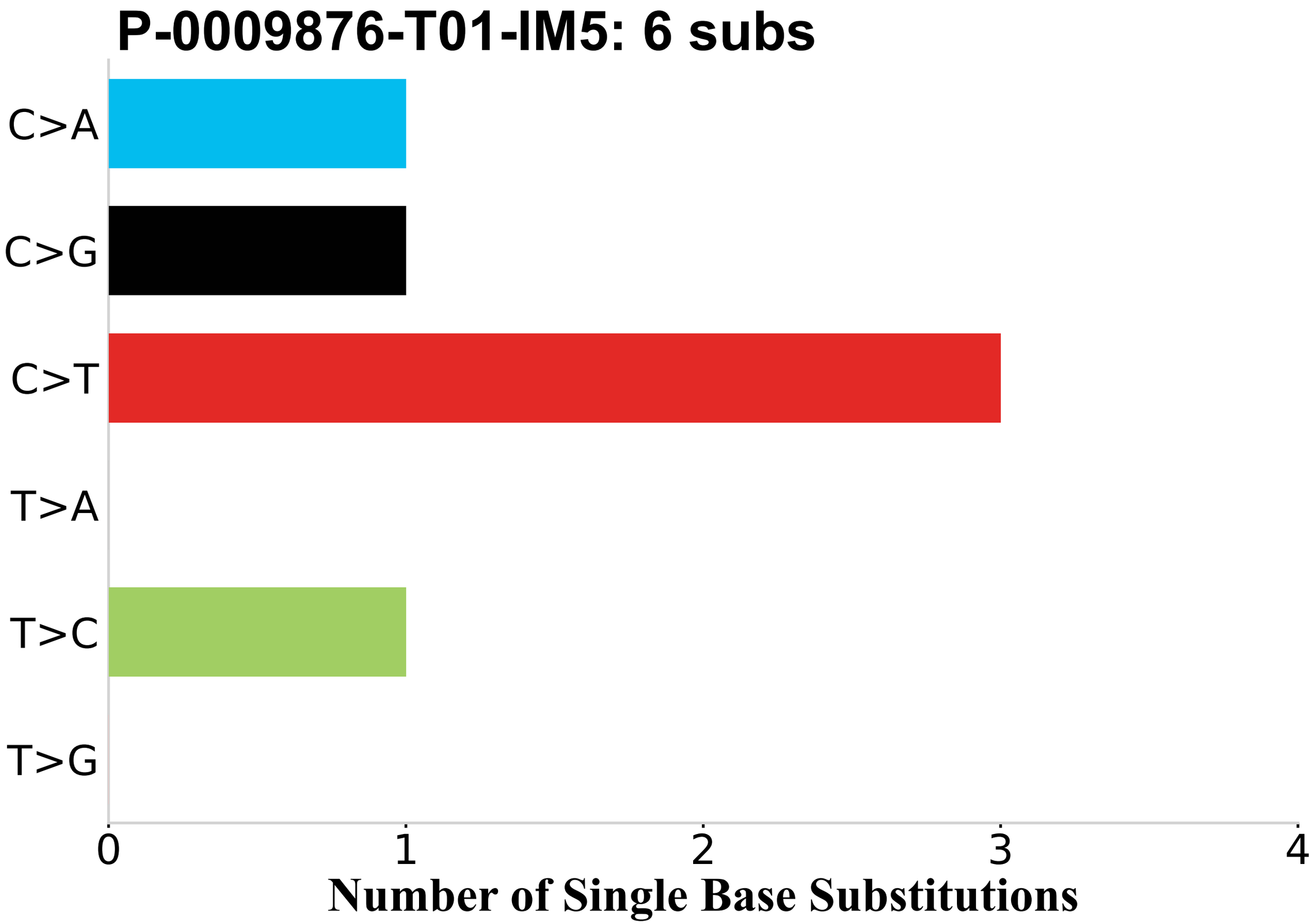
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0009876-T01-IM5: 6 subs
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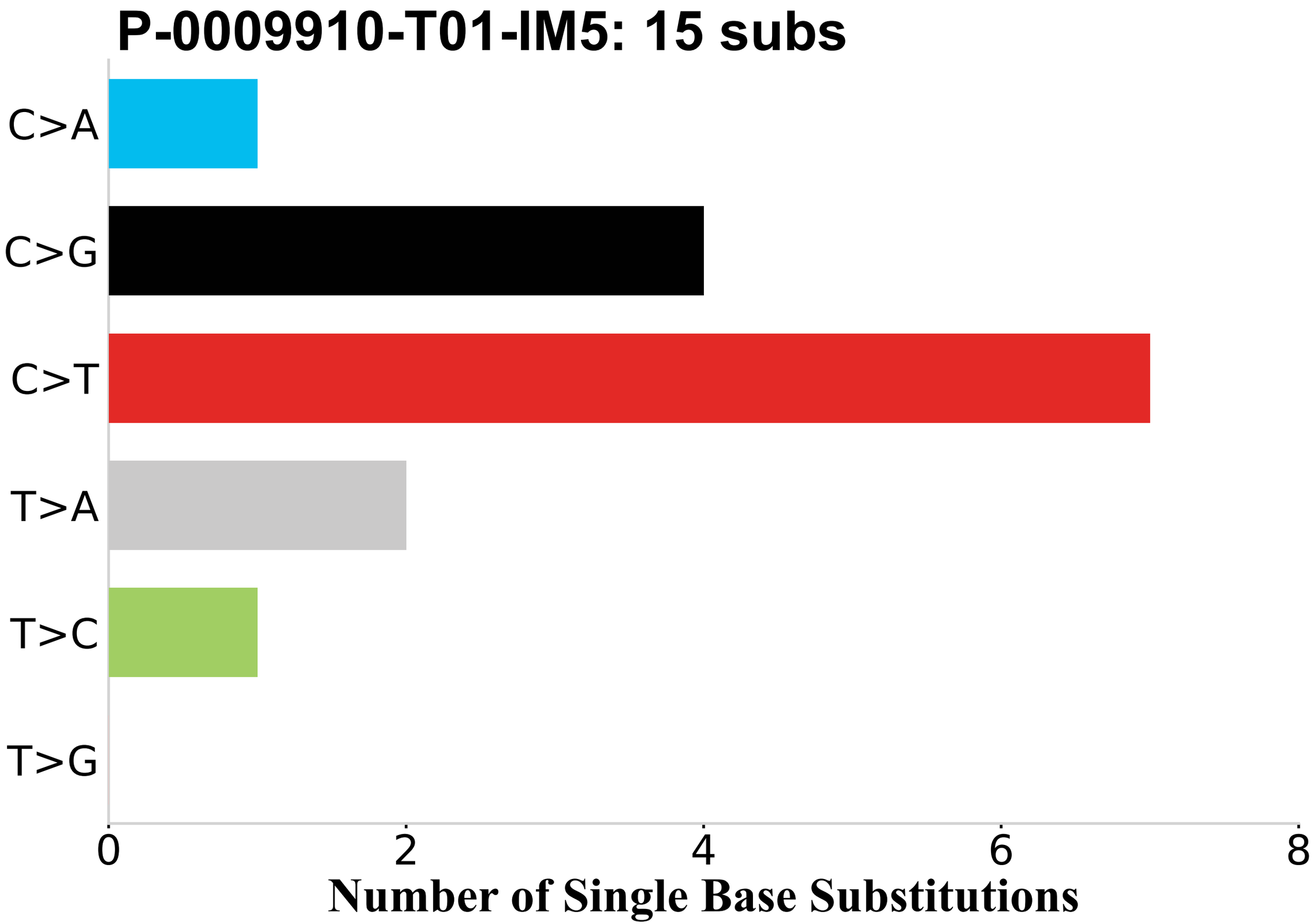
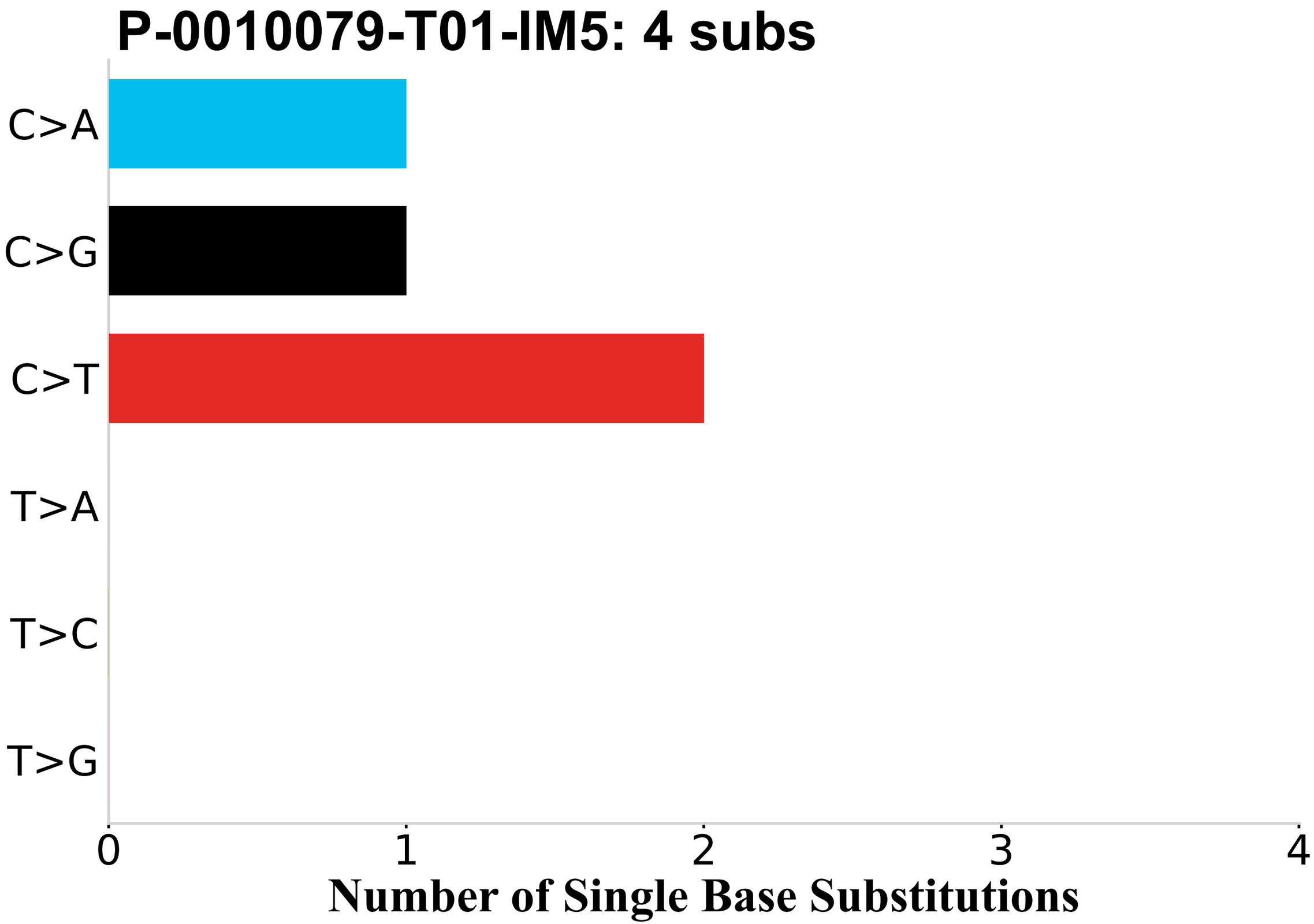
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0009910-T01-IM5: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0010079-T01-IM5: 4 subs
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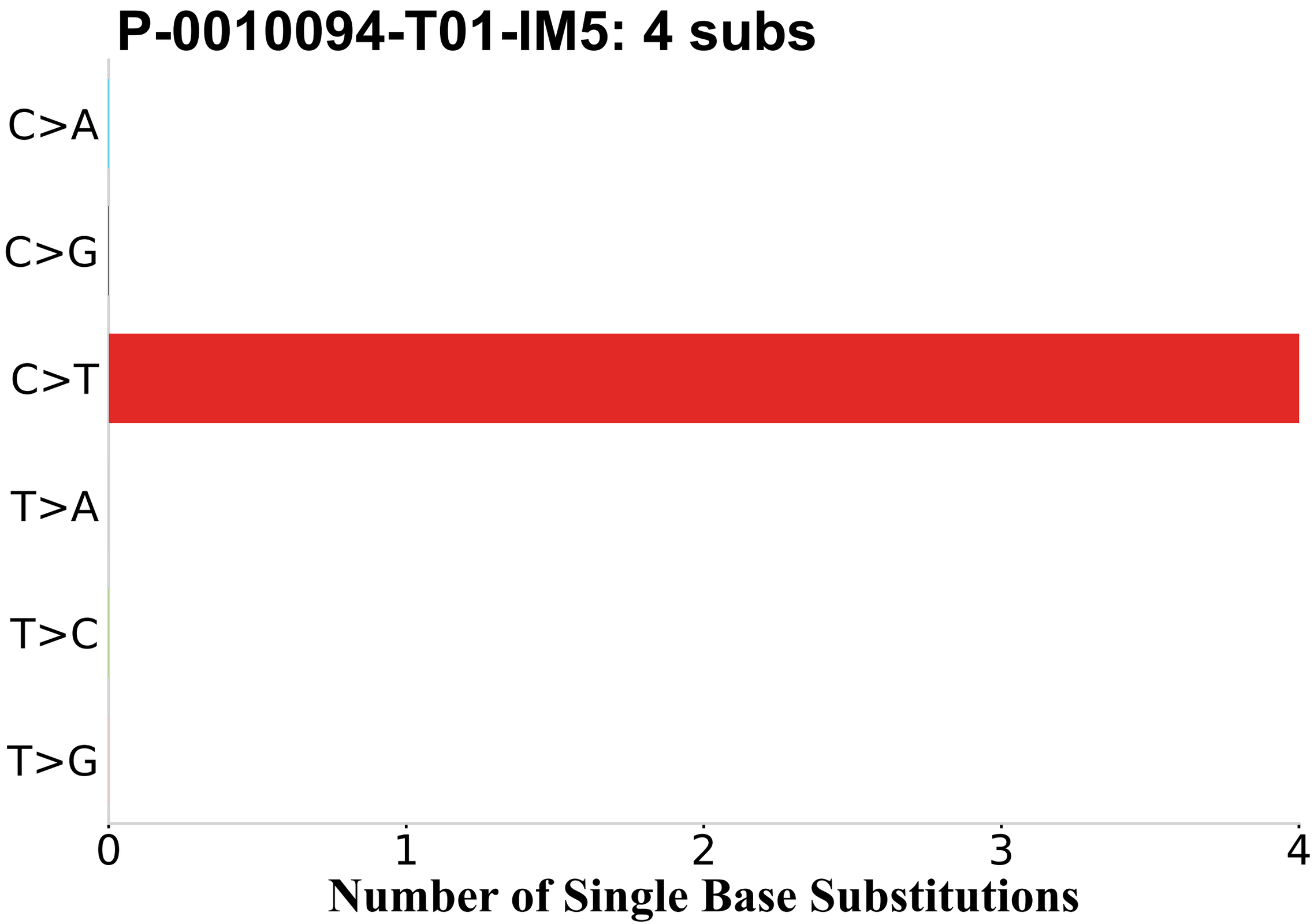
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0010094-T01-IM5: 4 subs
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C>G
C>T
T>A
T>C
T>G
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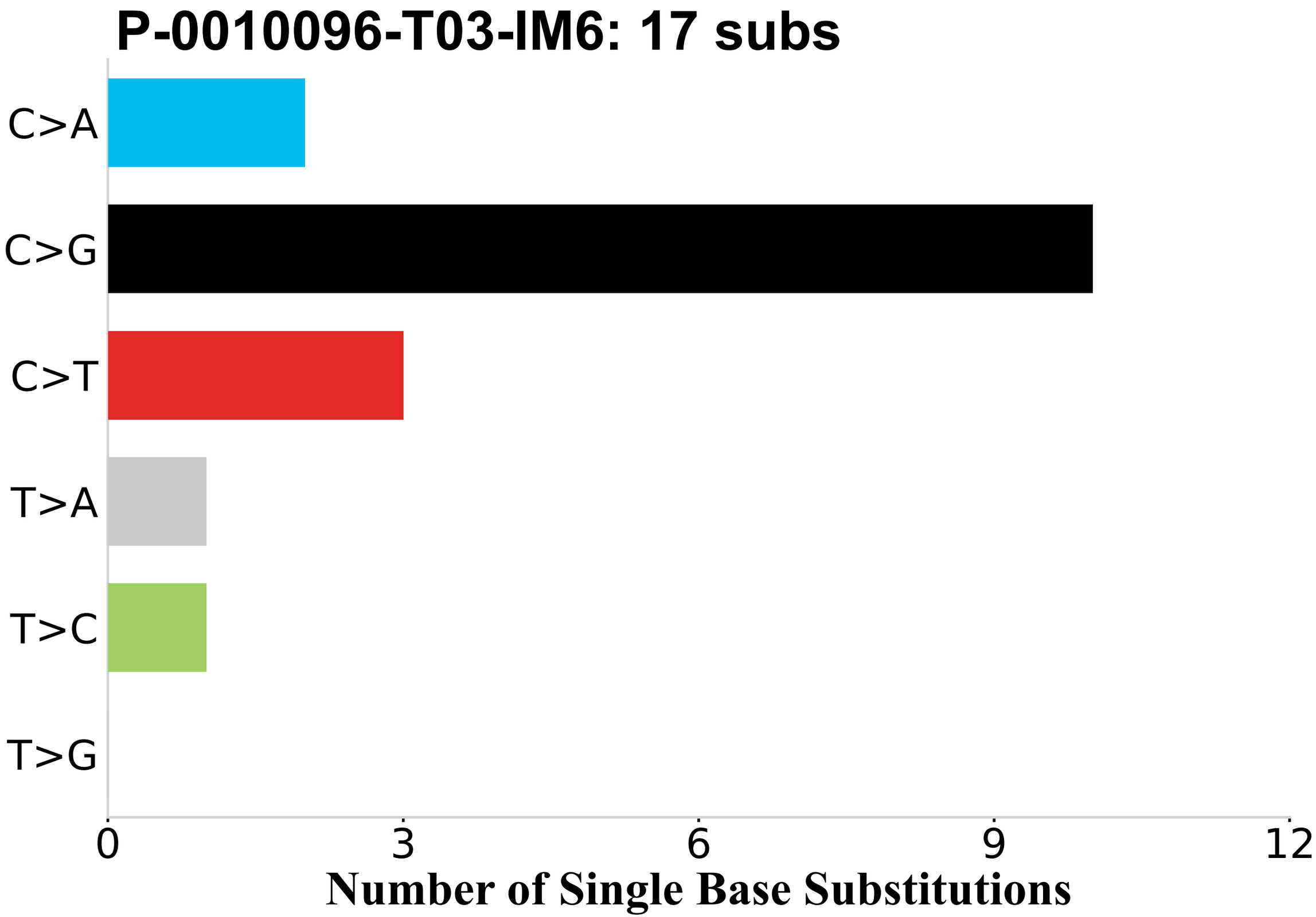
1
2
3
4
Number of Single Base Substitutions


P-0010096-T03-IM6: 17 subs
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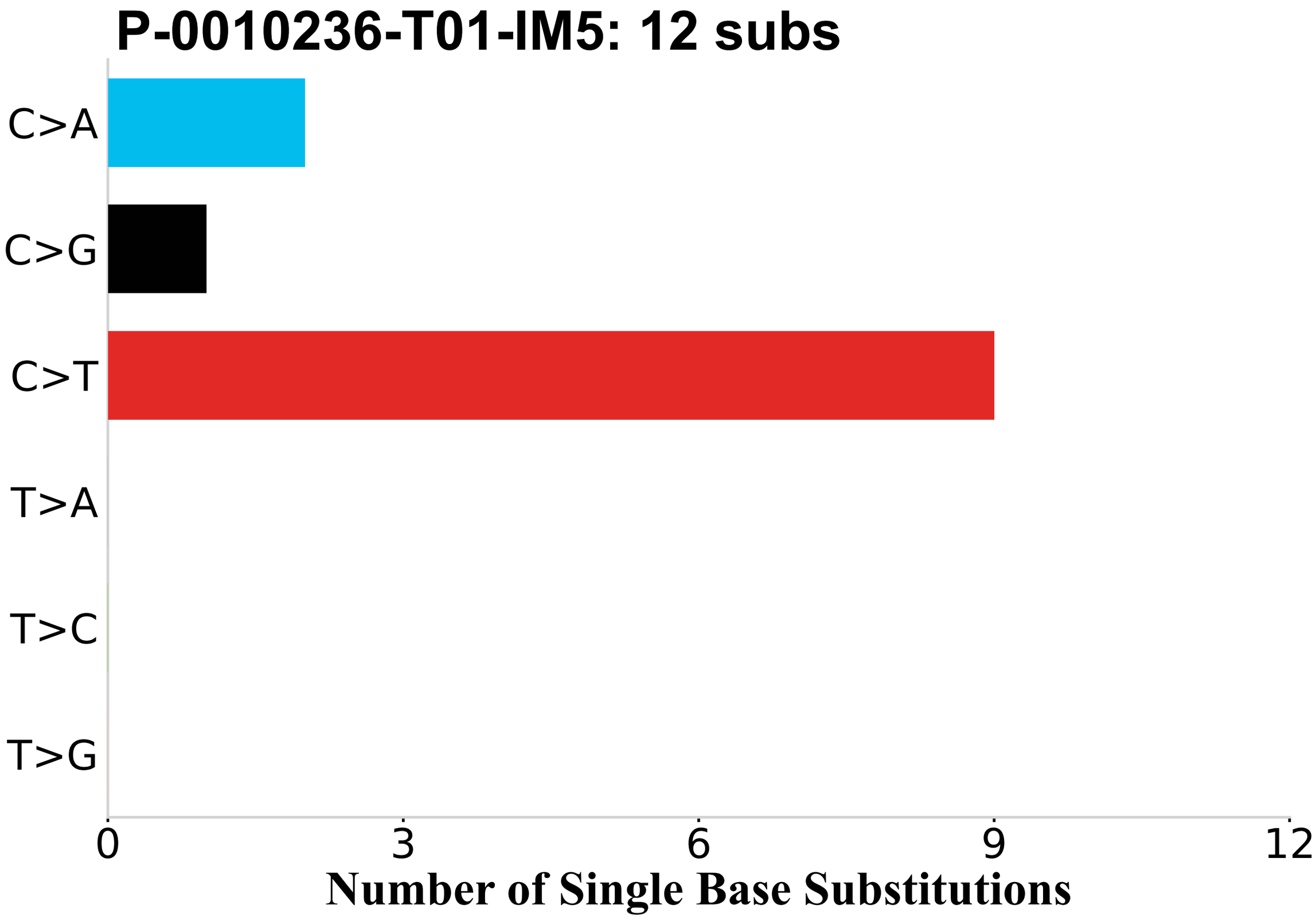
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0010236-T01-IM5: 12 subs
C>A
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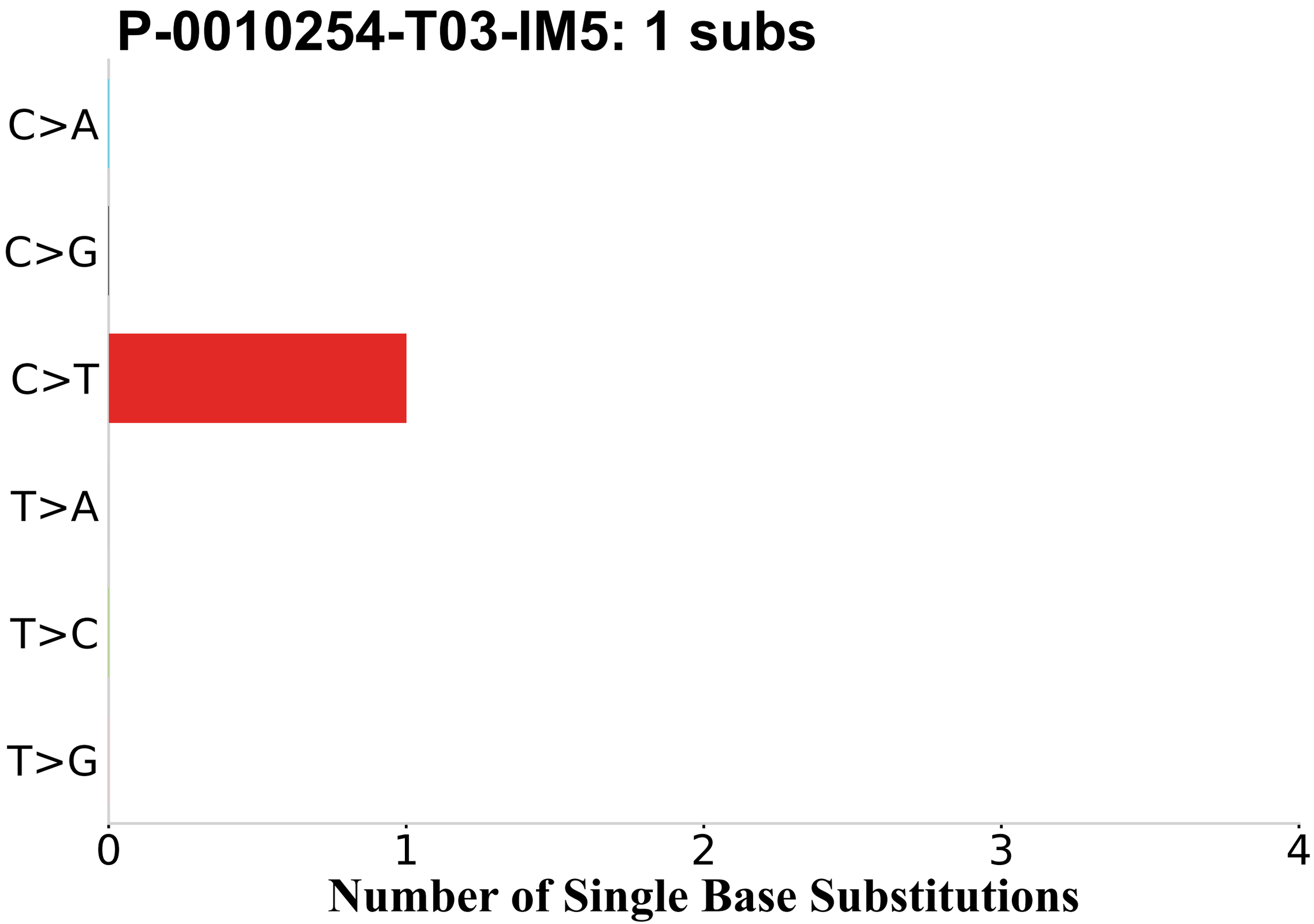
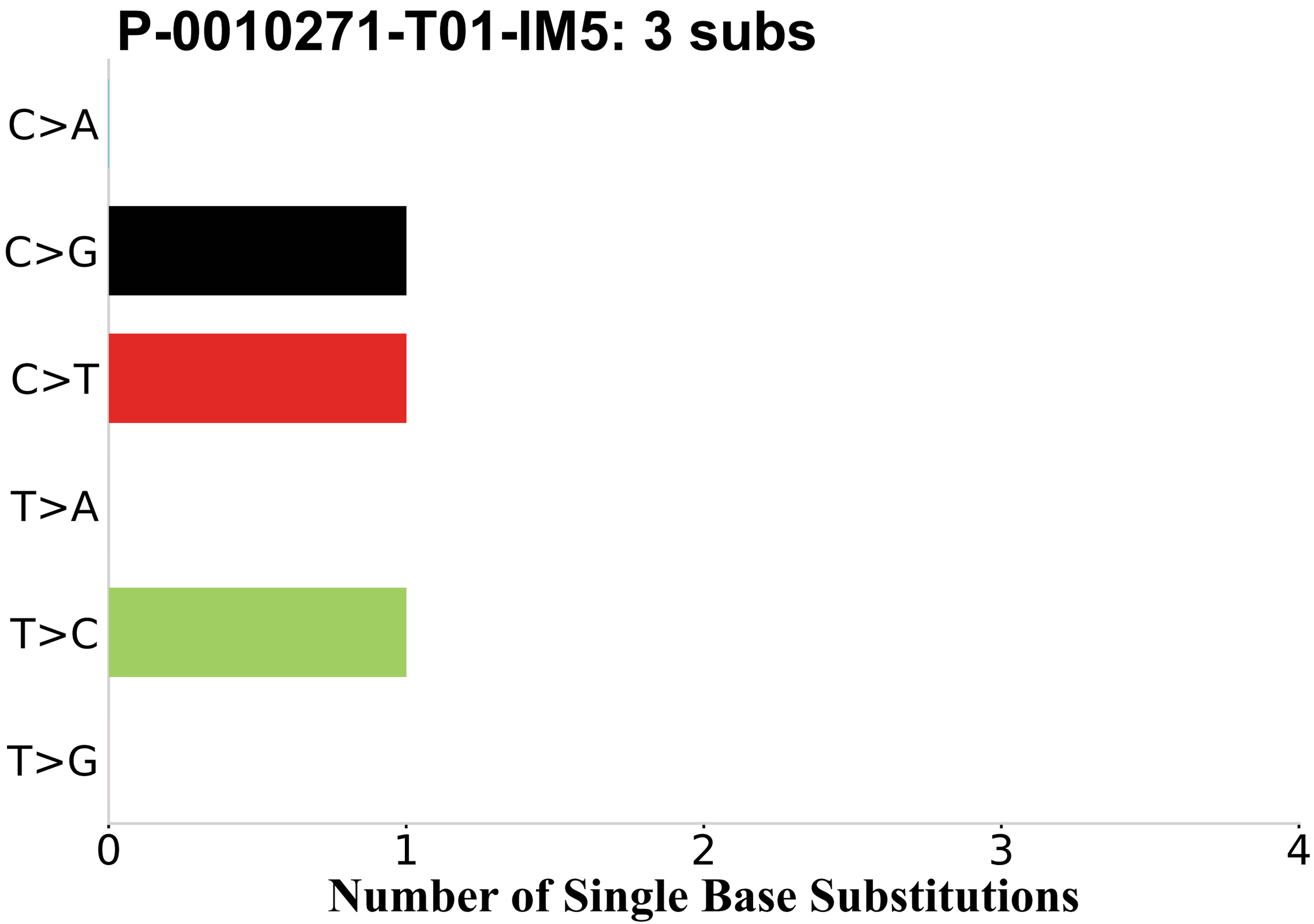
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0010254-T03-IM5: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0010271-T01-IM5: 3 subs
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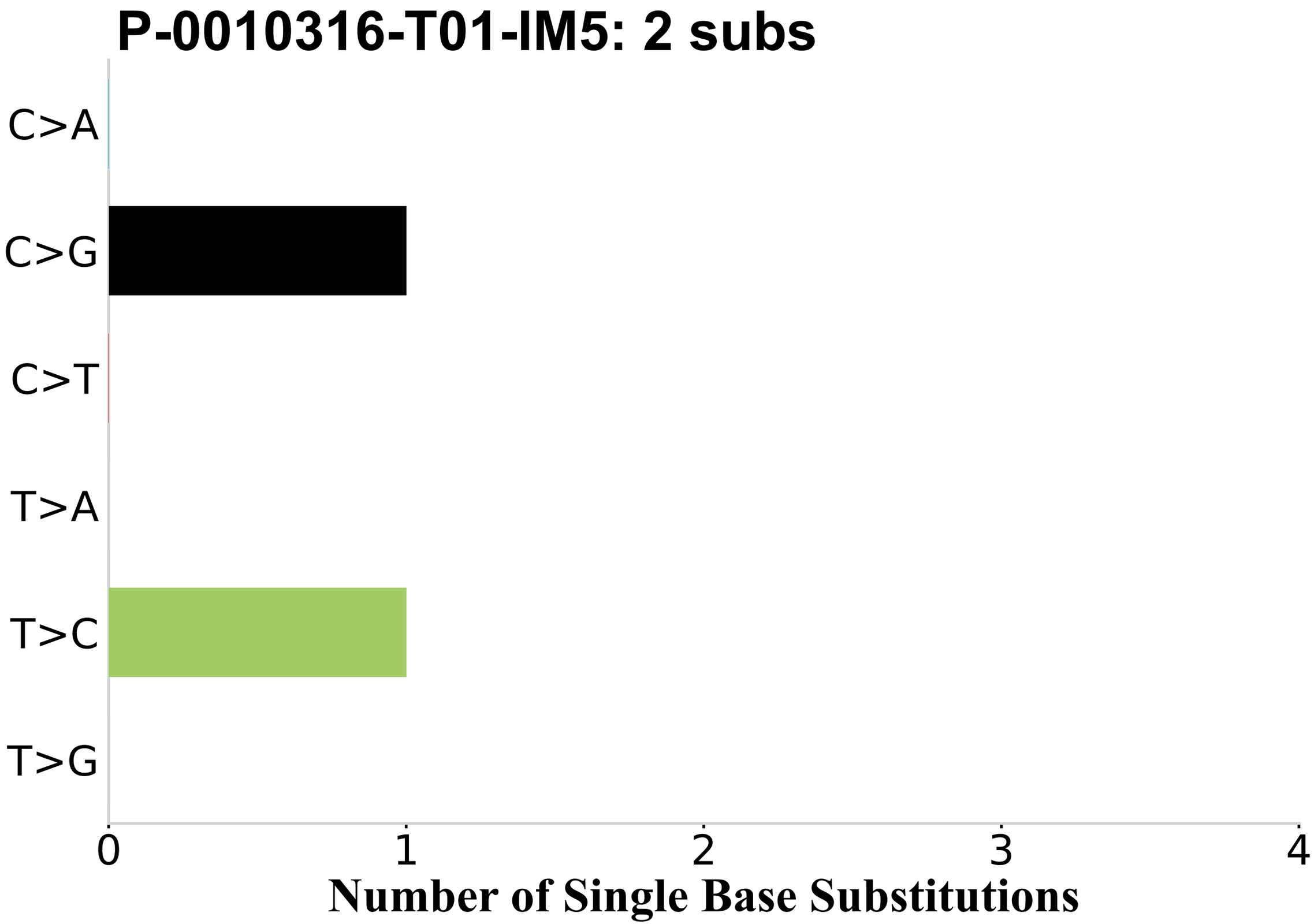
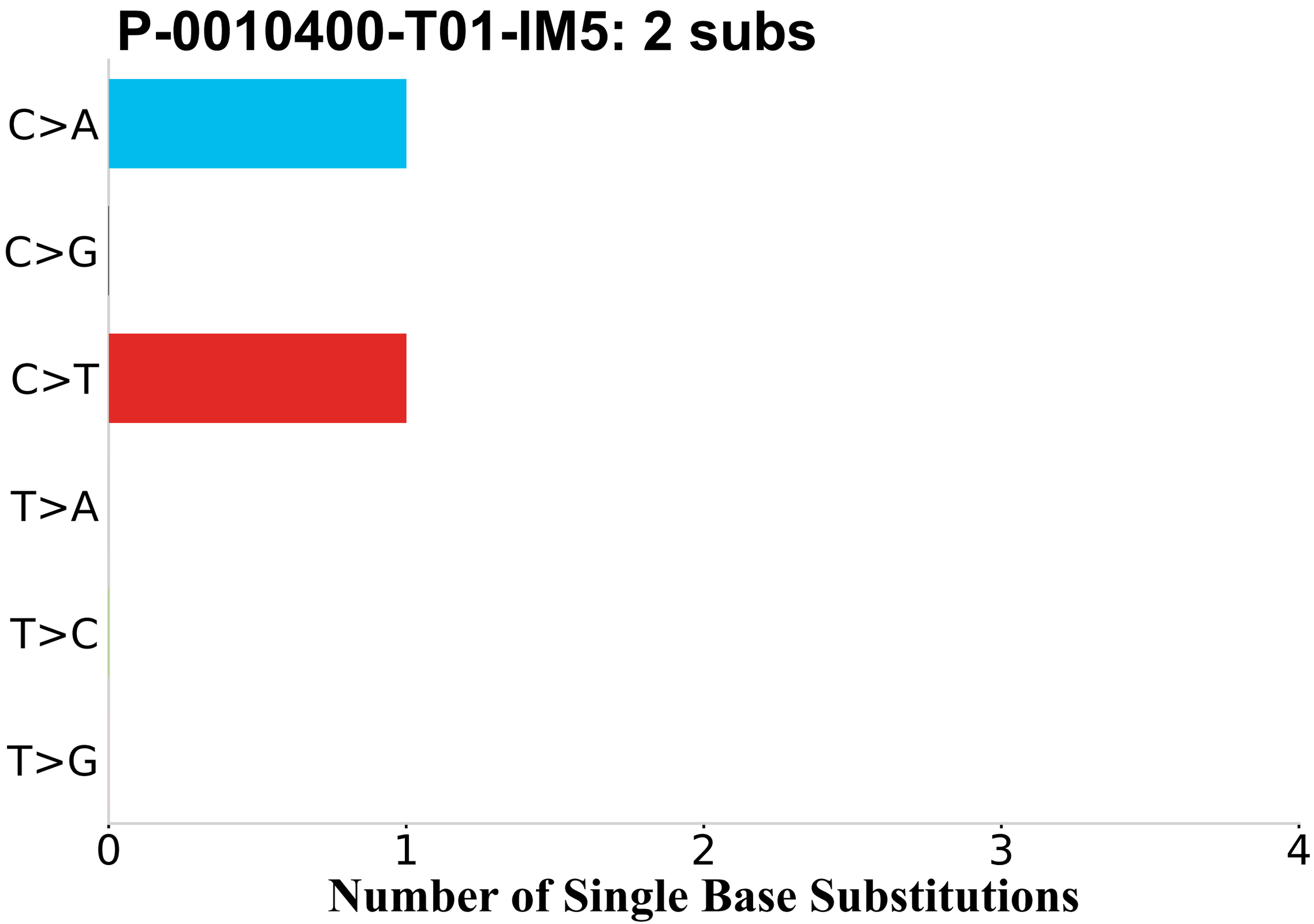
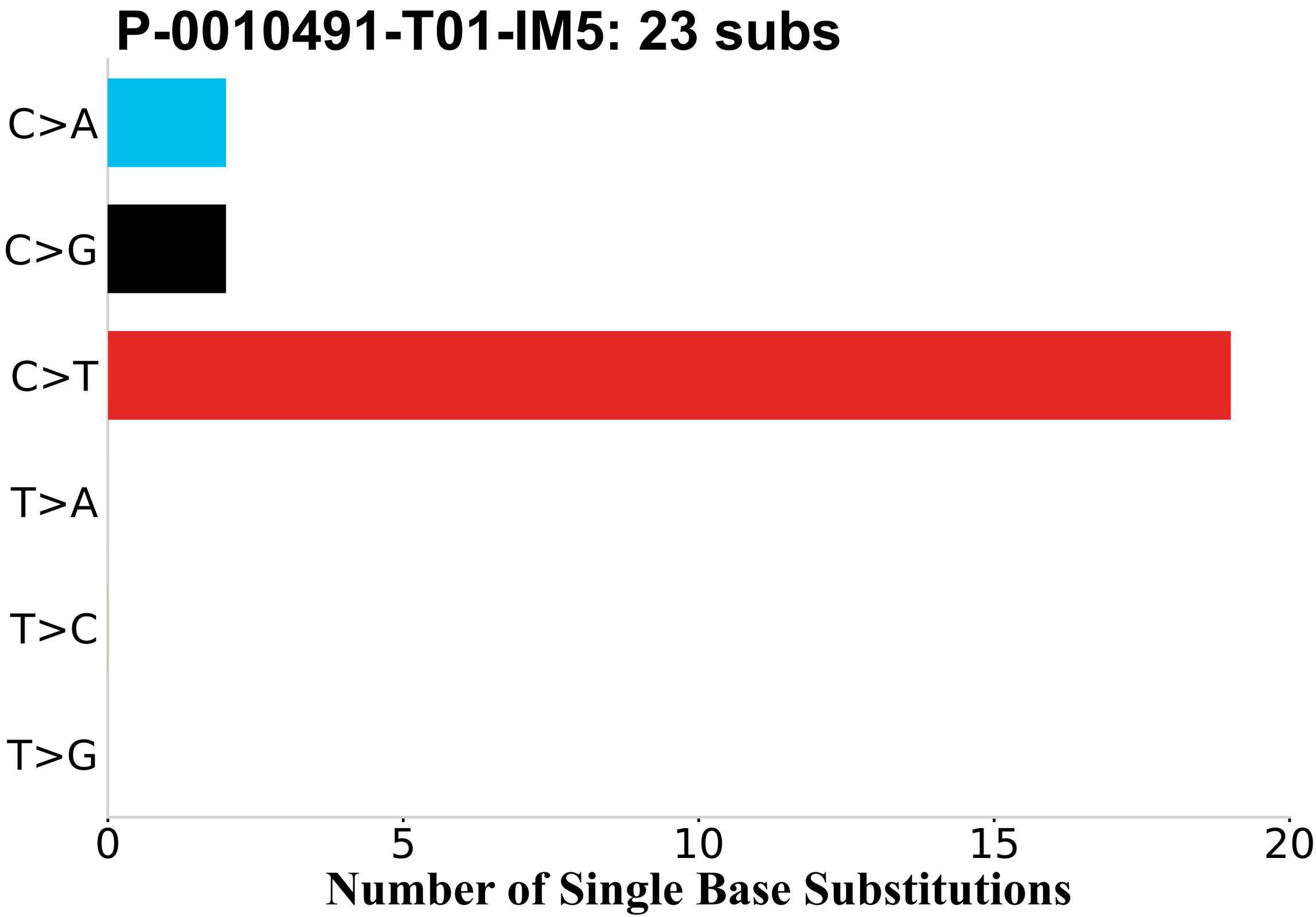
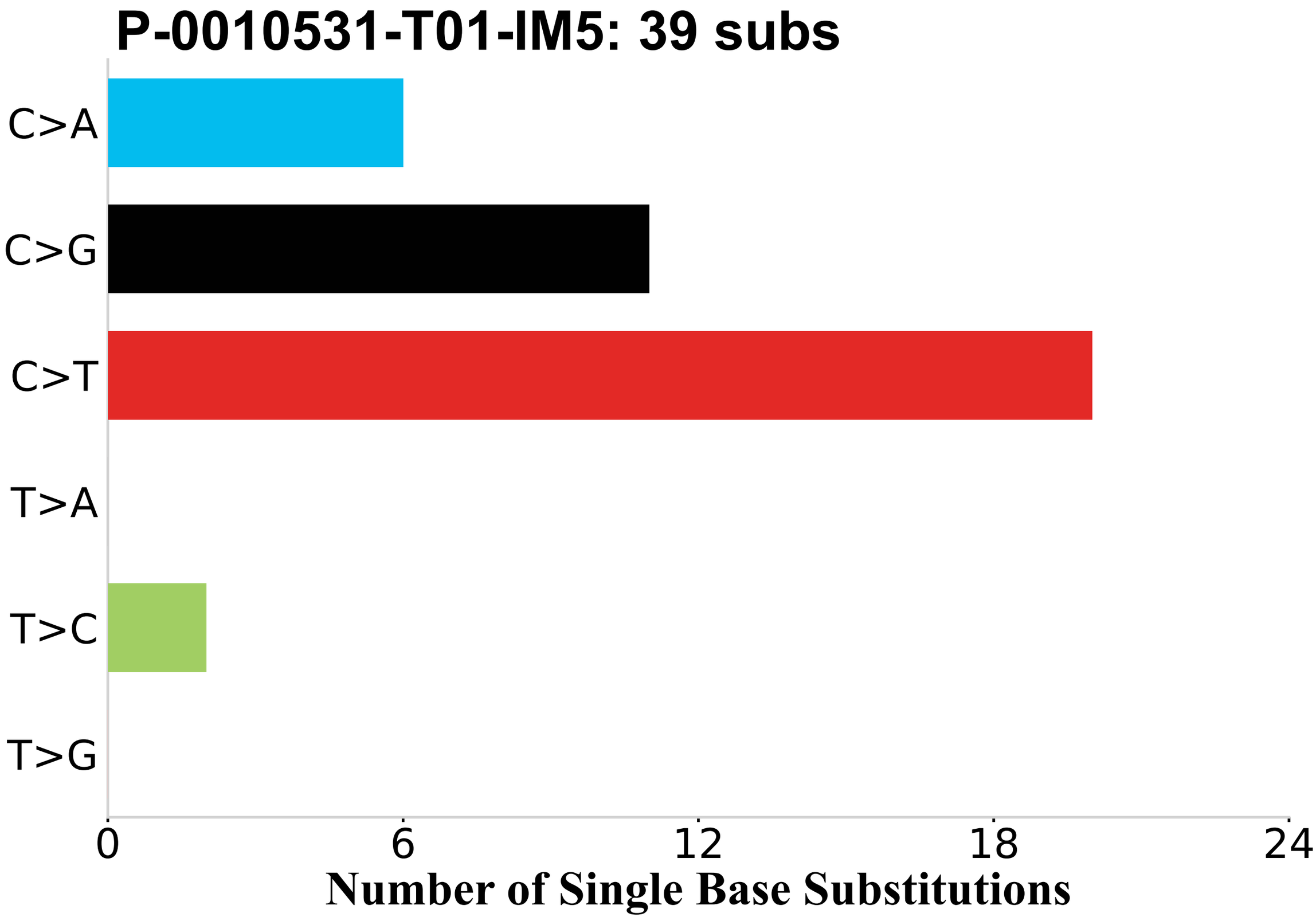
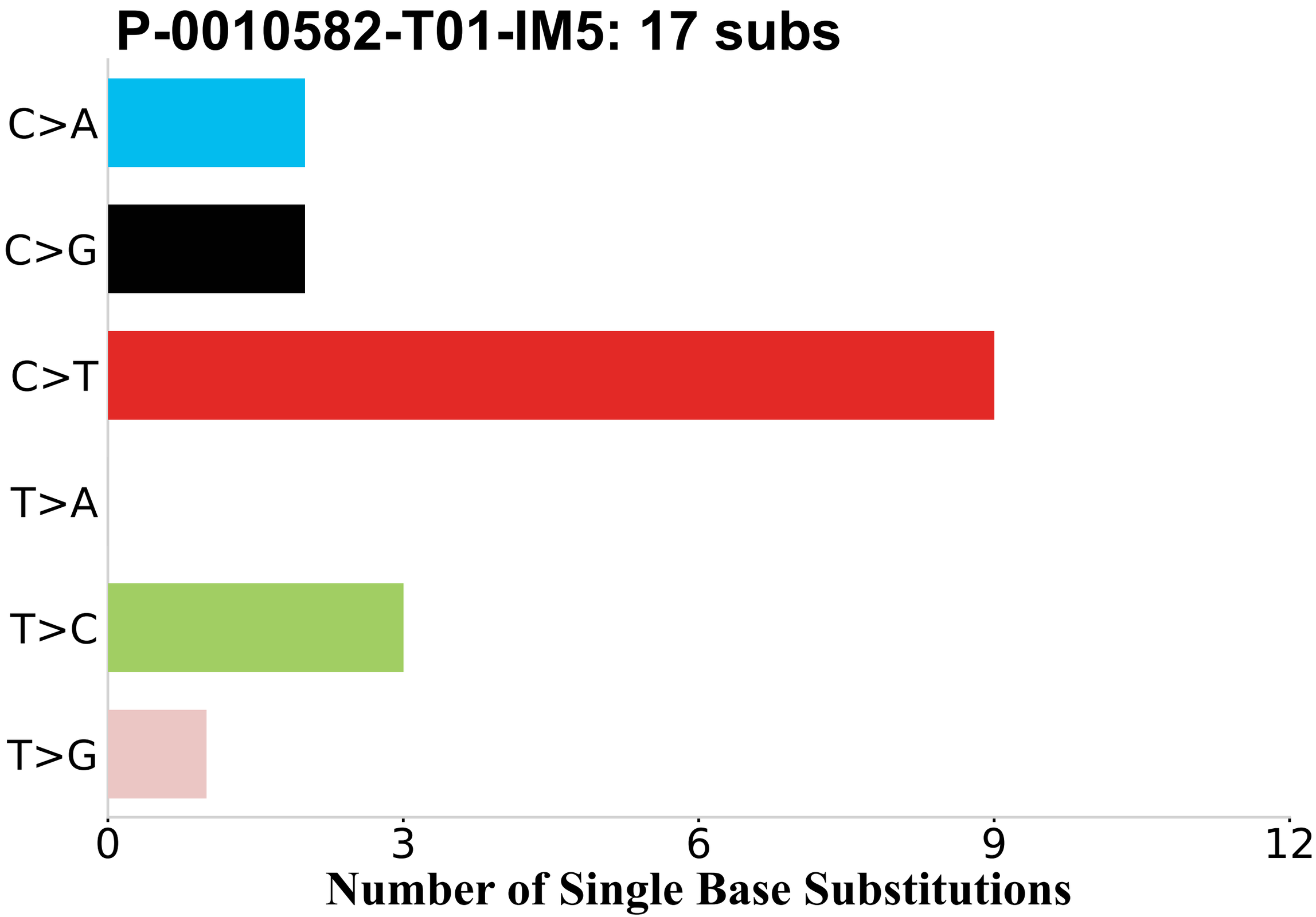
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0010316-T01-IM5: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0010400-T01-IM5: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0010491-T01-IM5: 23 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0010531-T01-IM5: 39 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions


P-0010582-T01-IM5: 17 subs
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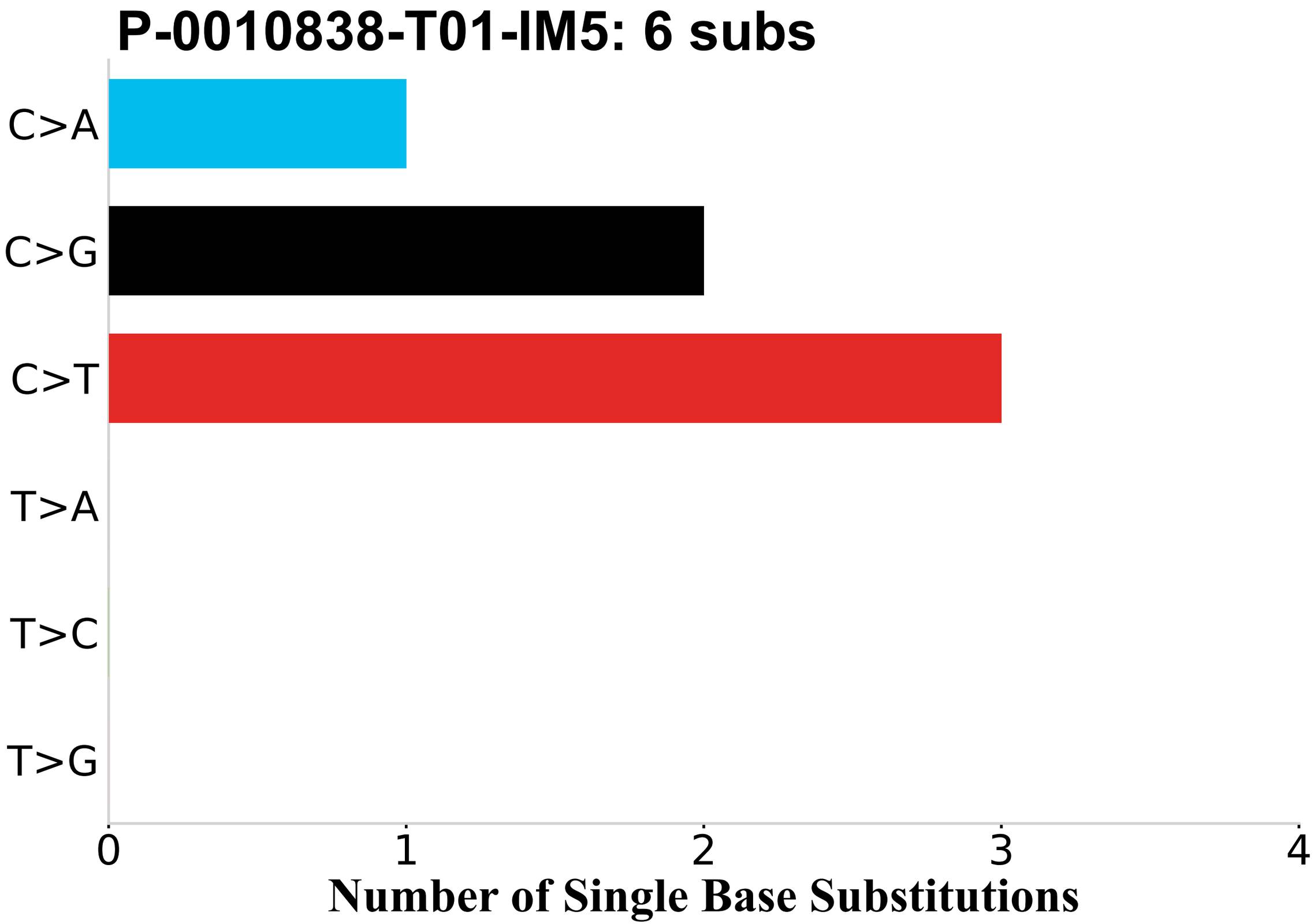
3
6
9
12
Number of Single Base Substitutions


P-0010838-T01-IM5: 6 subs
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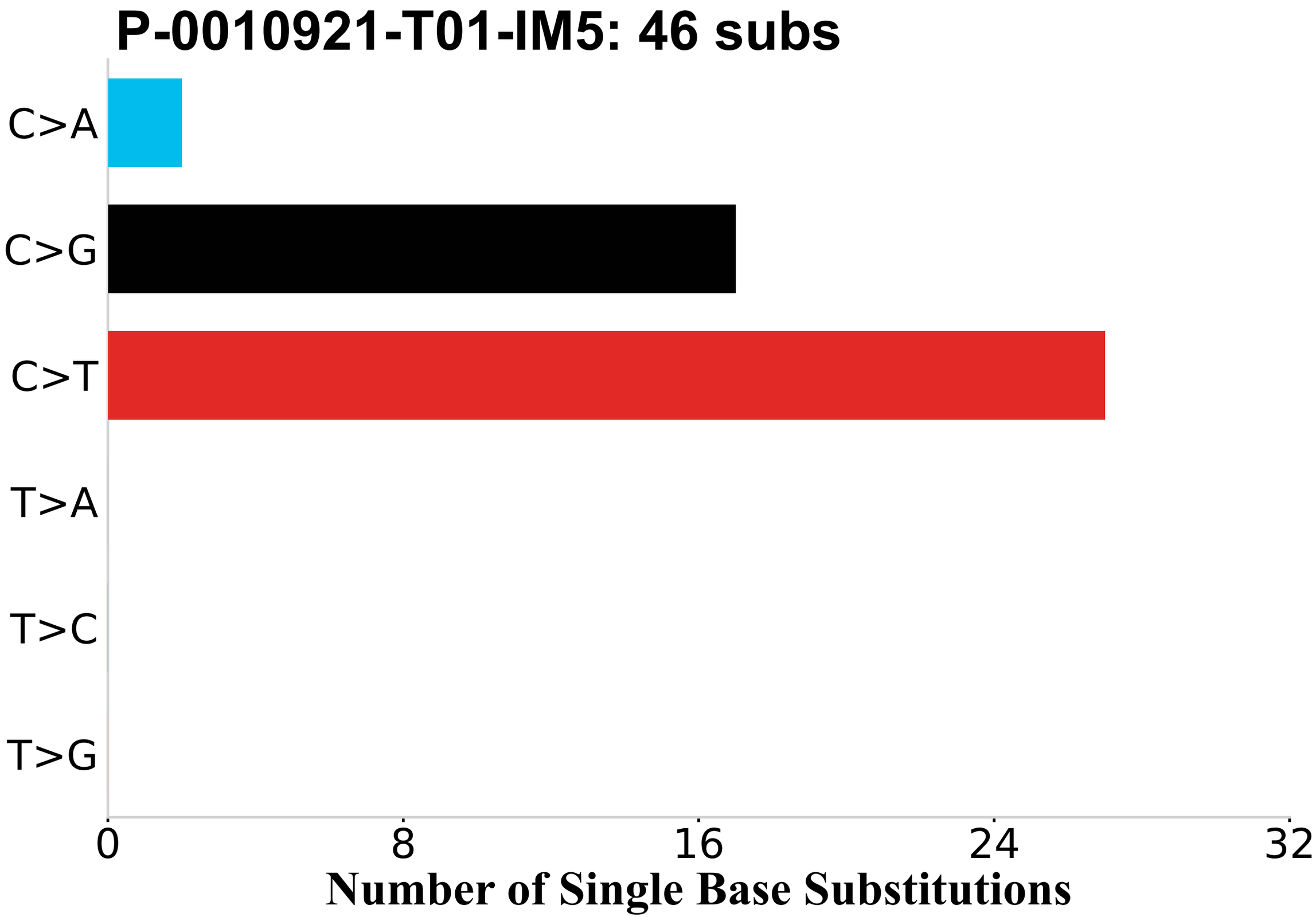
2
3
4
Number of Single Base Substitutions


P-0010921-T01-IM5: 46 subs
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C>T
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T>G
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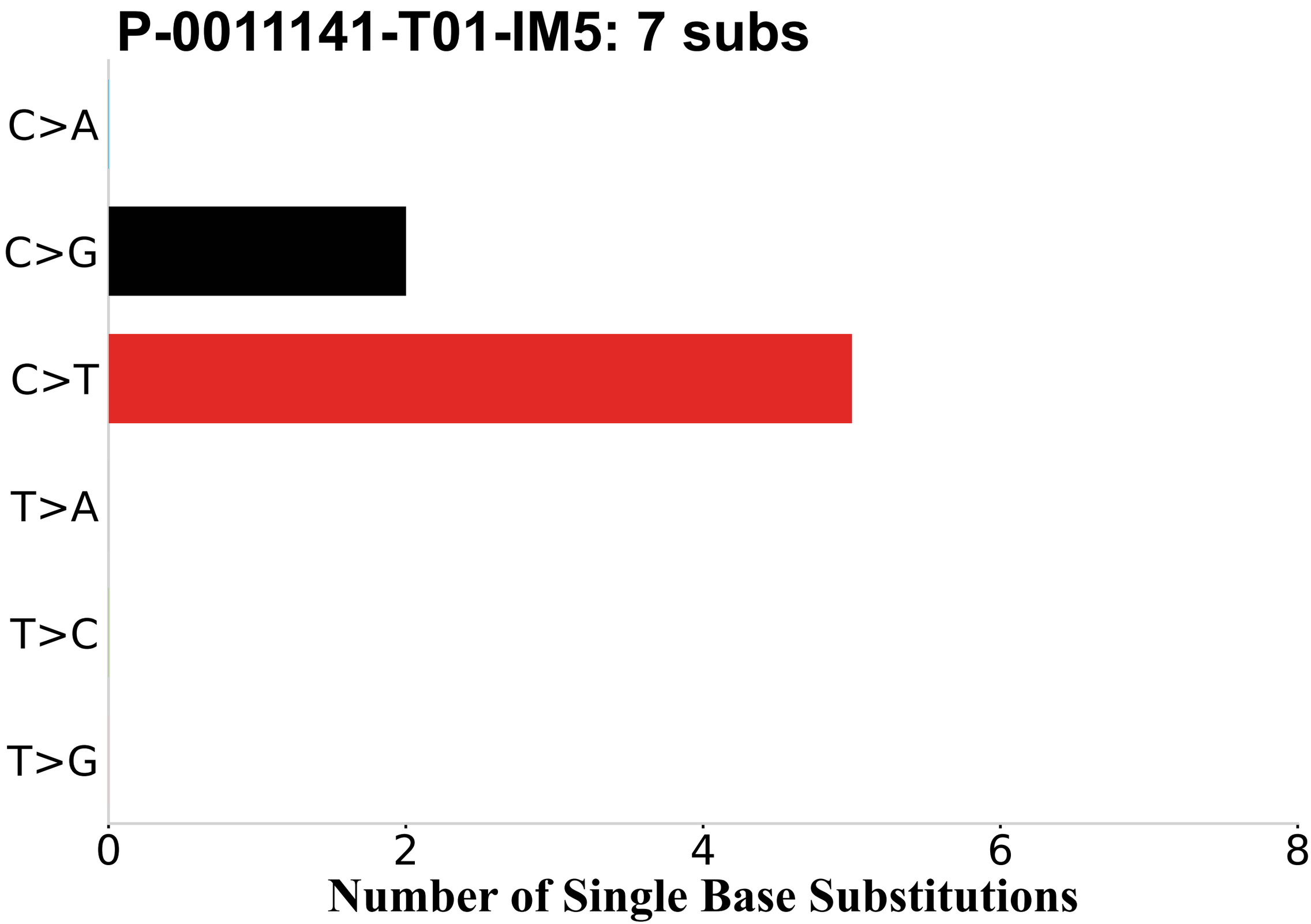
8
16
24
32
Number of Single Base Substitutions


P-0011141-T01-IM5: 7 subs
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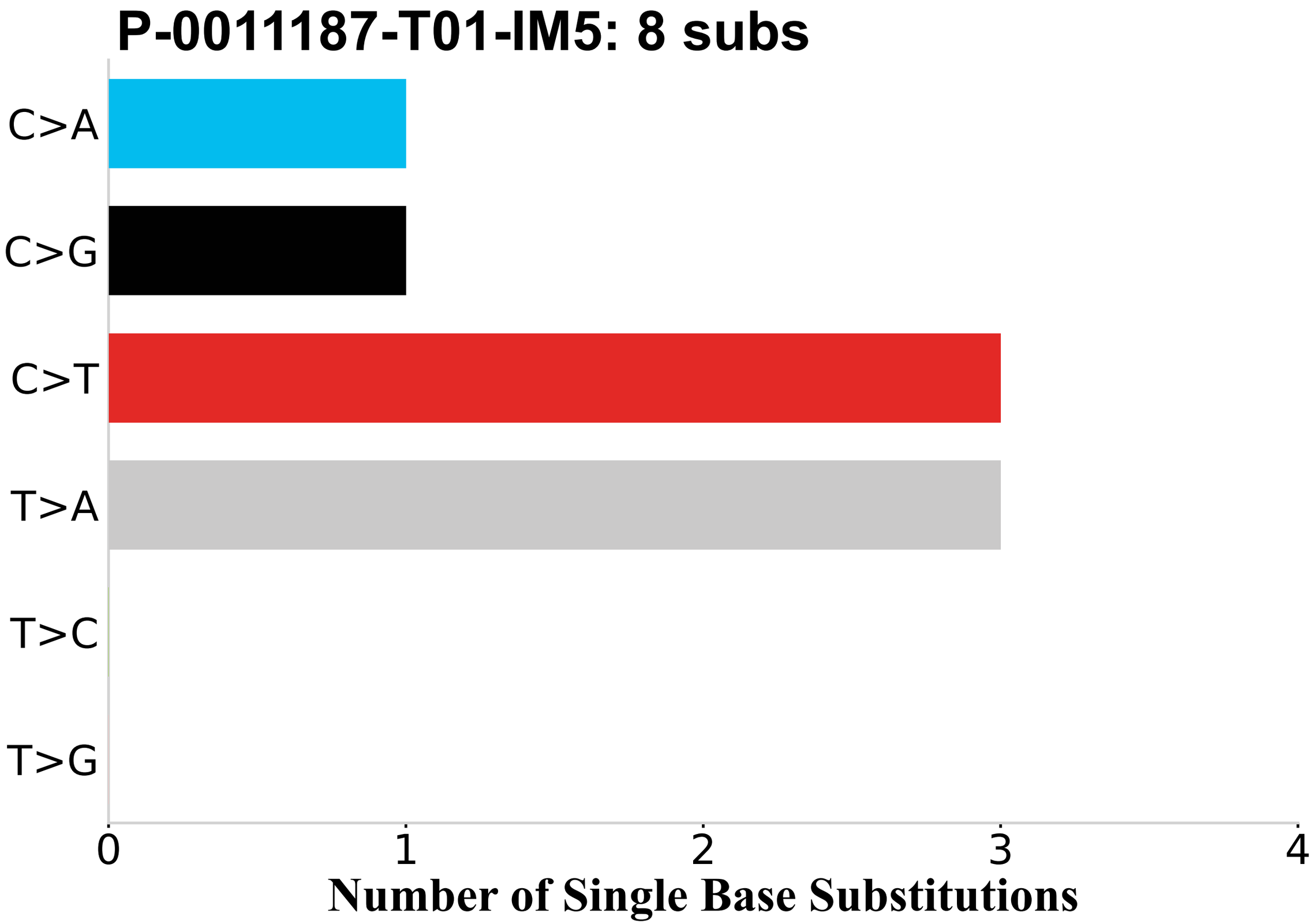
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0011187-T01-IM5: 8 subs
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C>G
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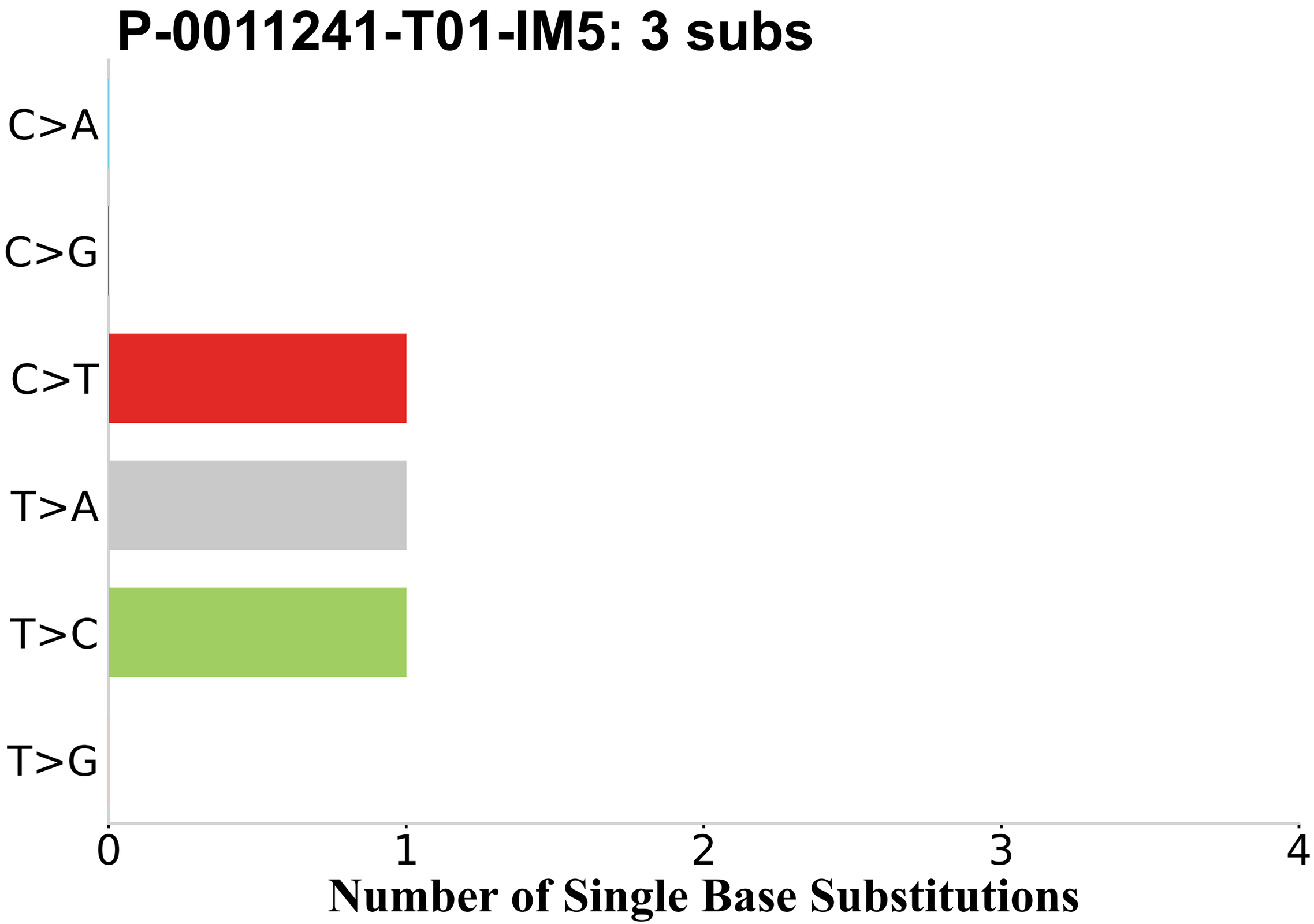
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0011241-T01-IM5: 3 subs
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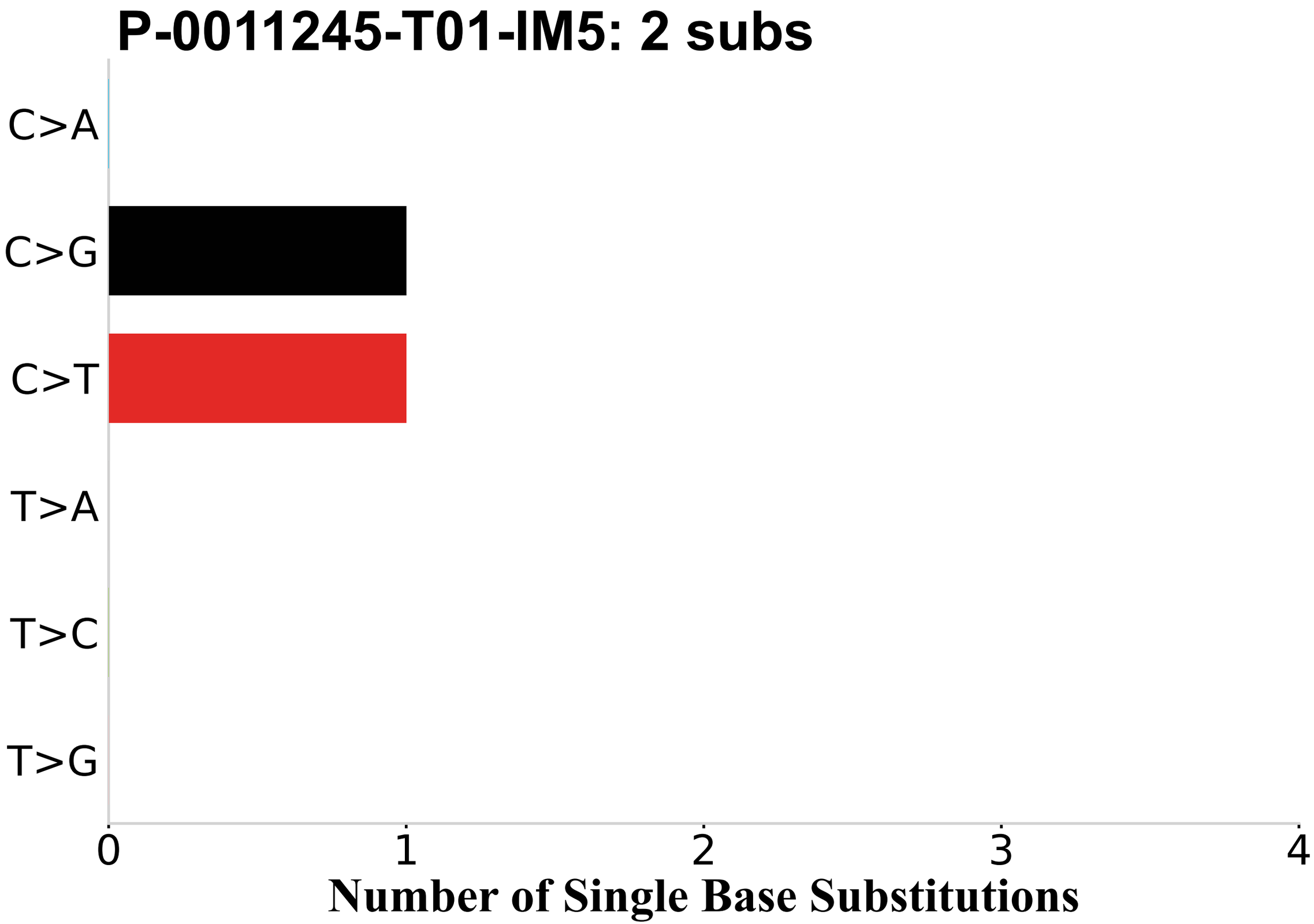
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0011245-T01-IM5: 2 subs
C>A
C>G
C>T
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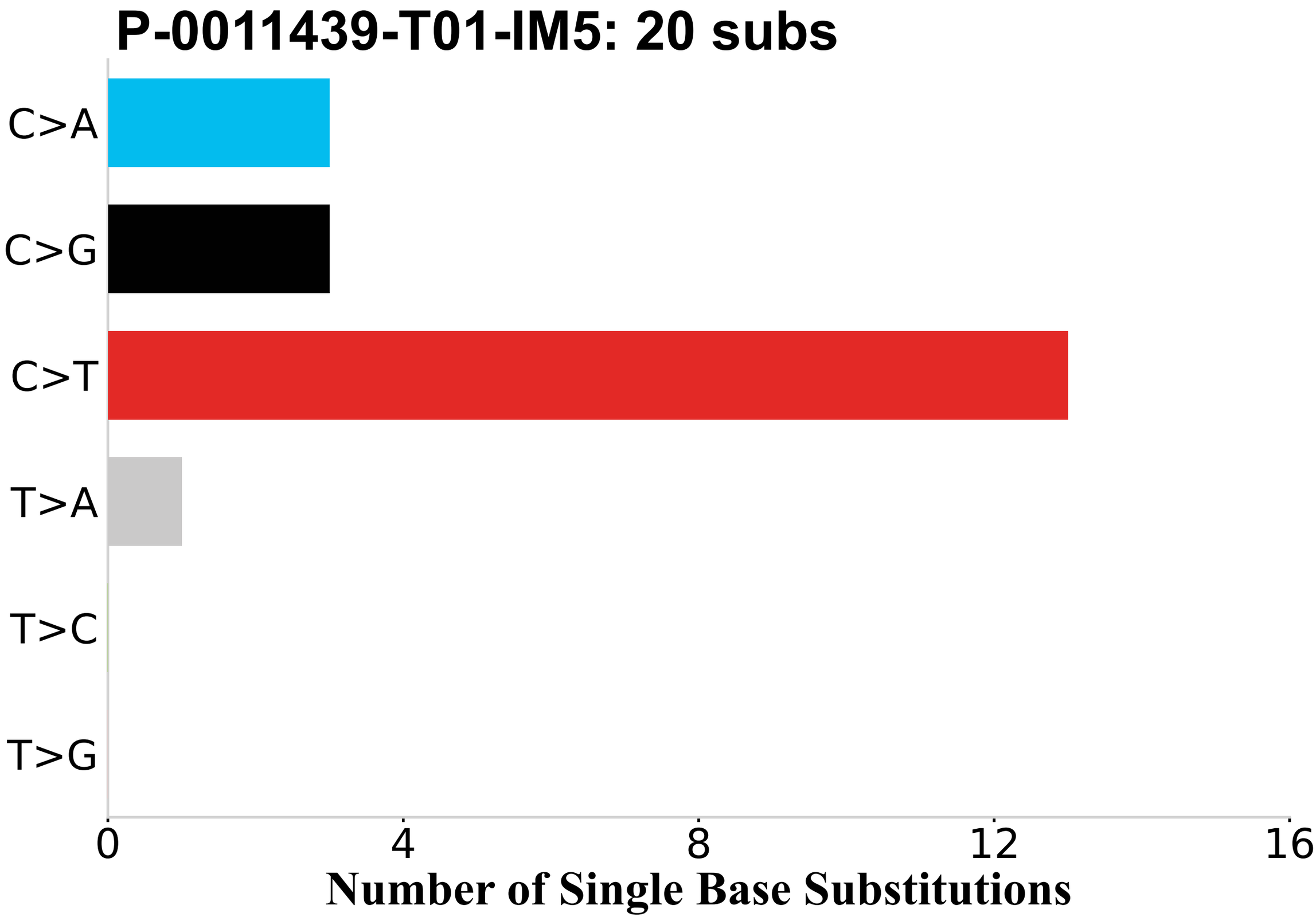
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0011439-T01-IM5: 20 subs
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C>T
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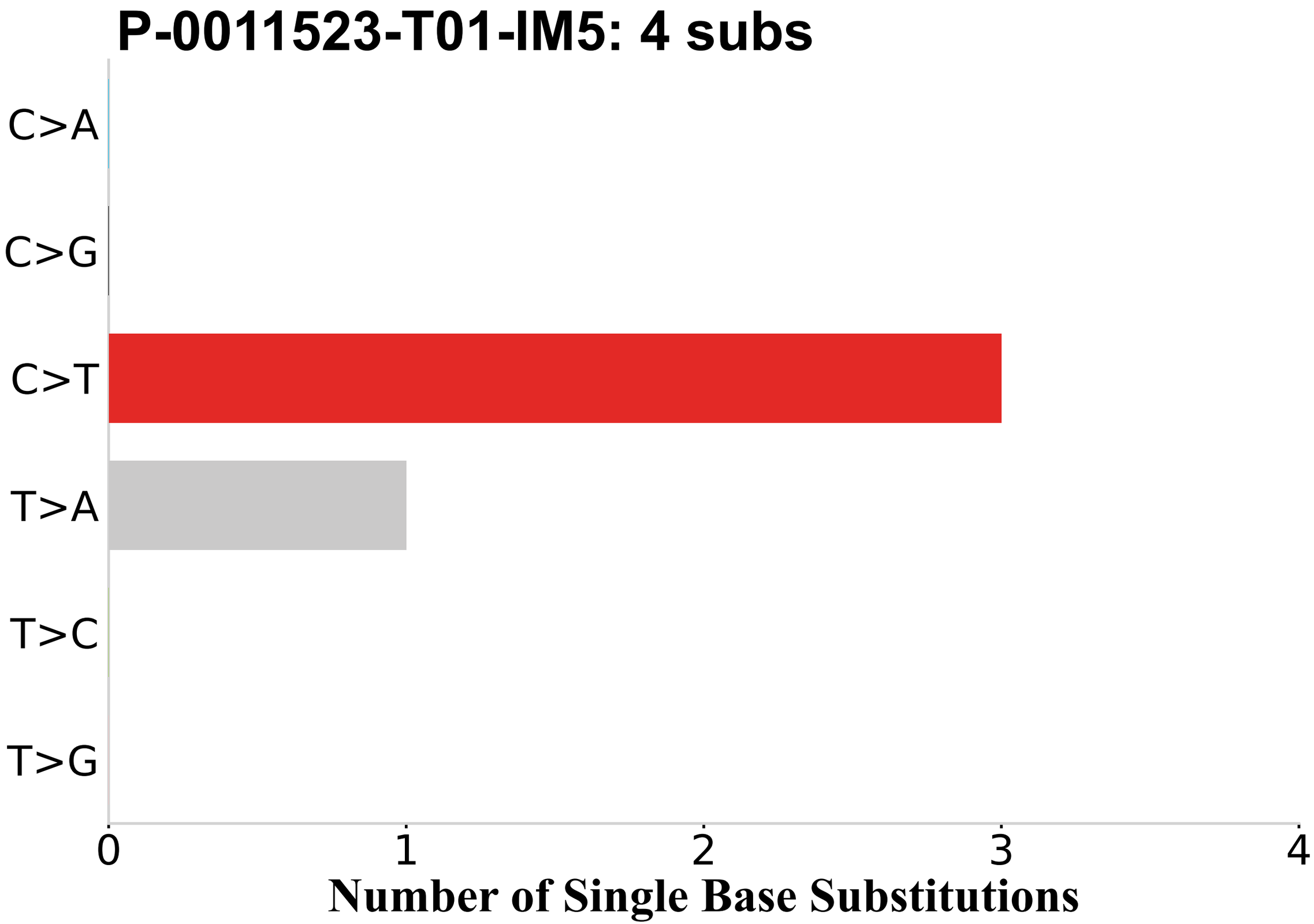
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0011523-T01-IM5: 4 subs
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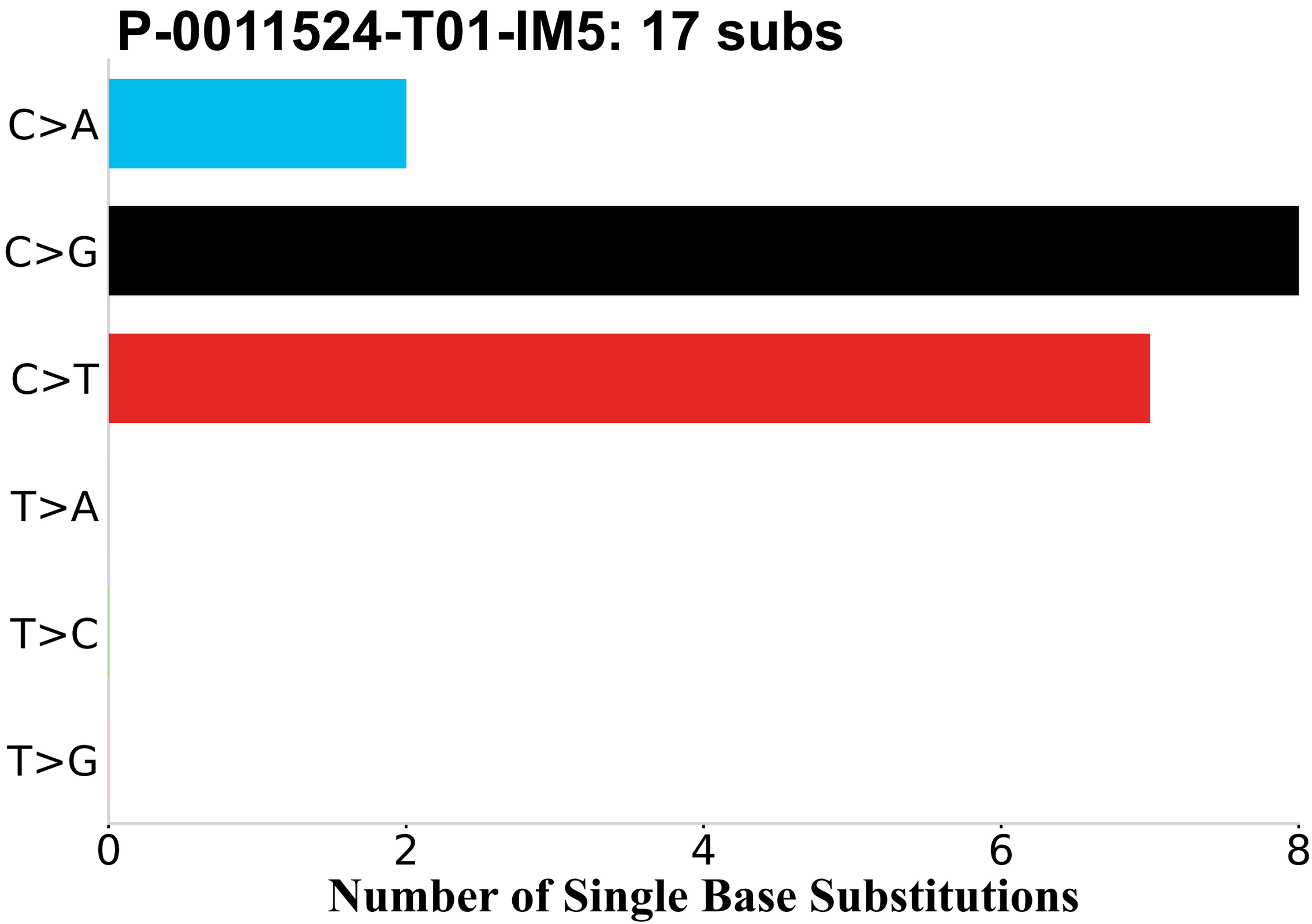
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0011524-T01-IM5: 17 subs
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C>T
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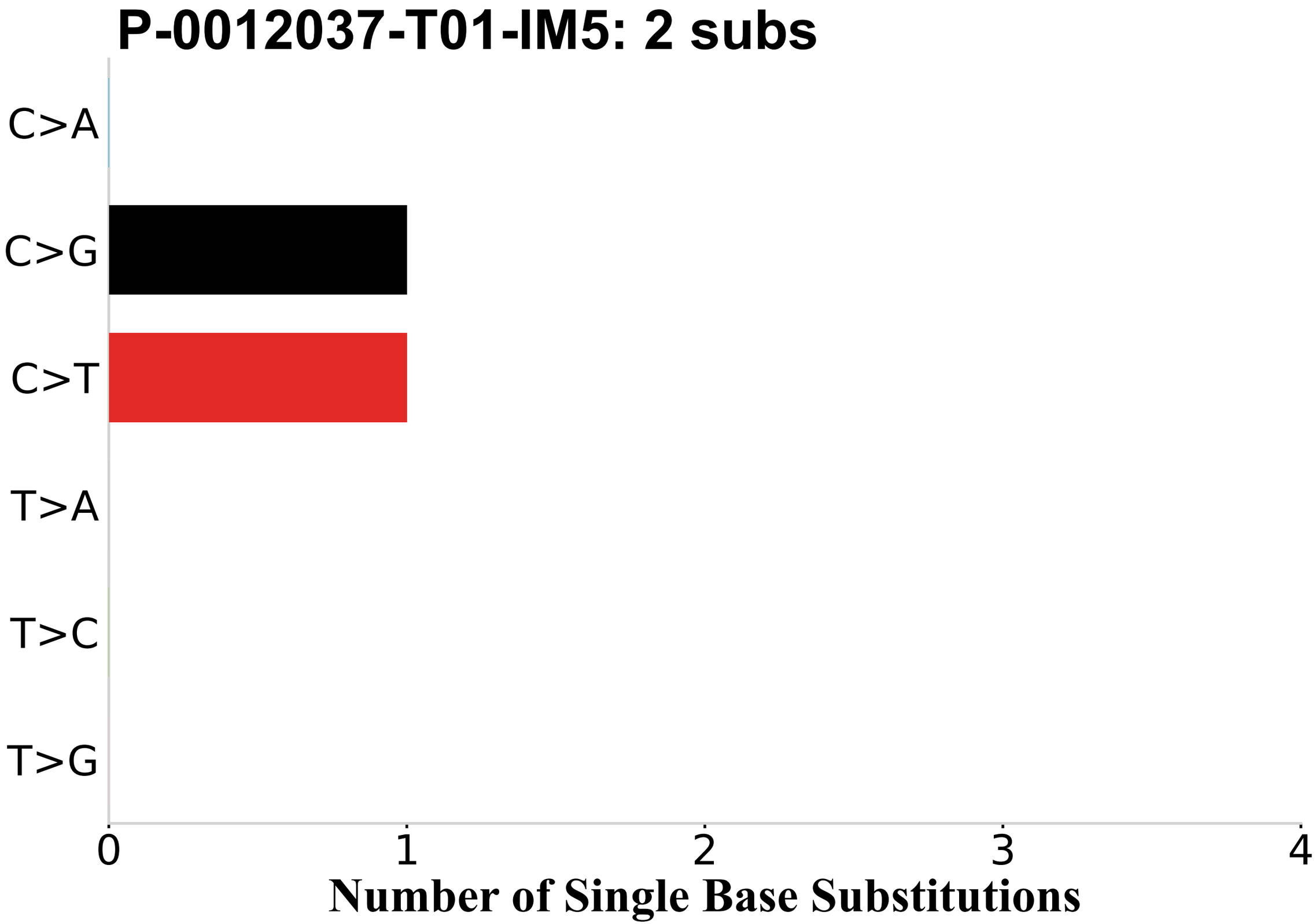
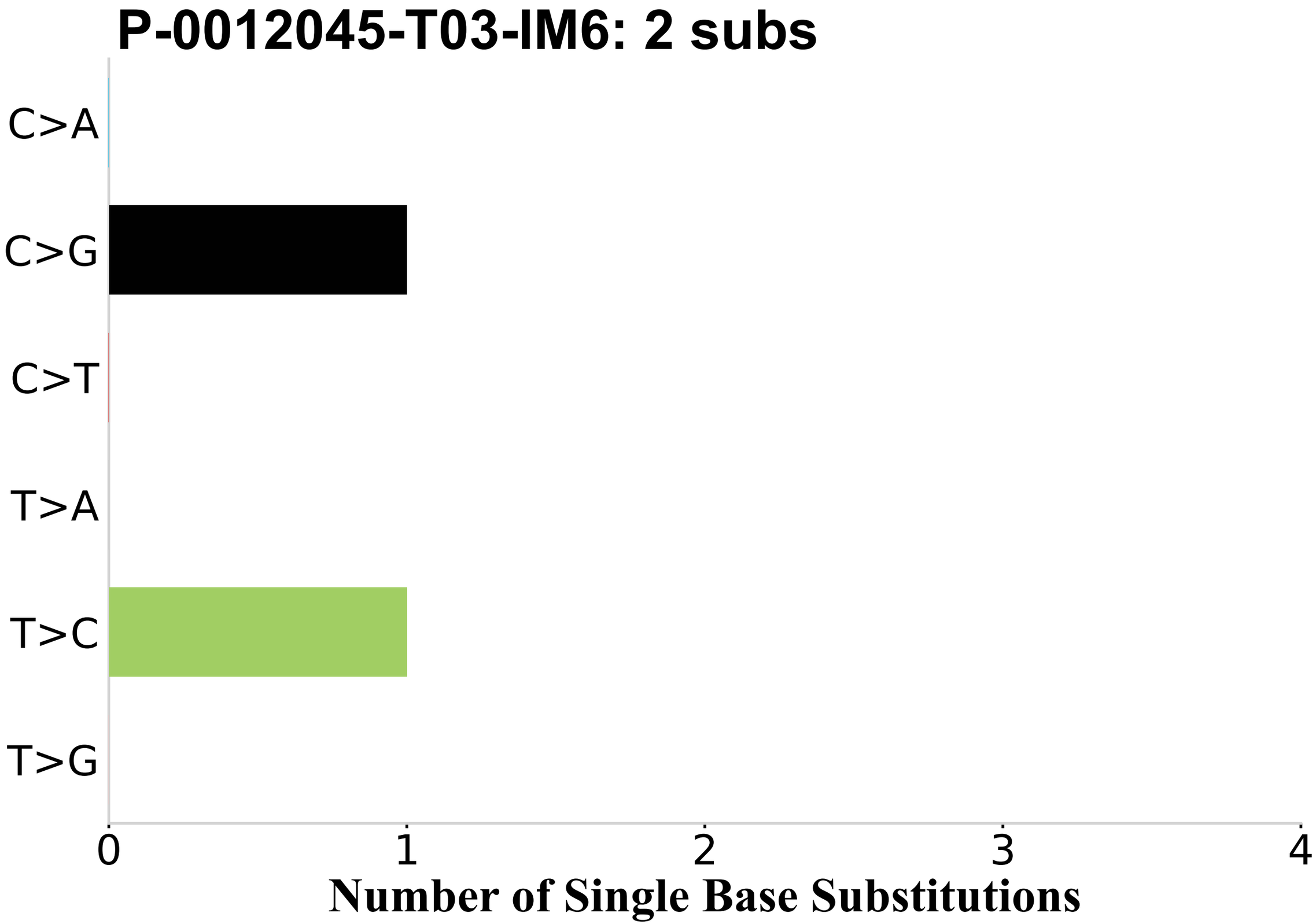
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0012037-T01-IM5: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0012045-T03-IM6: 2 subs
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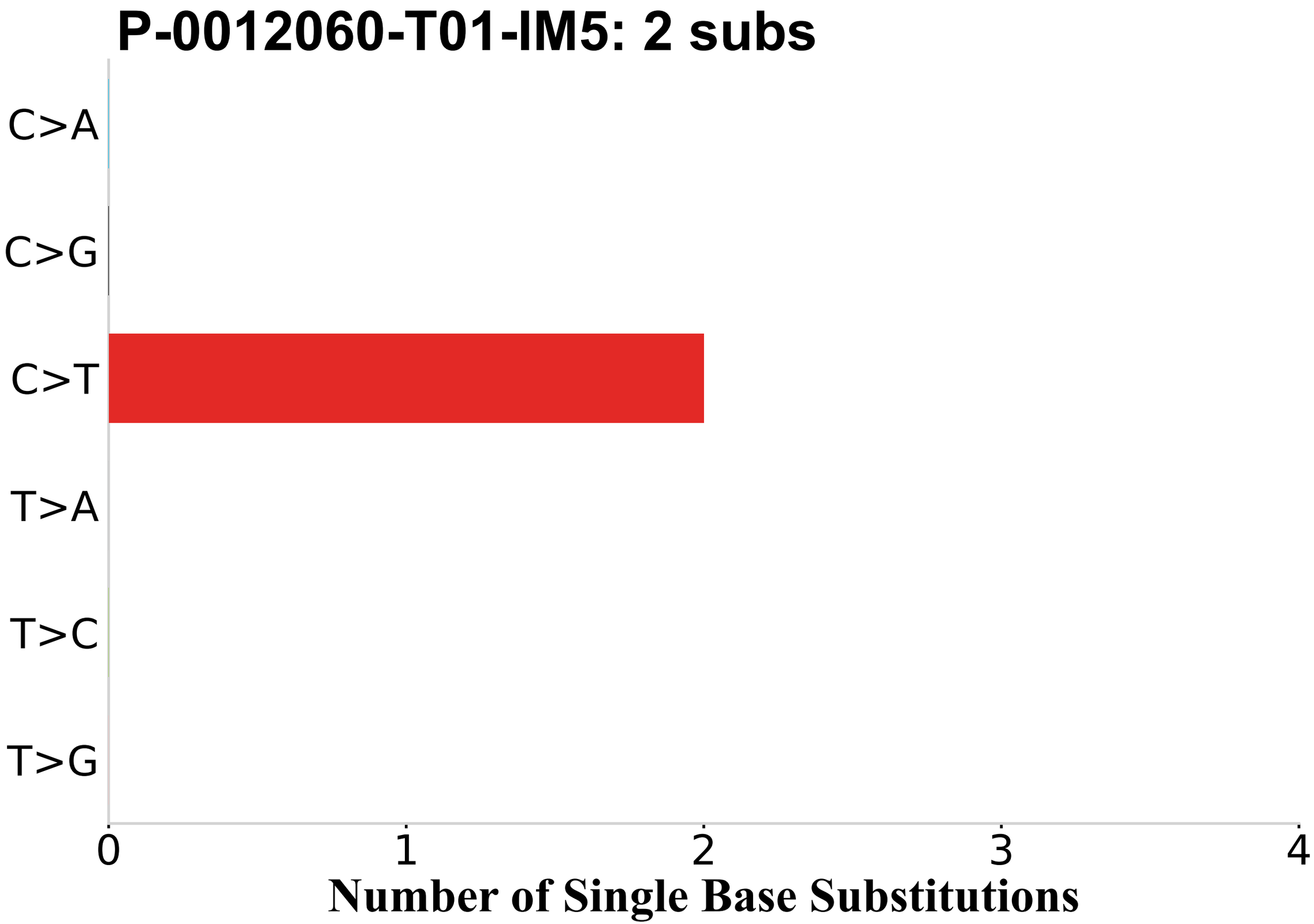
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0012060-T01-IM5: 2 subs
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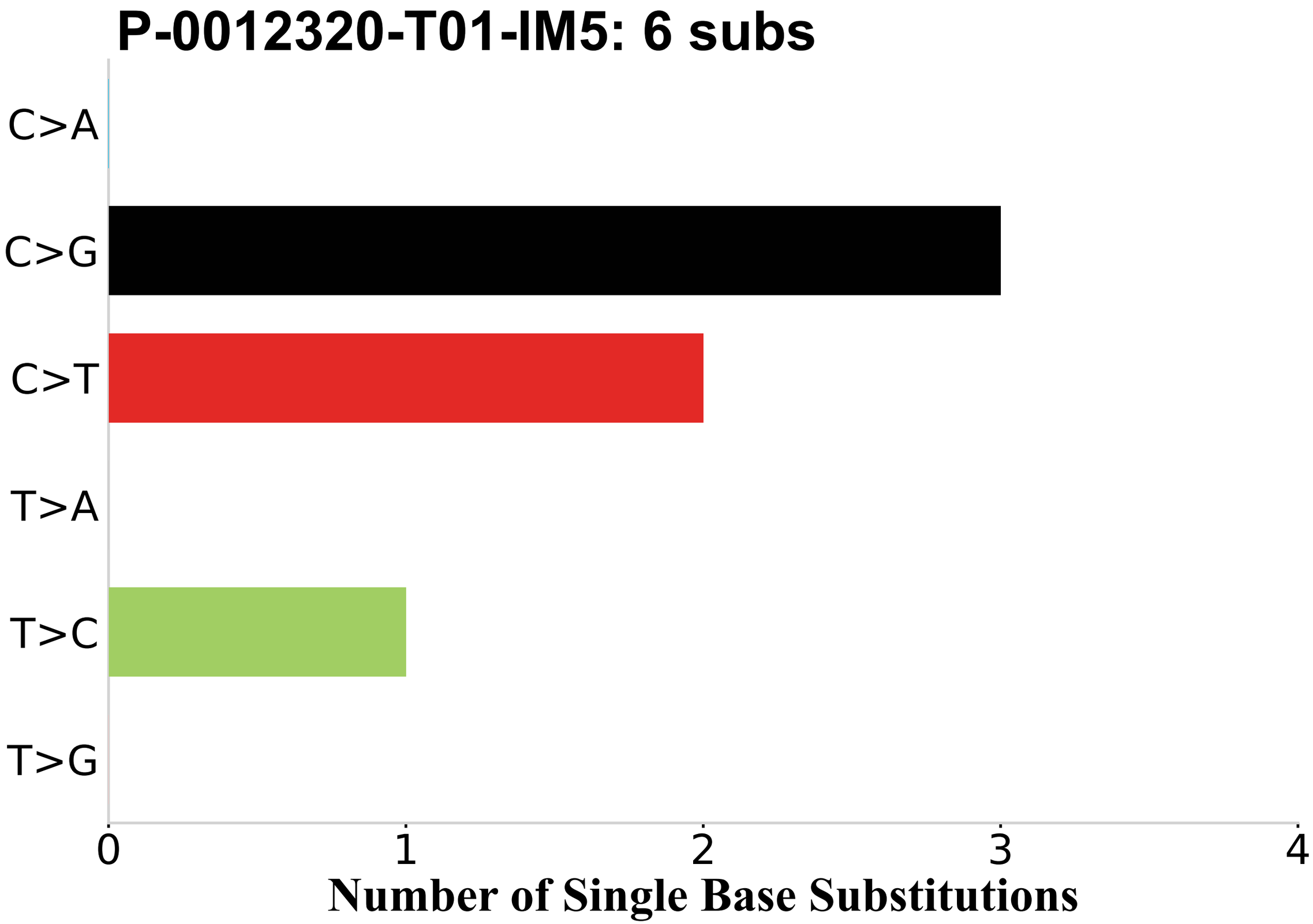
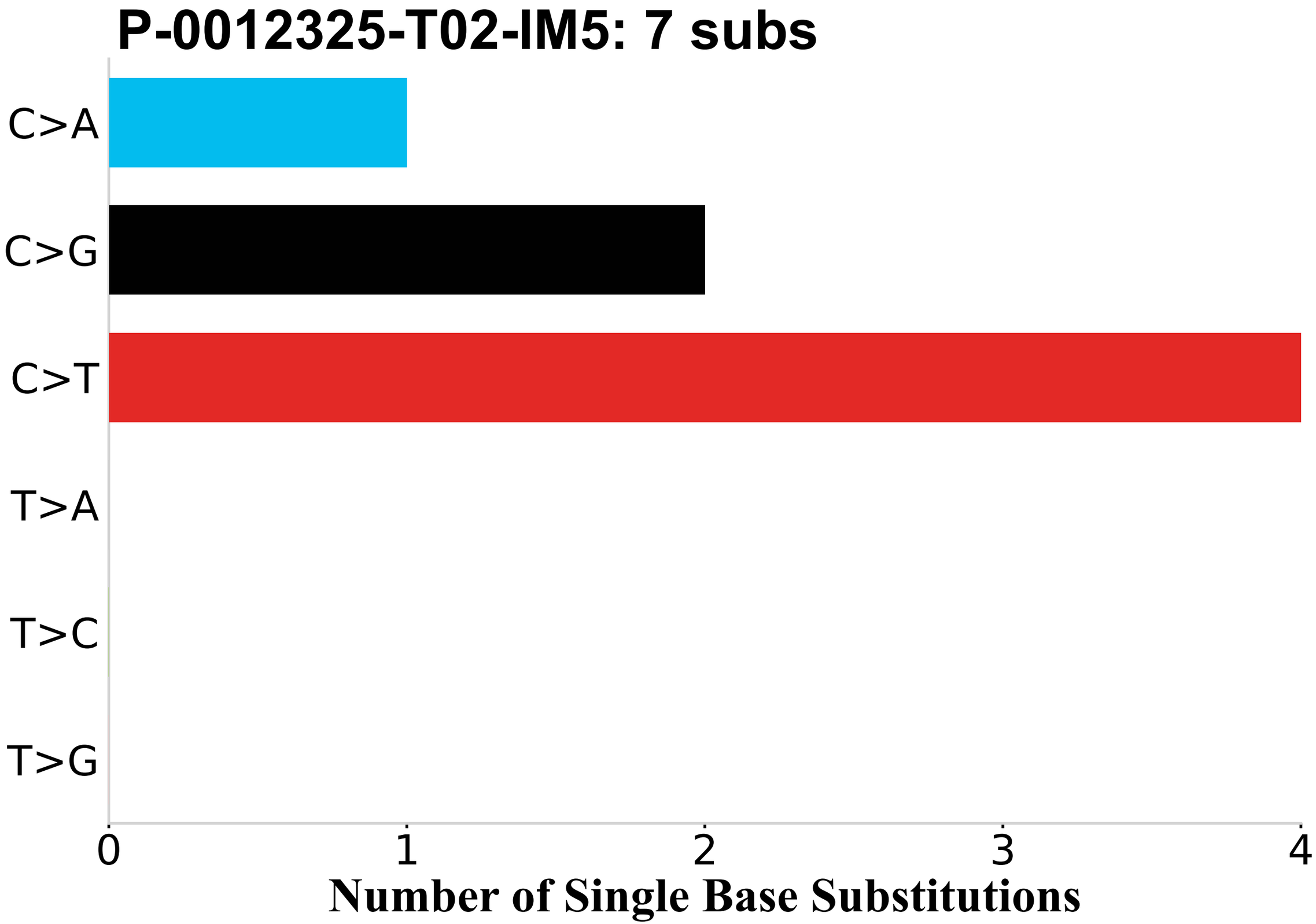
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0012320-T01-IM5: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0012325-T02-IM5: 7 subs
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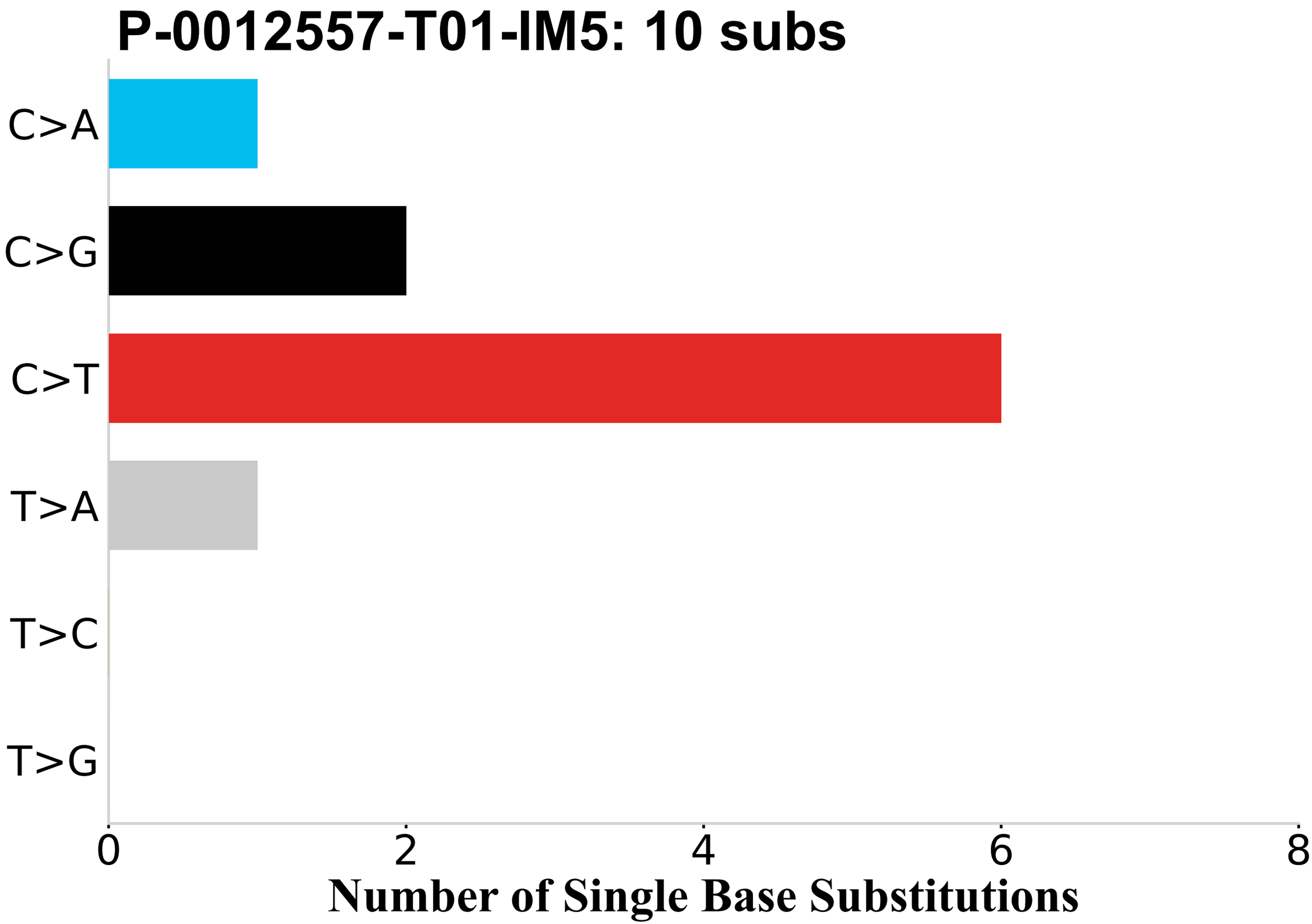
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0012557-T01-IM5: 10 subs
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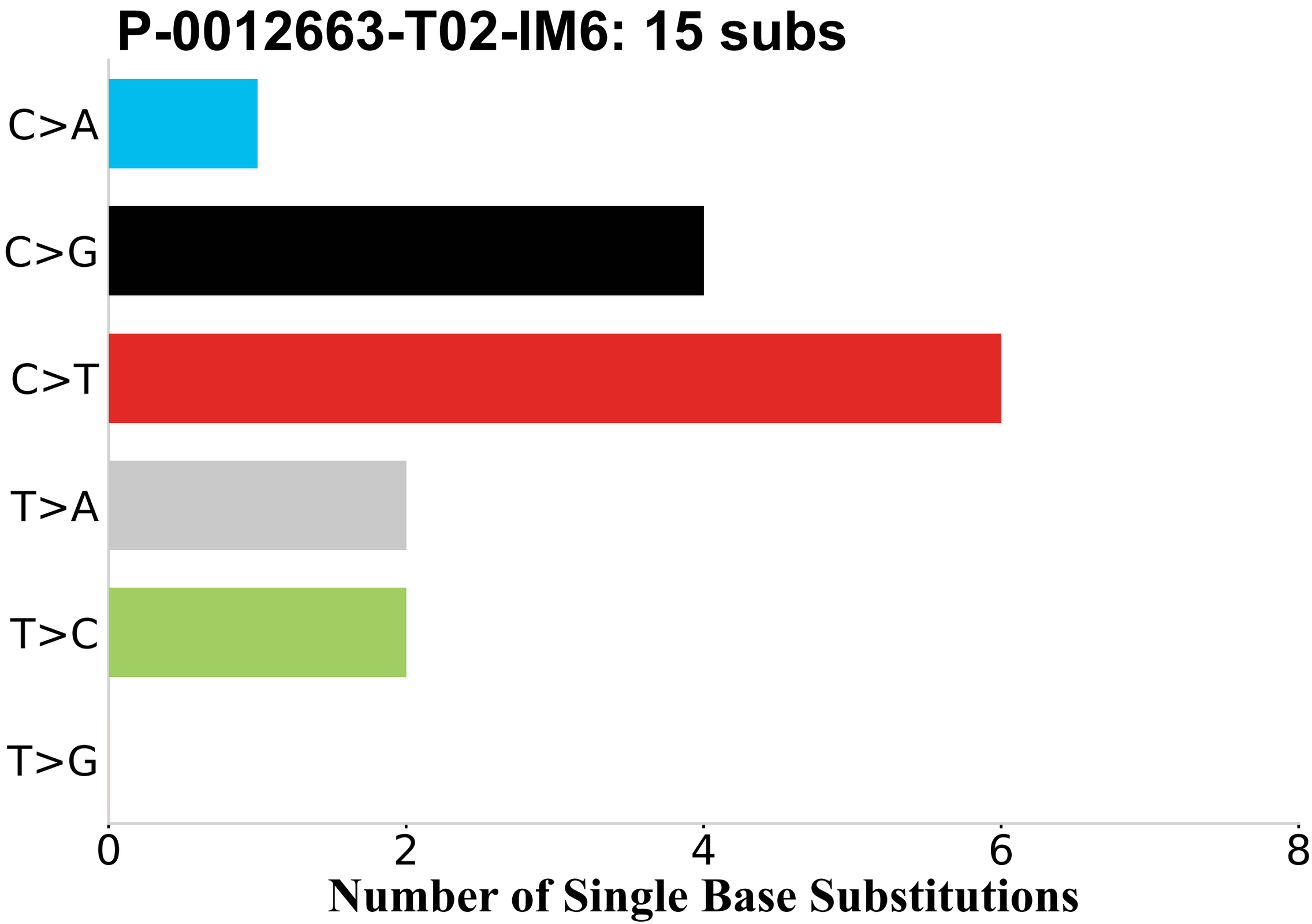
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0012663-T02-IM6: 15 subs
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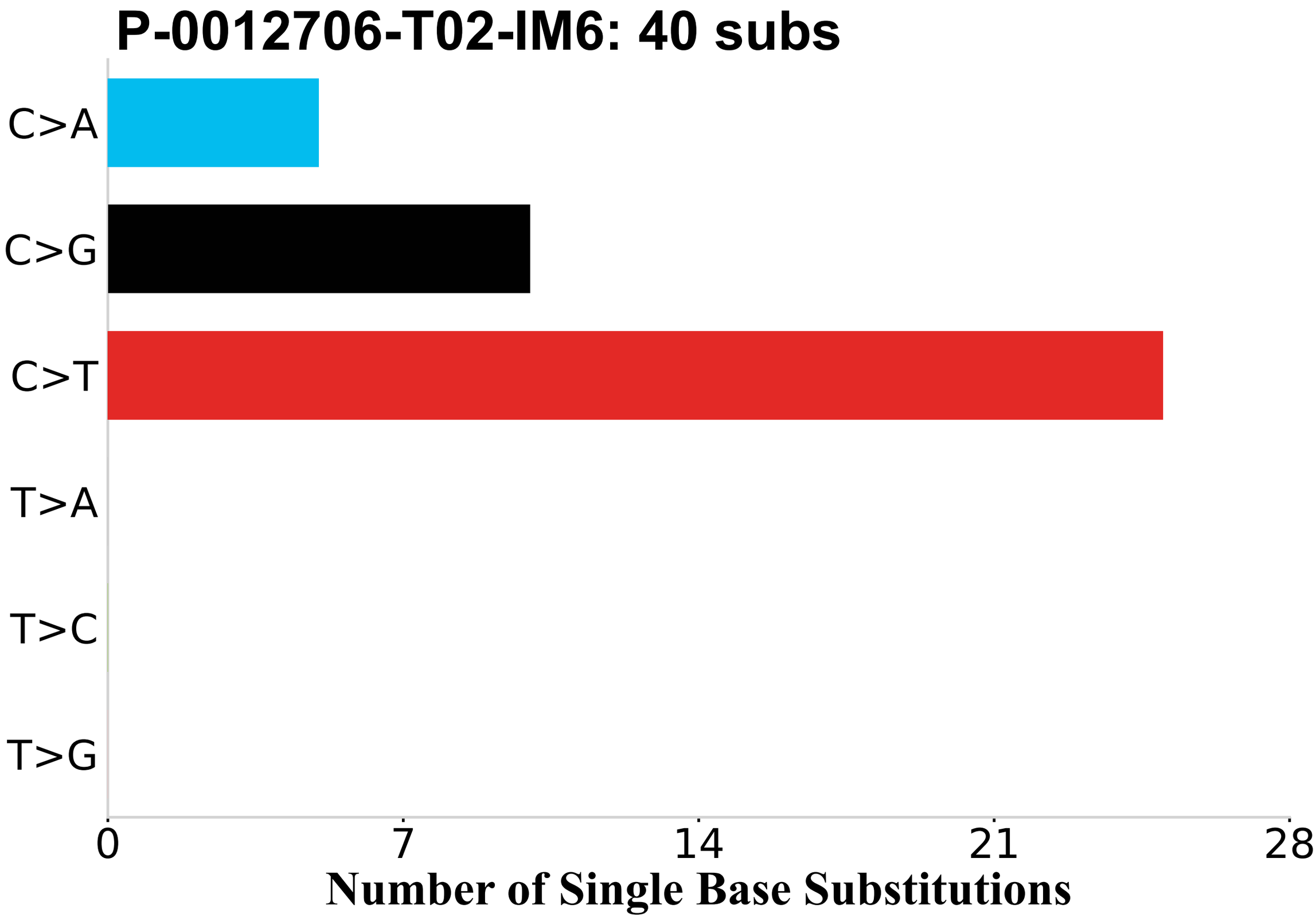
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0012706-T02-IM6: 40 subs
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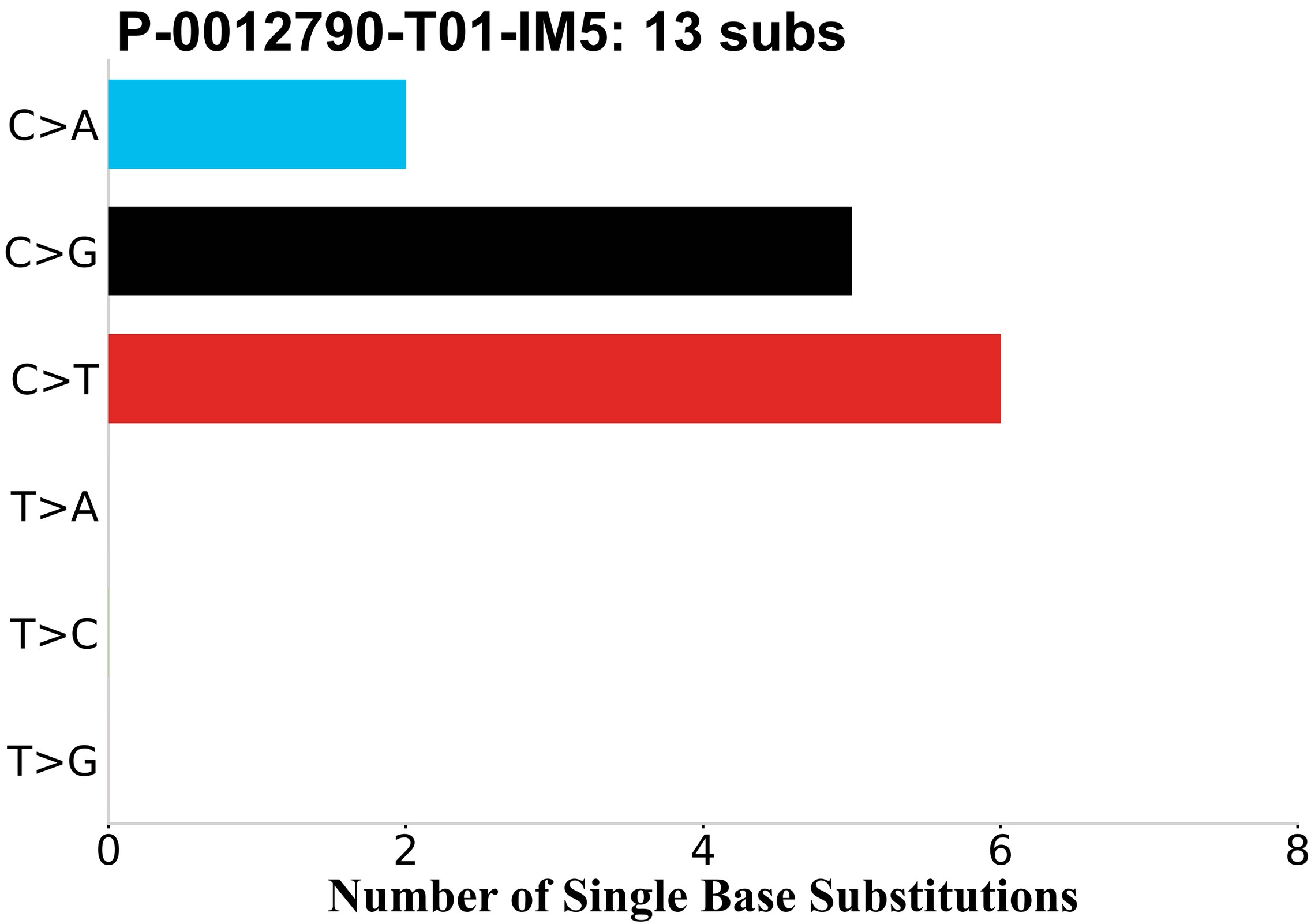
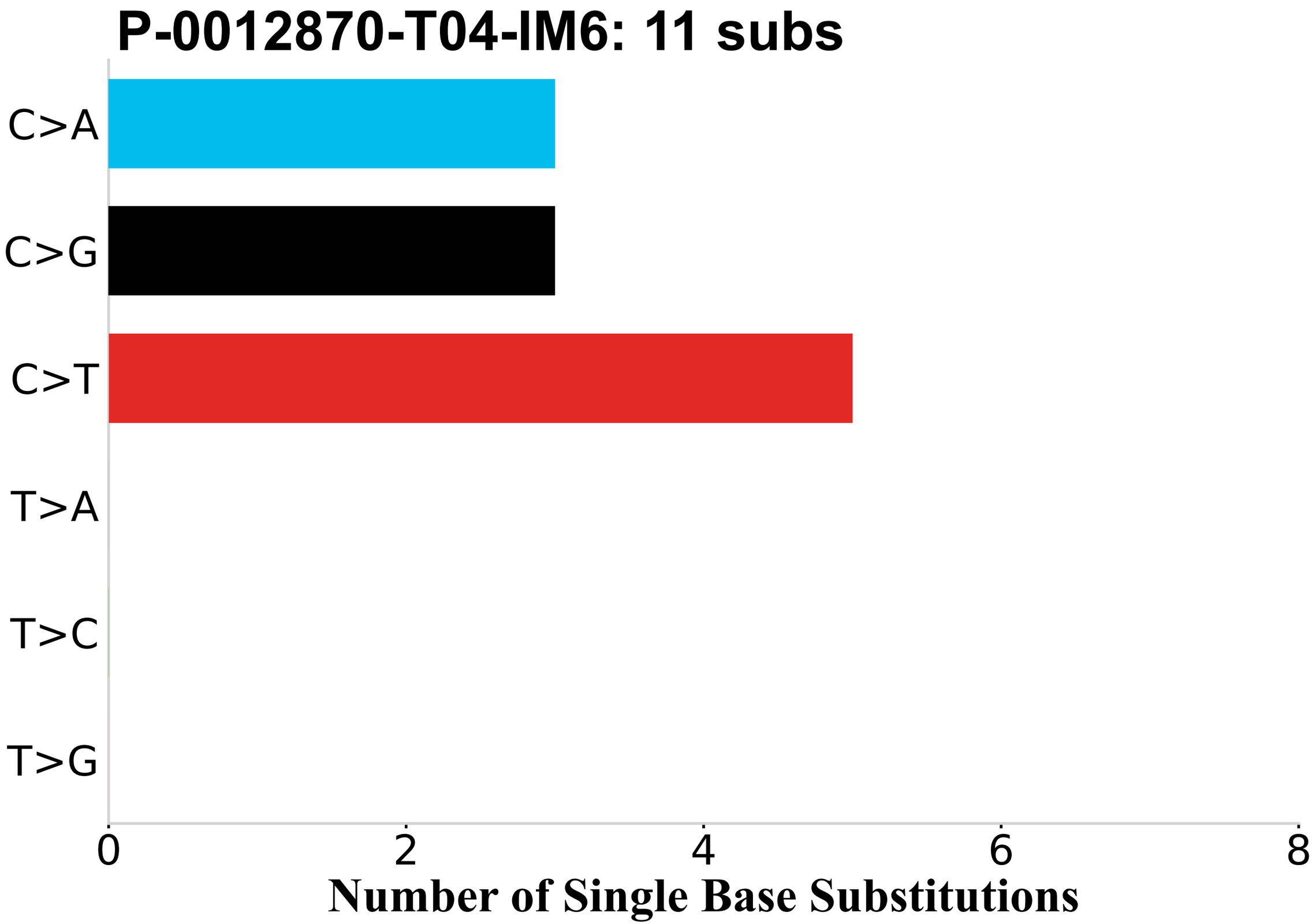
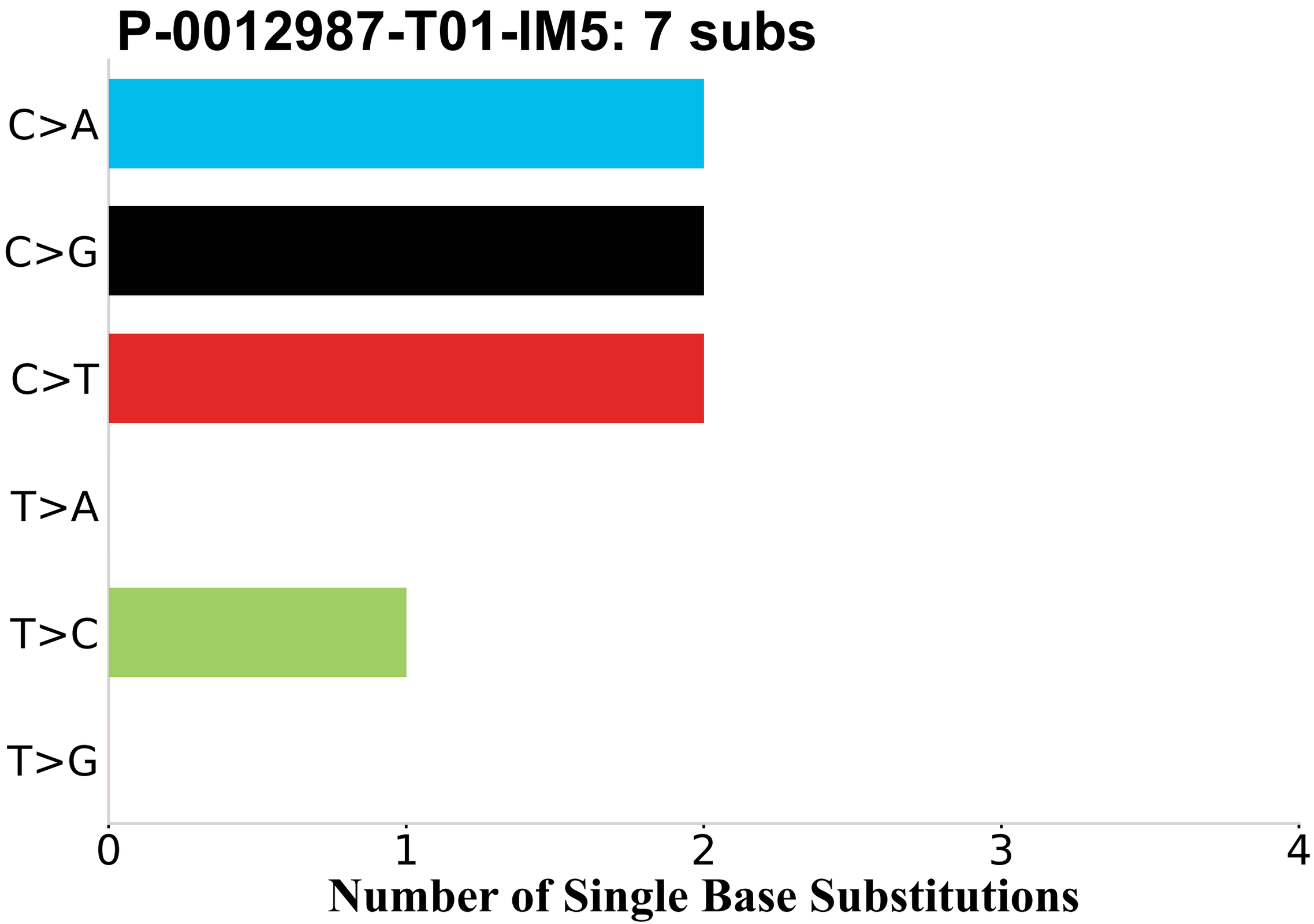
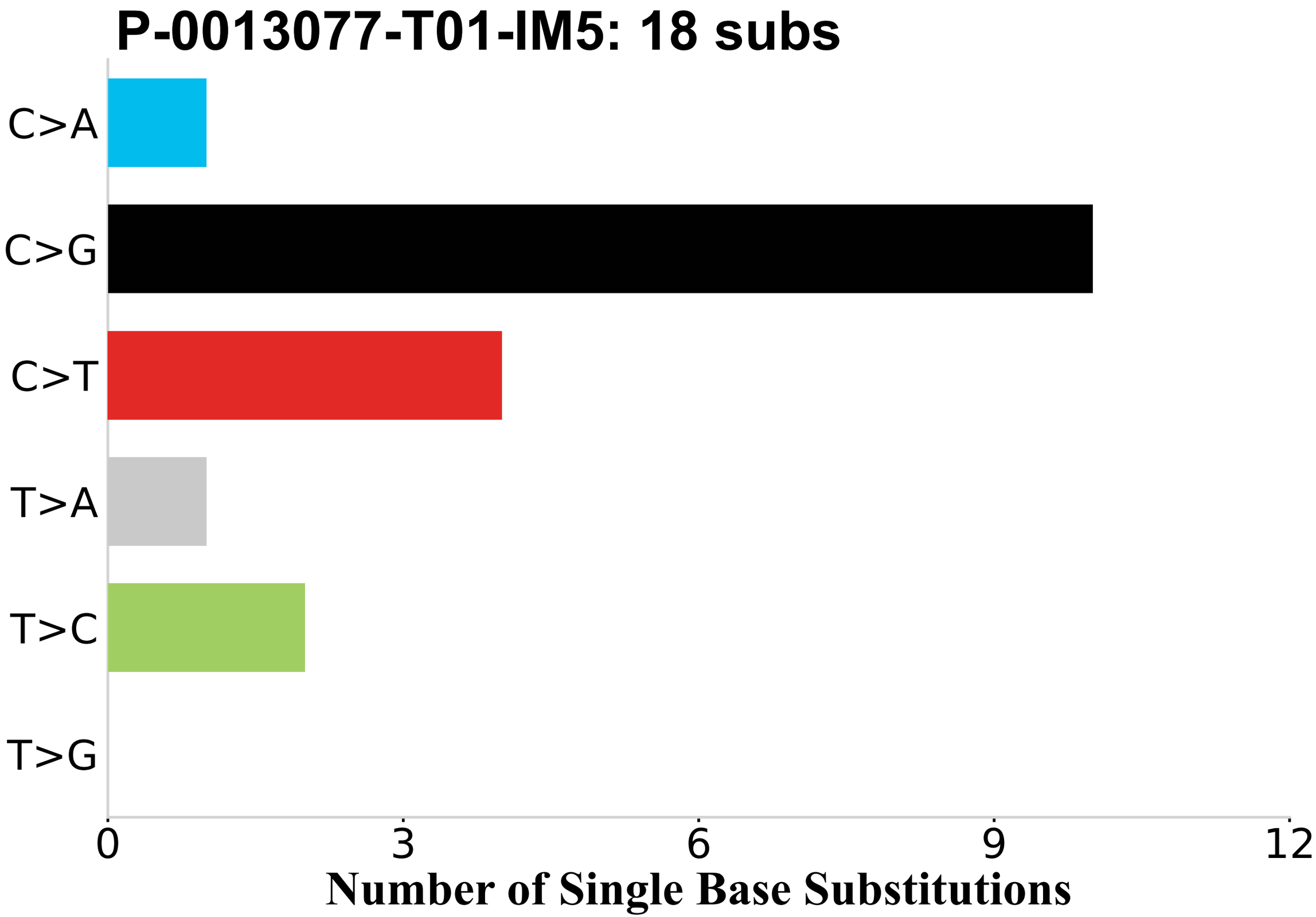
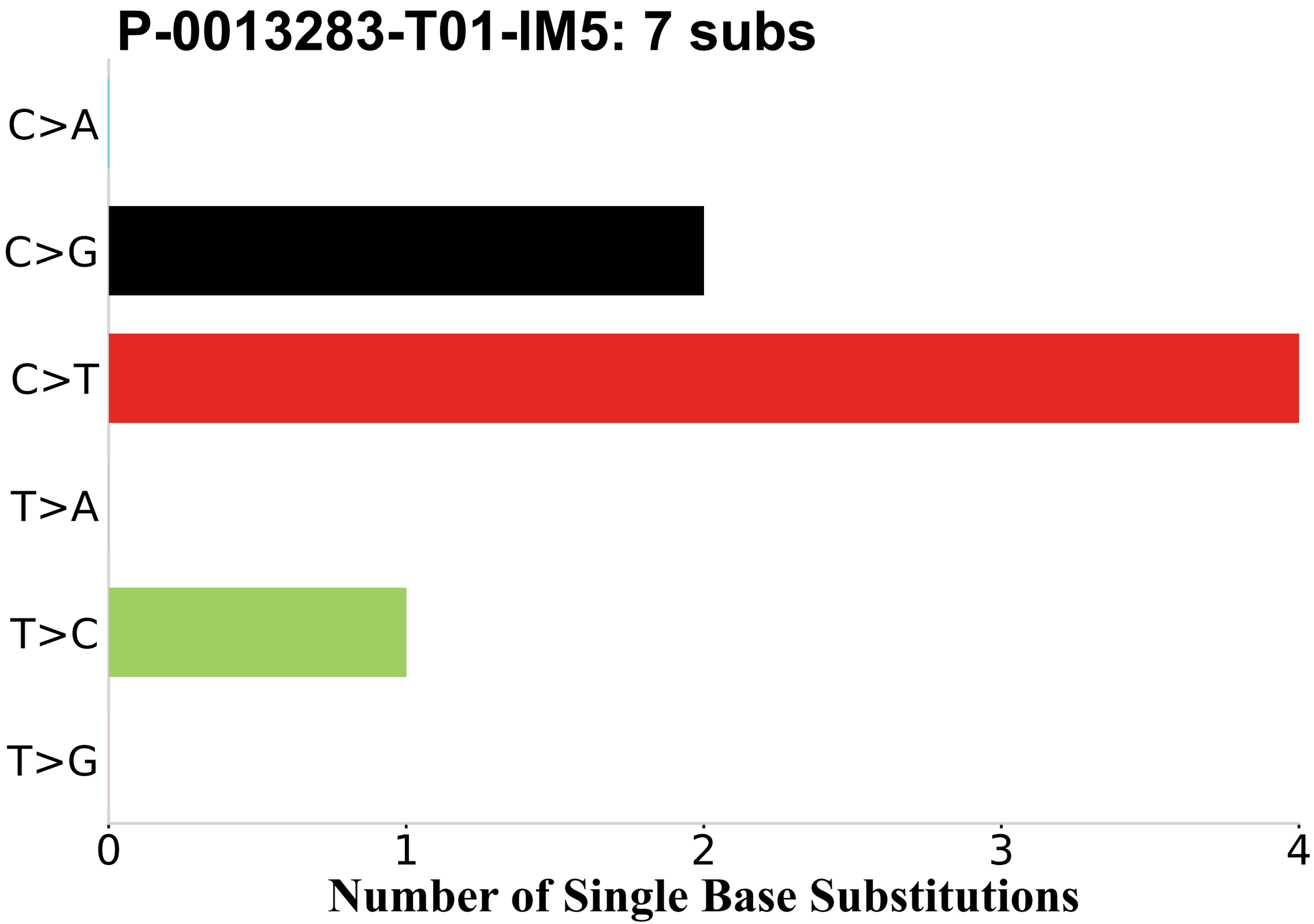
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0012790-T01-IM5: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0012870-T04-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0012987-T01-IM5: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0013077-T01-IM5: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0013283-T01-IM5: 7 subs
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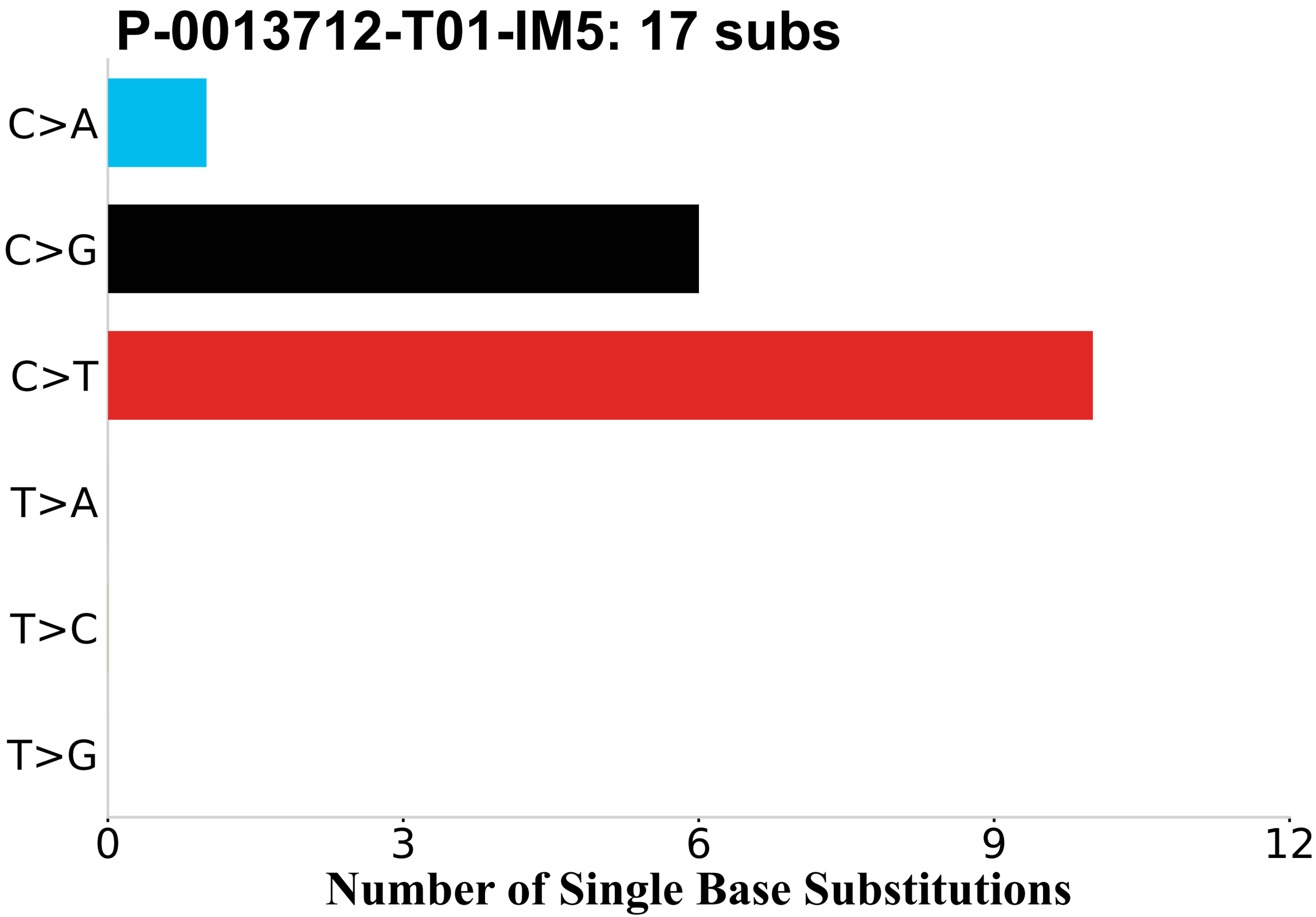
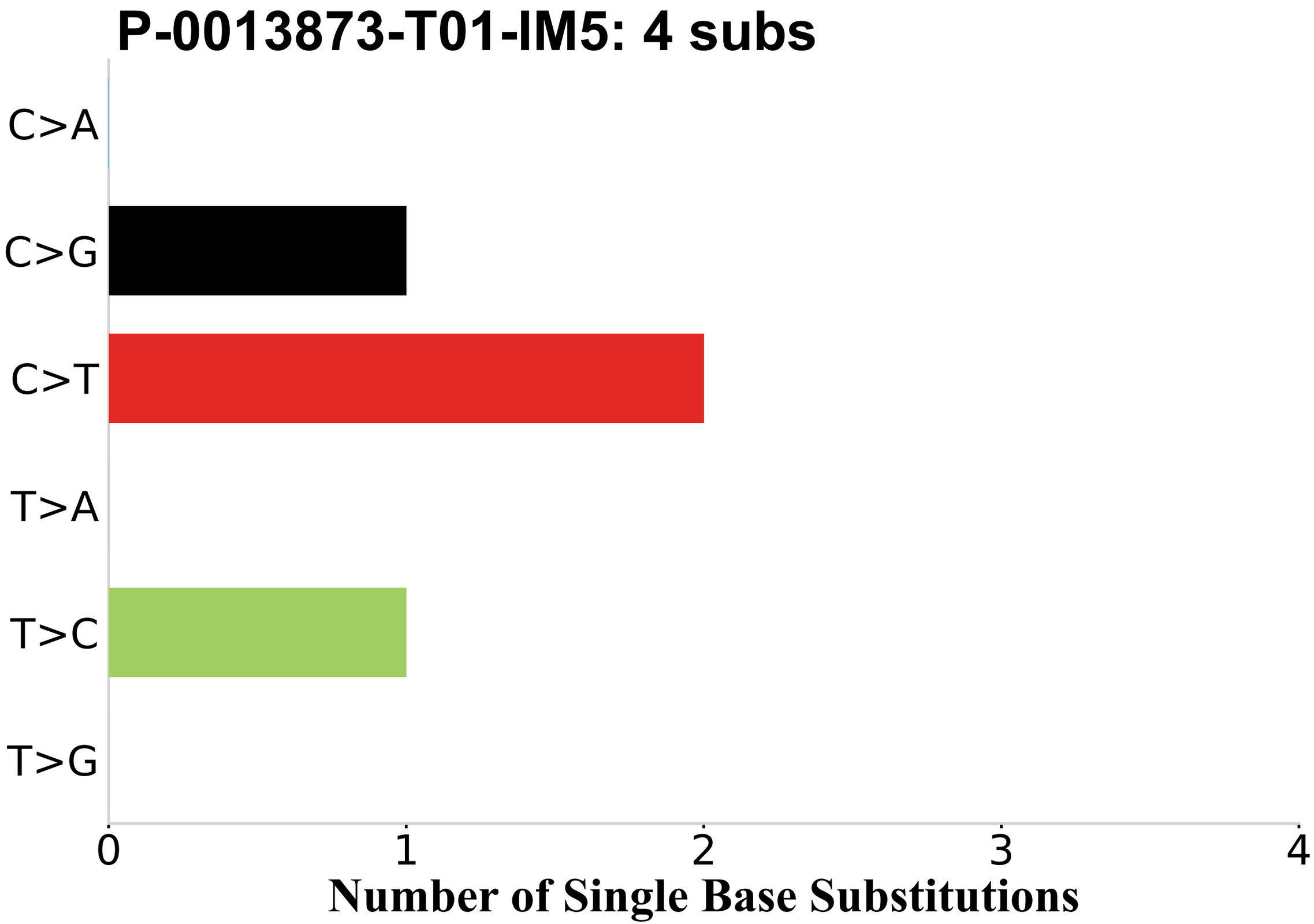
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0013712-T01-IM5: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0013873-T01-IM5: 4 subs
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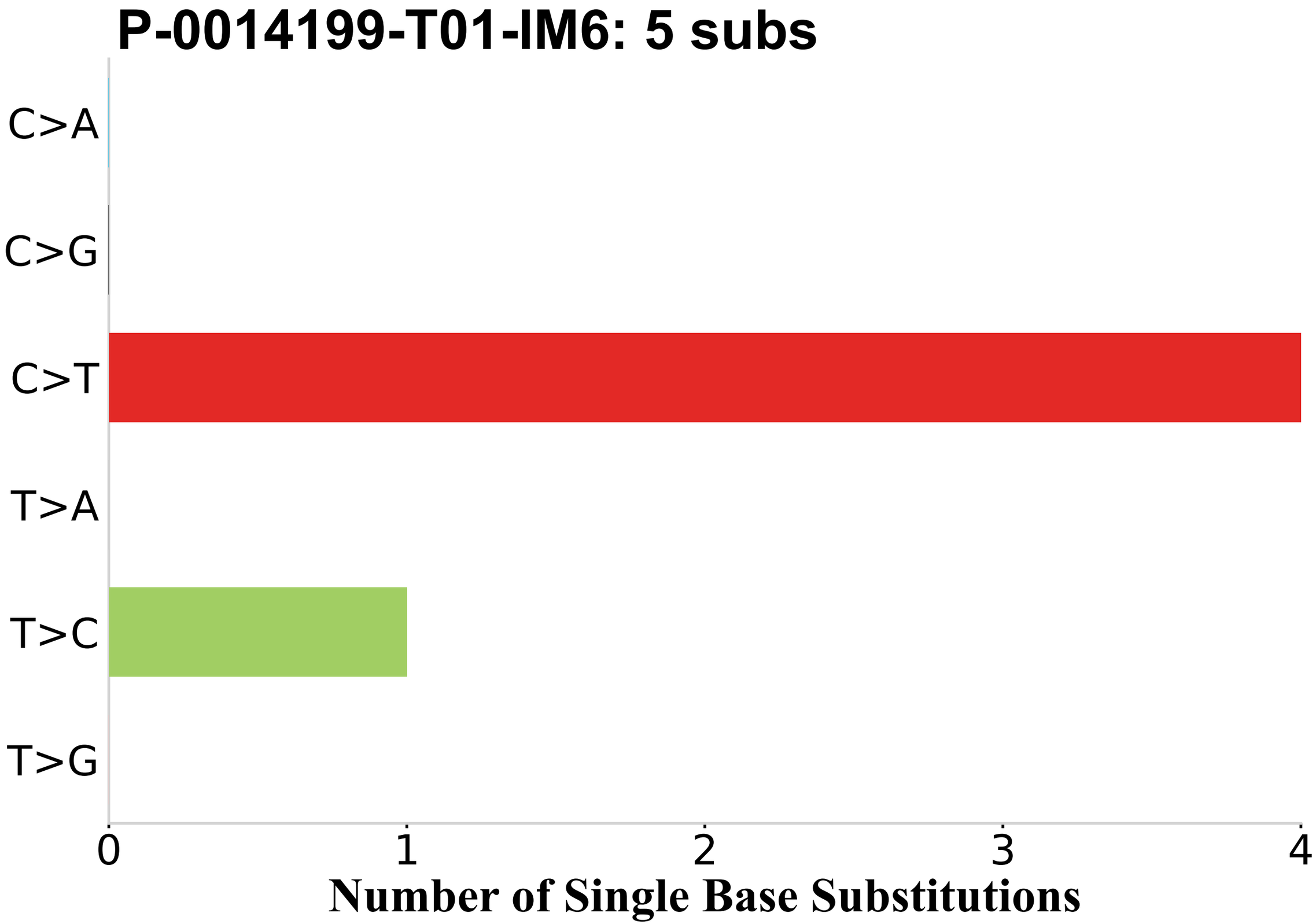
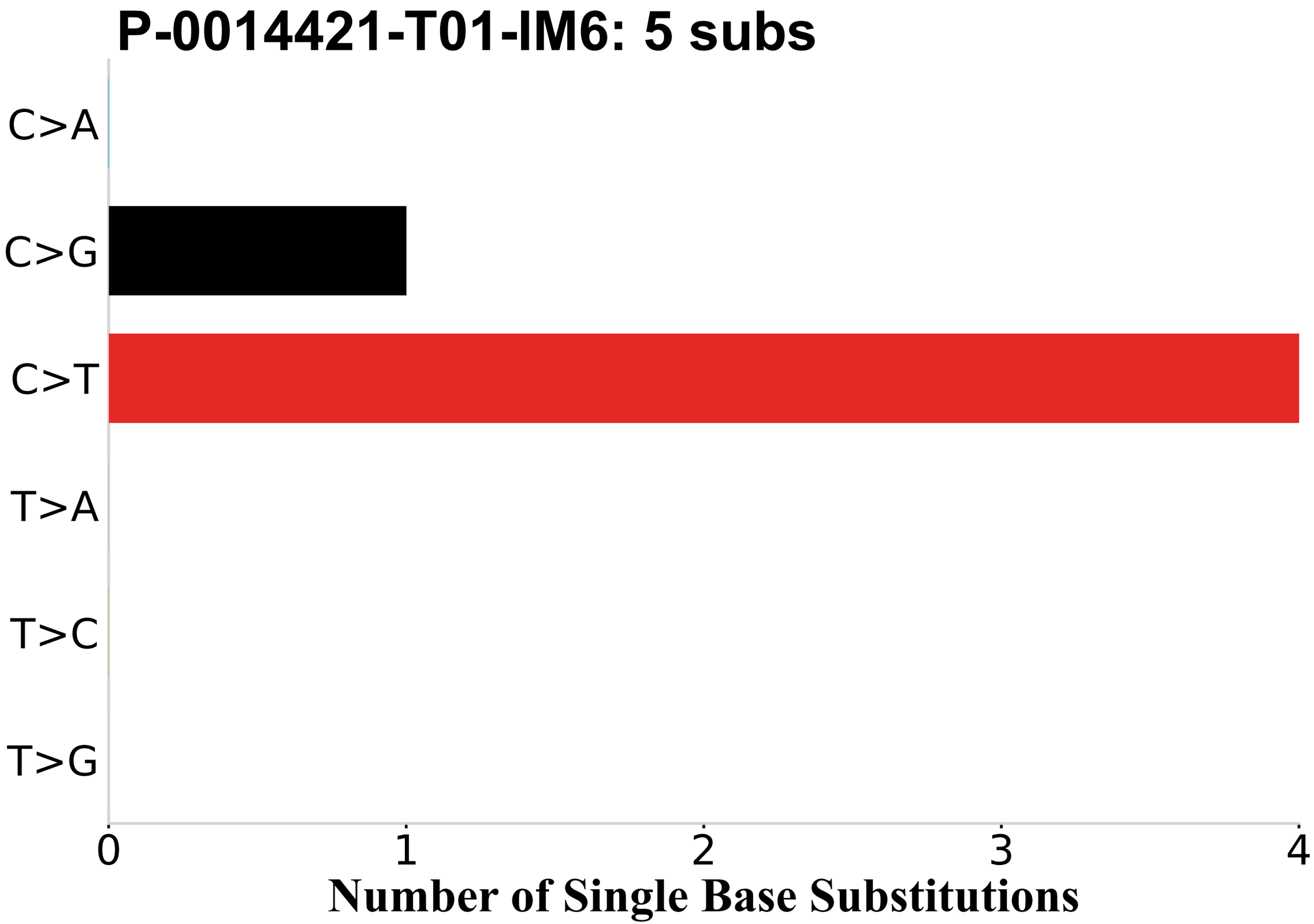
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0014199-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0014421-T01-IM6: 5 subs
C>A
C>G
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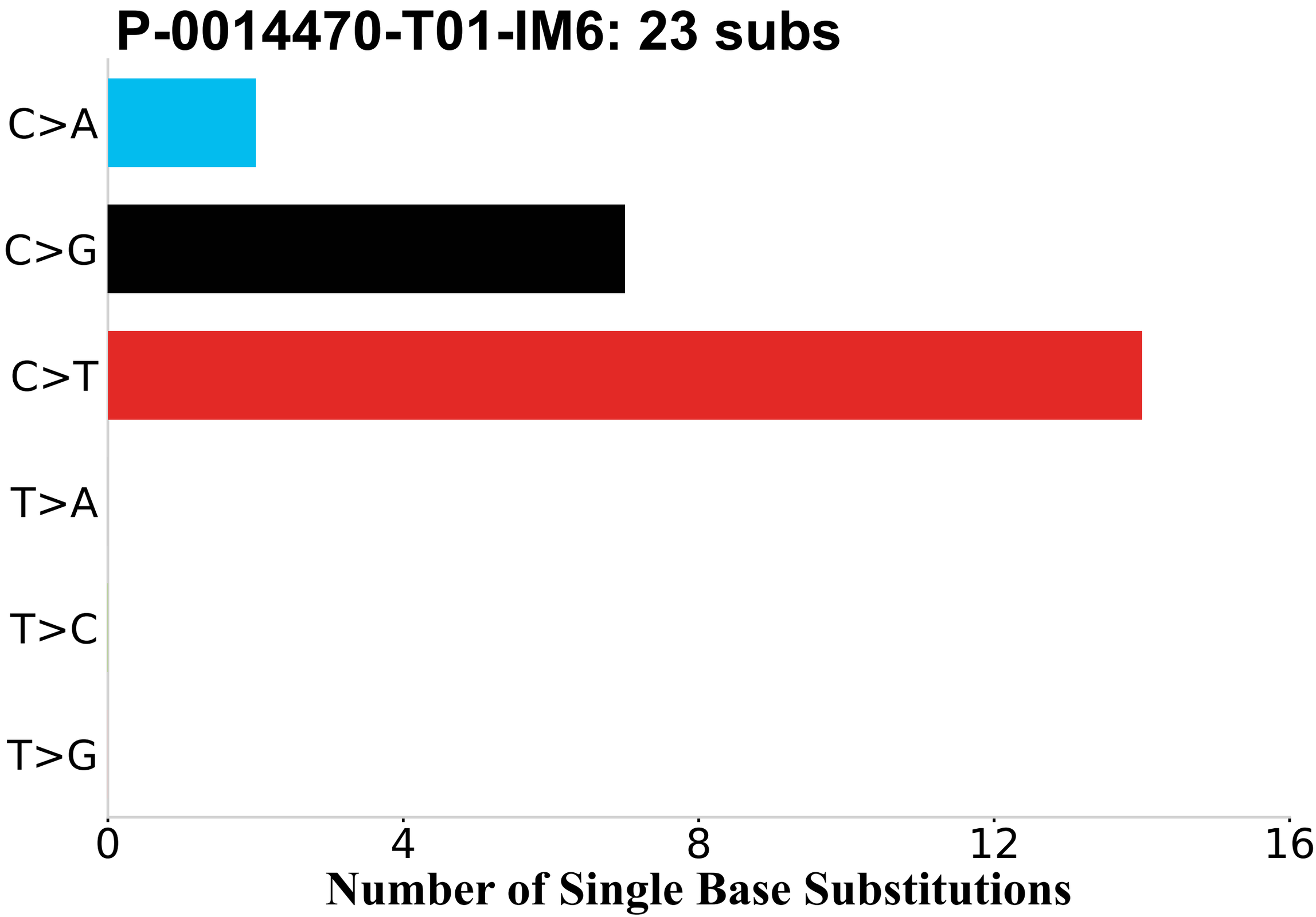
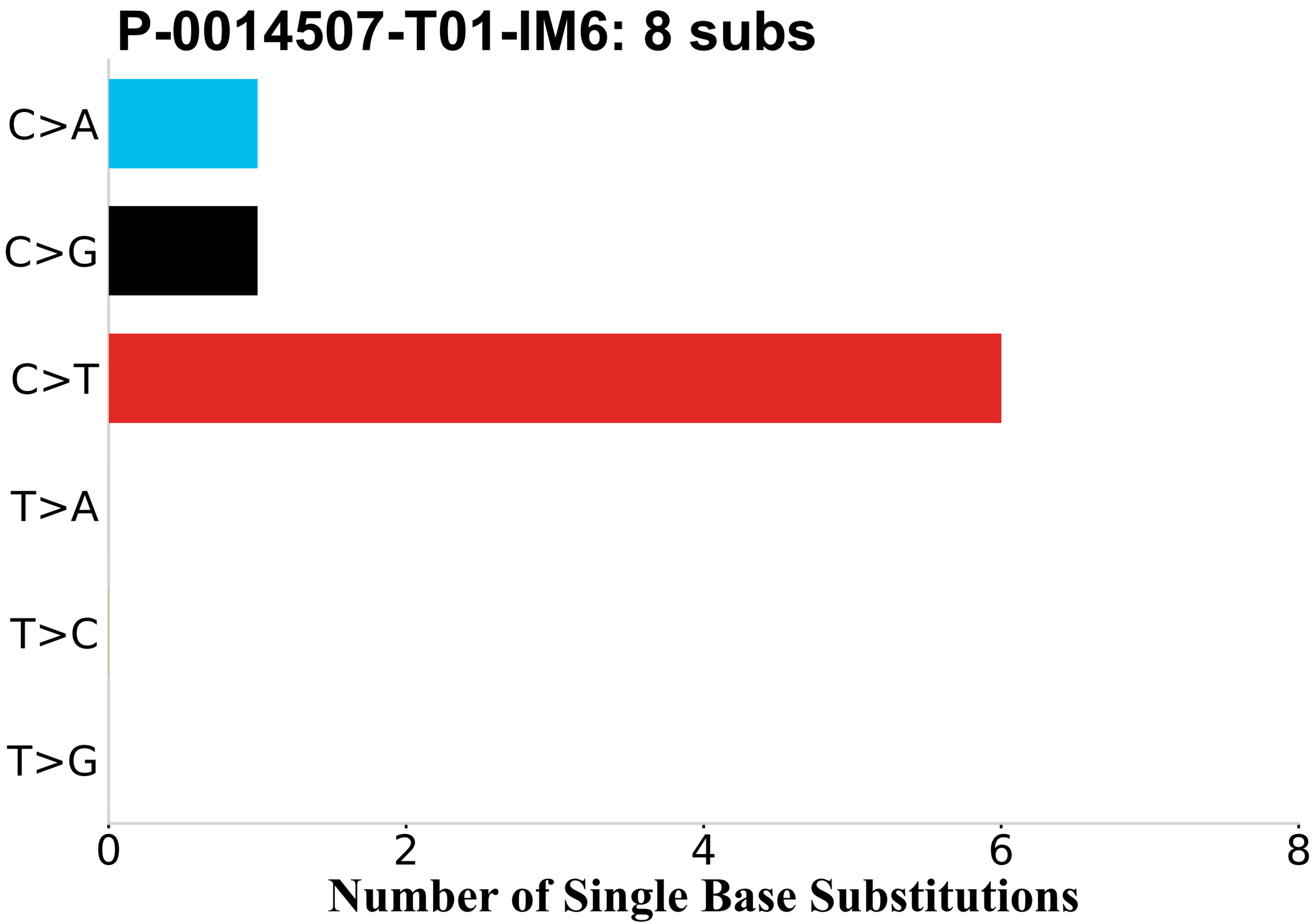
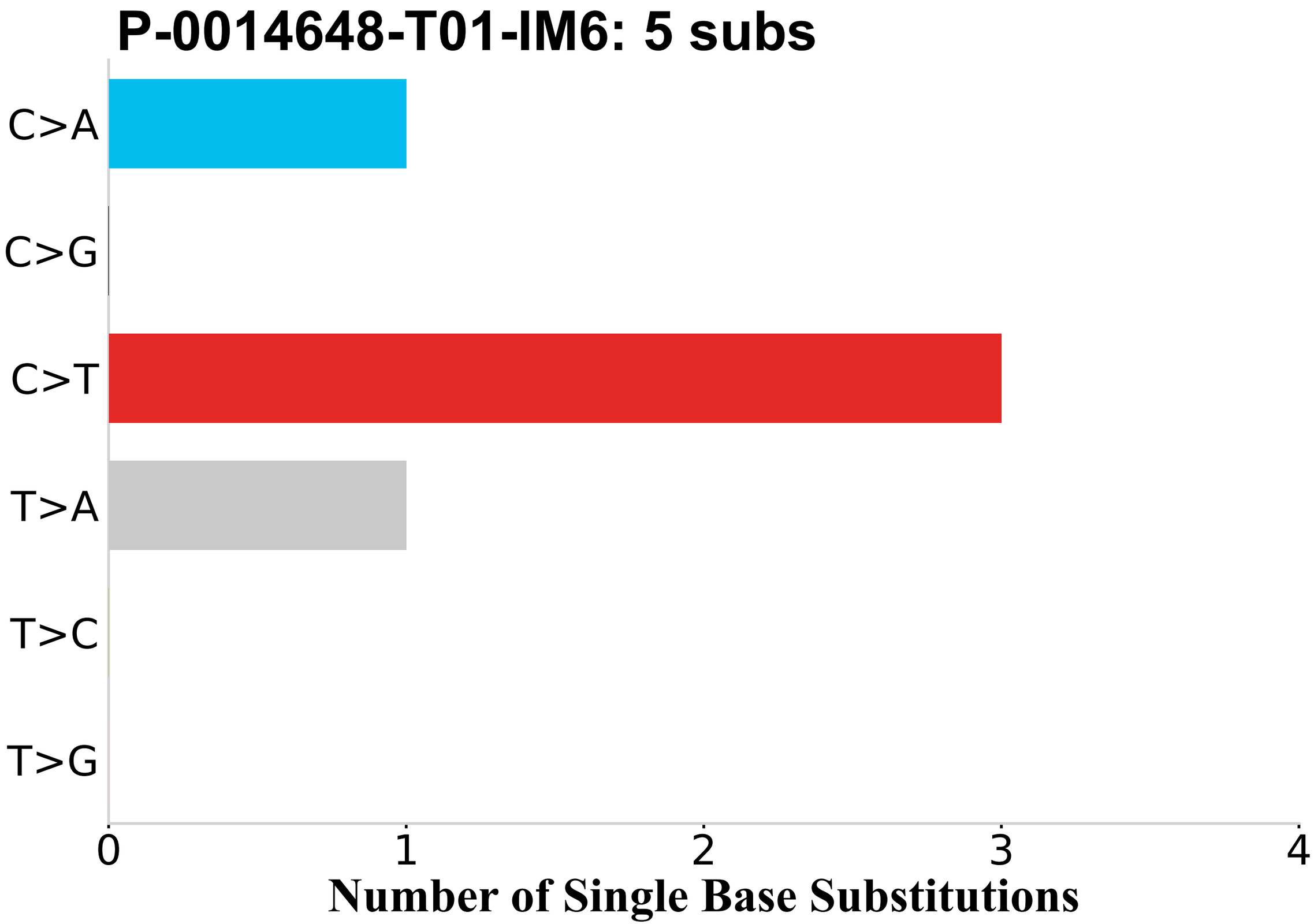
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0014470-T01-IM6: 23 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0014507-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0014648-T01-IM6: 5 subs
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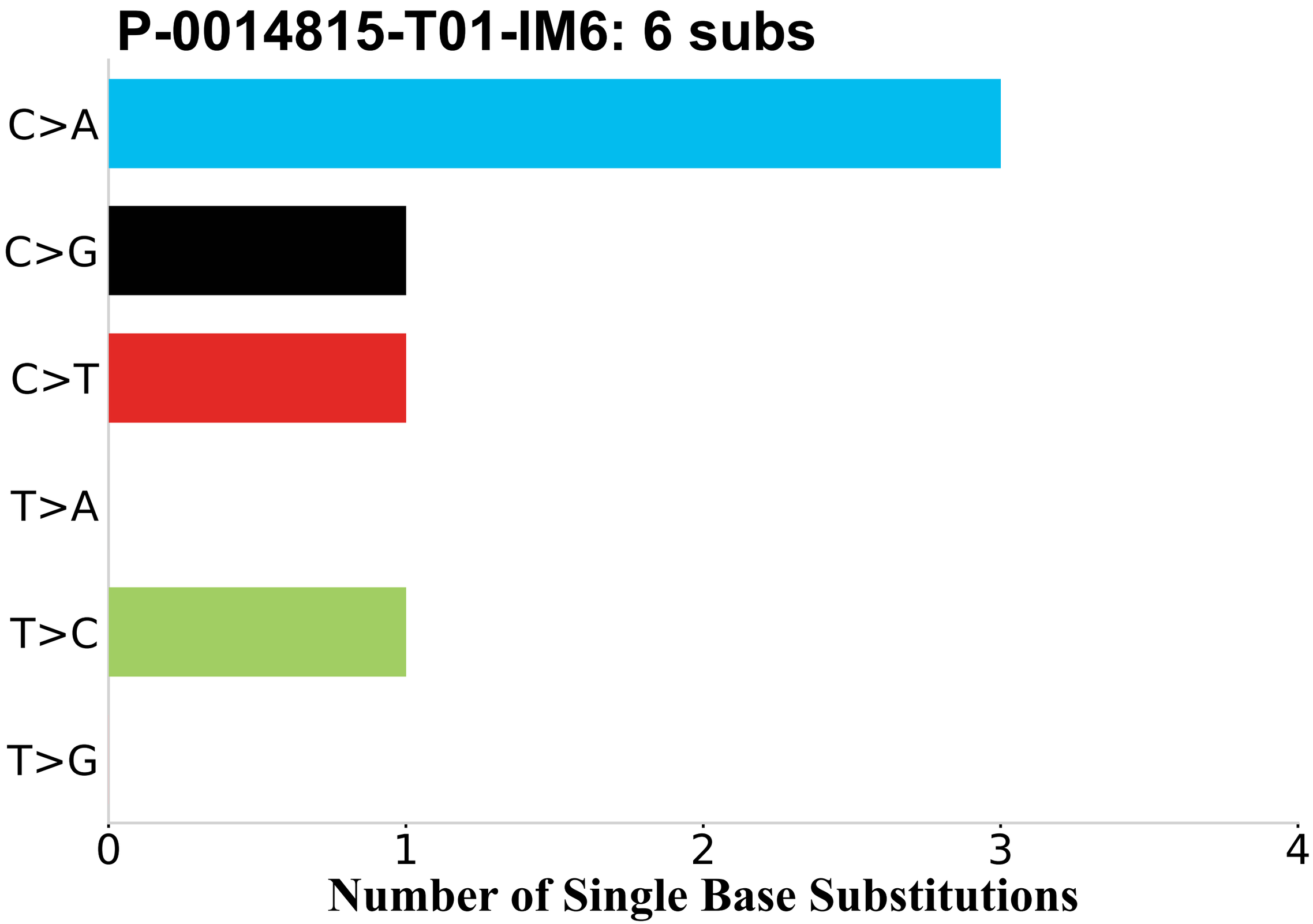
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0014815-T01-IM6: 6 subs
C>A
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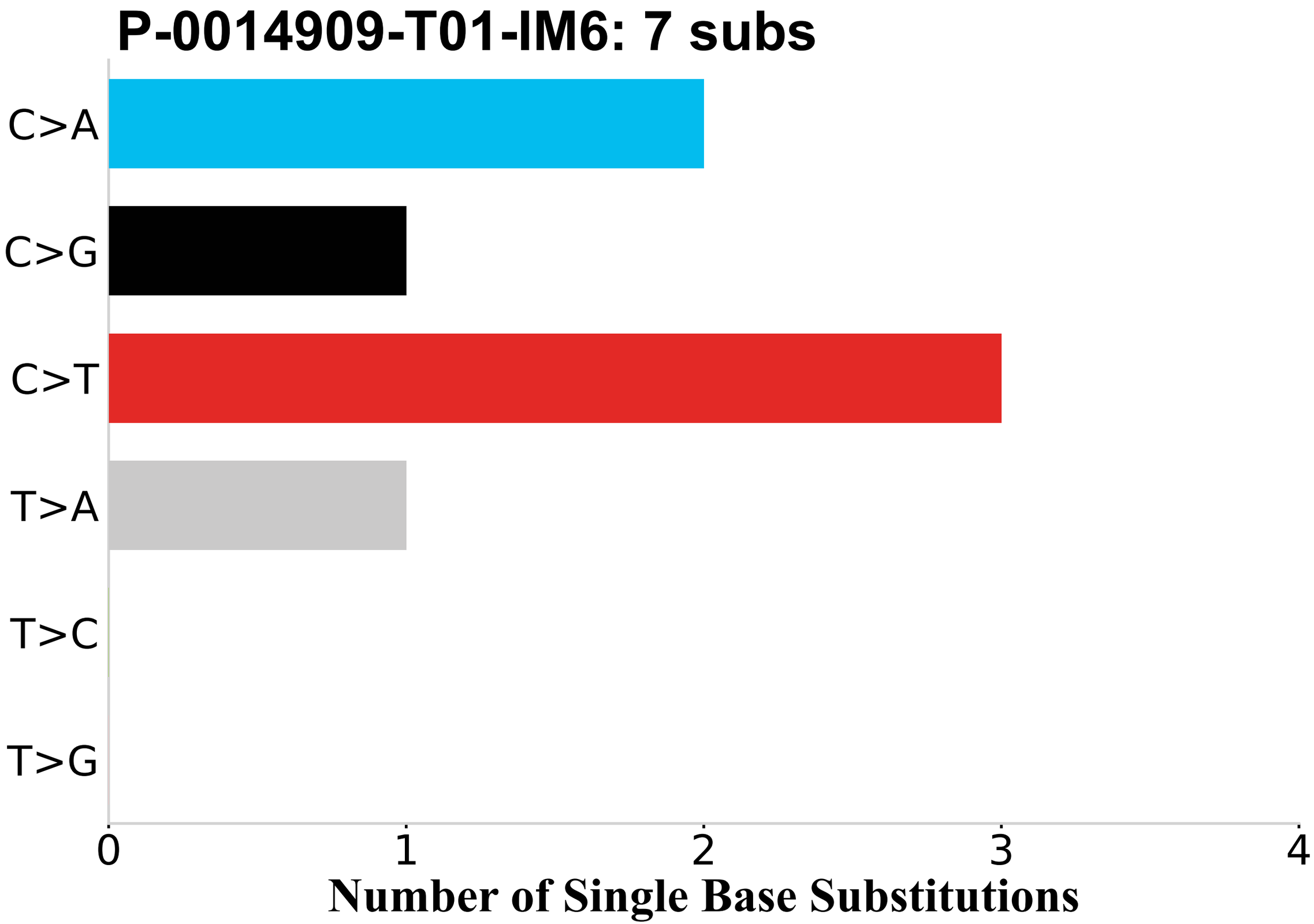
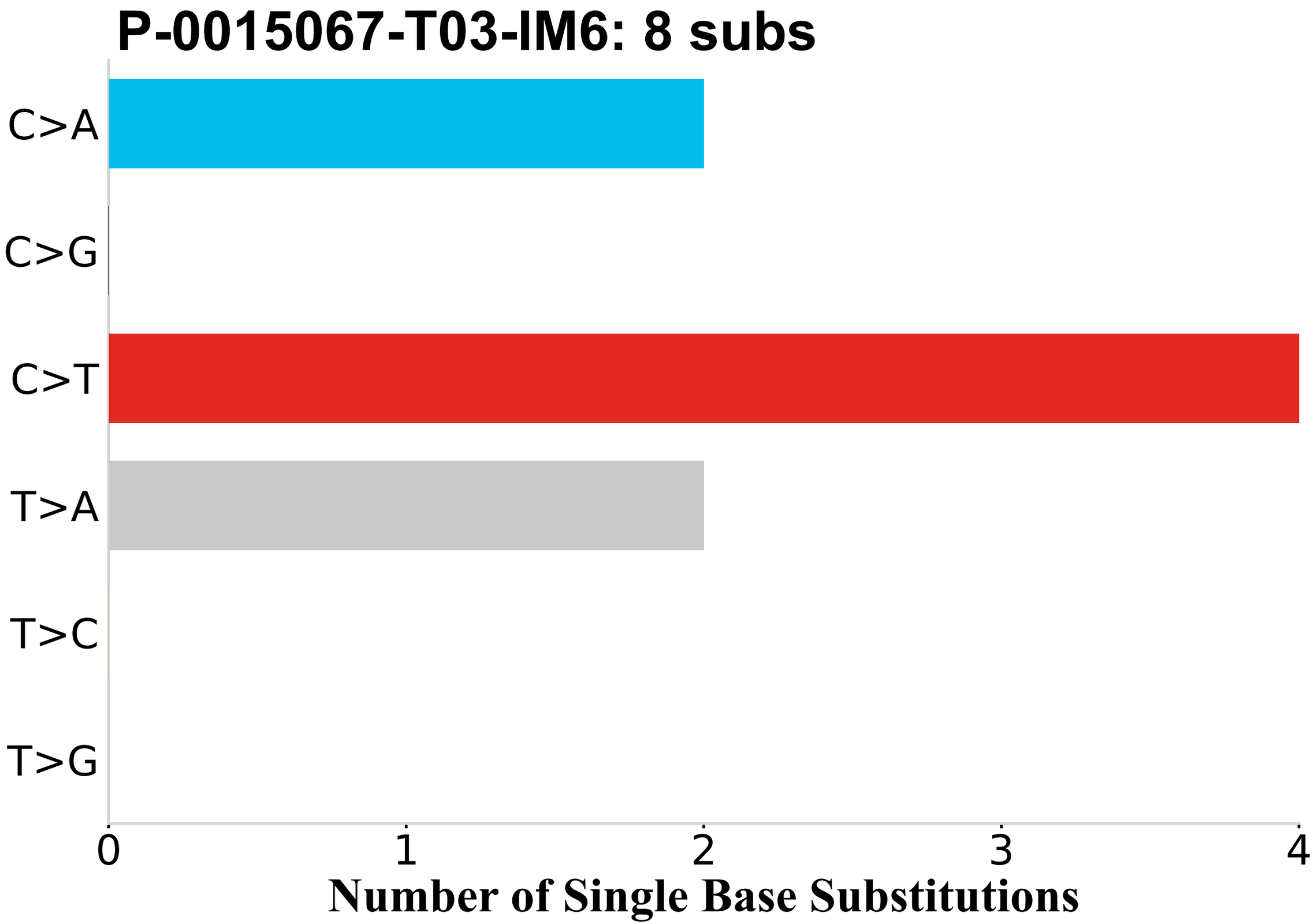
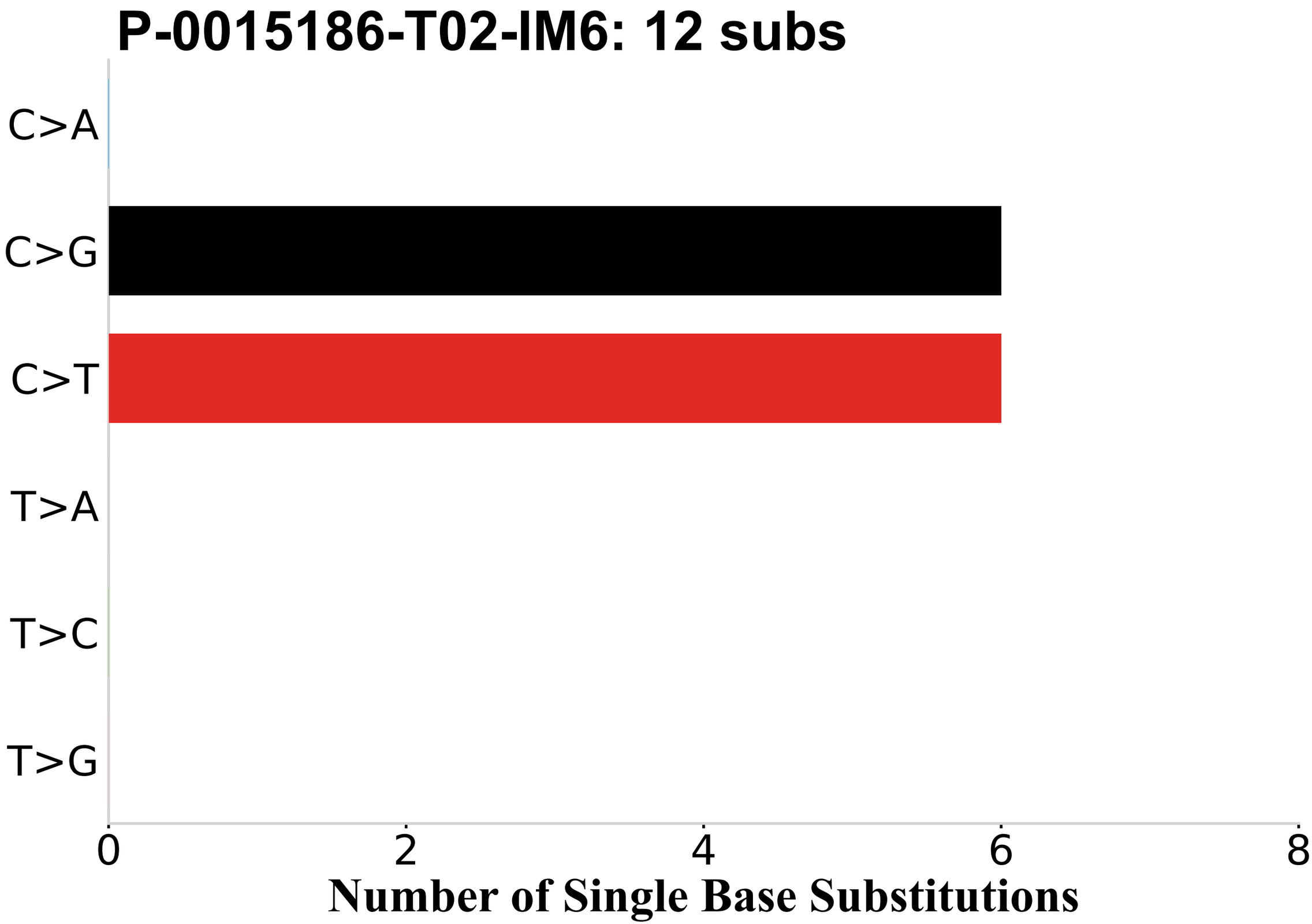
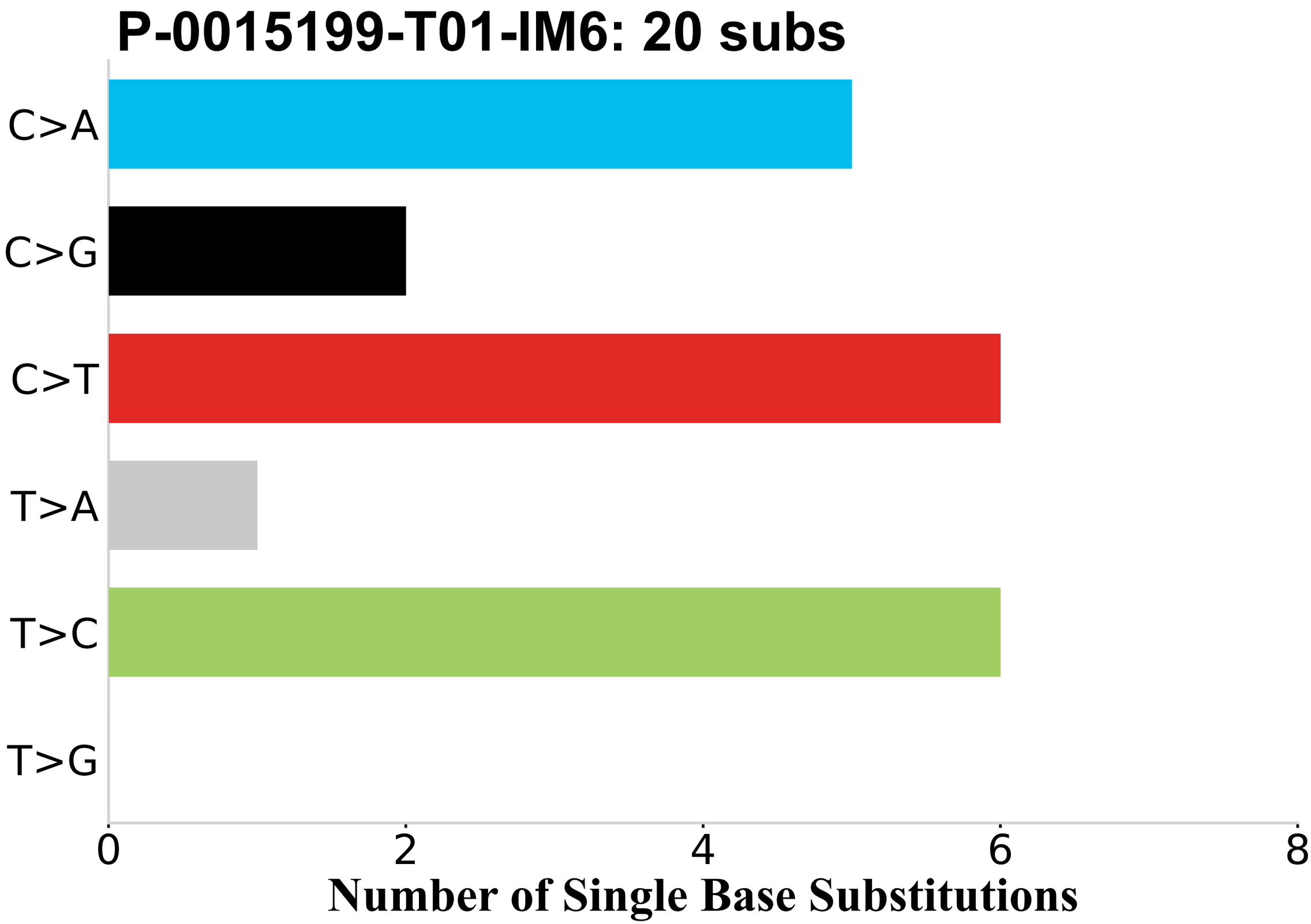
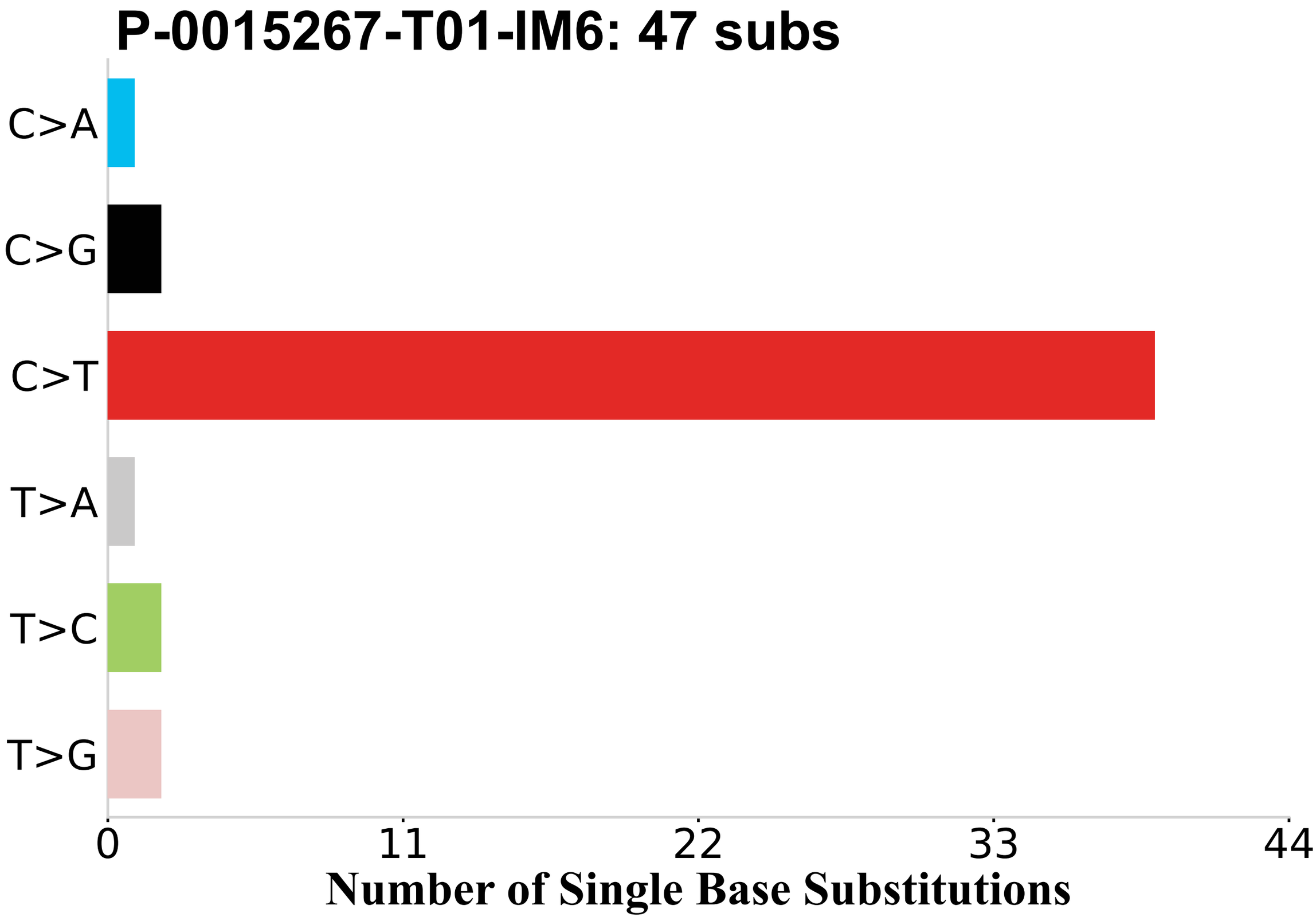
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

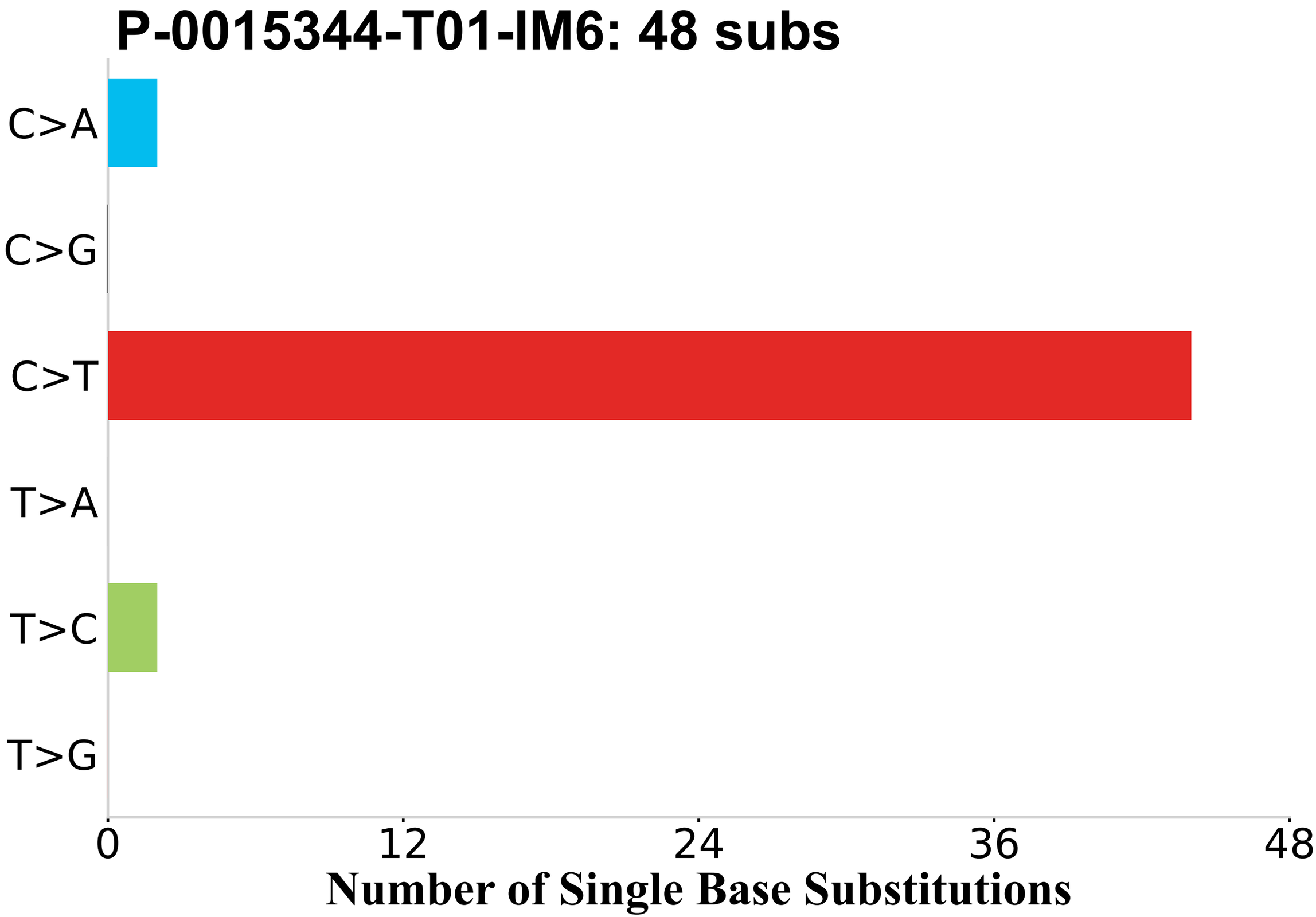

P-0014909-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

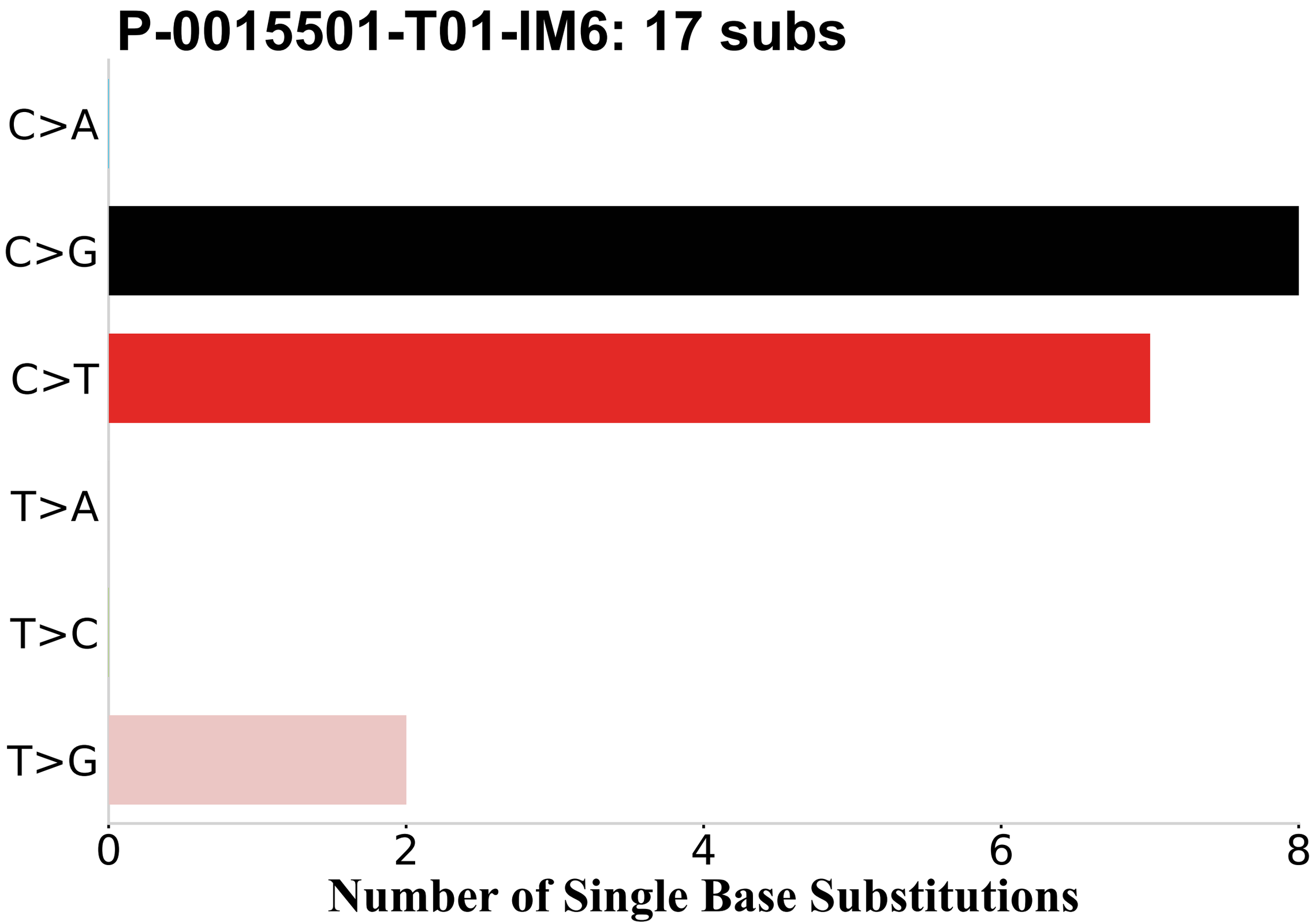

P-0015067-T03-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

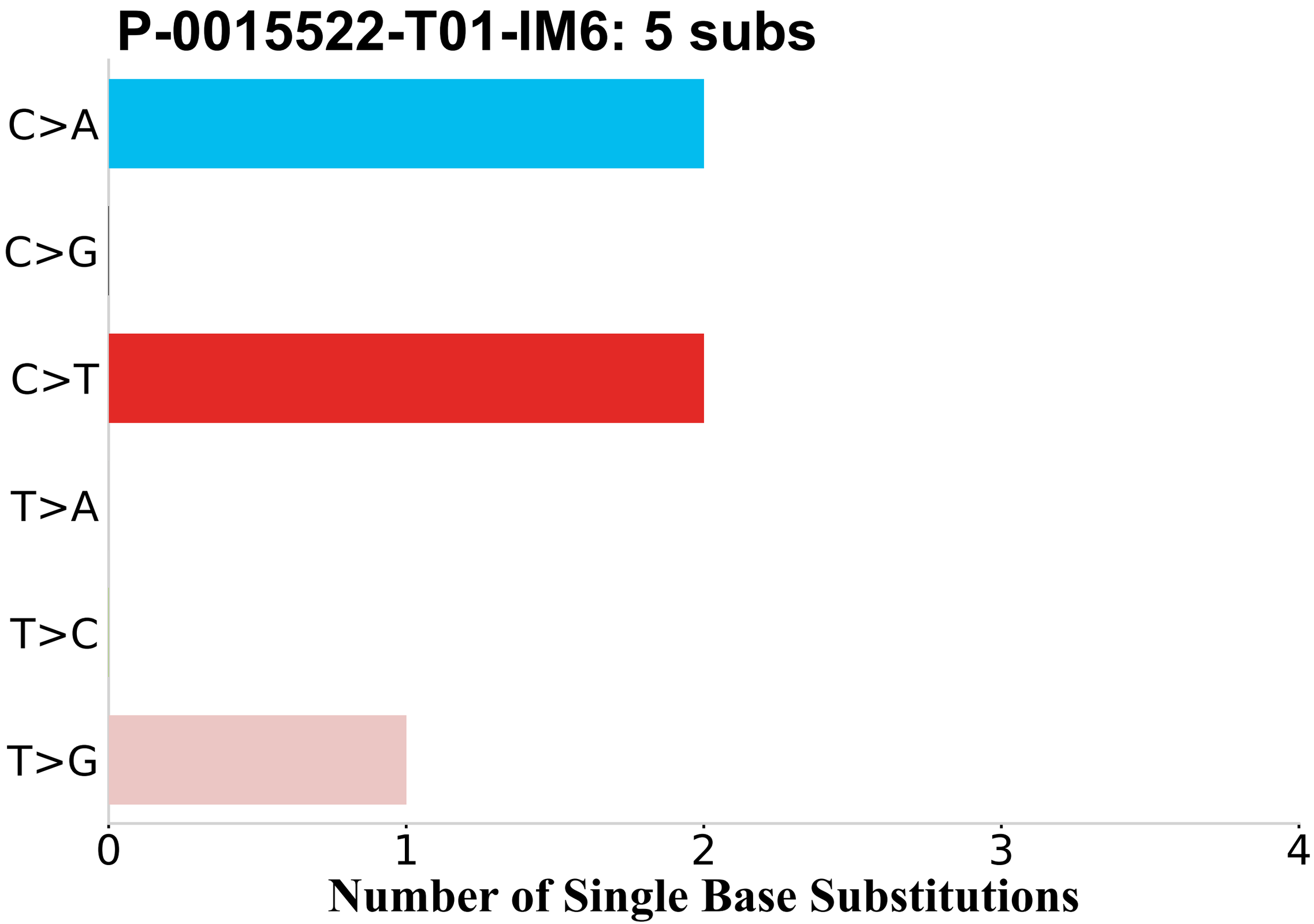

P-0015186-T02-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0015199-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0015267-T01-IM6: 47 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
11
22
33
44
Number of Single Base Substitutions


P-0015344-T01-IM6: 48 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
12
24
36
48
Number of Single Base Substitutions


P-0015501-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0015522-T01-IM6: 5 subs
C>A
C>G
C>T
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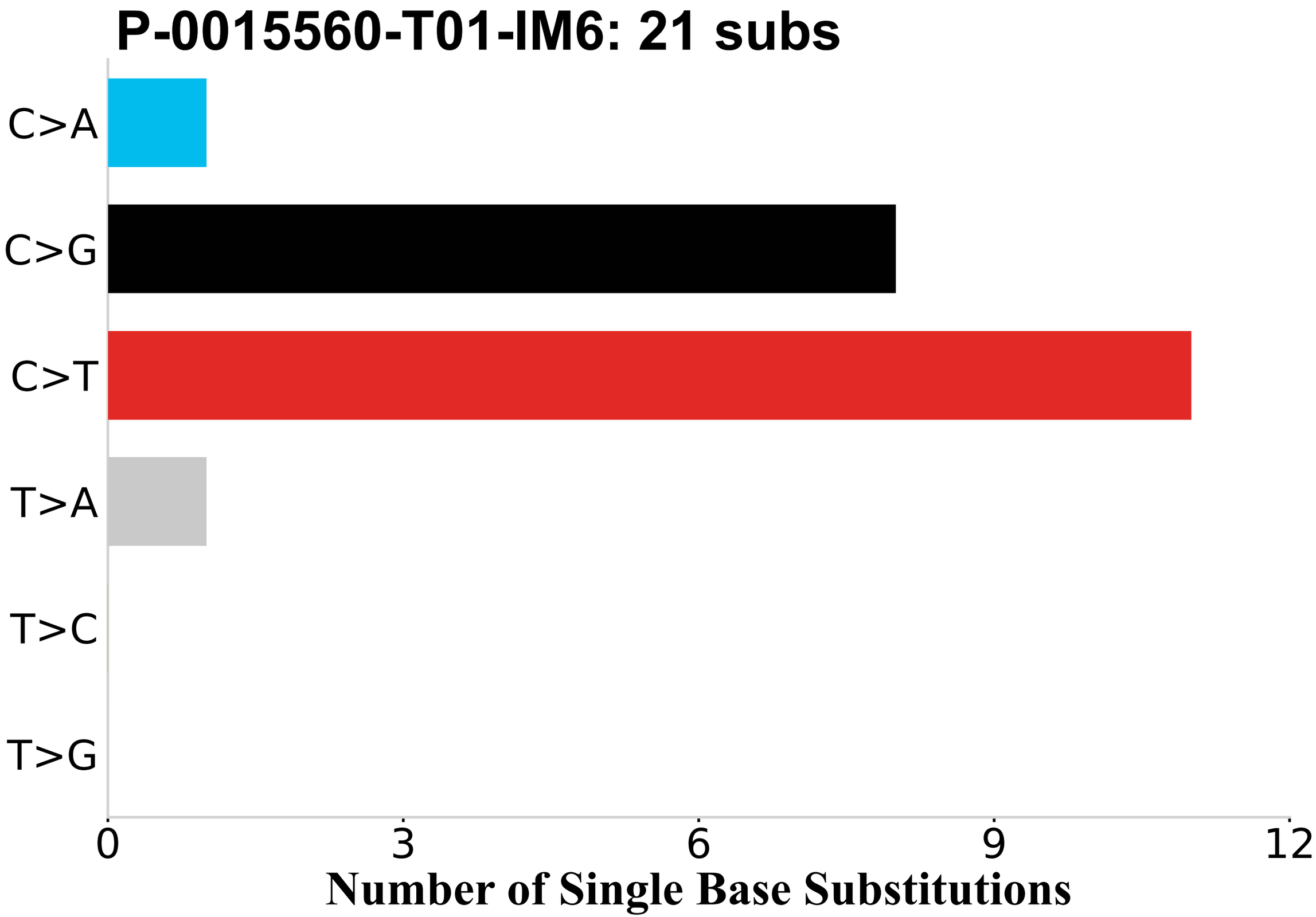
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015560-T01-IM6: 21 subs
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C>G
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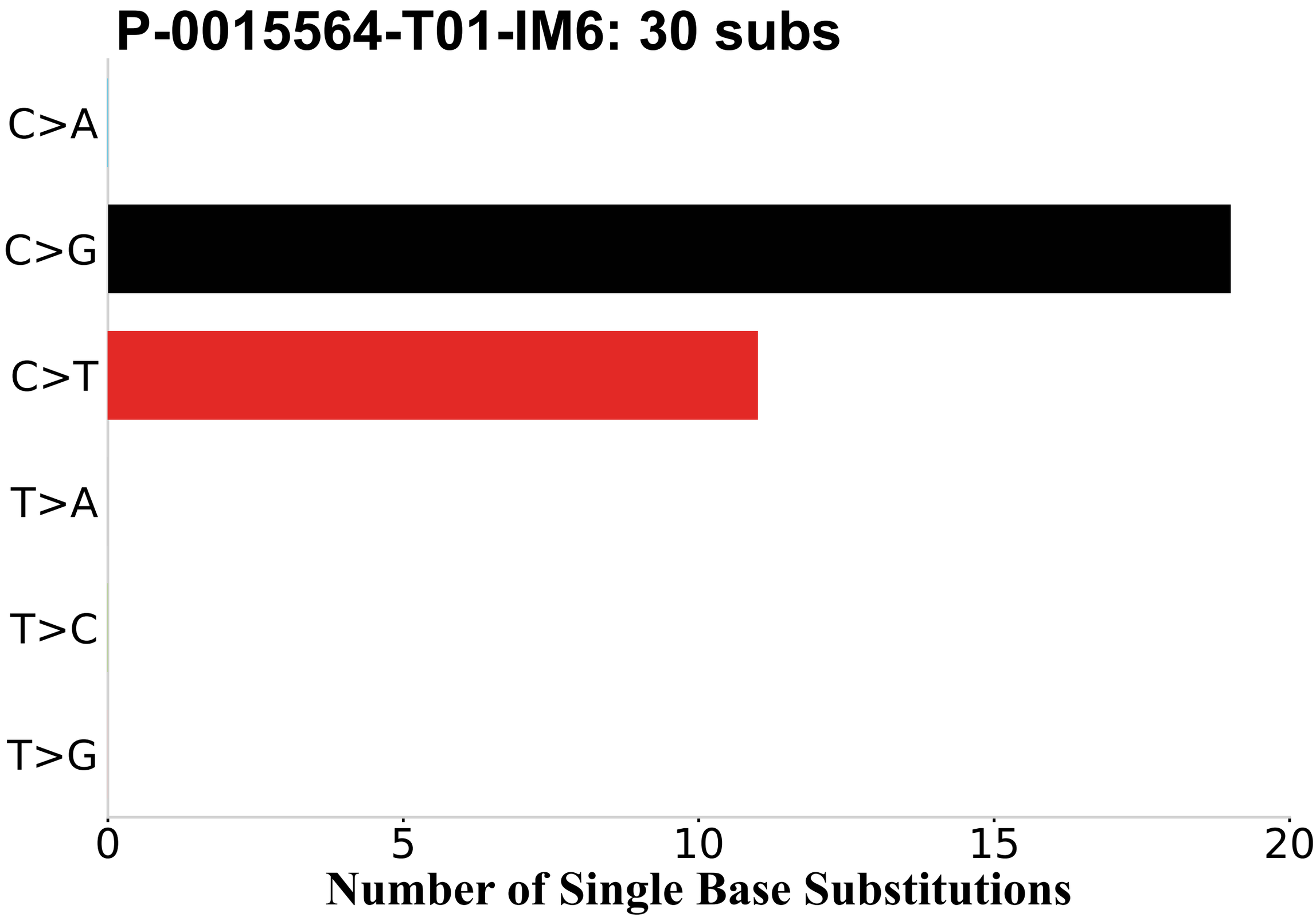
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0015564-T01-IM6: 30 subs
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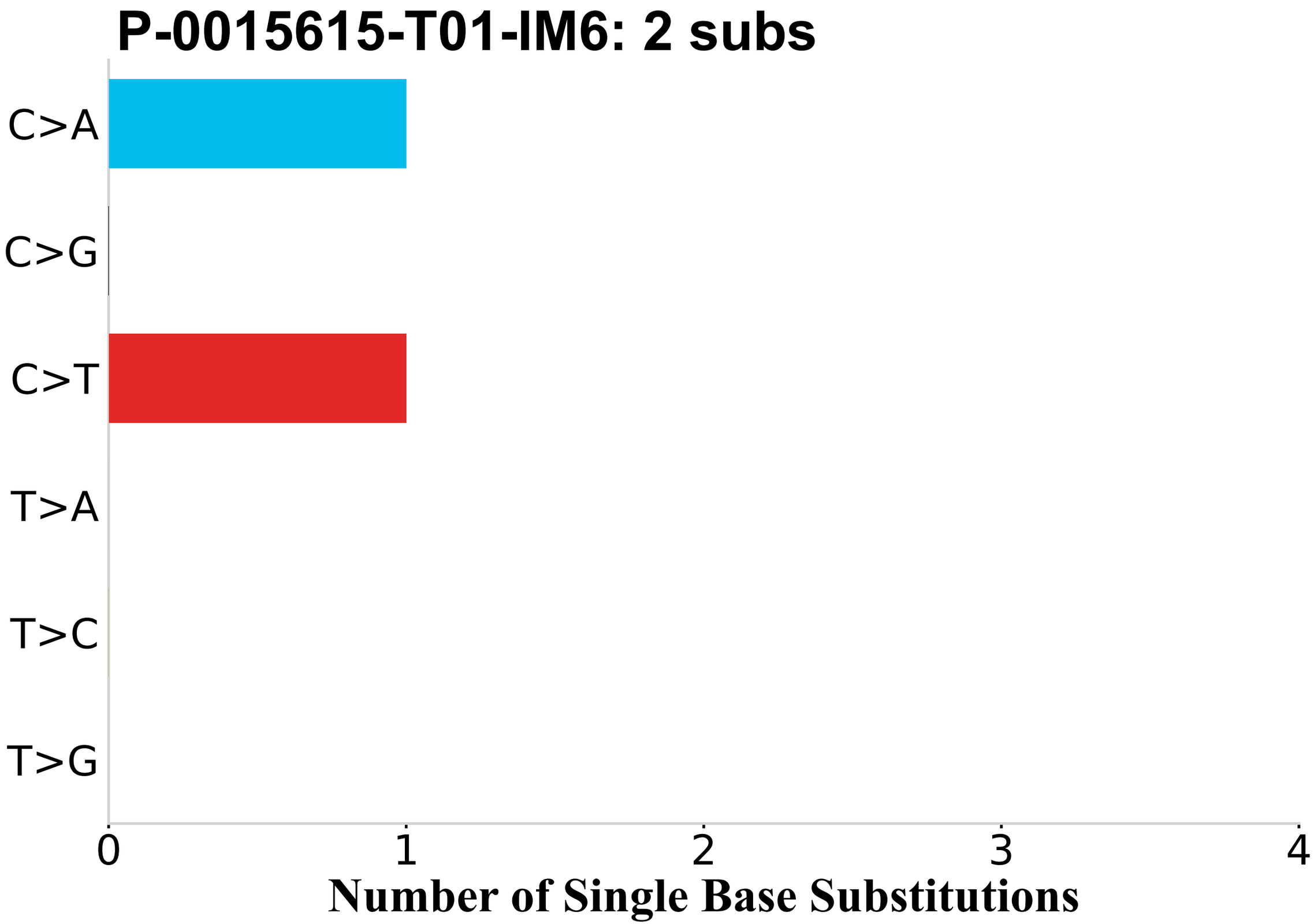
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0015615-T01-IM6: 2 subs
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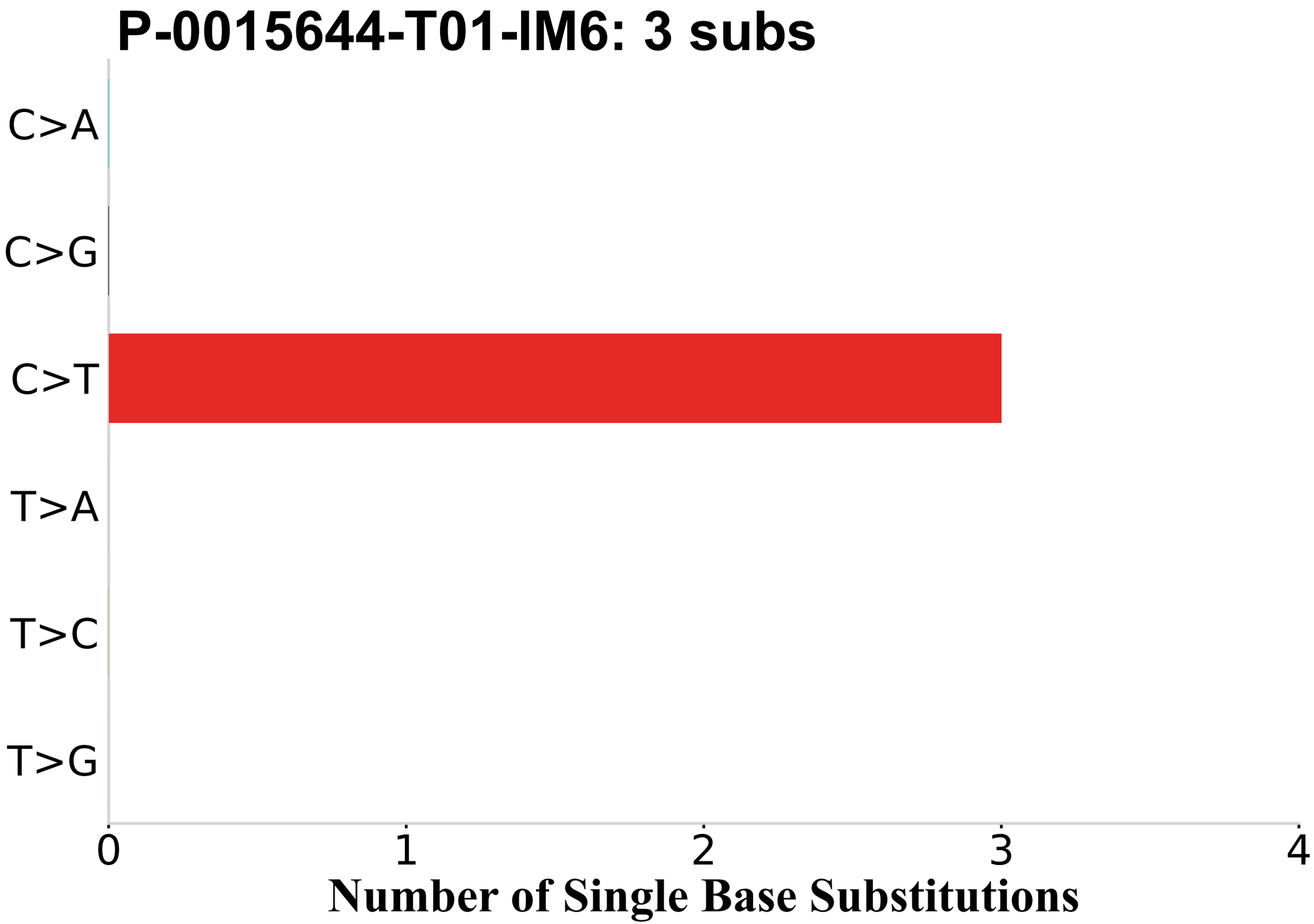
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015644-T01-IM6: 3 subs
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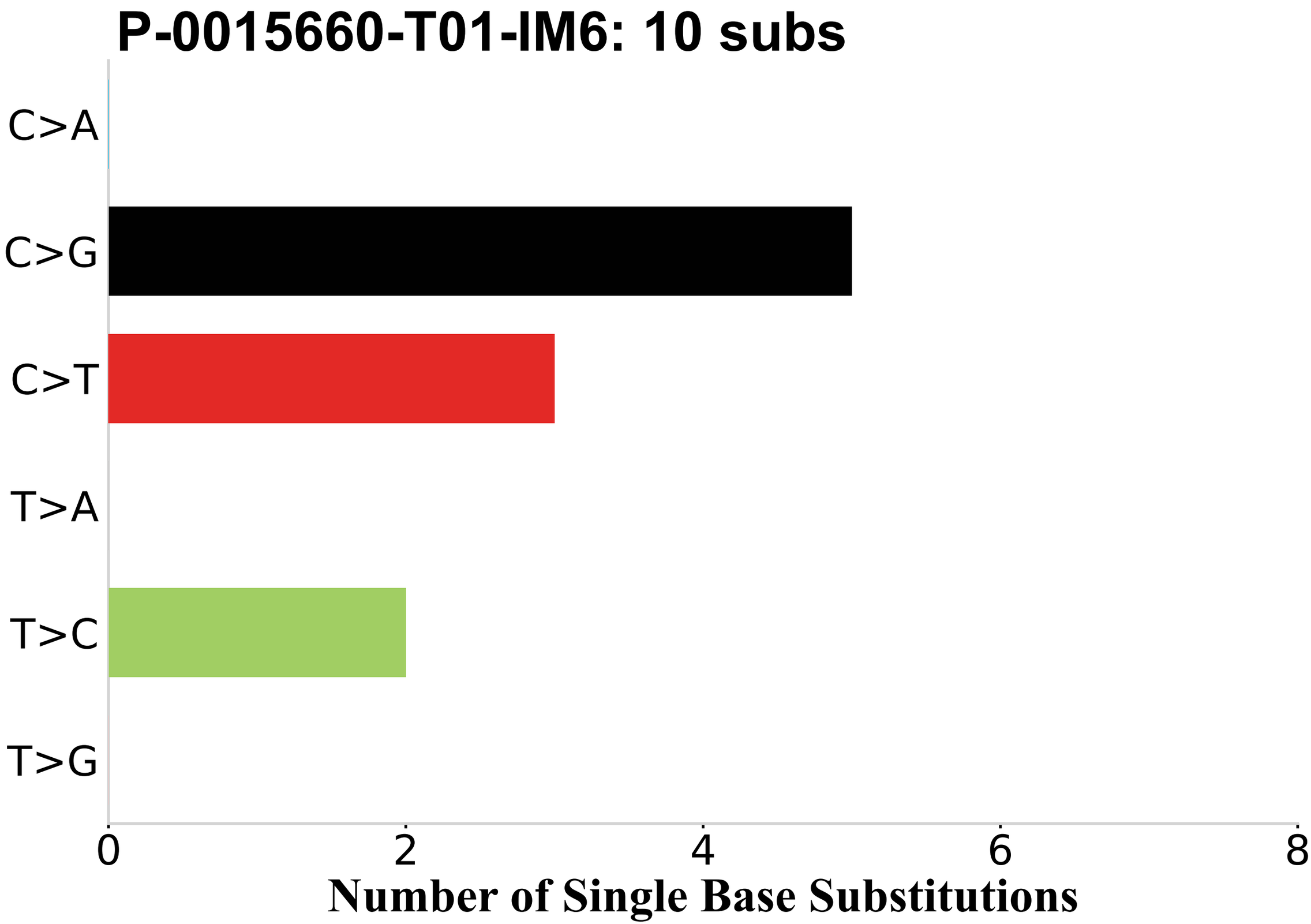
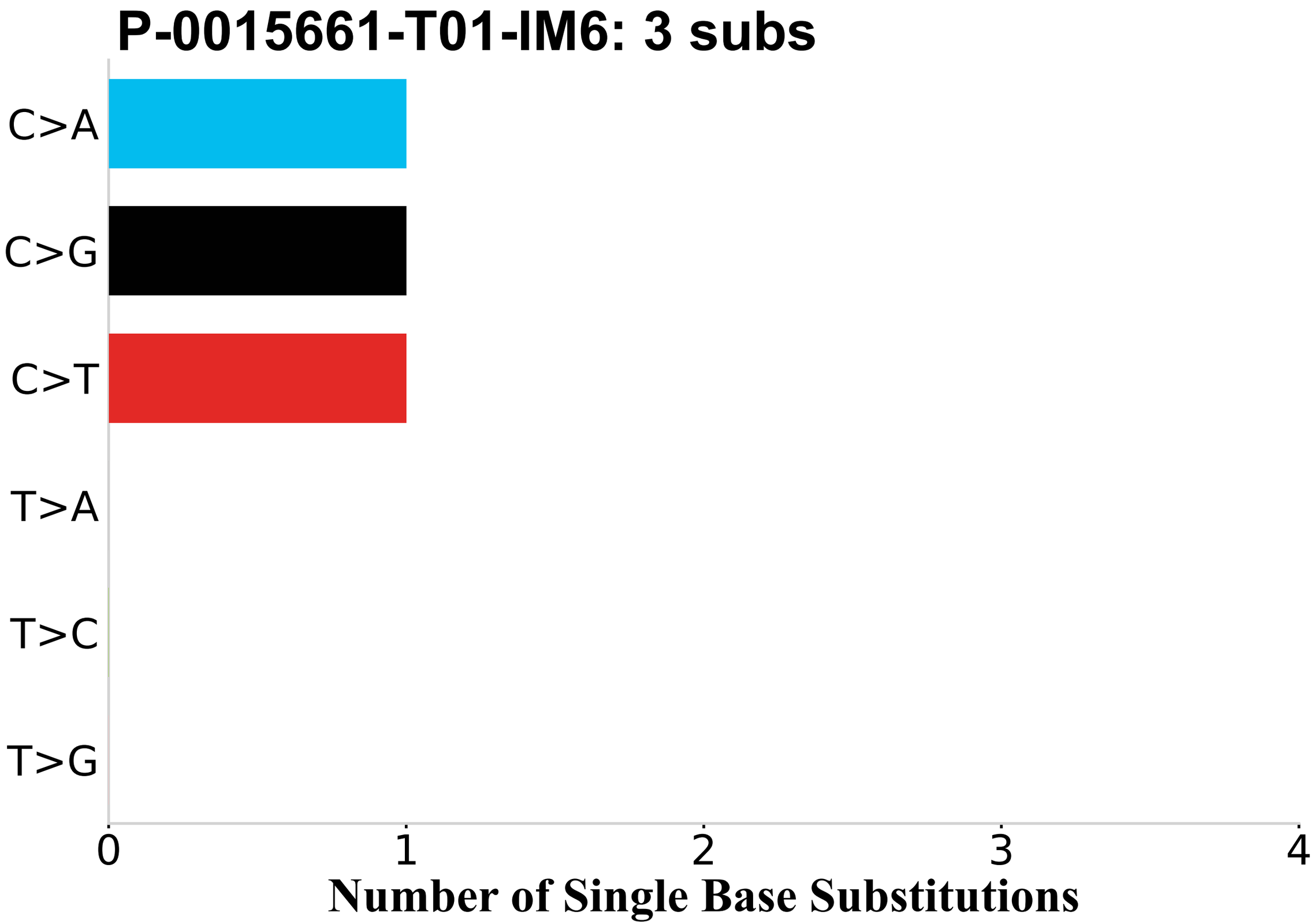
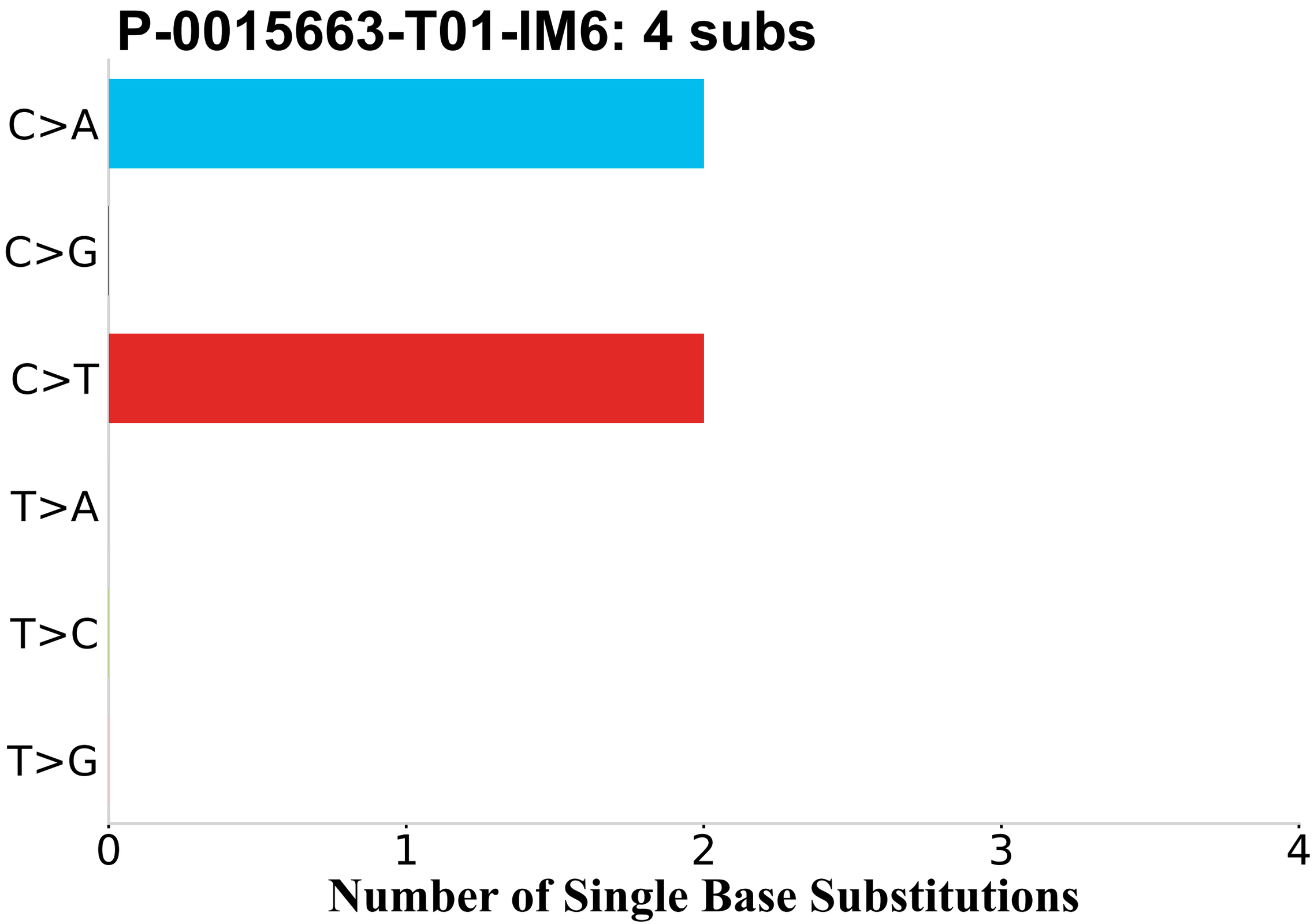
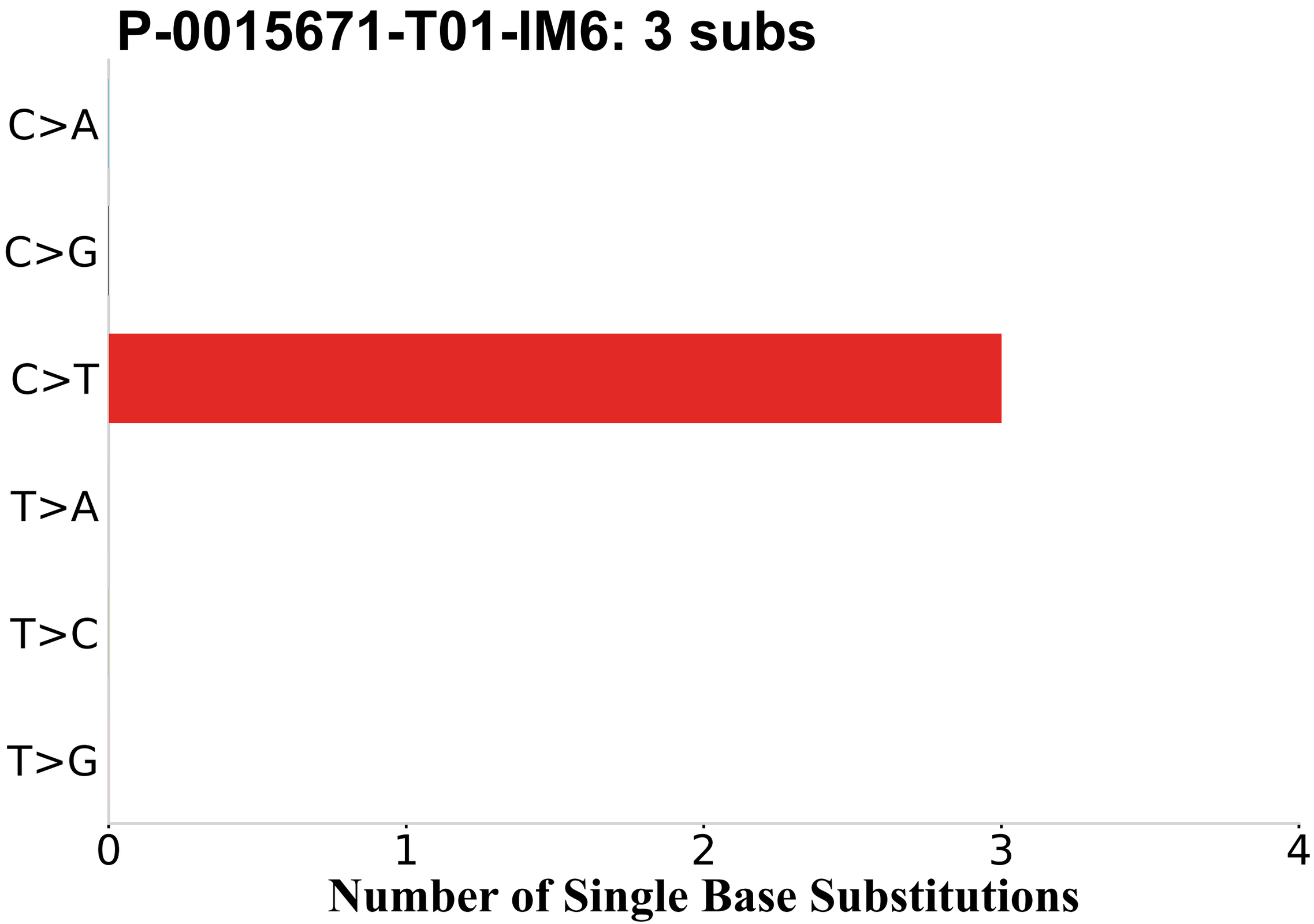
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015660-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0015661-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015663-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015671-T01-IM6: 3 subs
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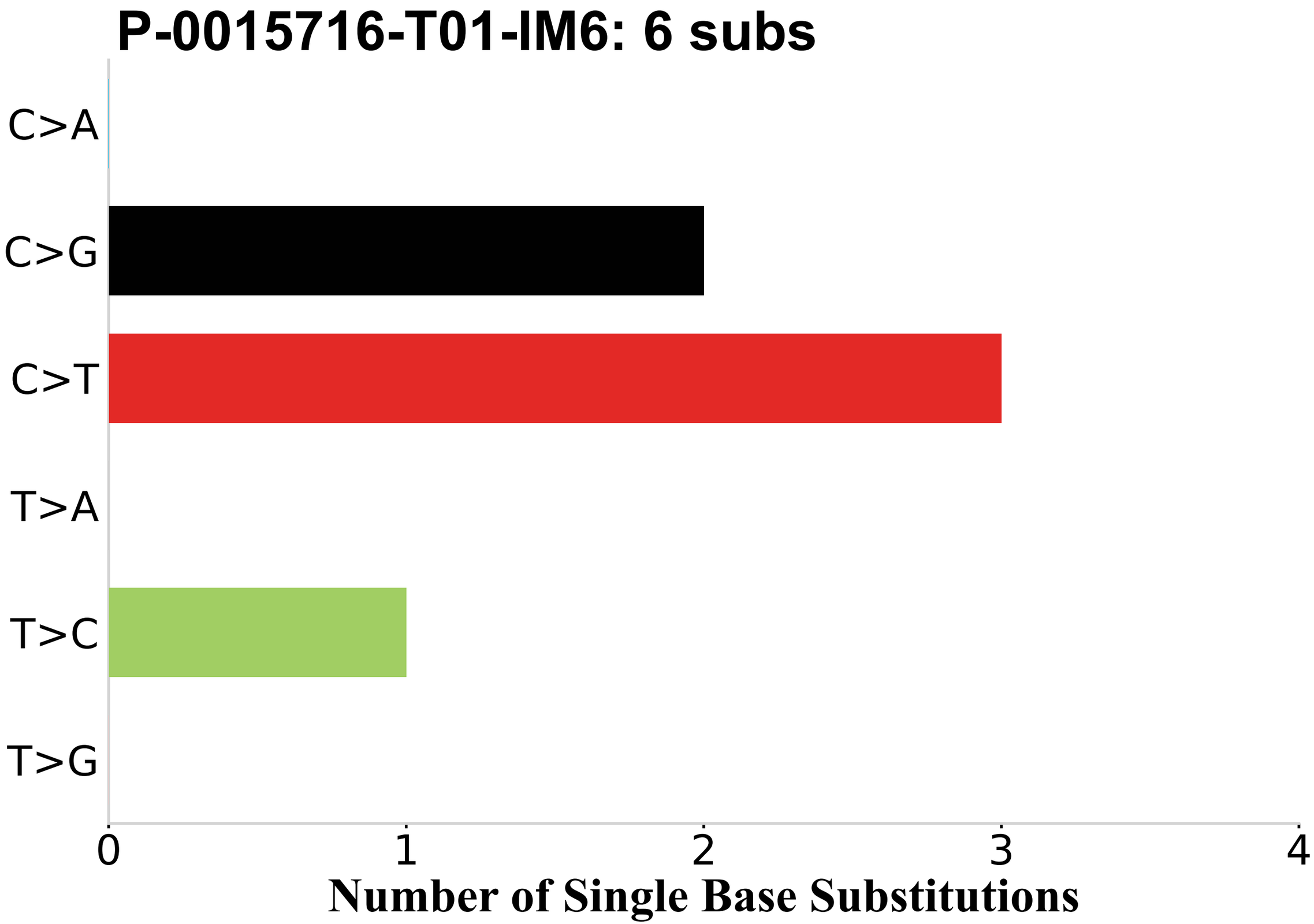
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015716-T01-IM6: 6 subs
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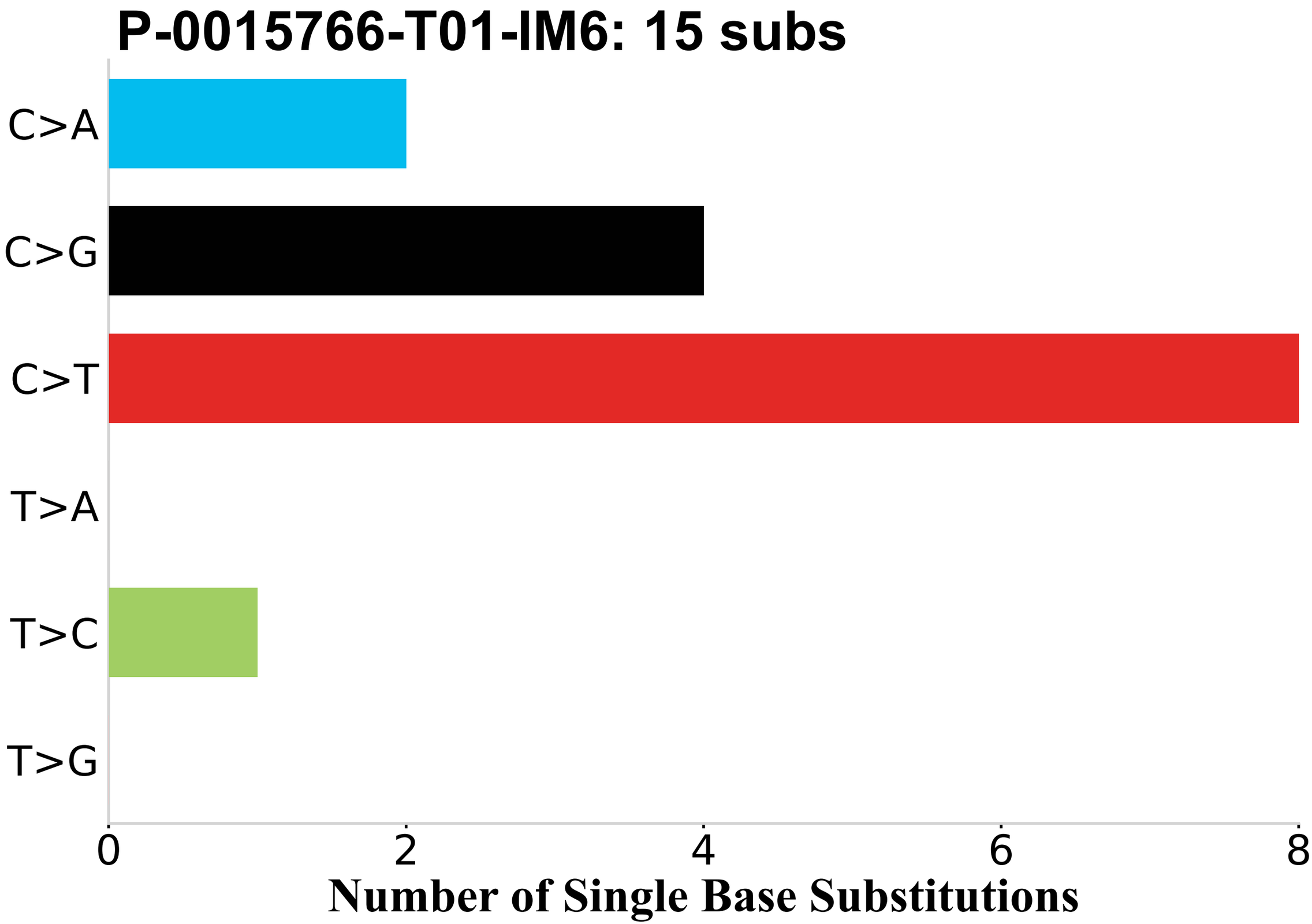
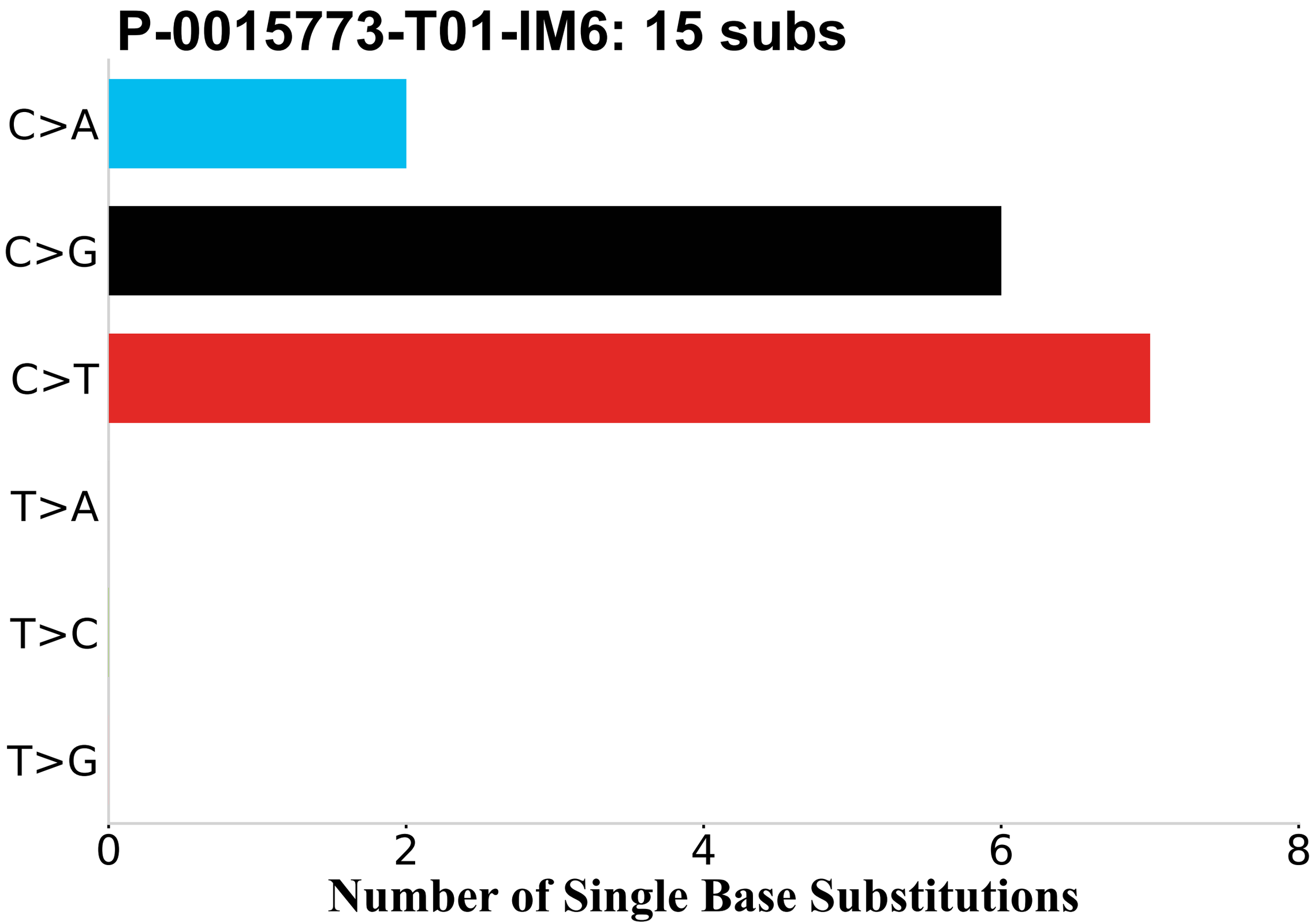
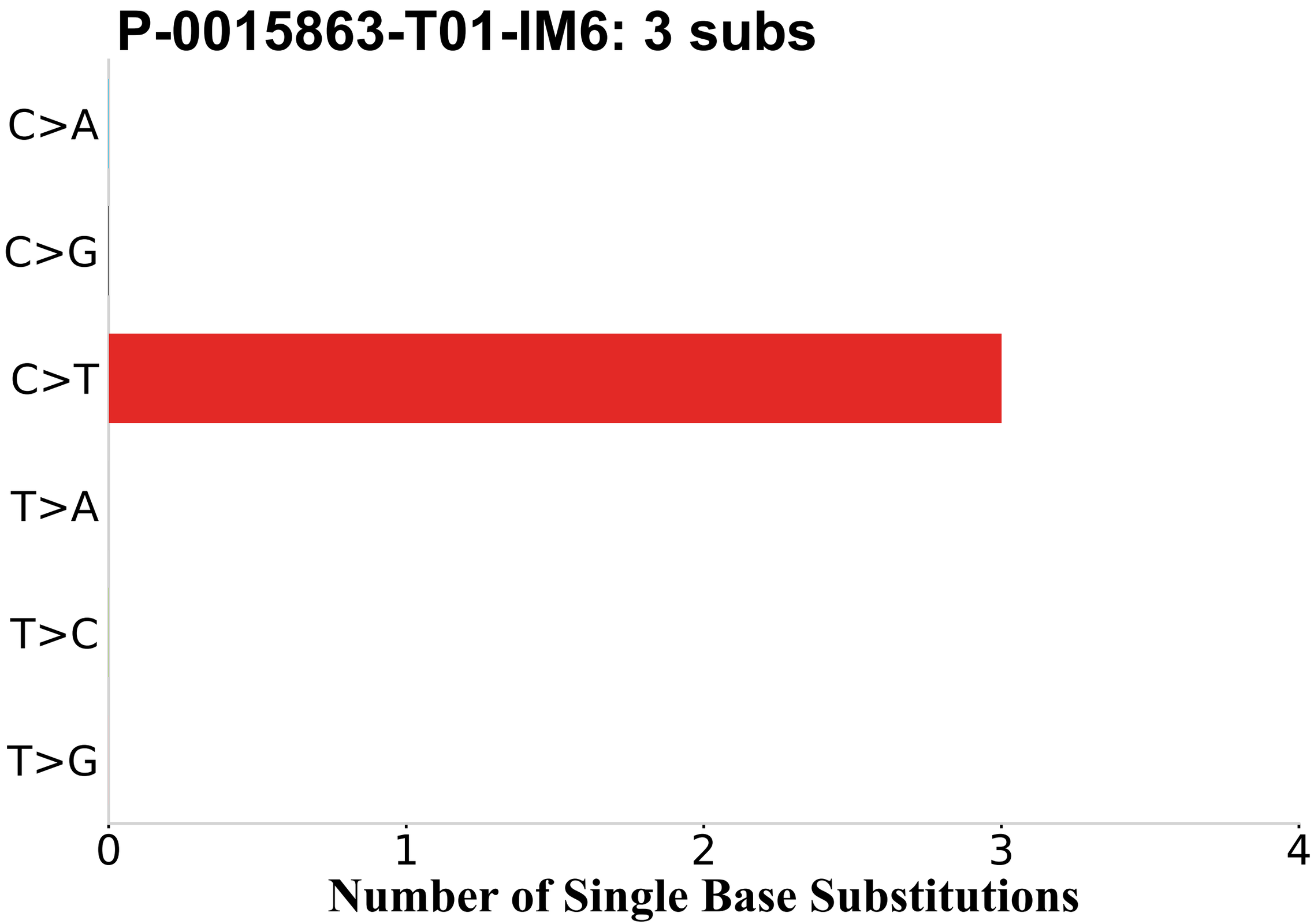
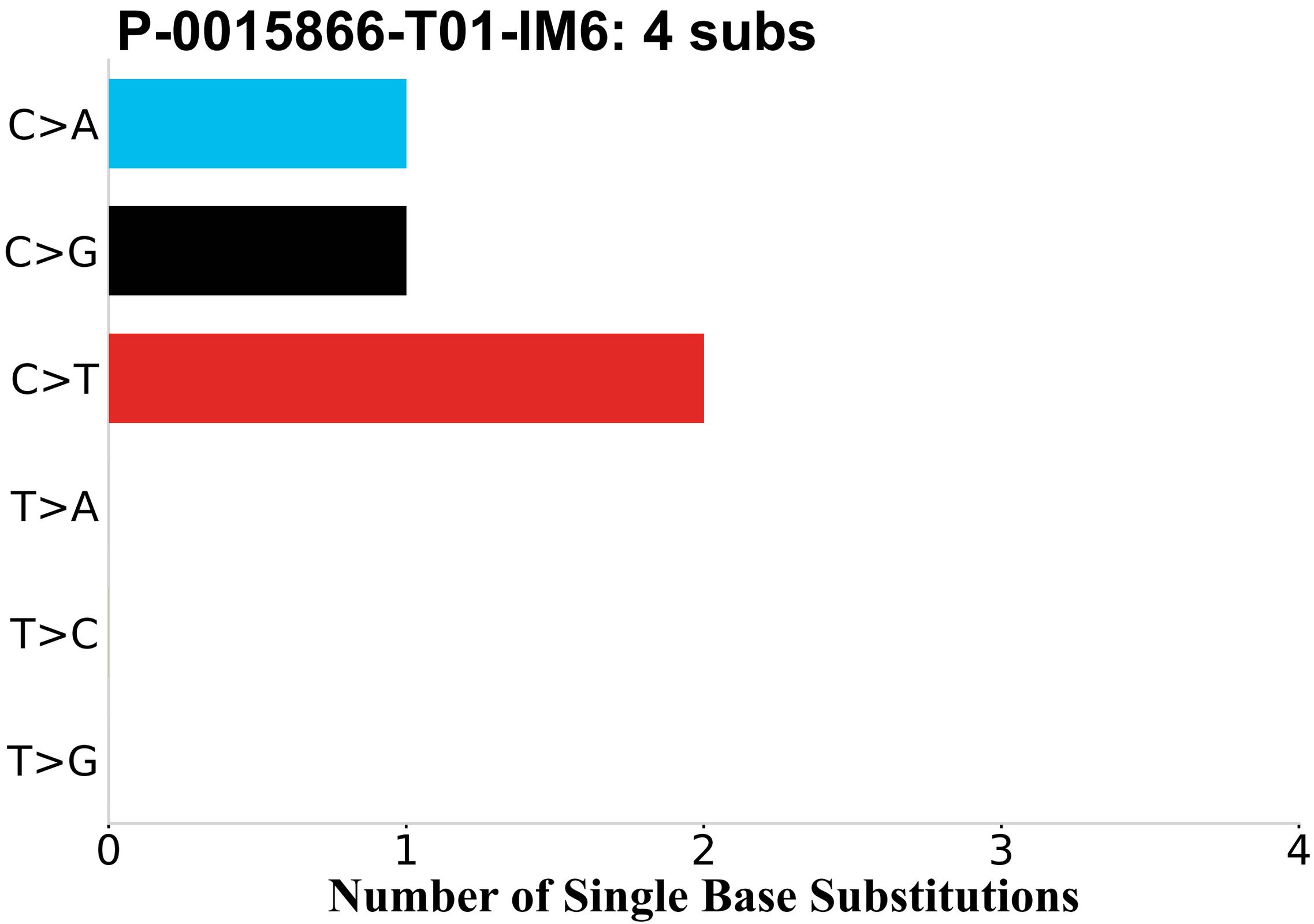
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015766-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0015773-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0015863-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0015866-T01-IM6: 4 subs
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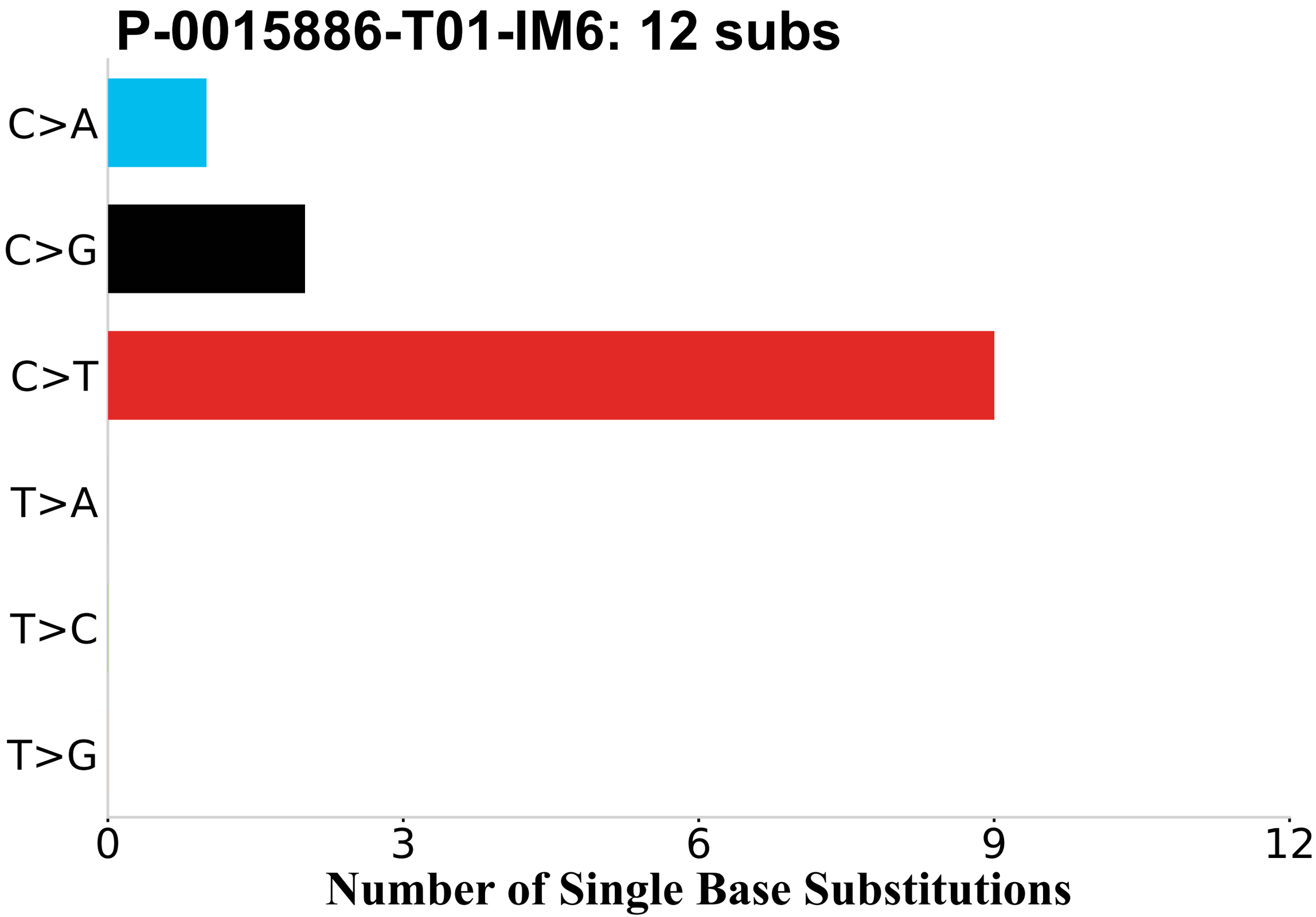
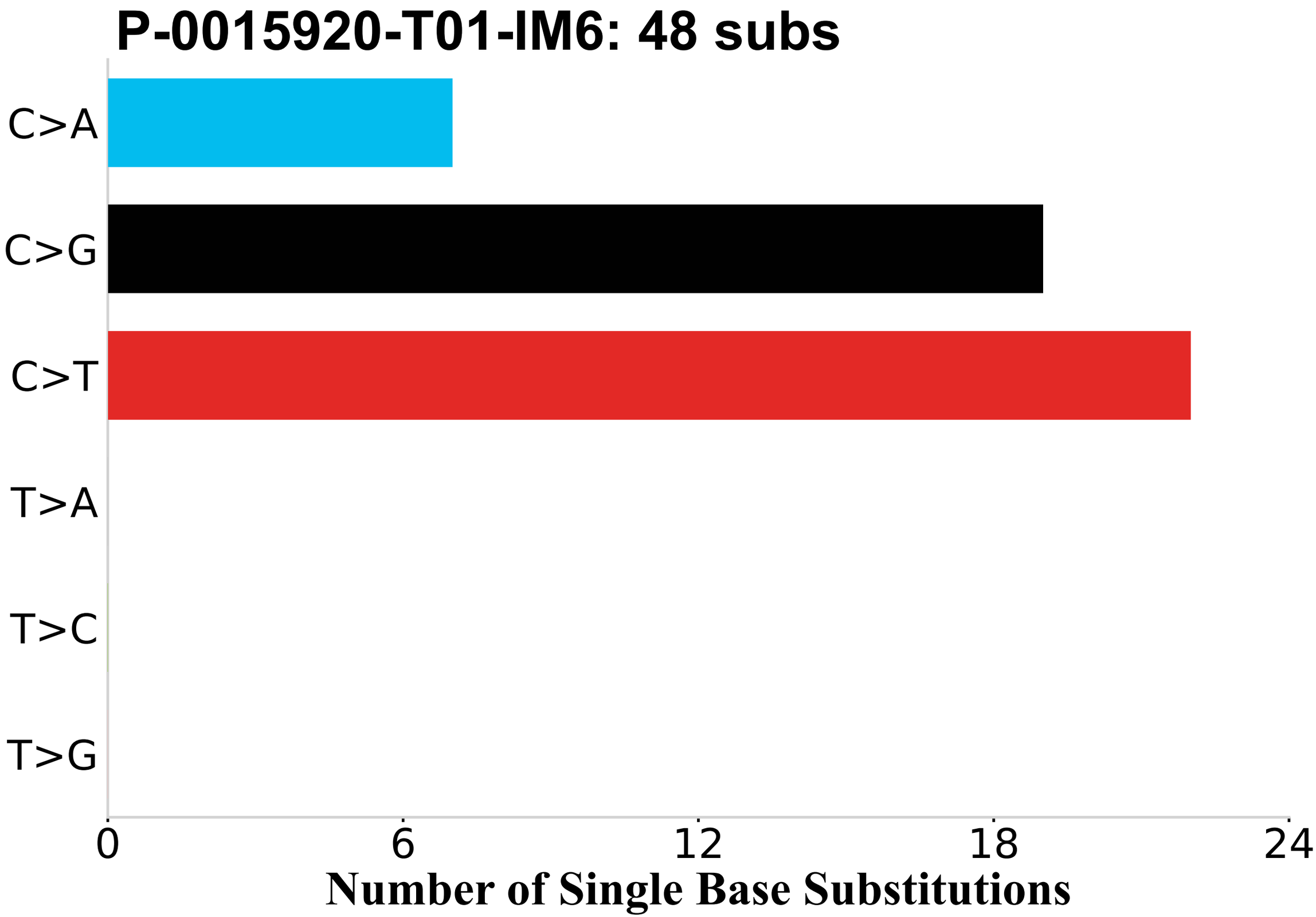
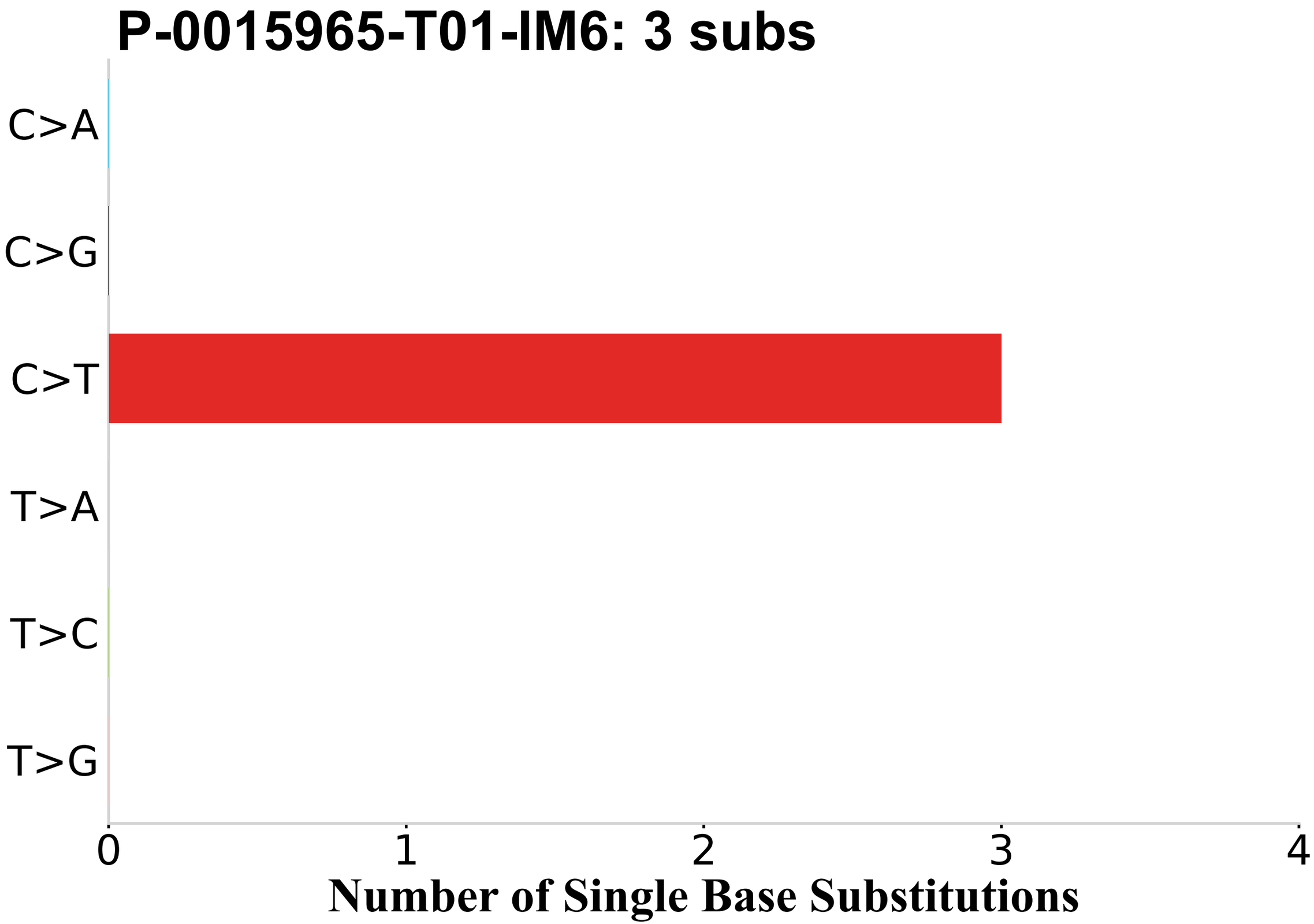
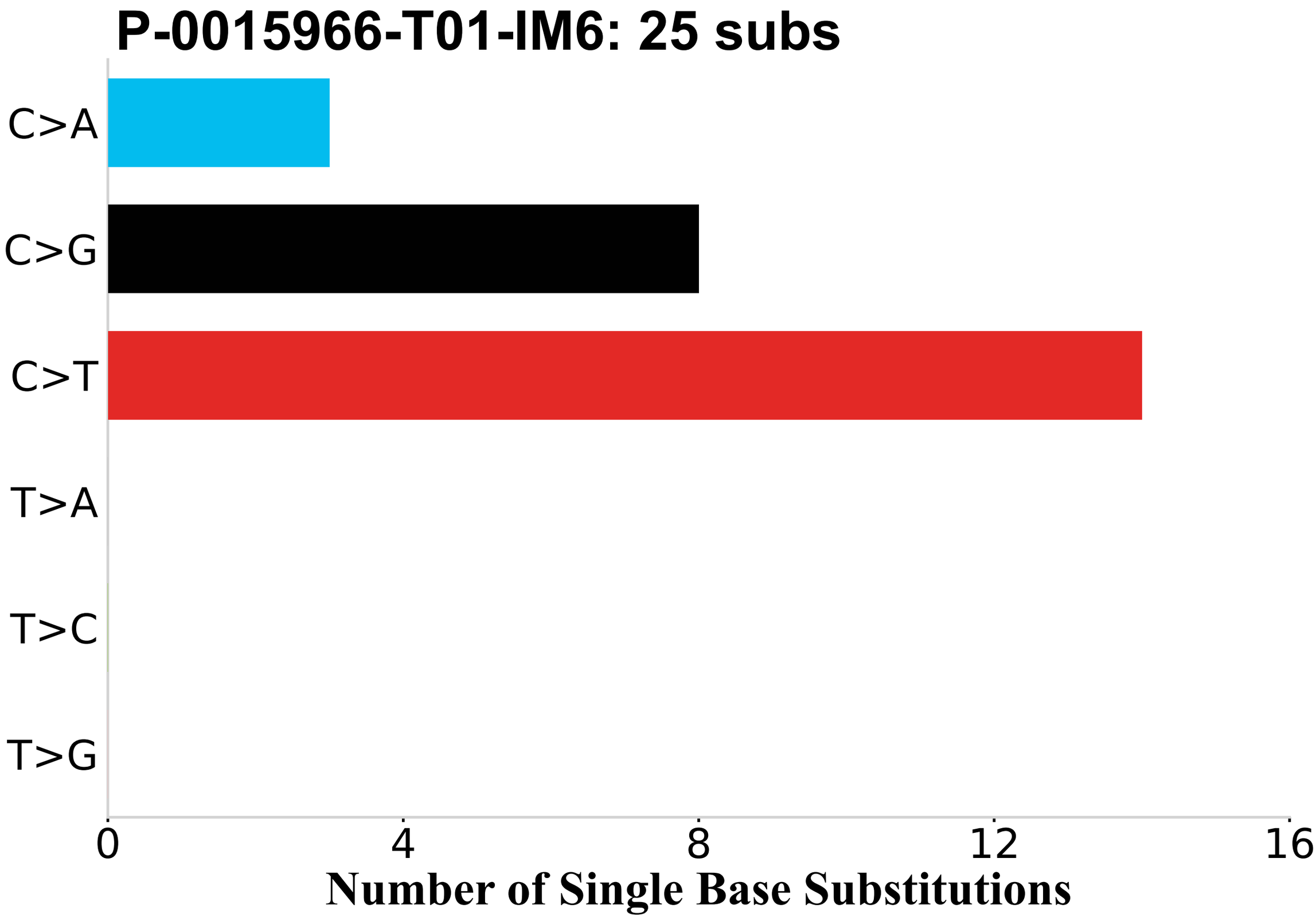
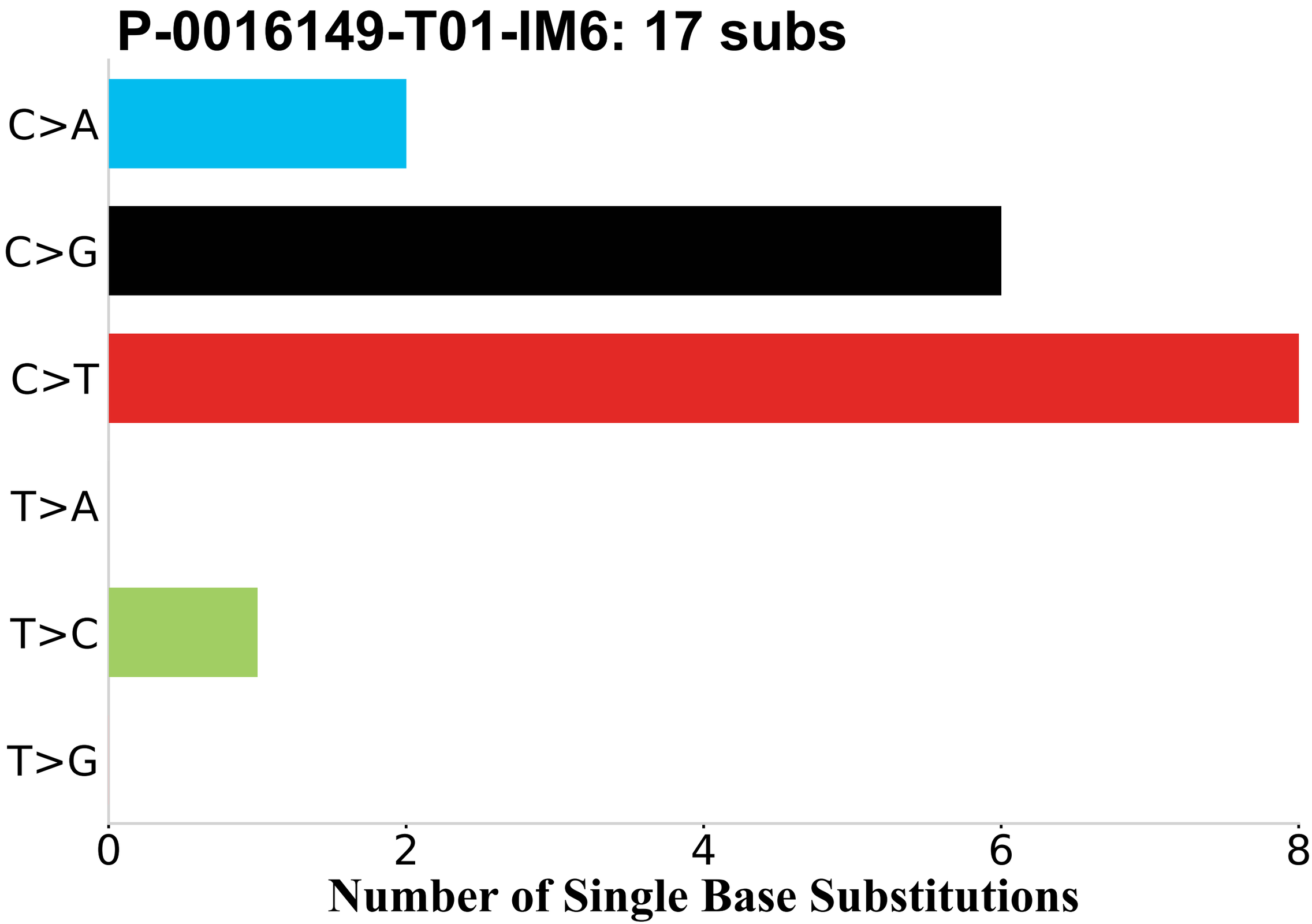
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

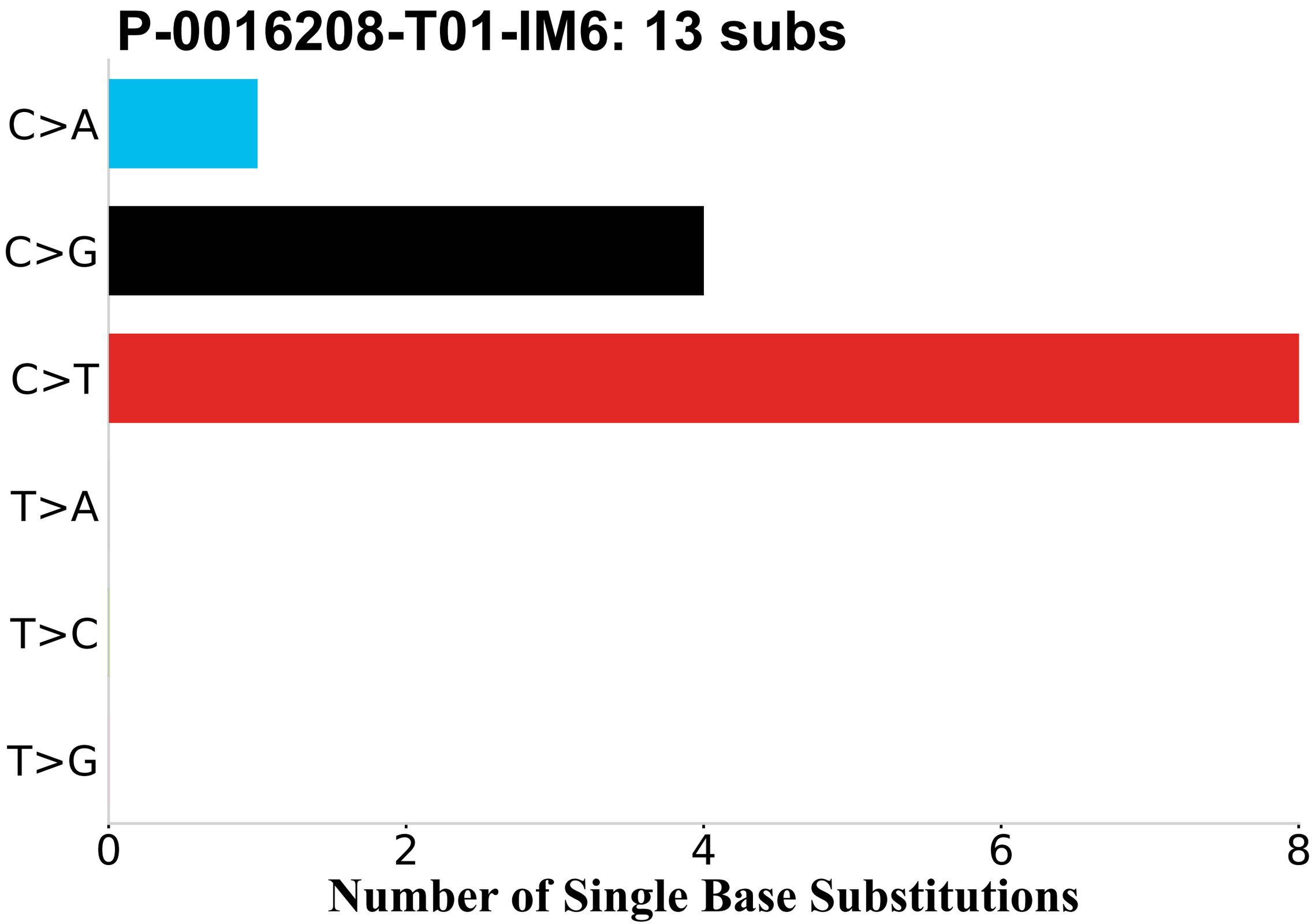

P-0015886-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

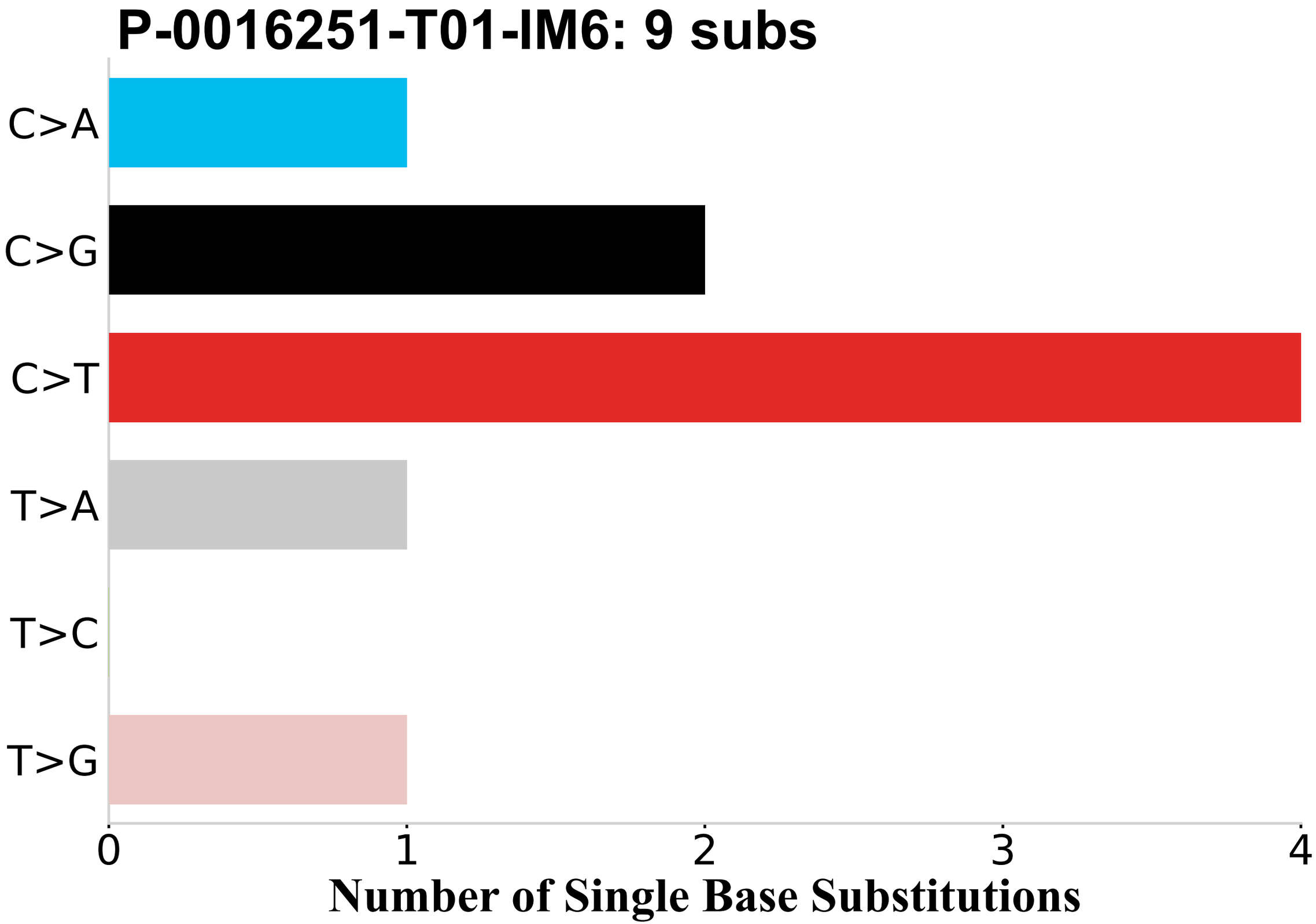

P-0015920-T01-IM6: 48 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions

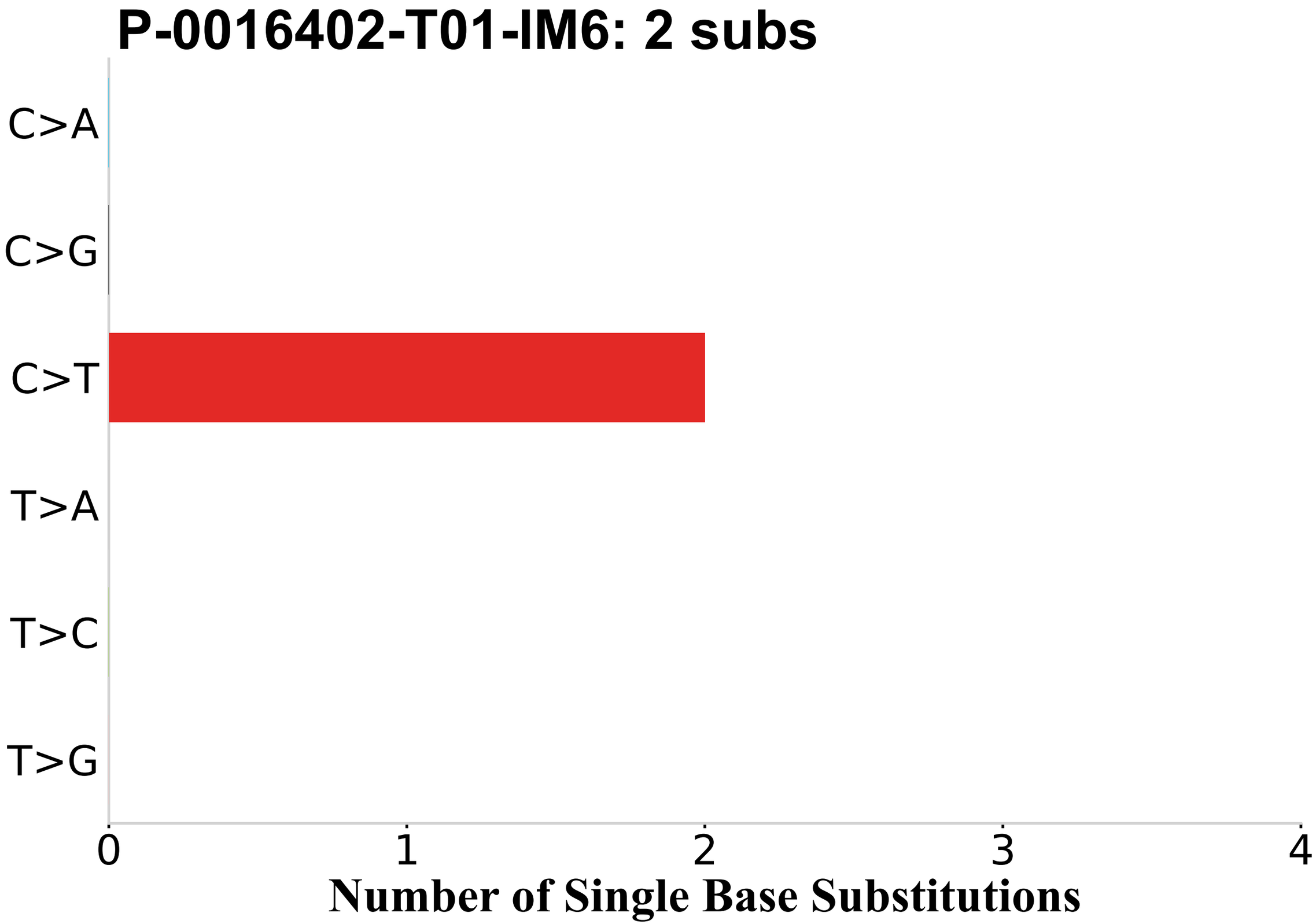

P-0015965-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

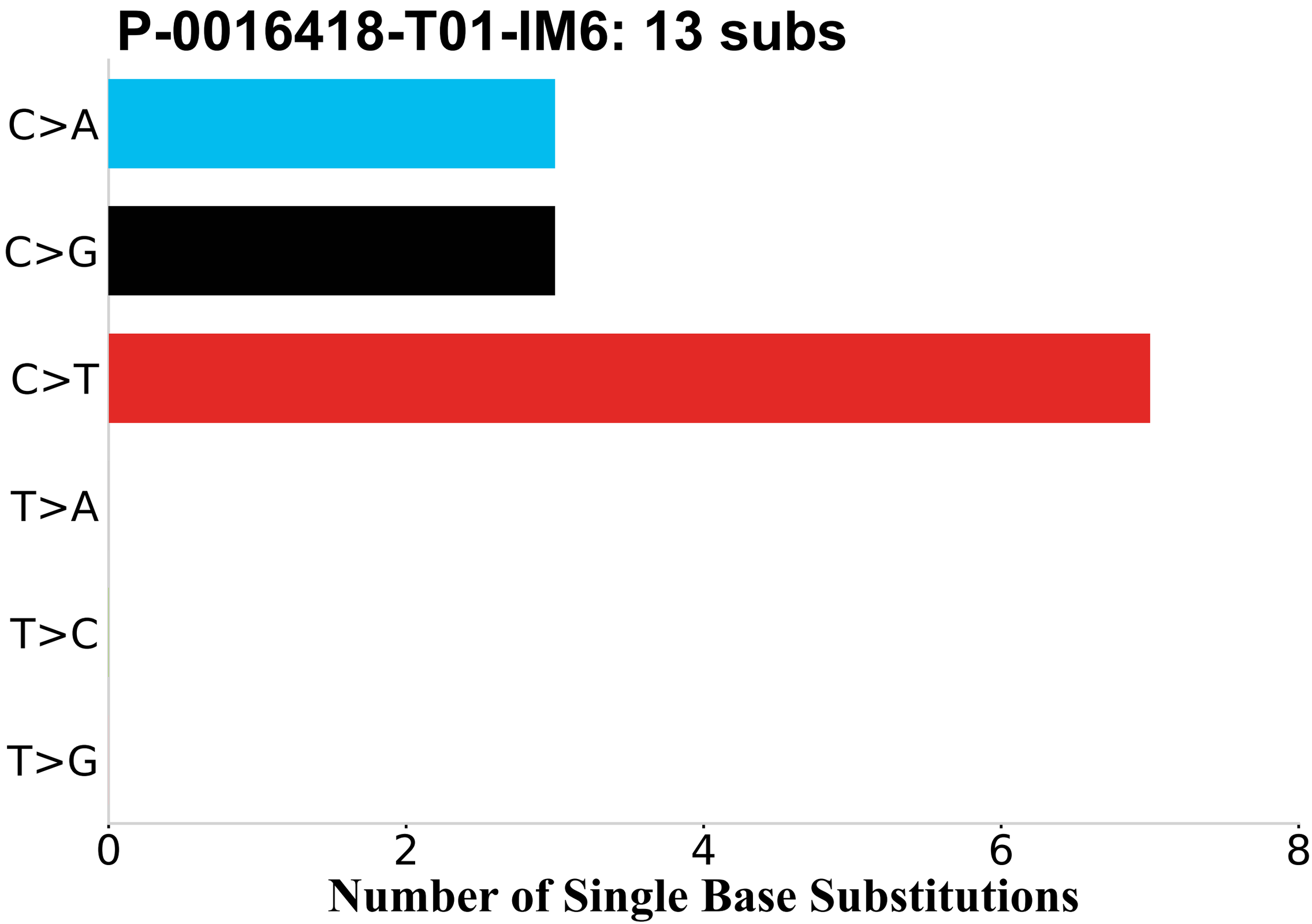

P-0015966-T01-IM6: 25 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

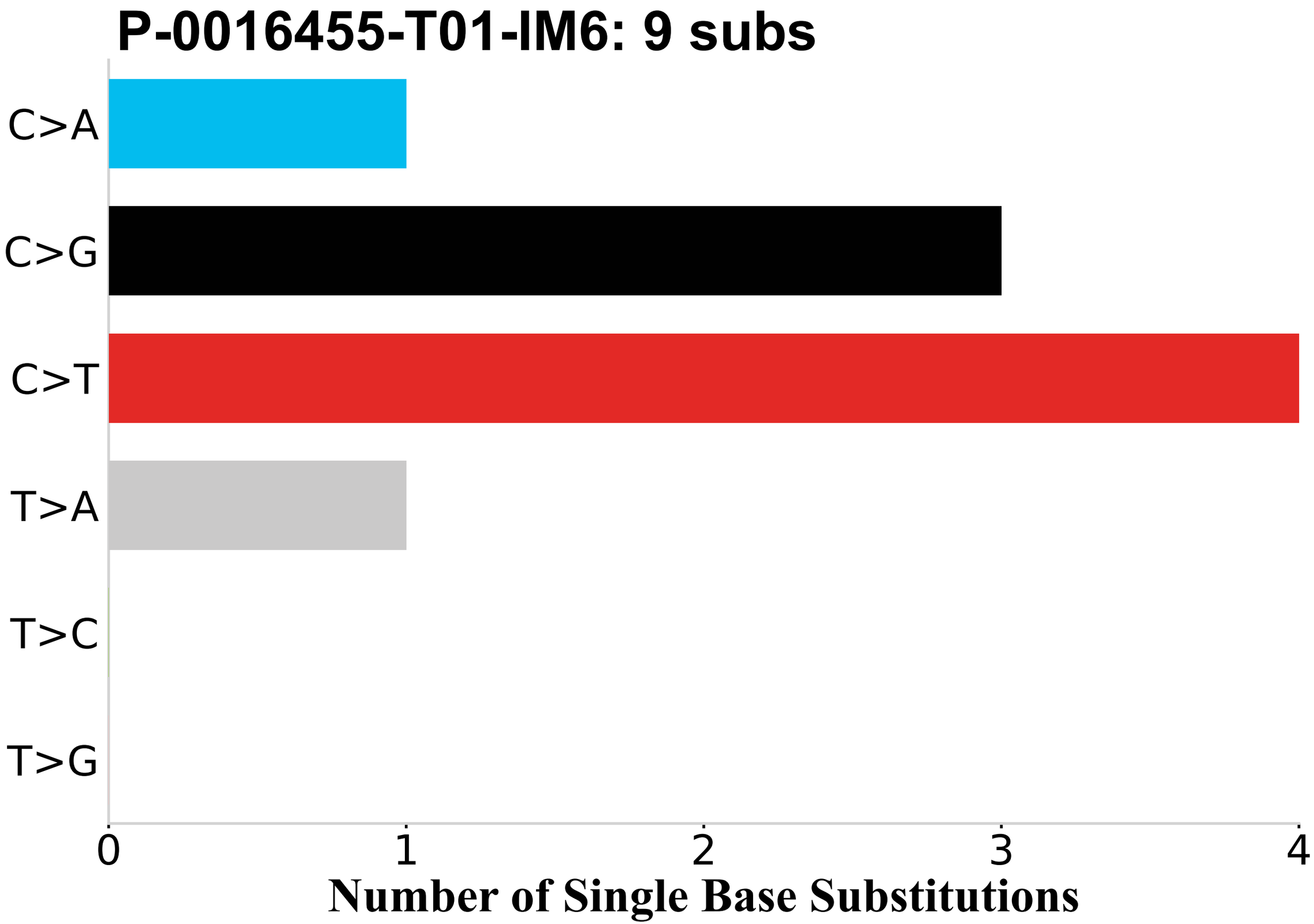

P-0016149-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0016208-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0016251-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0016402-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0016418-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0016455-T01-IM6: 9 subs
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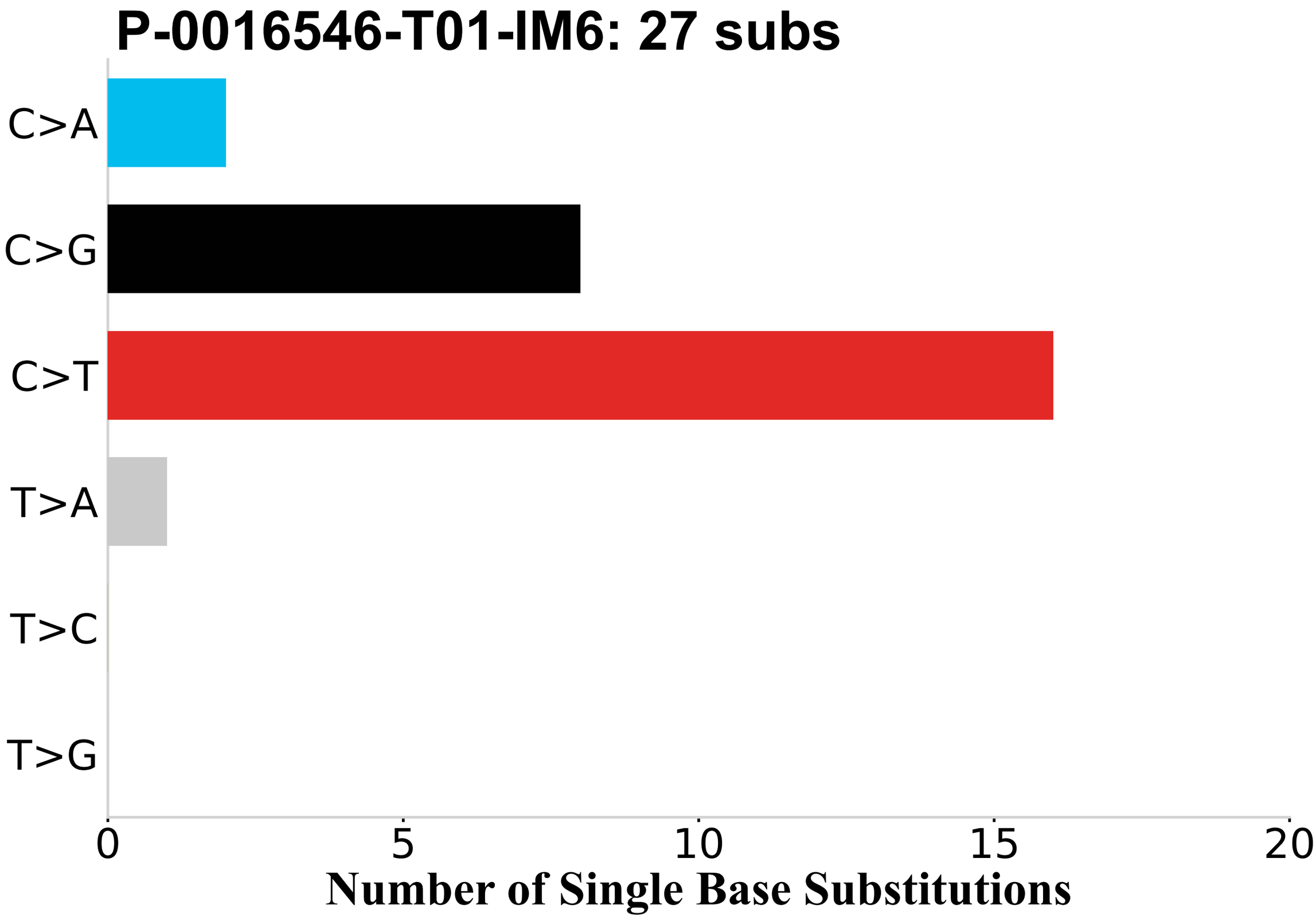
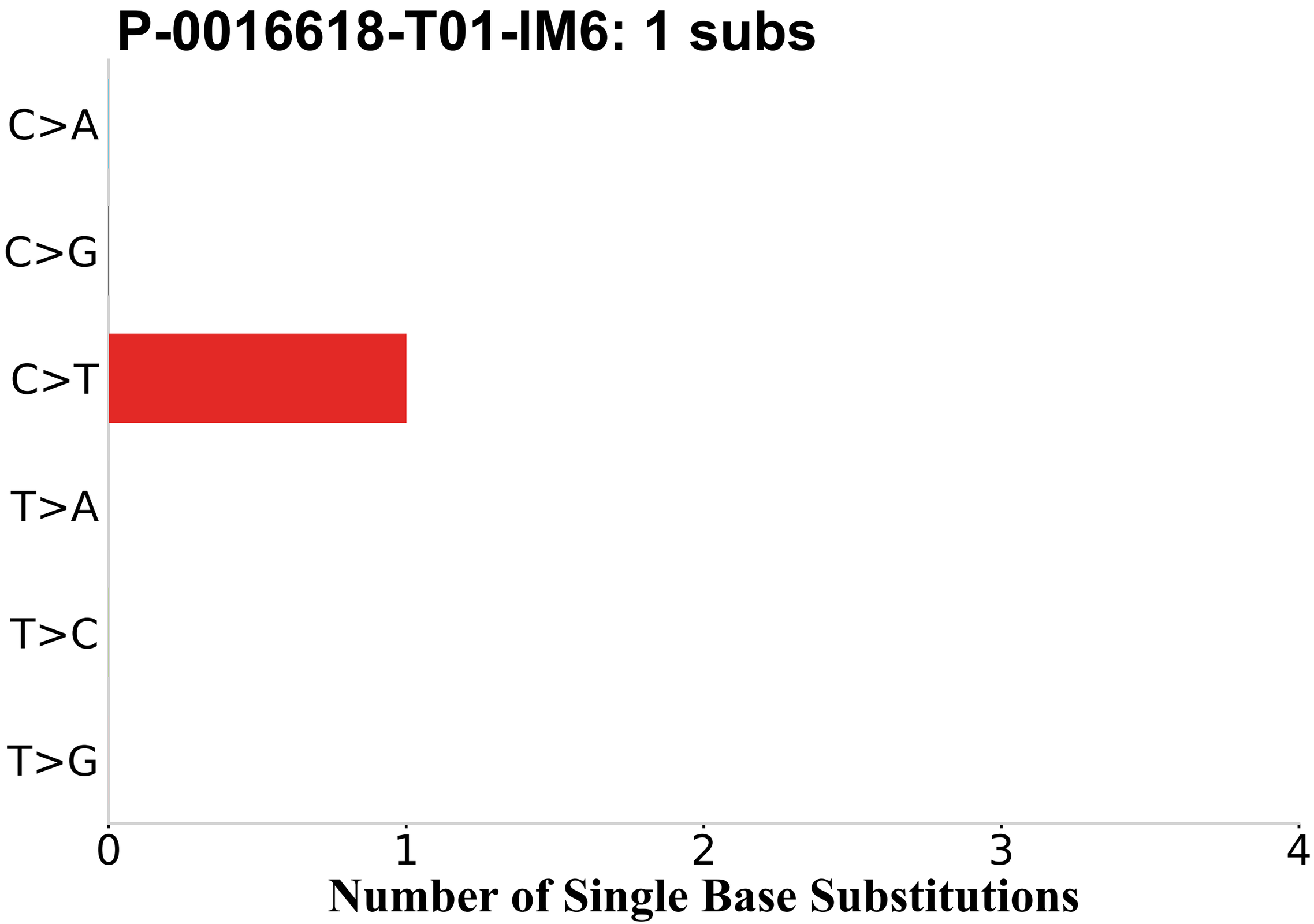
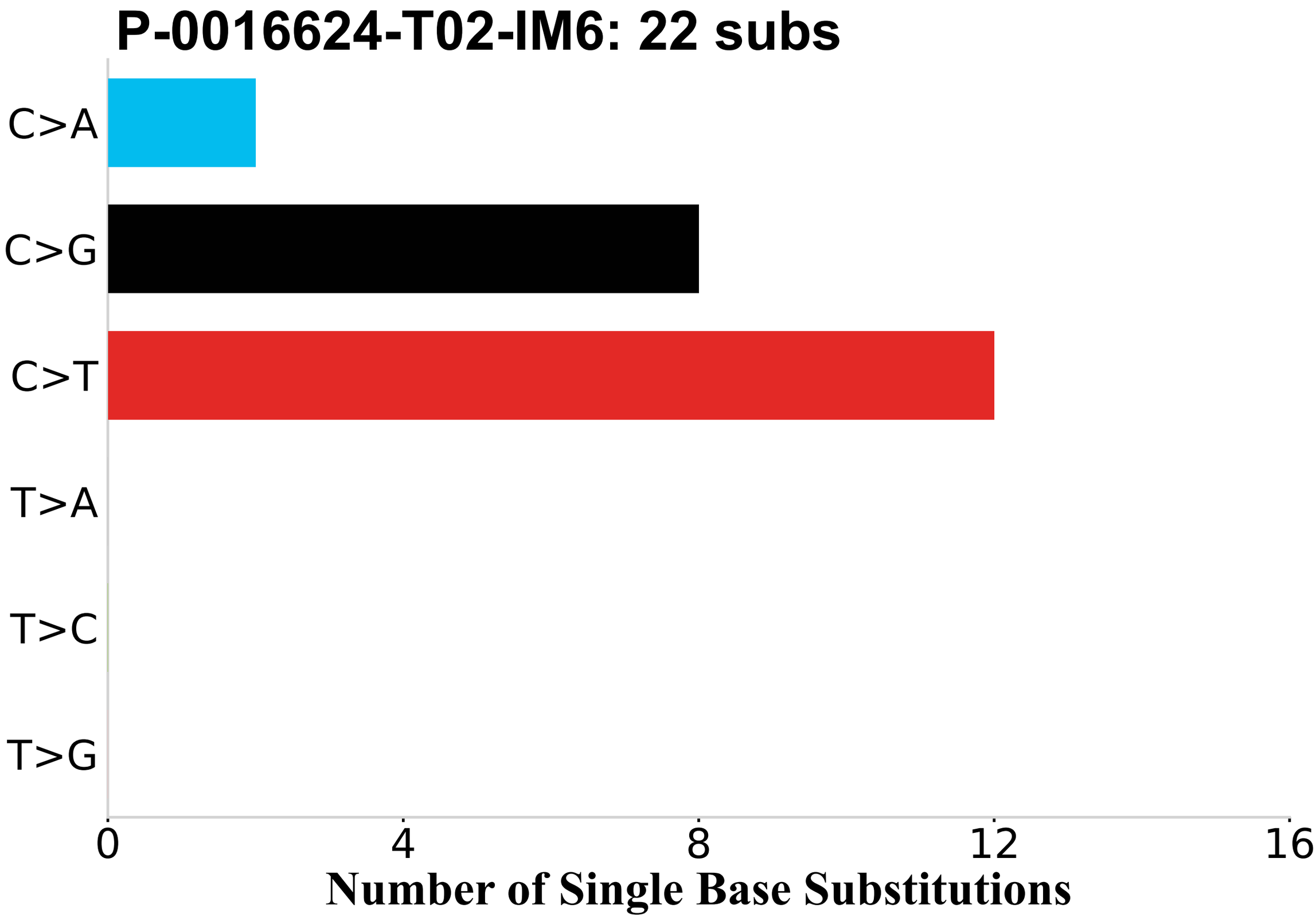
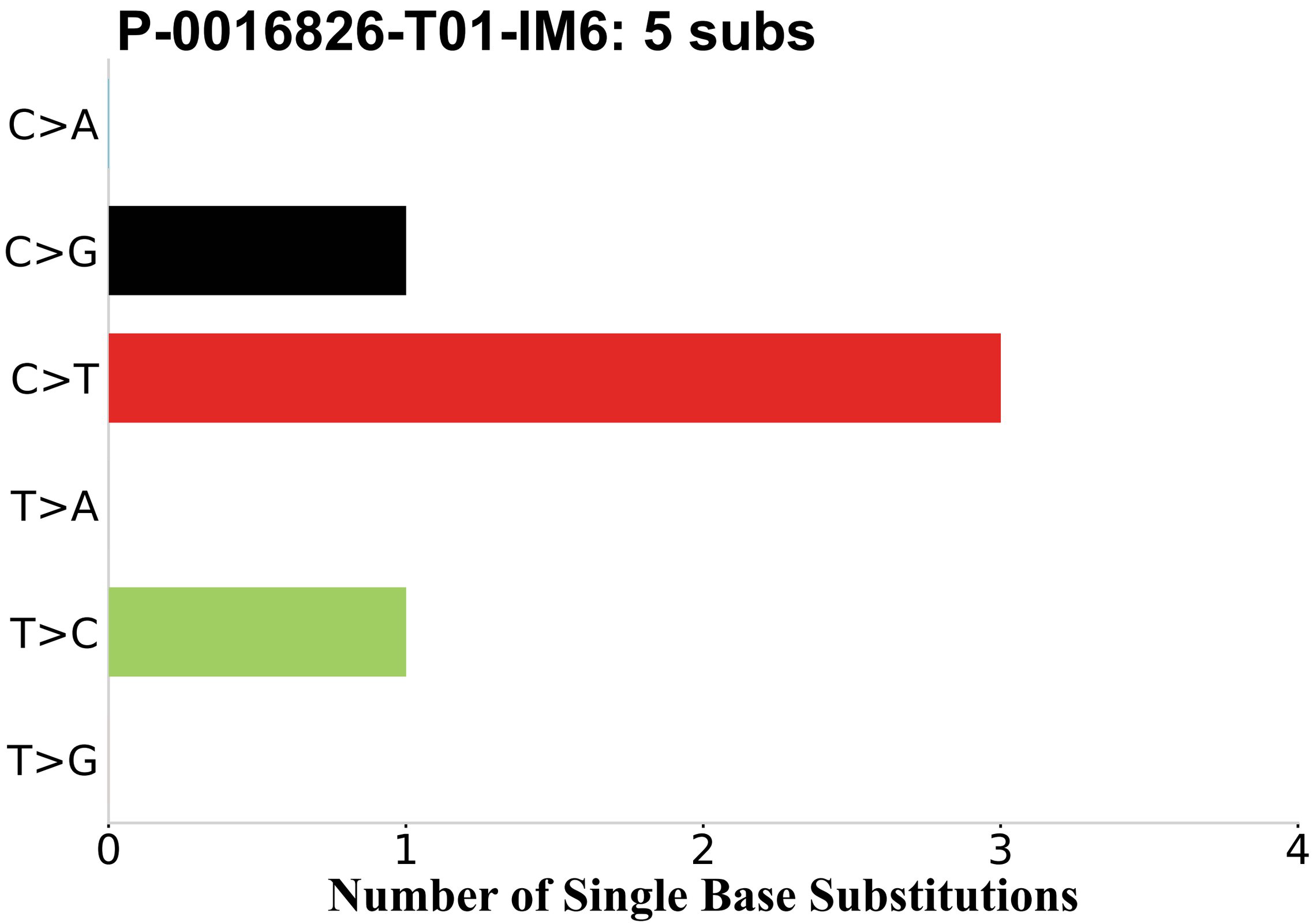
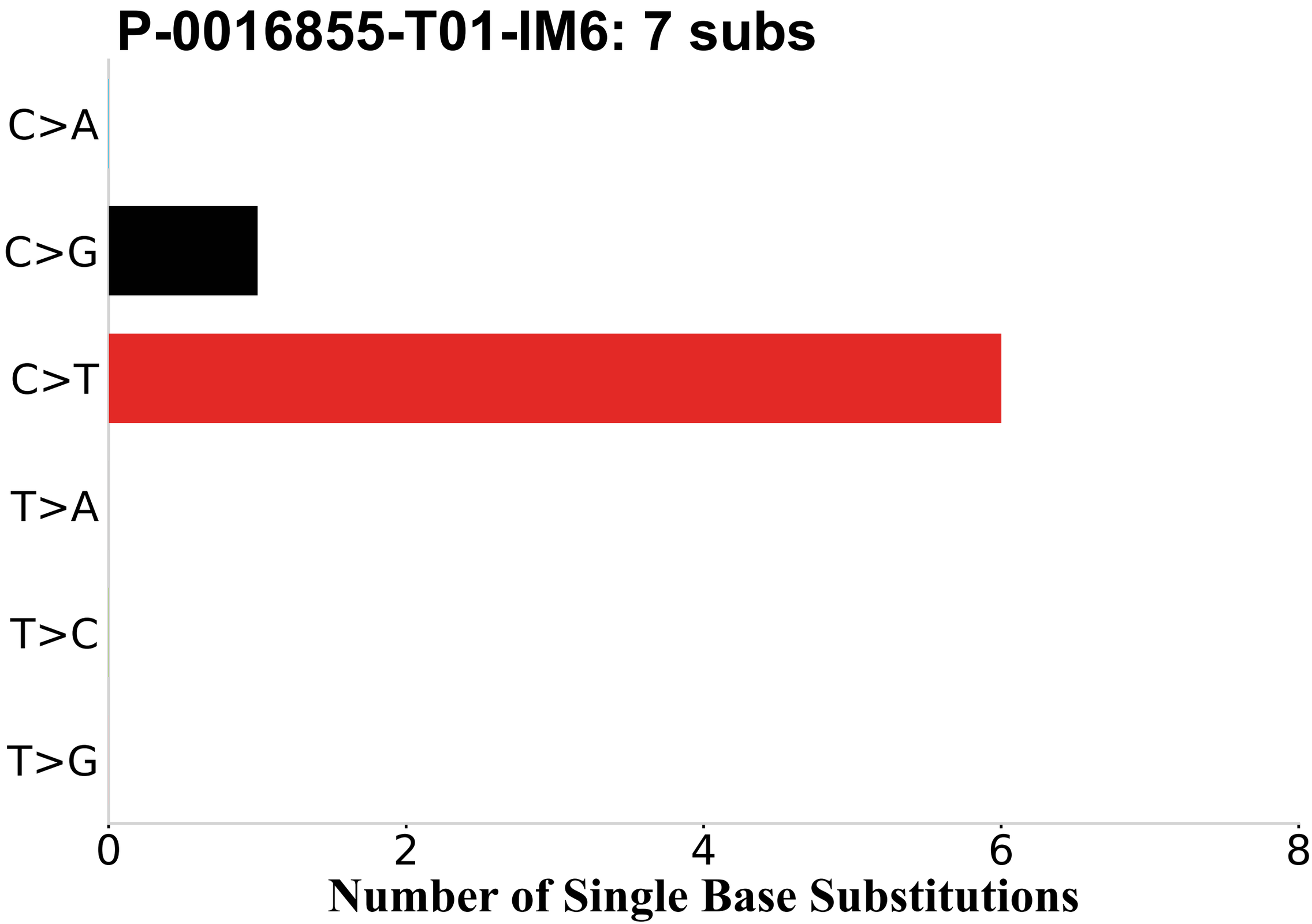
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

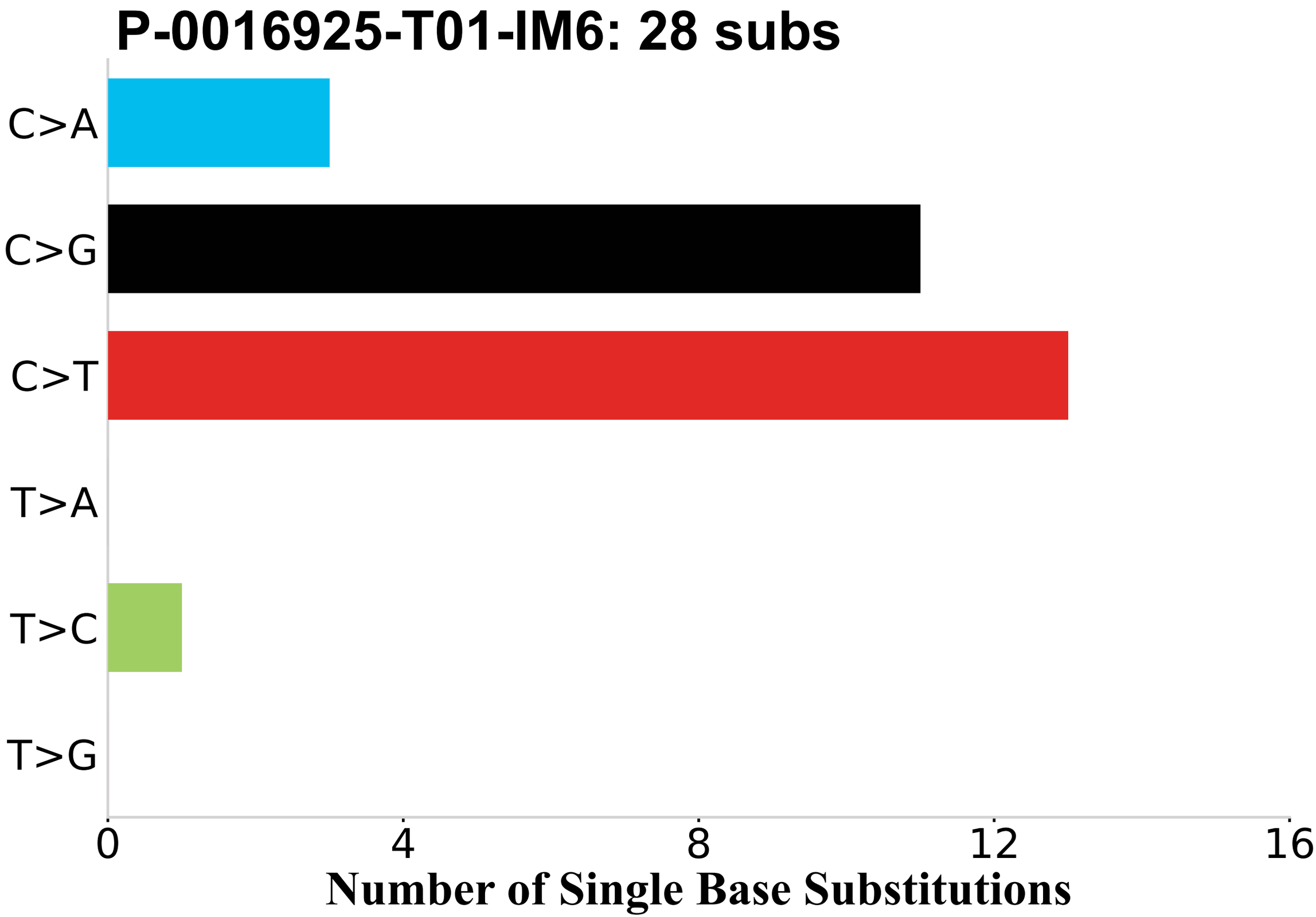

P-0016546-T01-IM6: 27 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

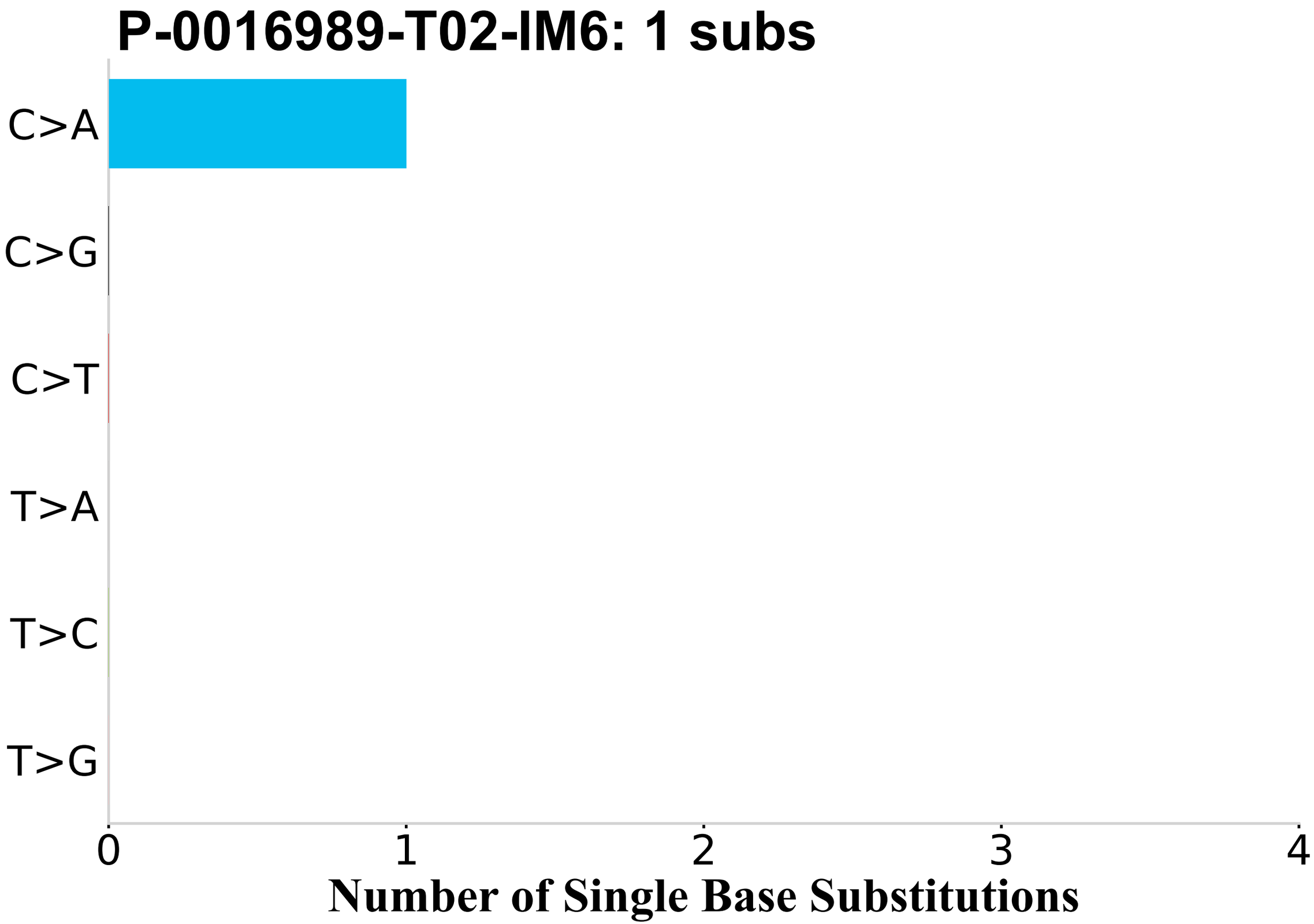

P-0016618-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

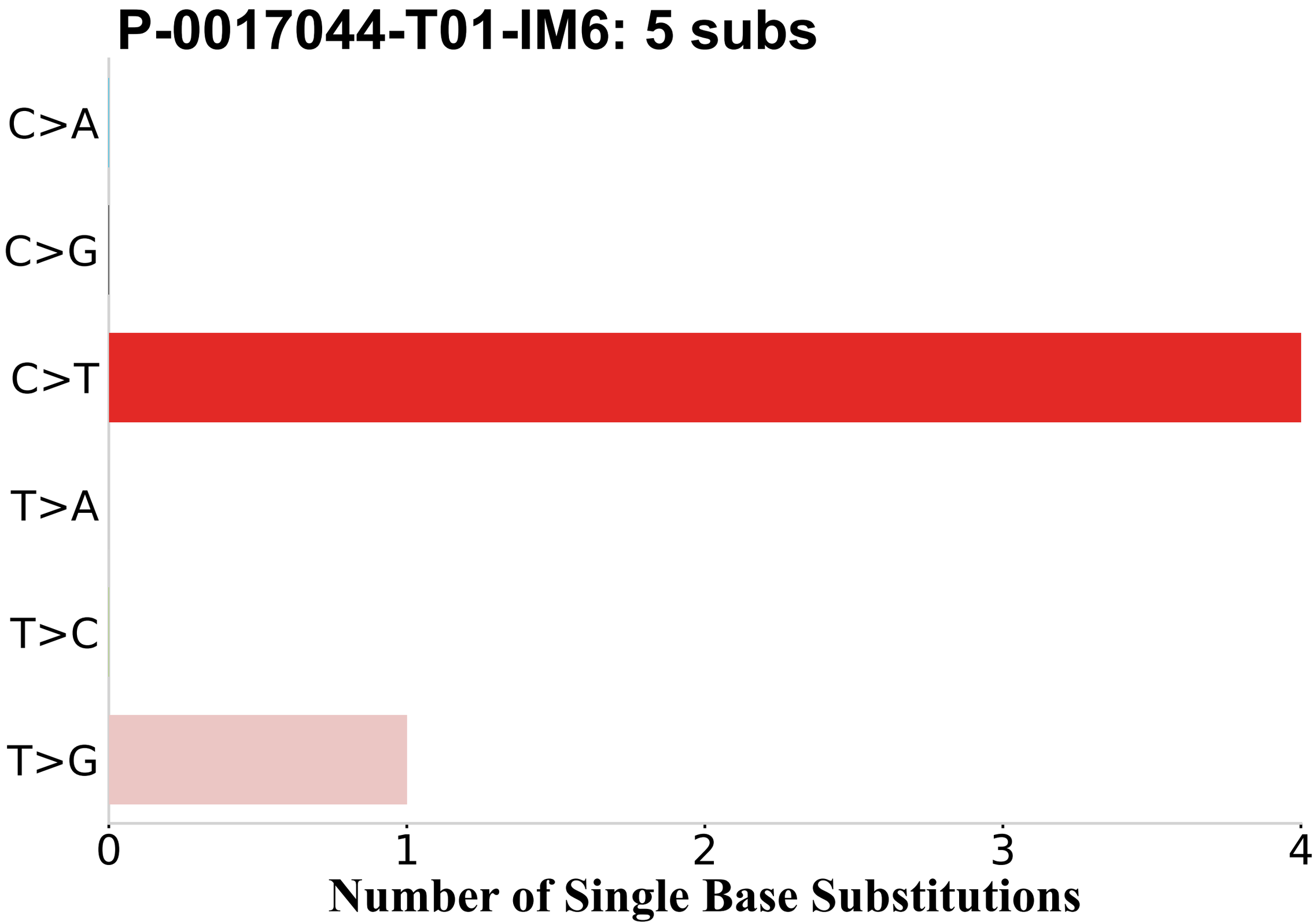

P-0016624-T02-IM6: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

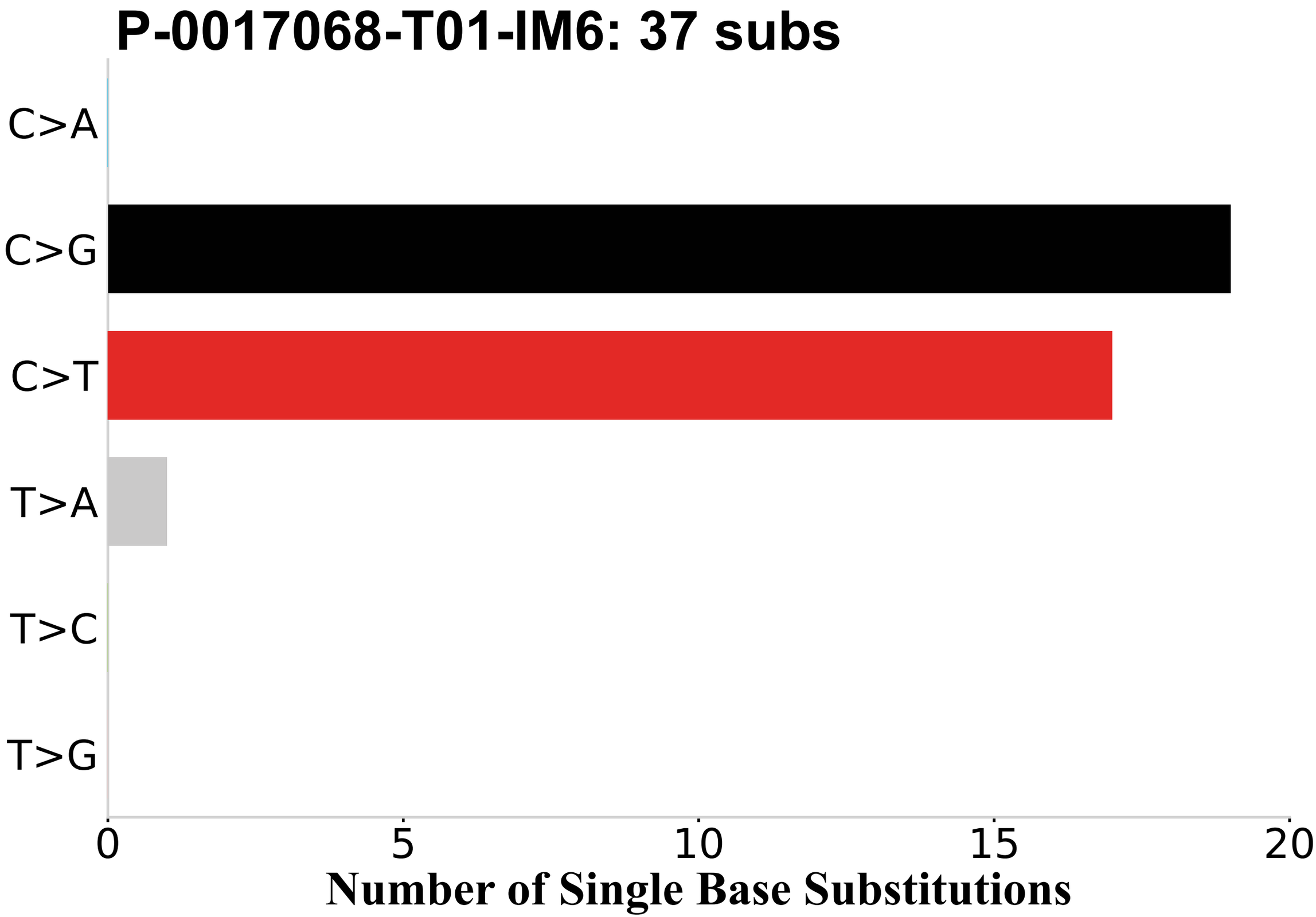

P-0016826-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

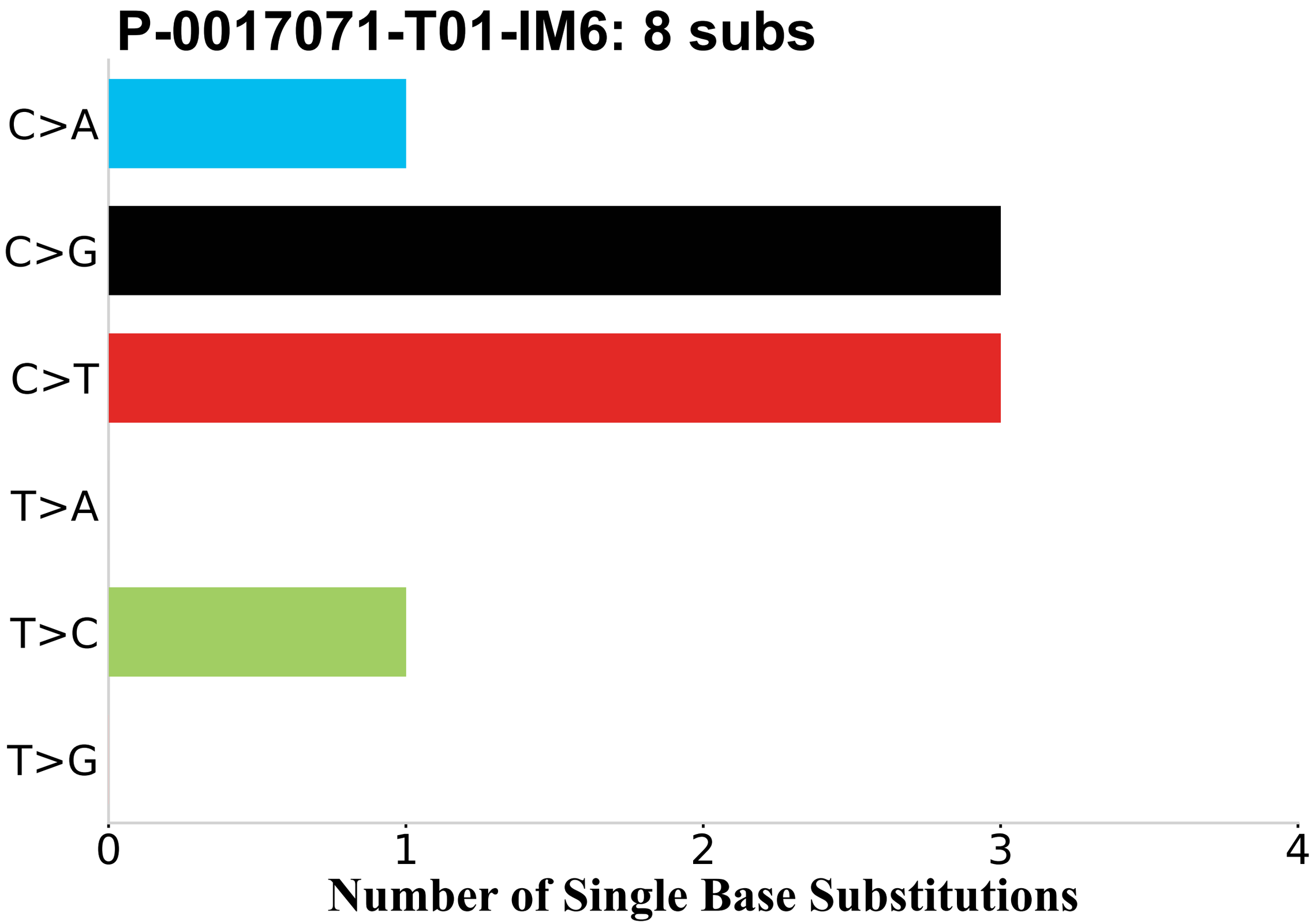

P-0016855-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

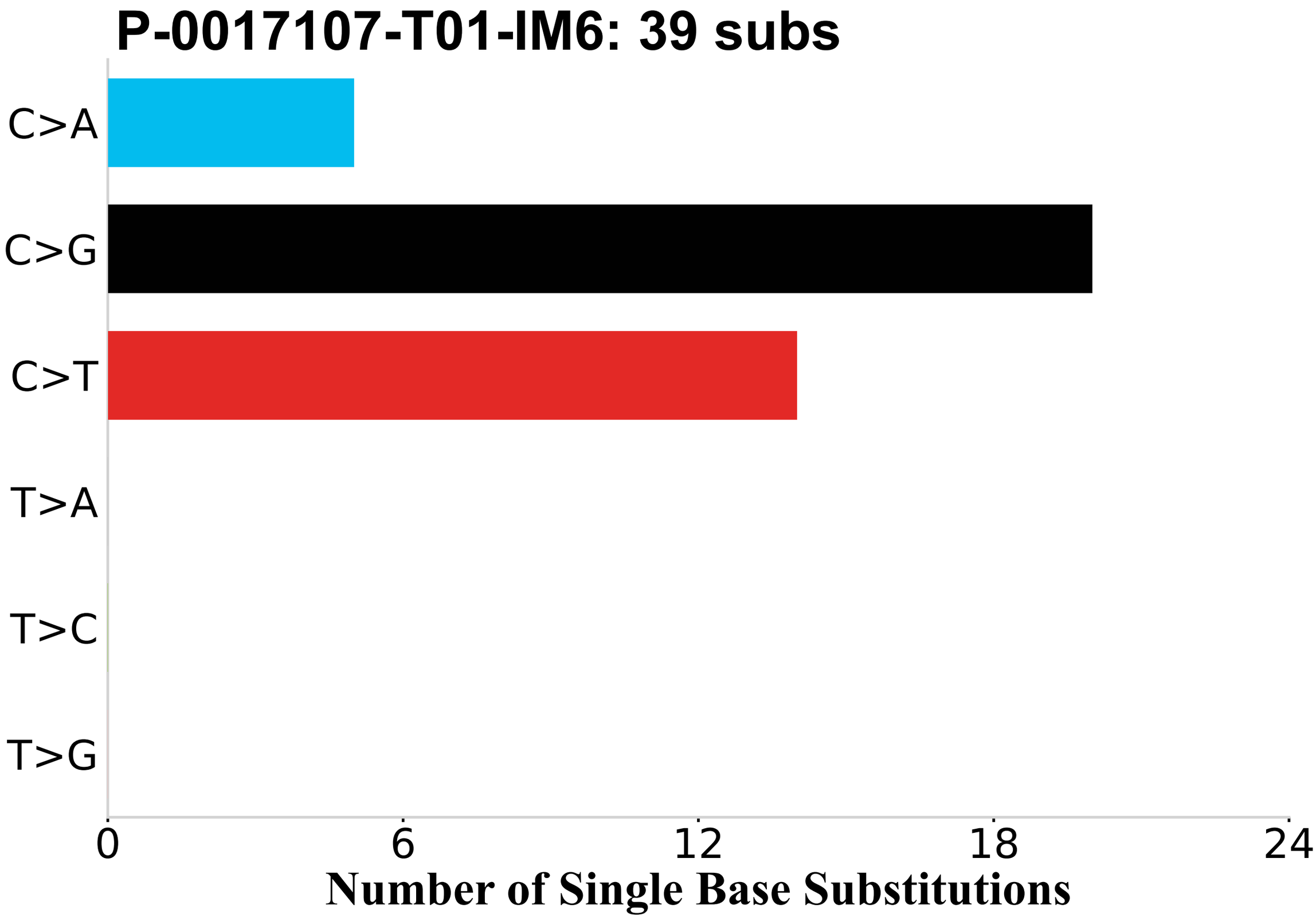

P-0016925-T01-IM6: 28 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

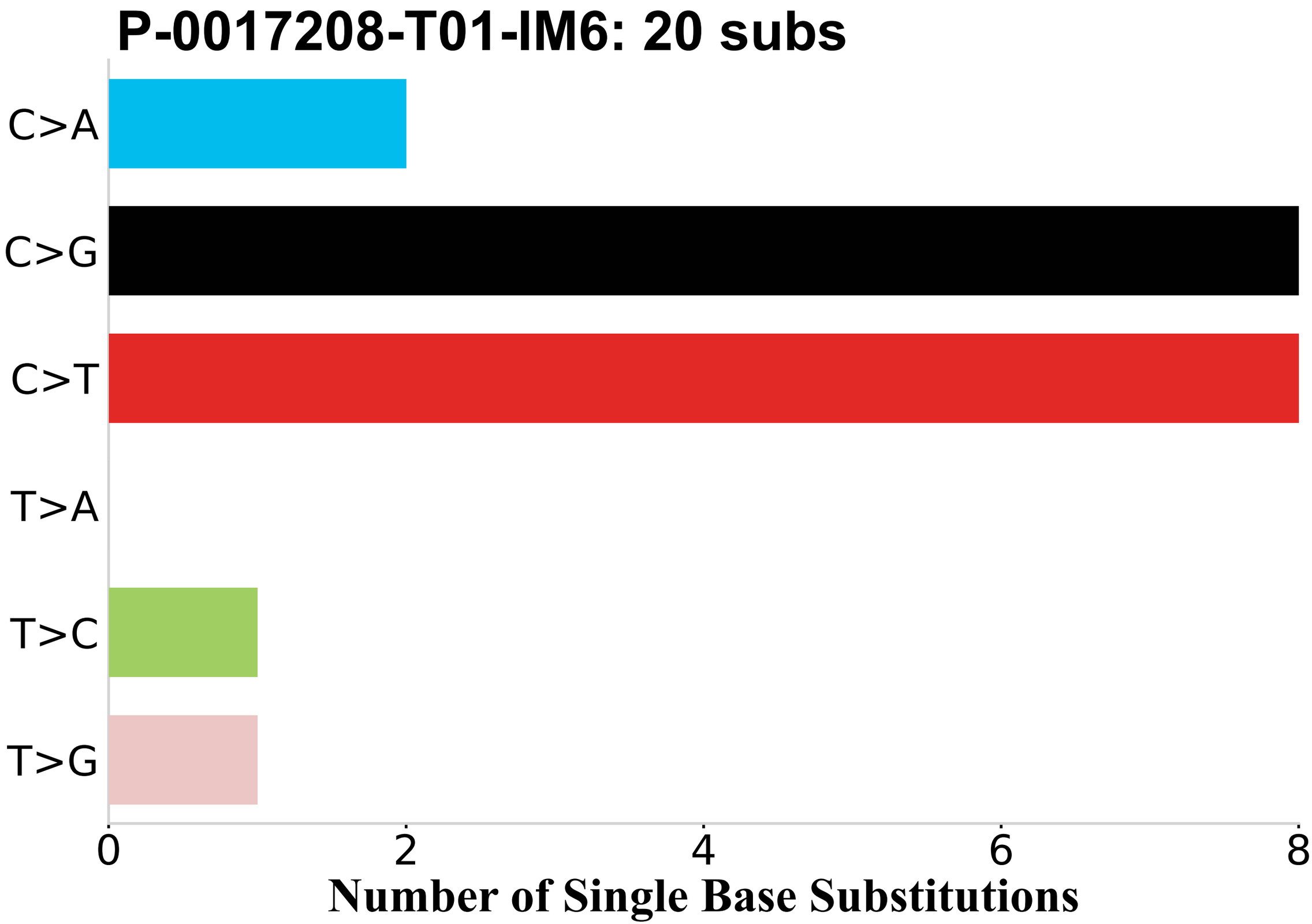

P-0016989-T02-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

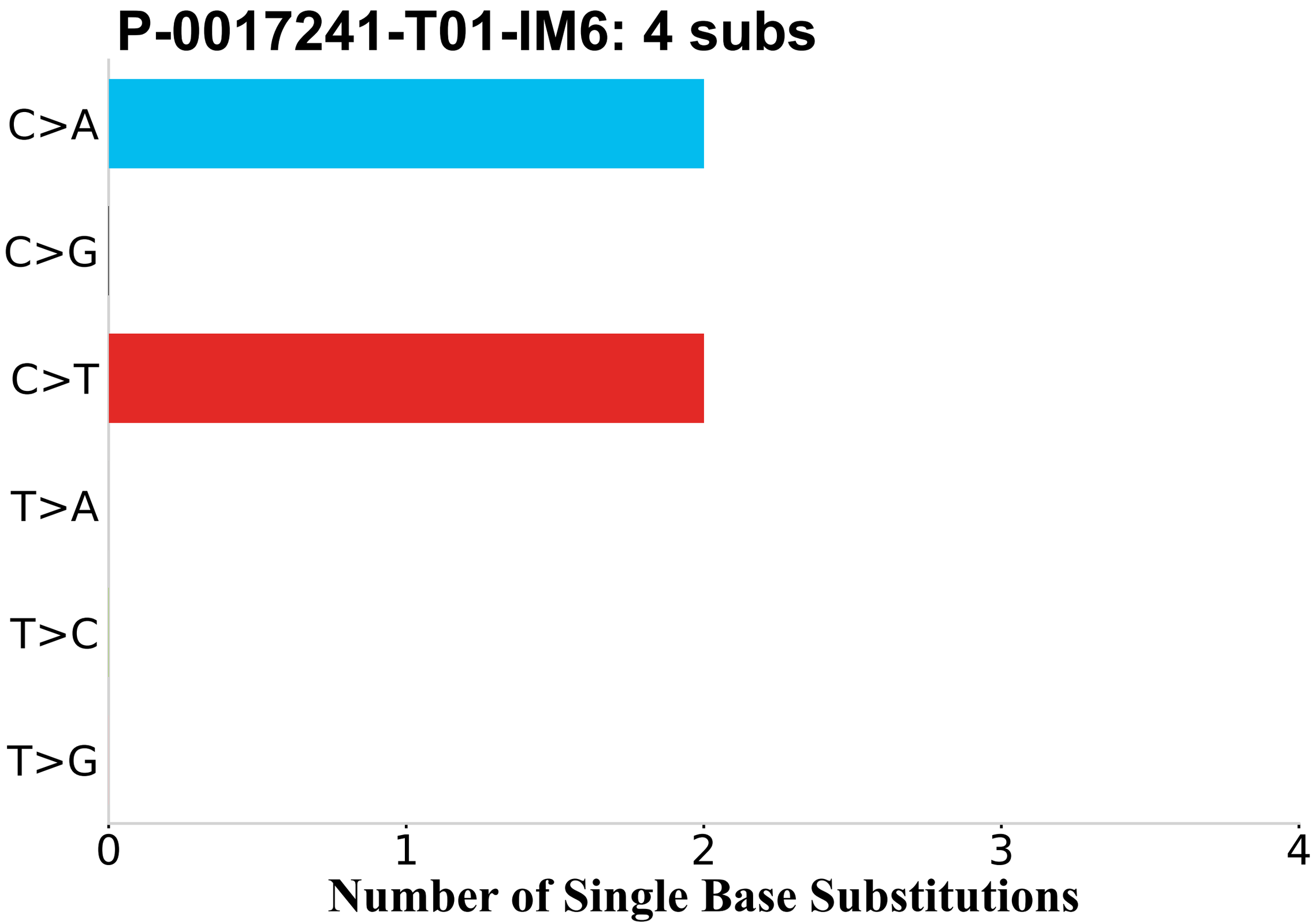

P-0017044-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

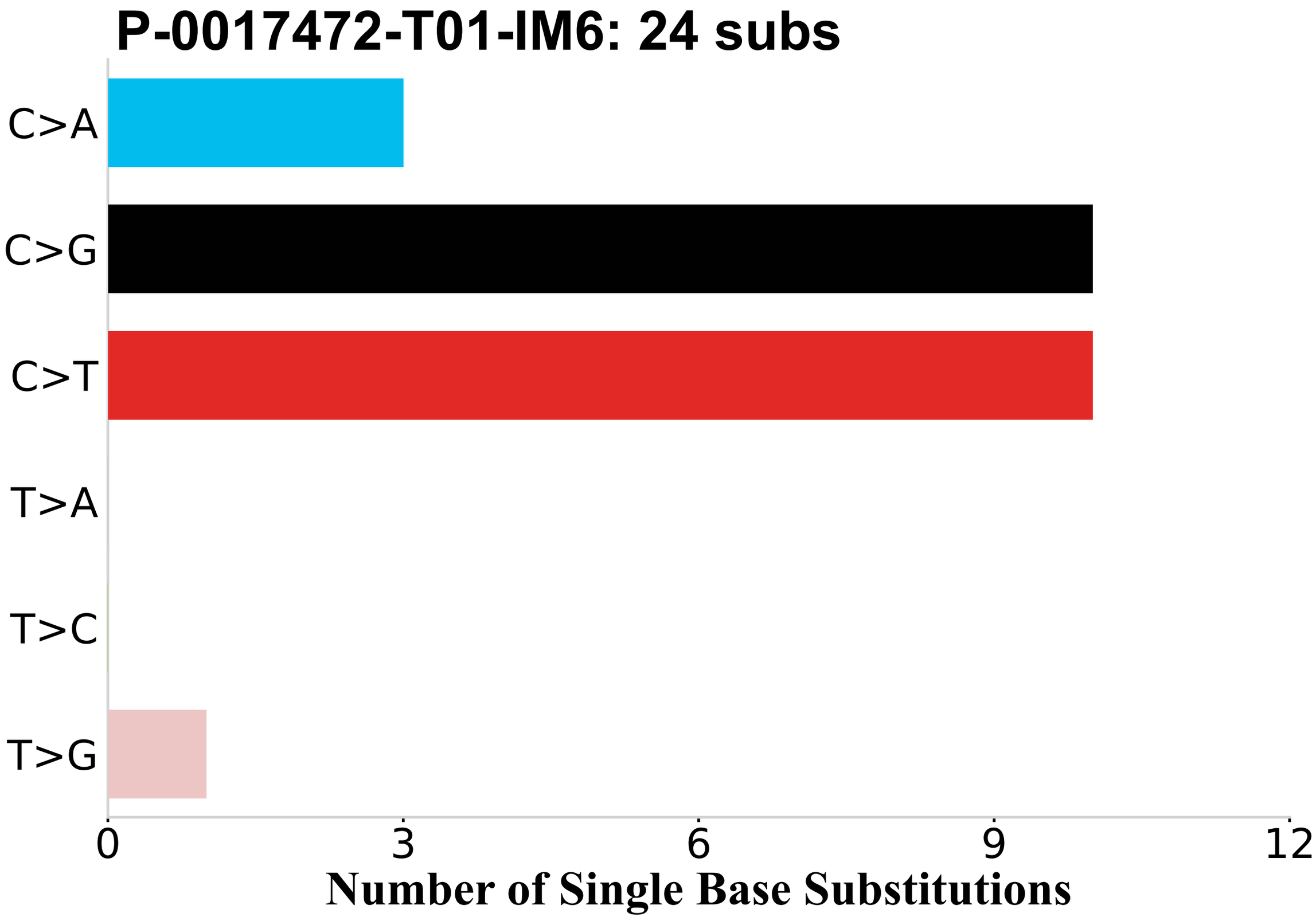

P-0017068-T01-IM6: 37 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

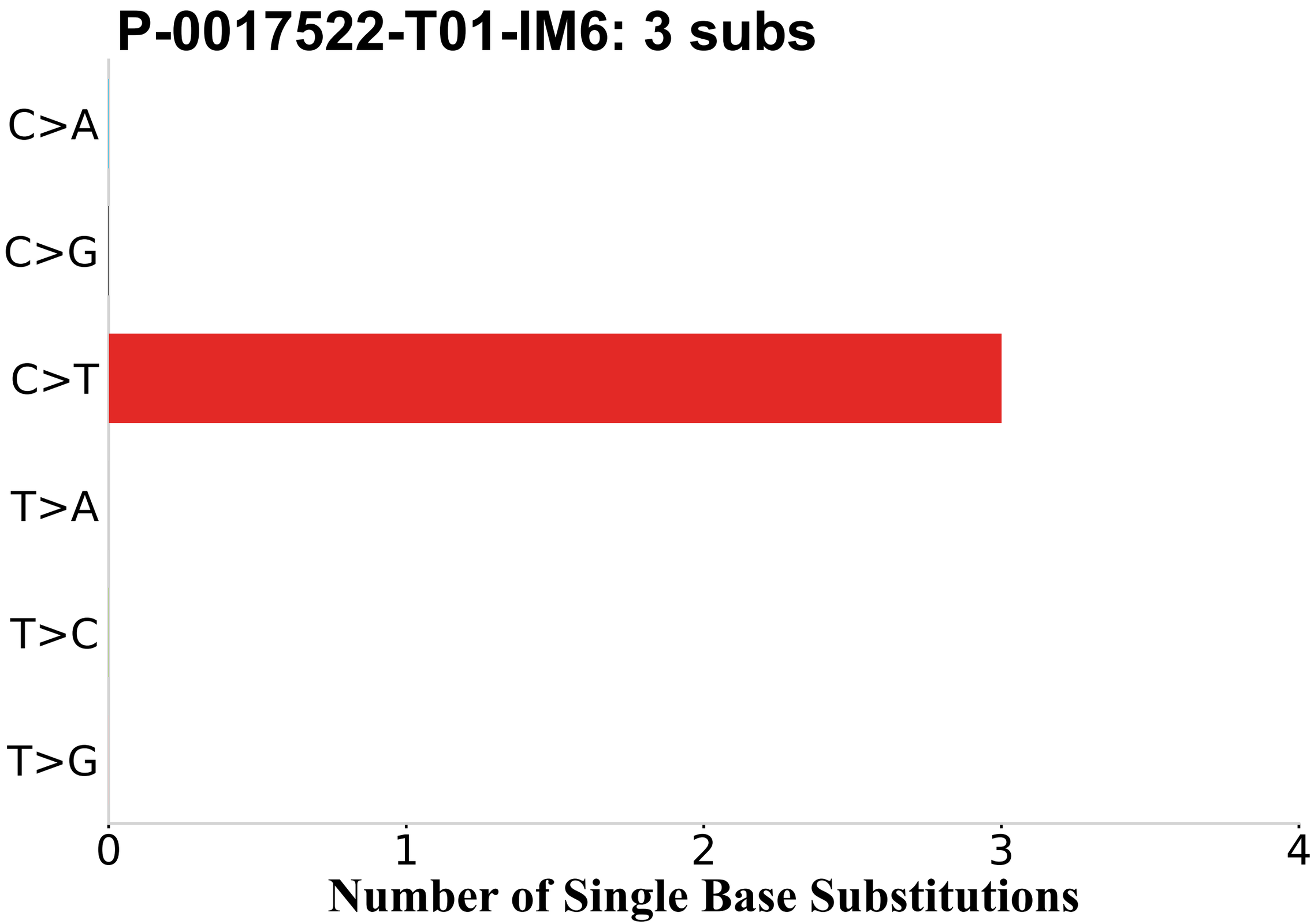

P-0017071-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0017107-T01-IM6: 39 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions


P-0017208-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0017241-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0017472-T01-IM6: 24 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0017522-T01-IM6: 3 subs
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T>G
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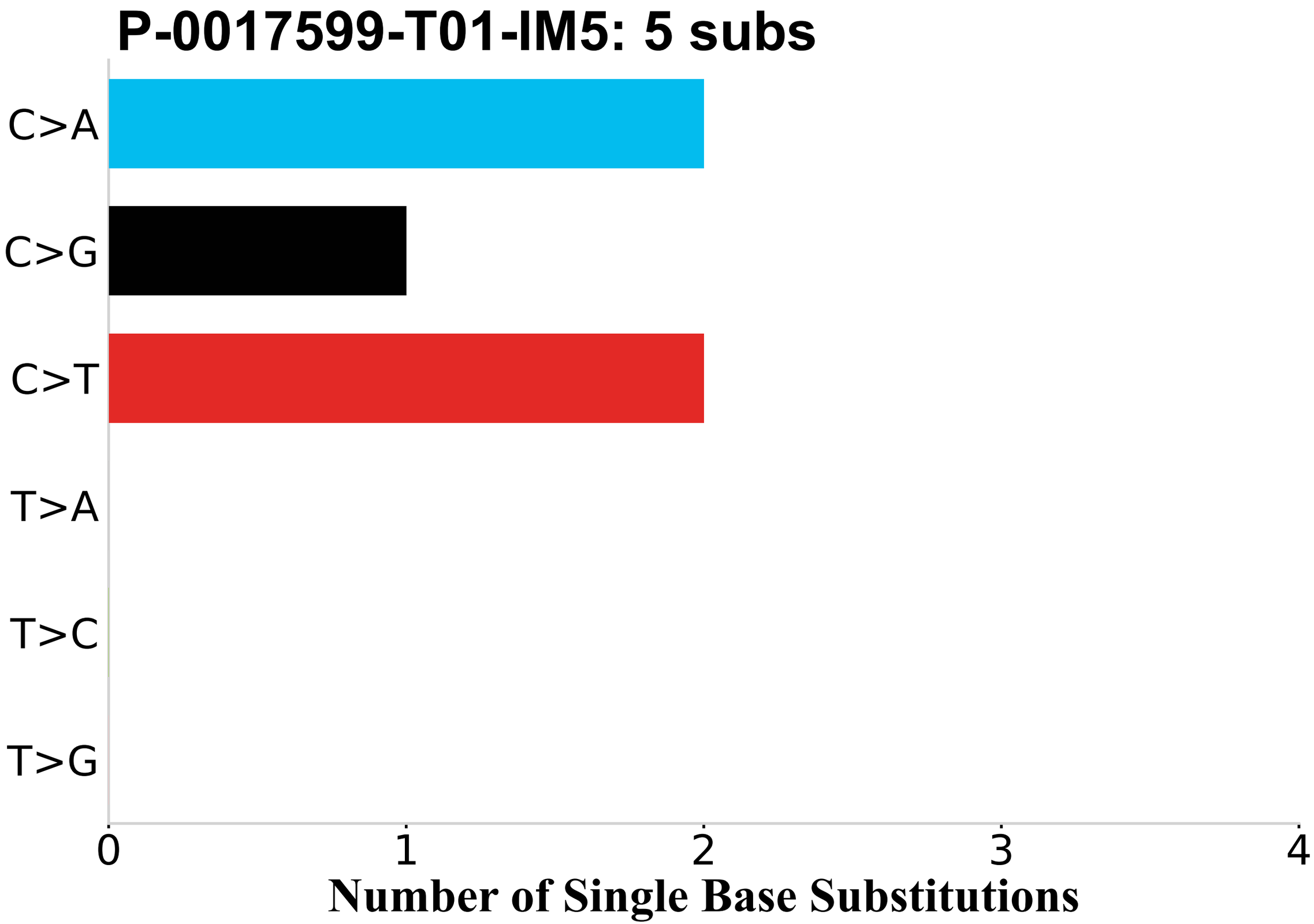
3
4
Number of Single Base Substitutions


P-0017599-T01-IM5: 5 subs
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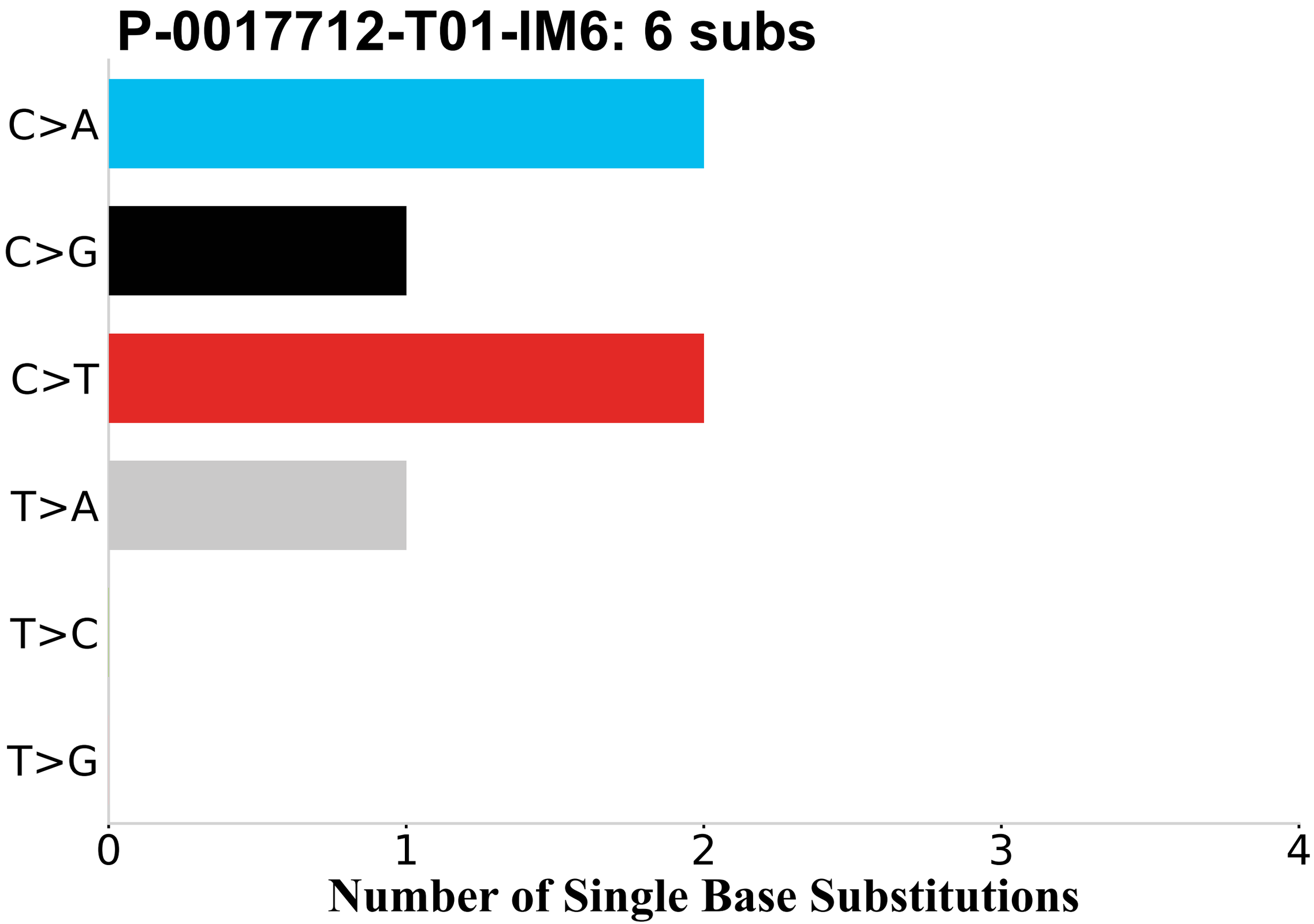
4
Number of Single Base Substitutions


P-0017712-T01-IM6: 6 subs
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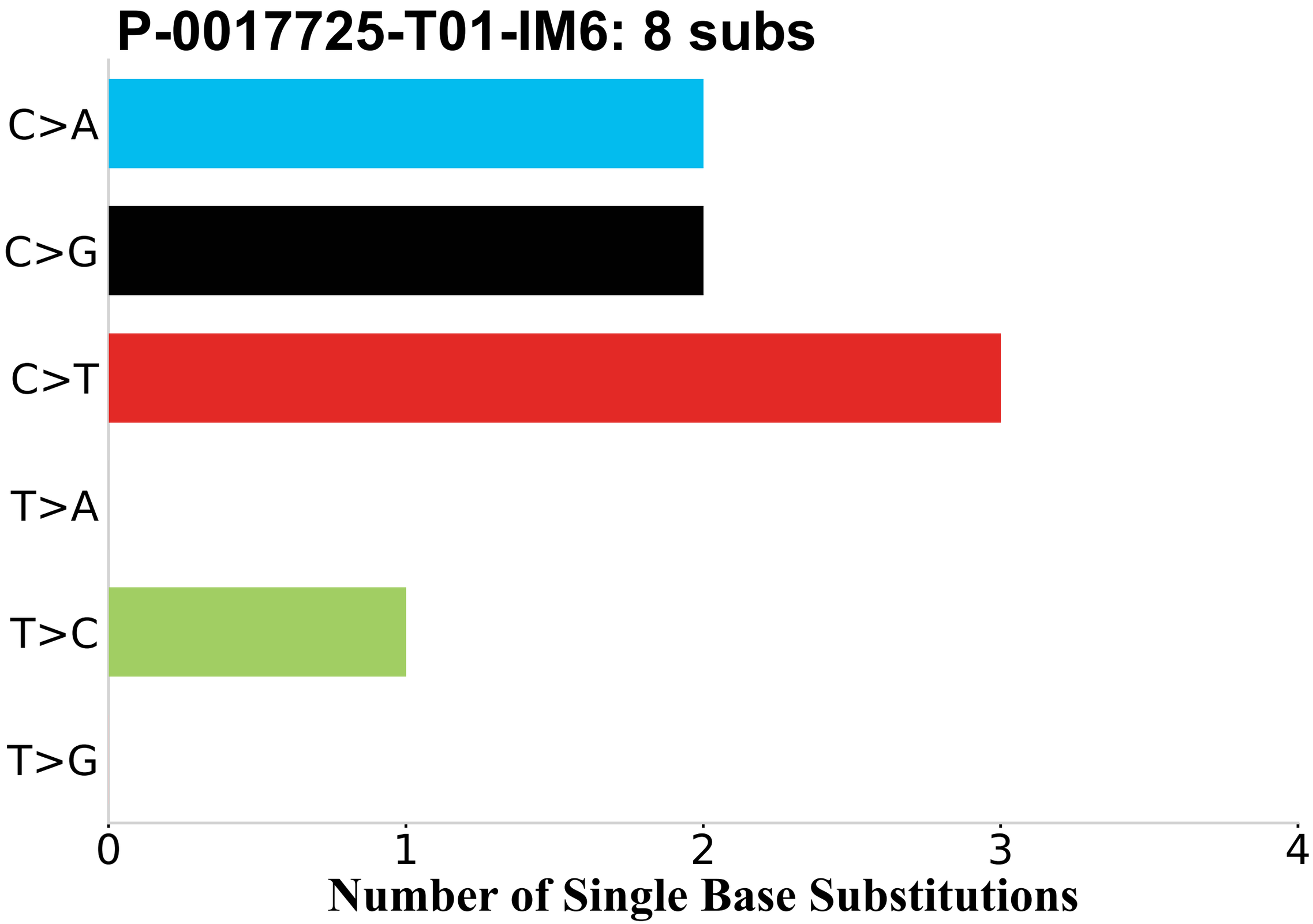
Number of Single Base Substitutions


P-0017725-T01-IM6: 8 subs
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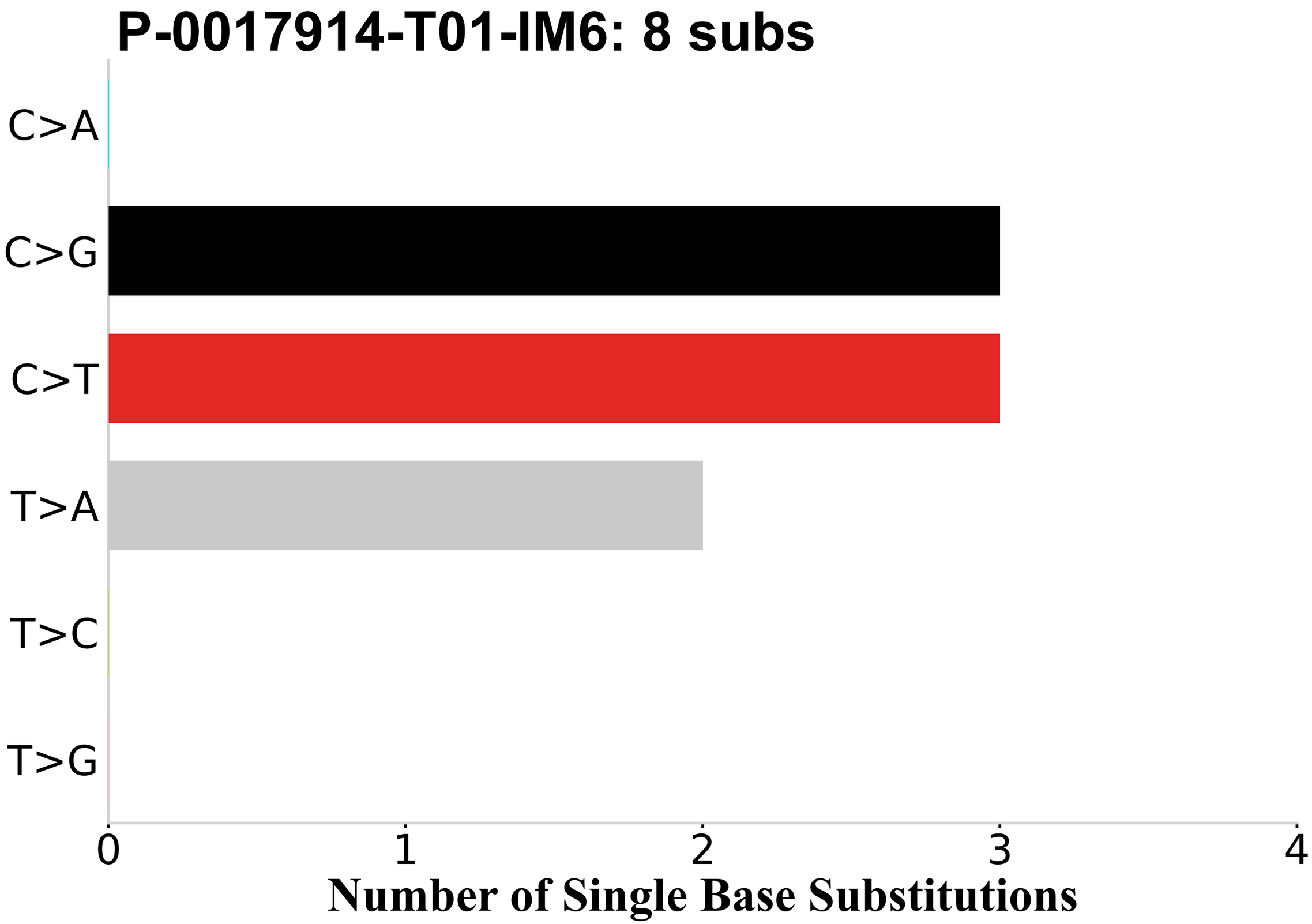
4
Number of Single Base Substitutions


P-0017914-T01-IM6: 8 subs
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T>G
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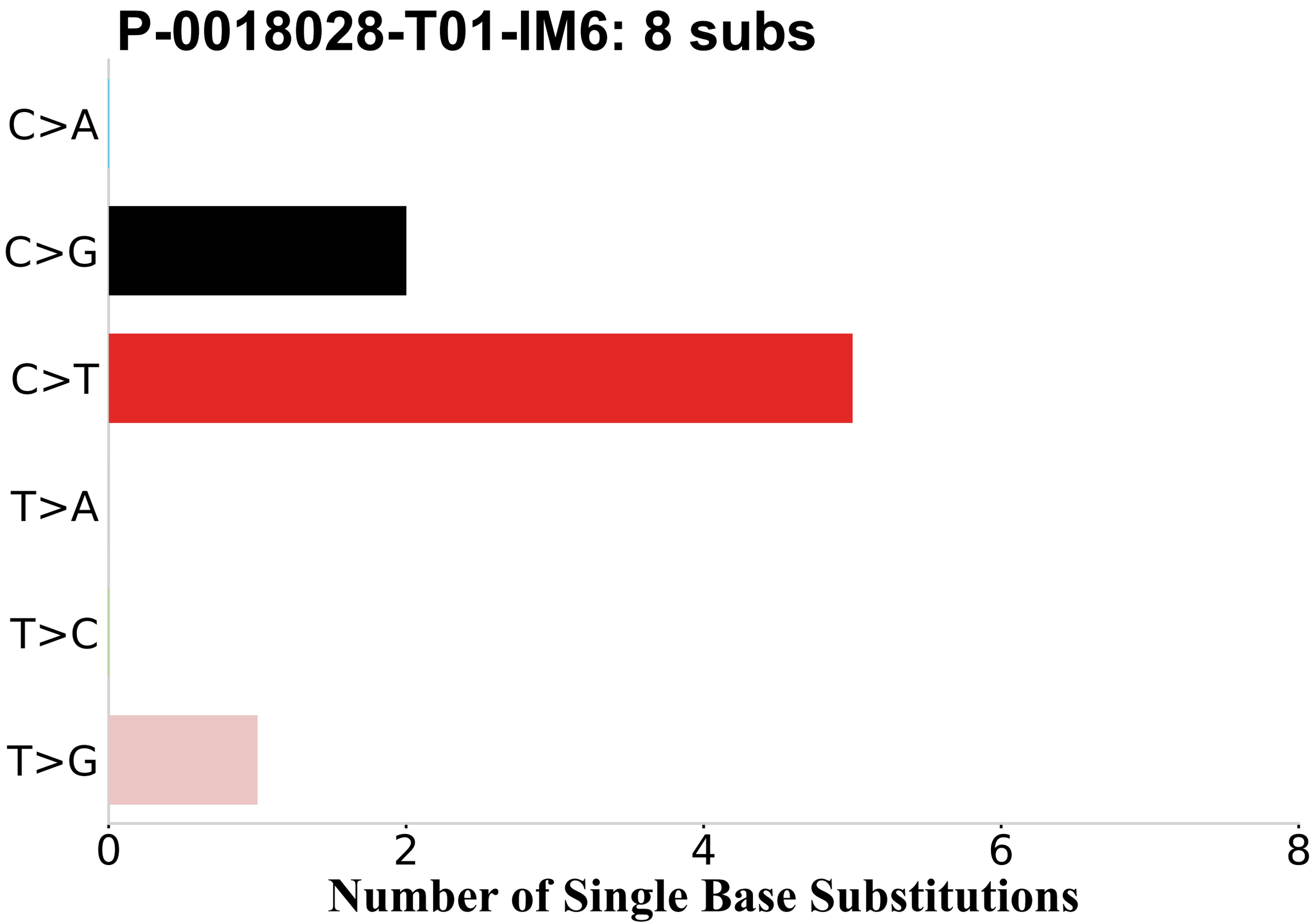
Number of Single Base Substitutions


P-0018028-T01-IM6: 8 subs
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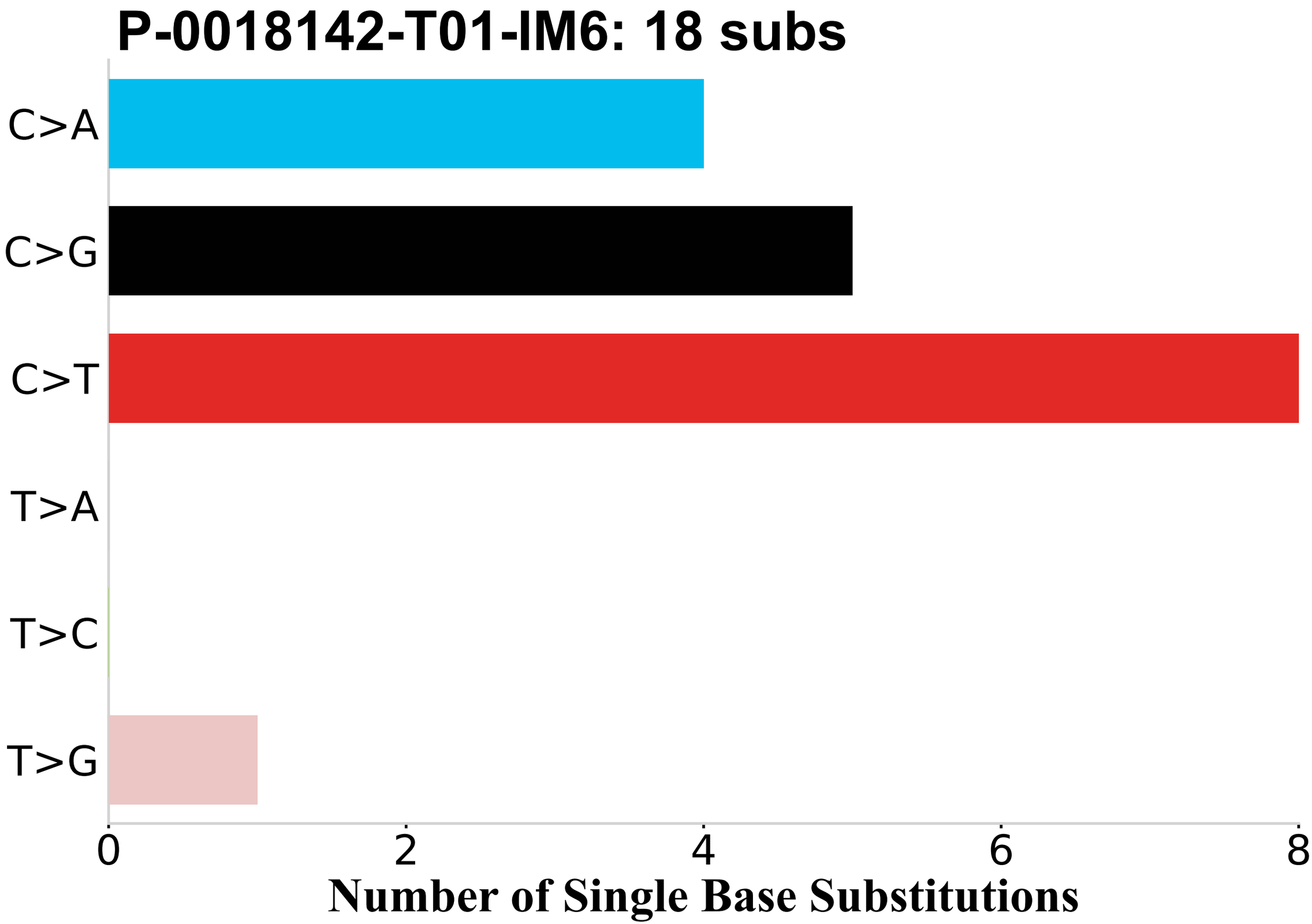
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0018142-T01-IM6: 18 subs
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T>C
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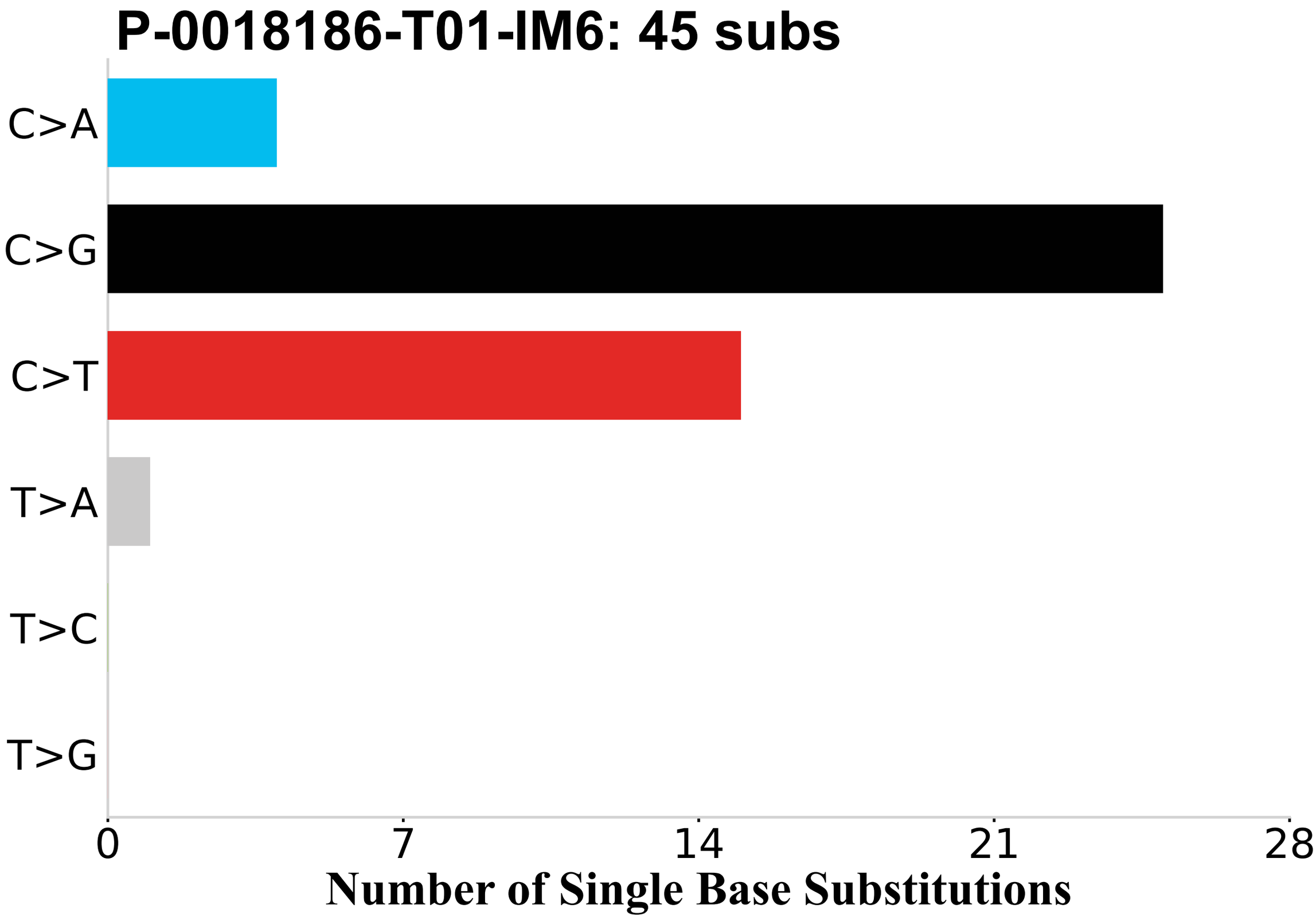
2
4
6
8
Number of Single Base Substitutions


P-0018186-T01-IM6: 45 subs
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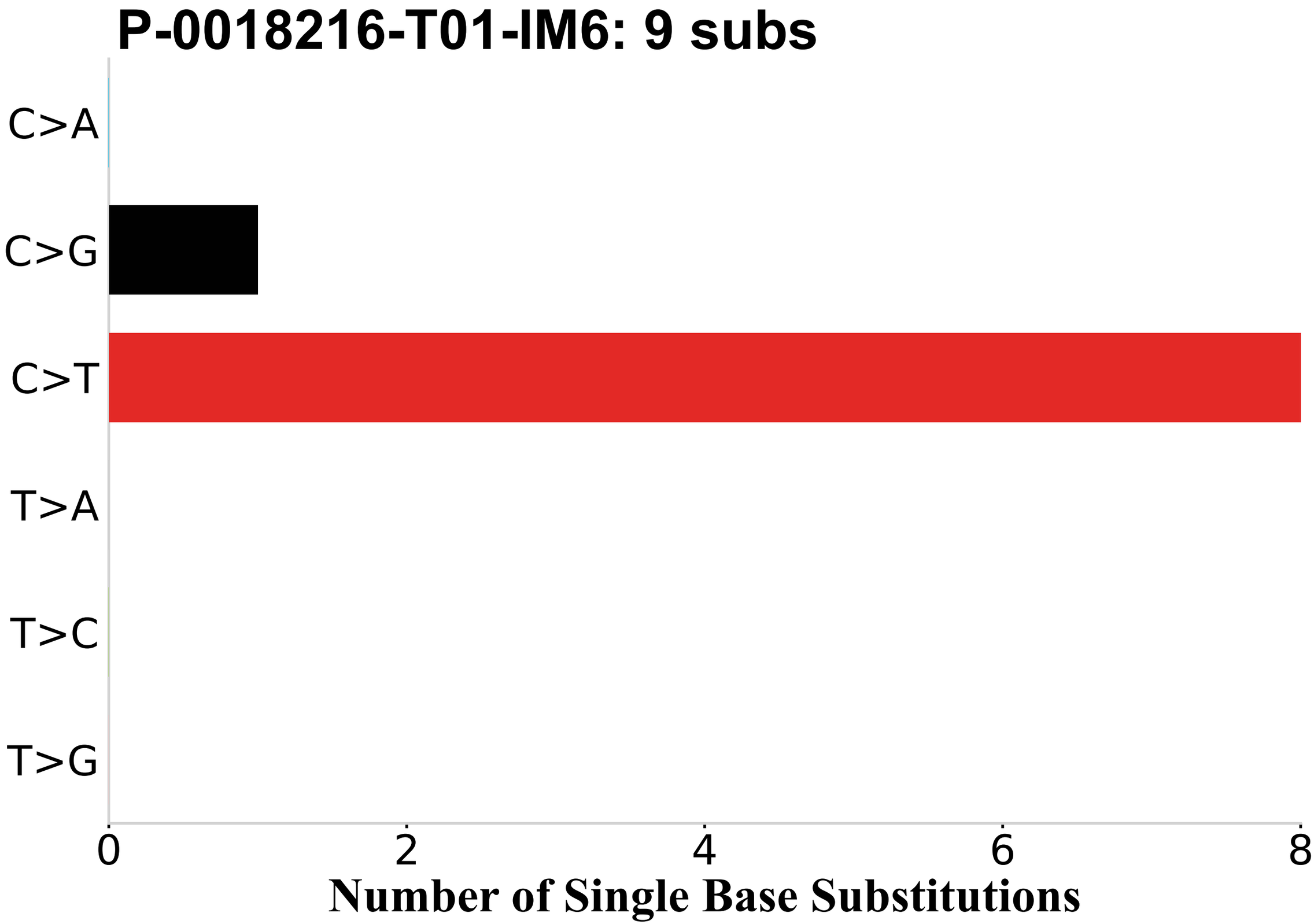
7
14
21
28
Number of Single Base Substitutions


P-0018216-T01-IM6: 9 subs
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T>G
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2
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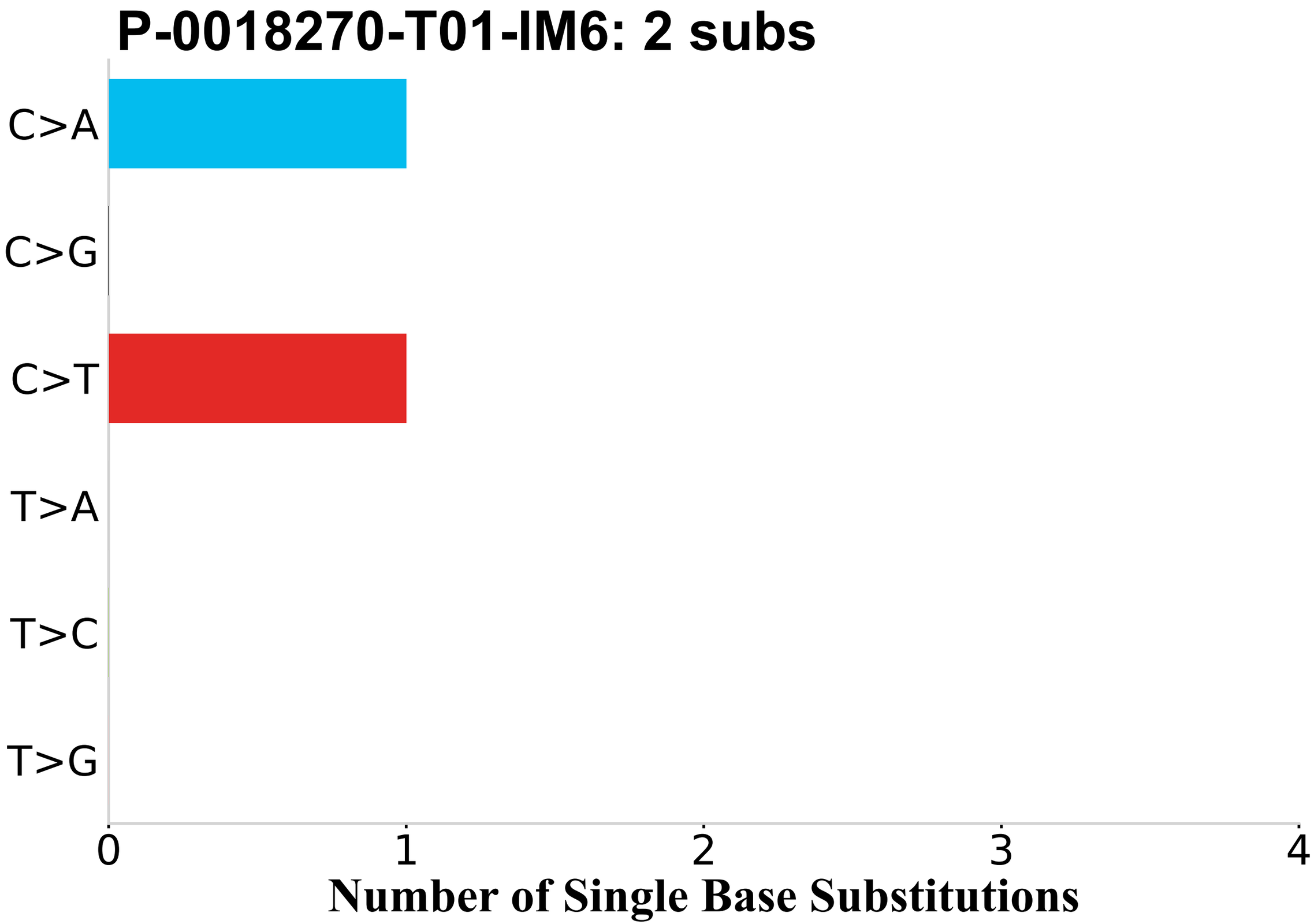
6
8
Number of Single Base Substitutions


P-0018270-T01-IM6: 2 subs
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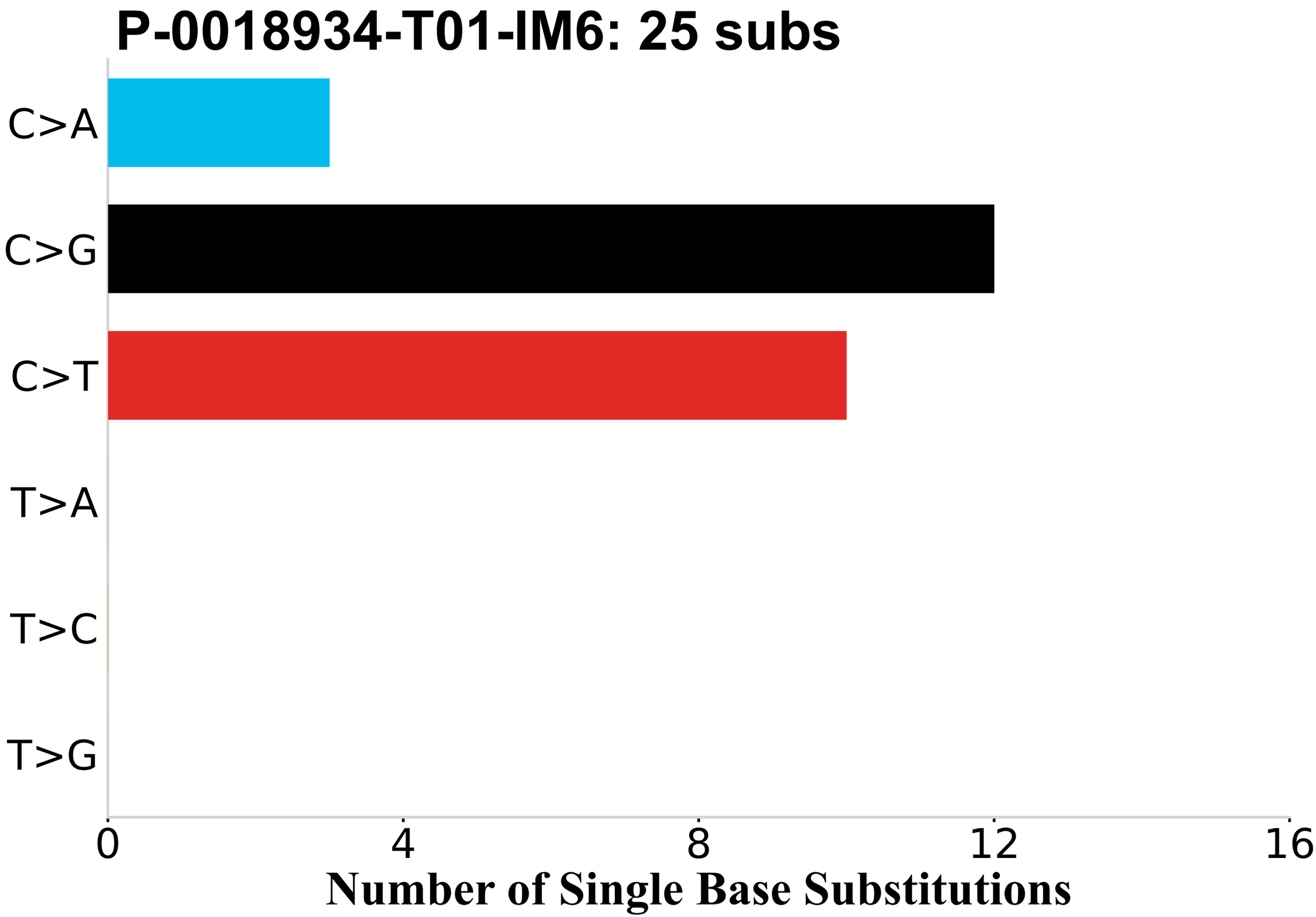
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0018934-T01-IM6: 25 subs
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C>T
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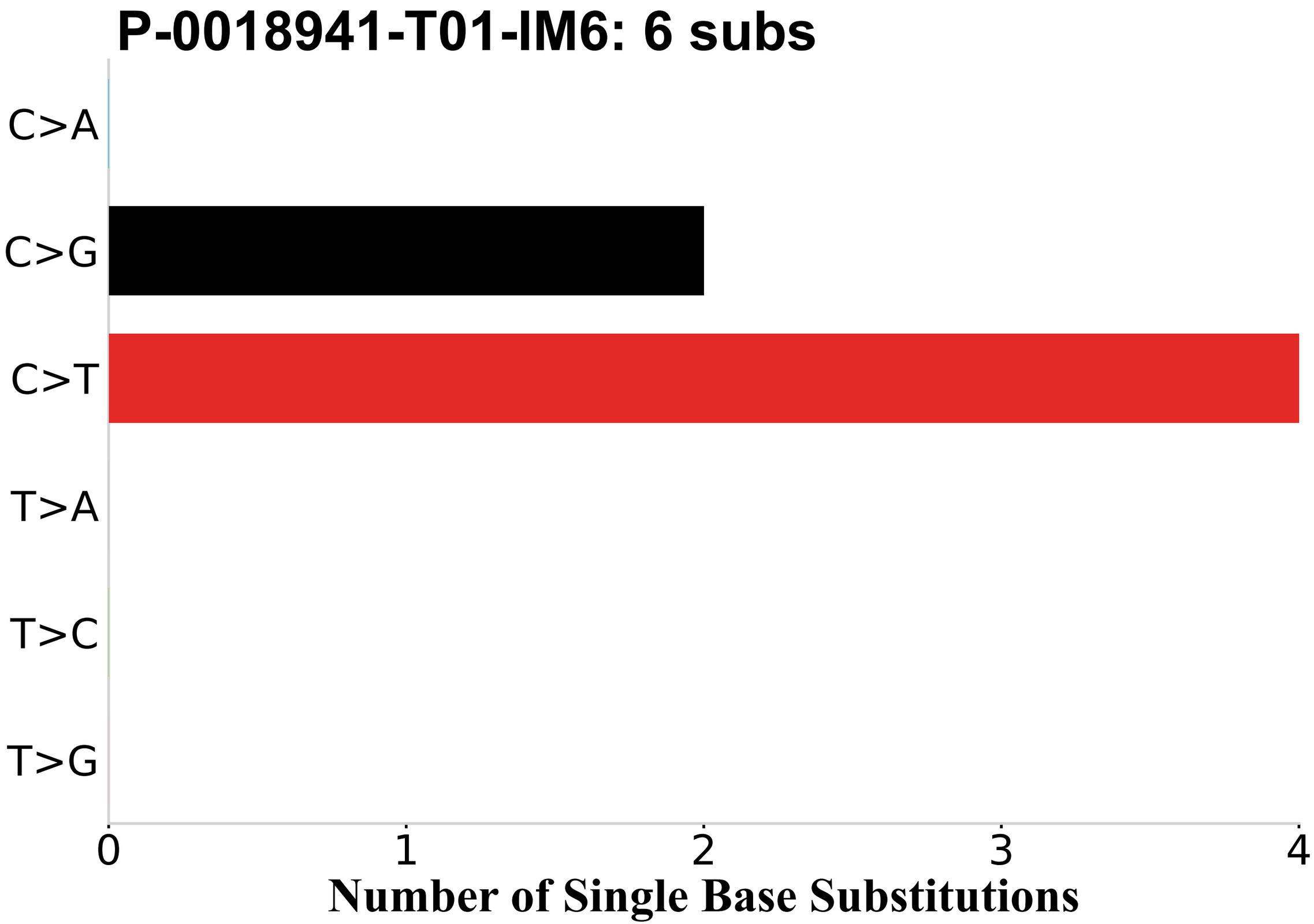
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0018941-T01-IM6: 6 subs
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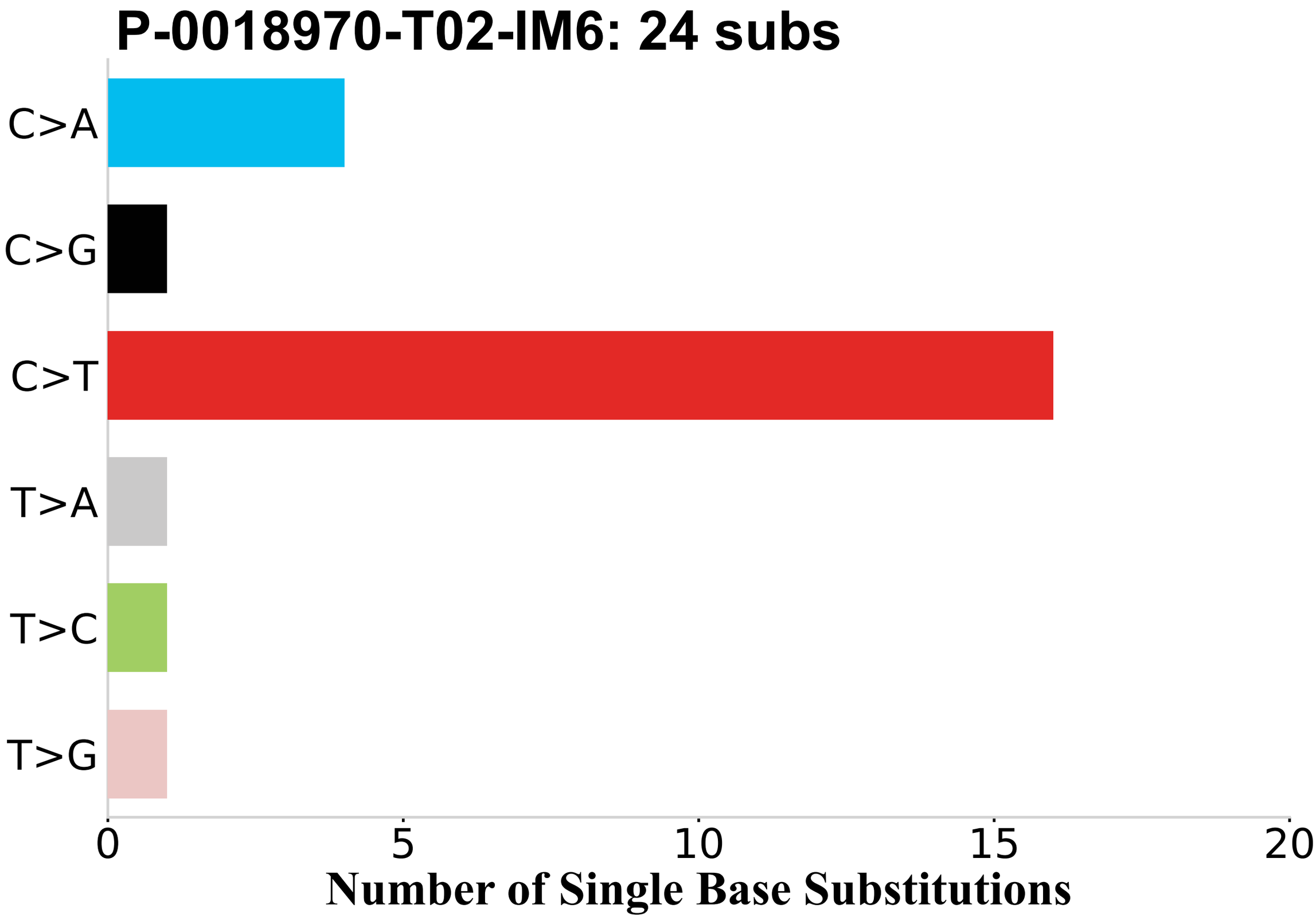
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0018970-T02-IM6: 24 subs
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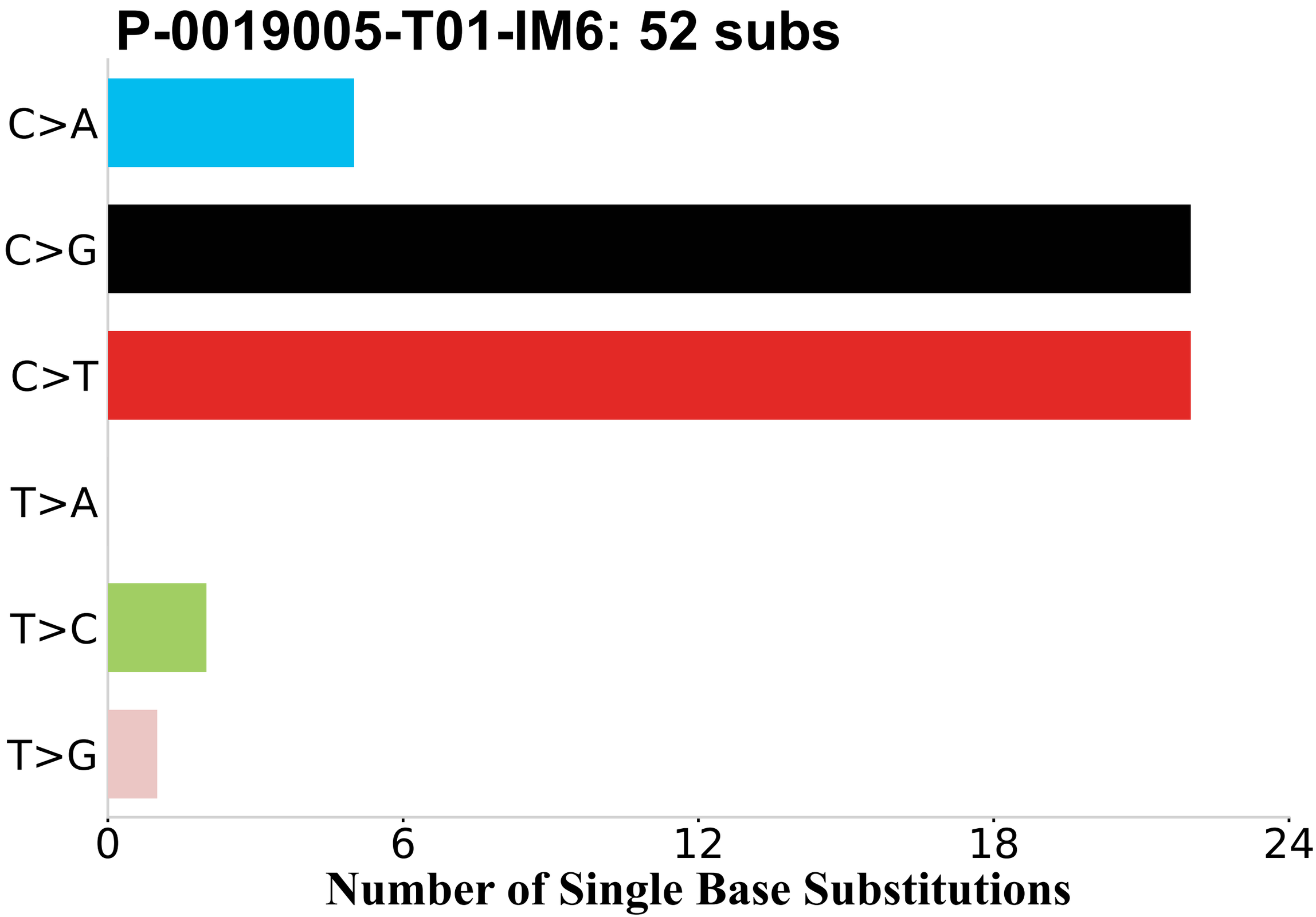
5
10
15
20
Number of Single Base Substitutions


P-0019005-T01-IM6: 52 subs
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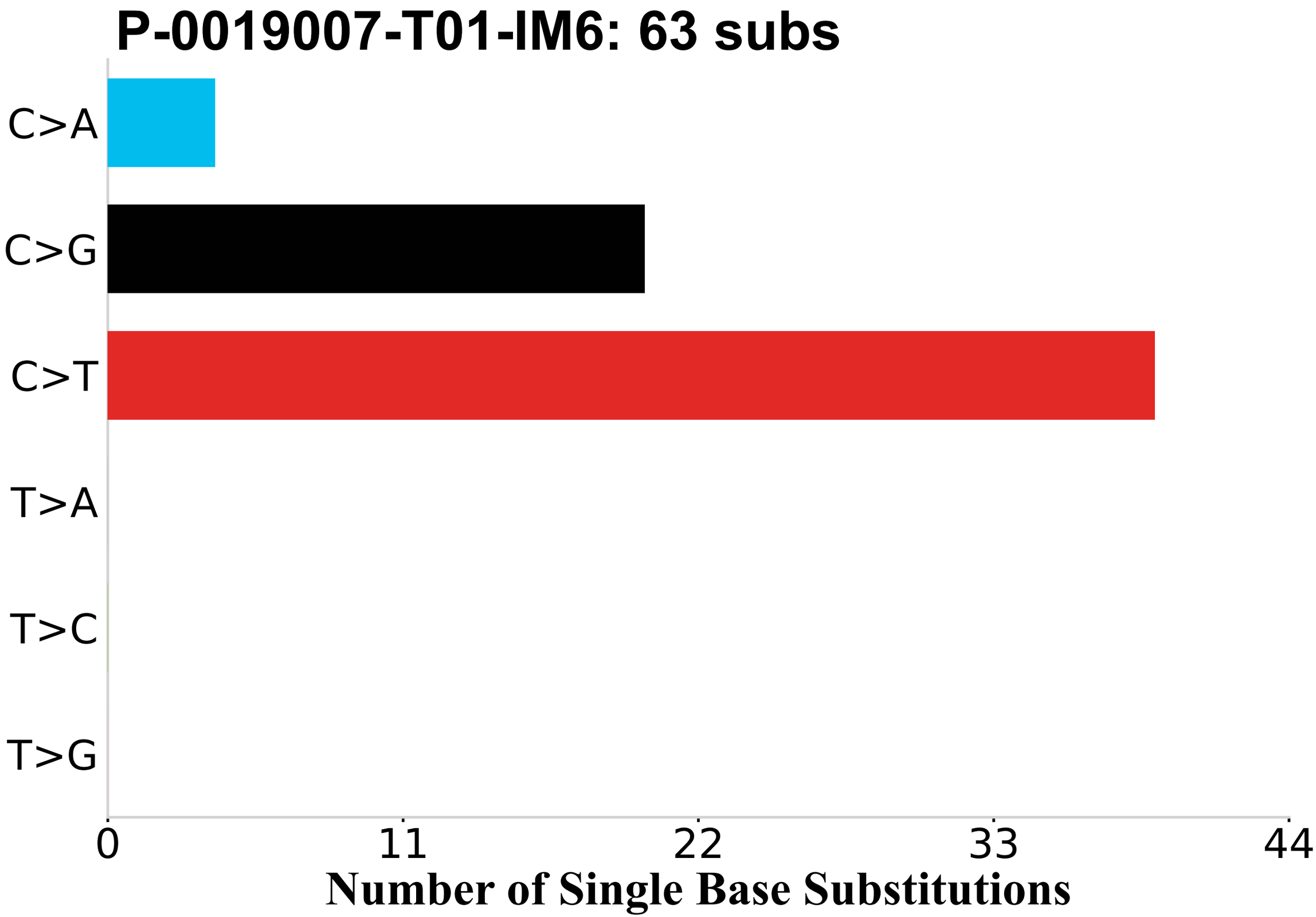
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions


P-0019007-T01-IM6: 63 subs
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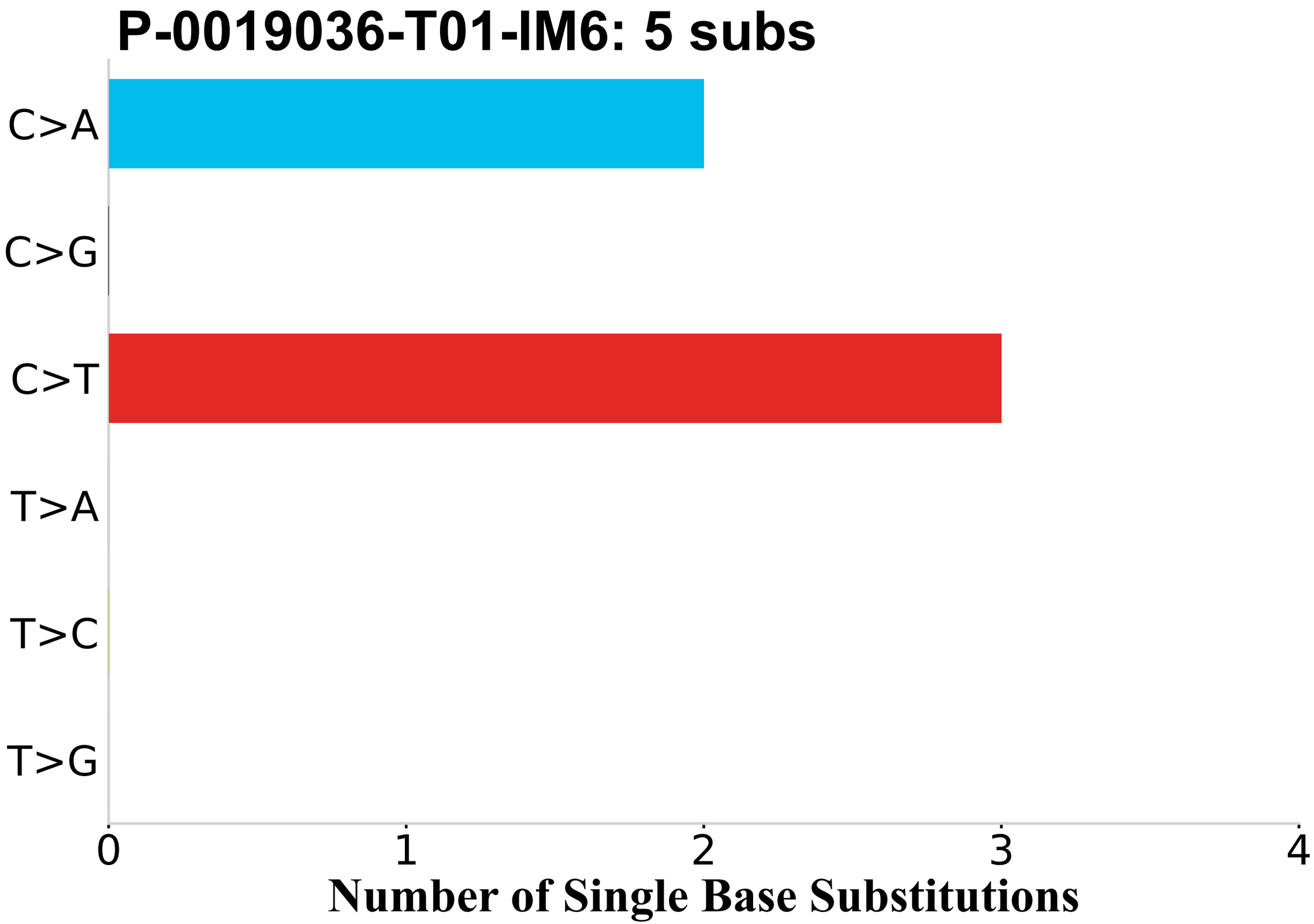
C>T
T>A
T>C
T>G
0
11
22
33
44
Number of Single Base Substitutions


P-0019036-T01-IM6: 5 subs
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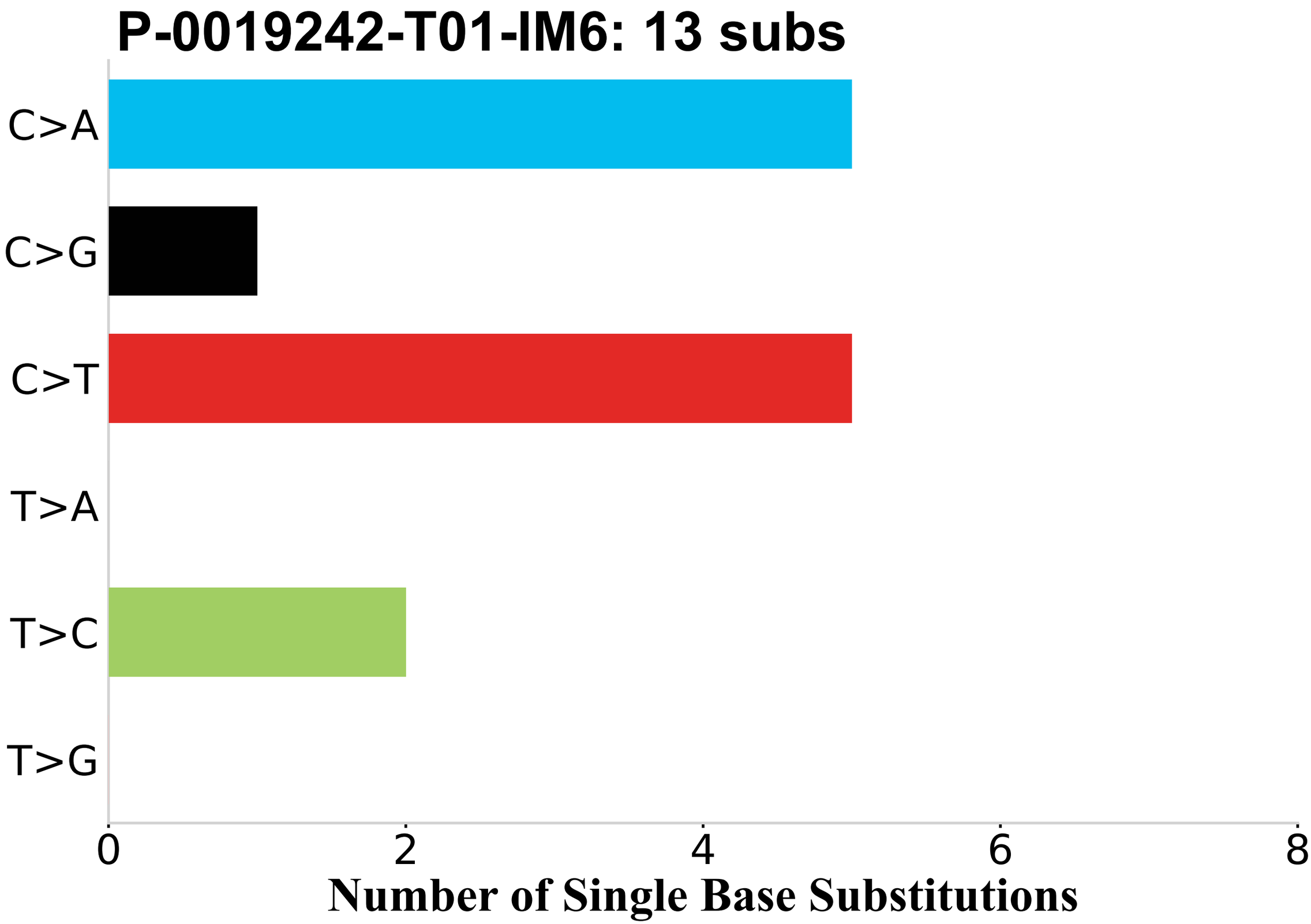
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0019242-T01-IM6: 13 subs
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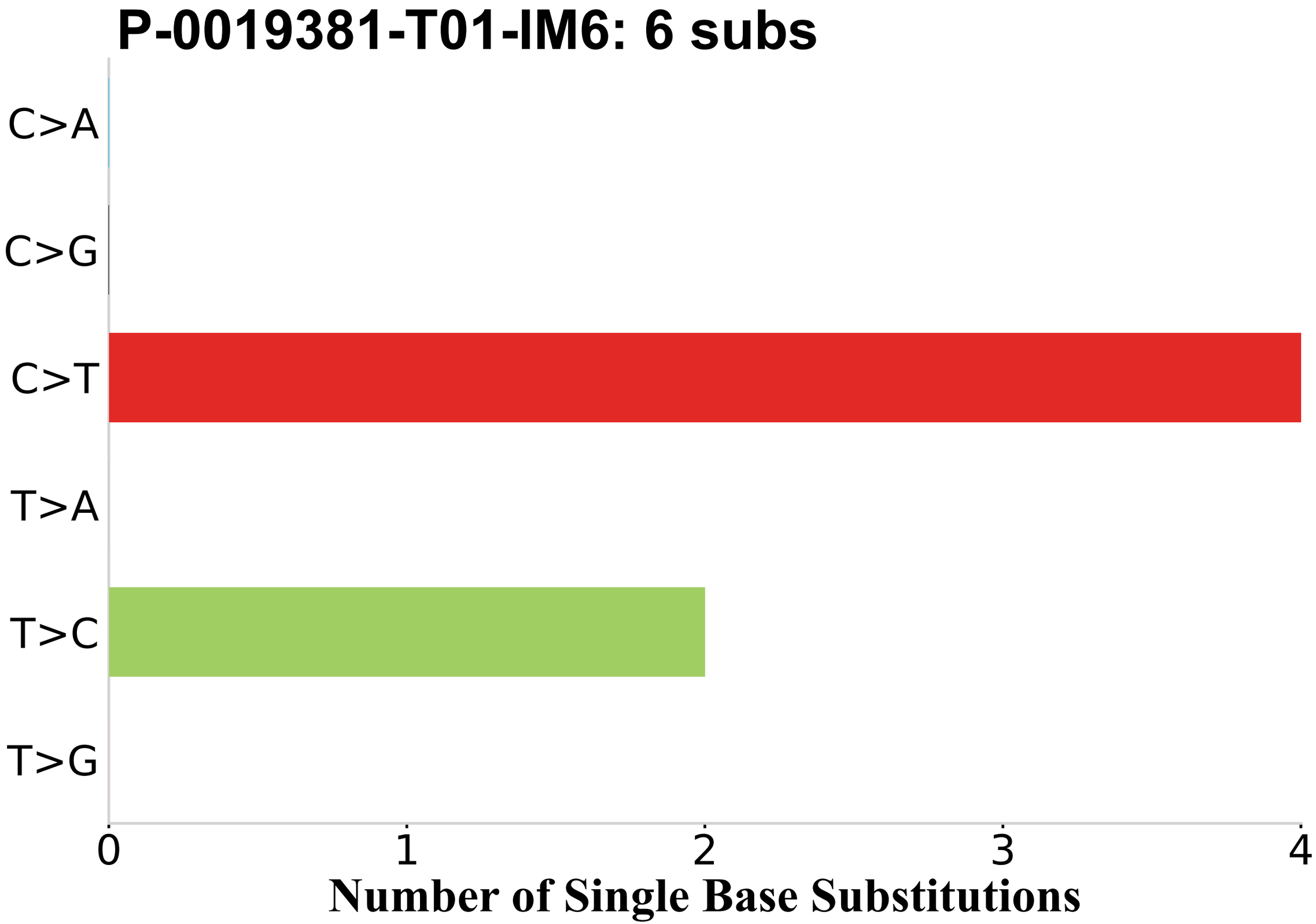
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0019381-T01-IM6: 6 subs
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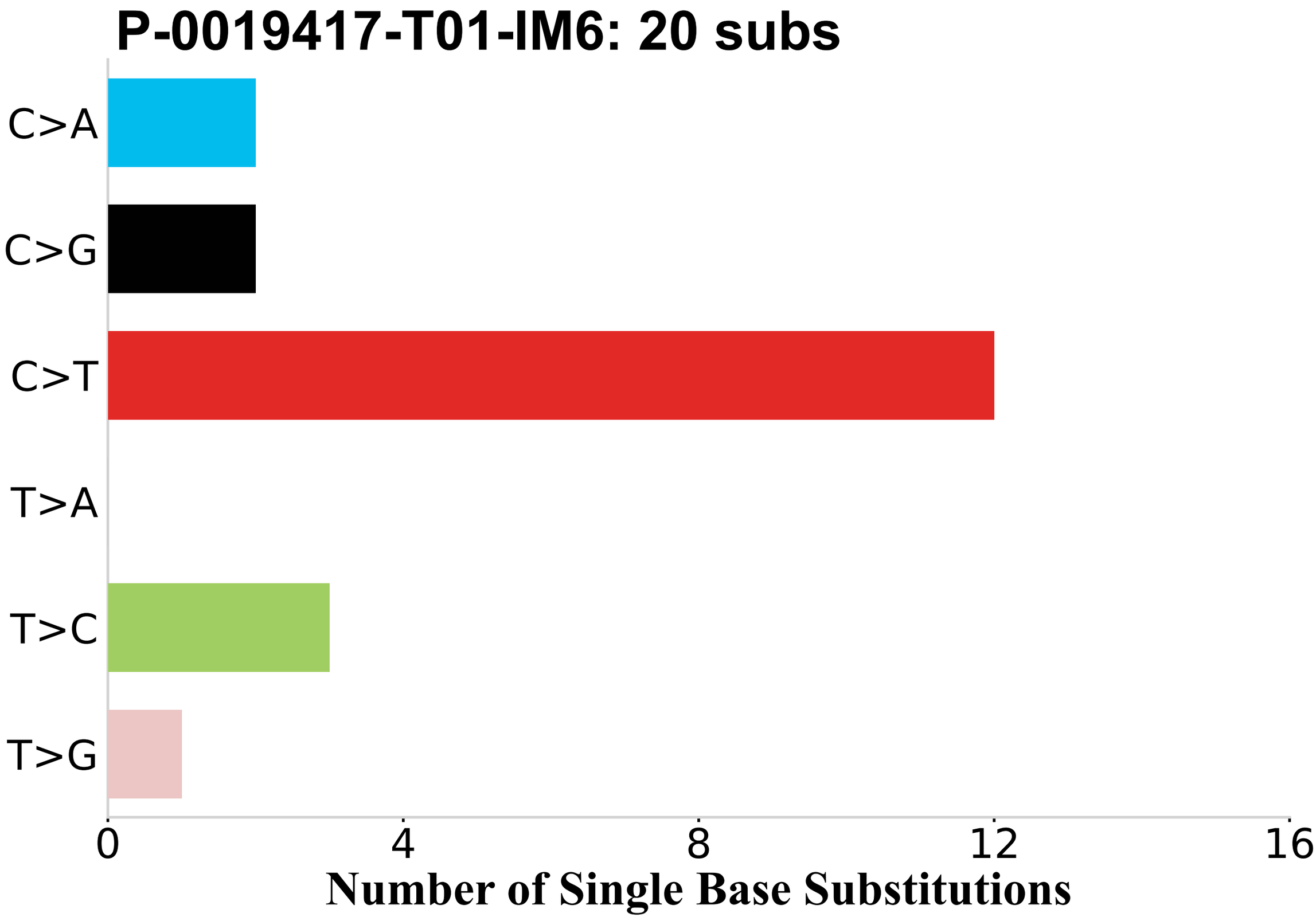
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0019417-T01-IM6: 20 subs
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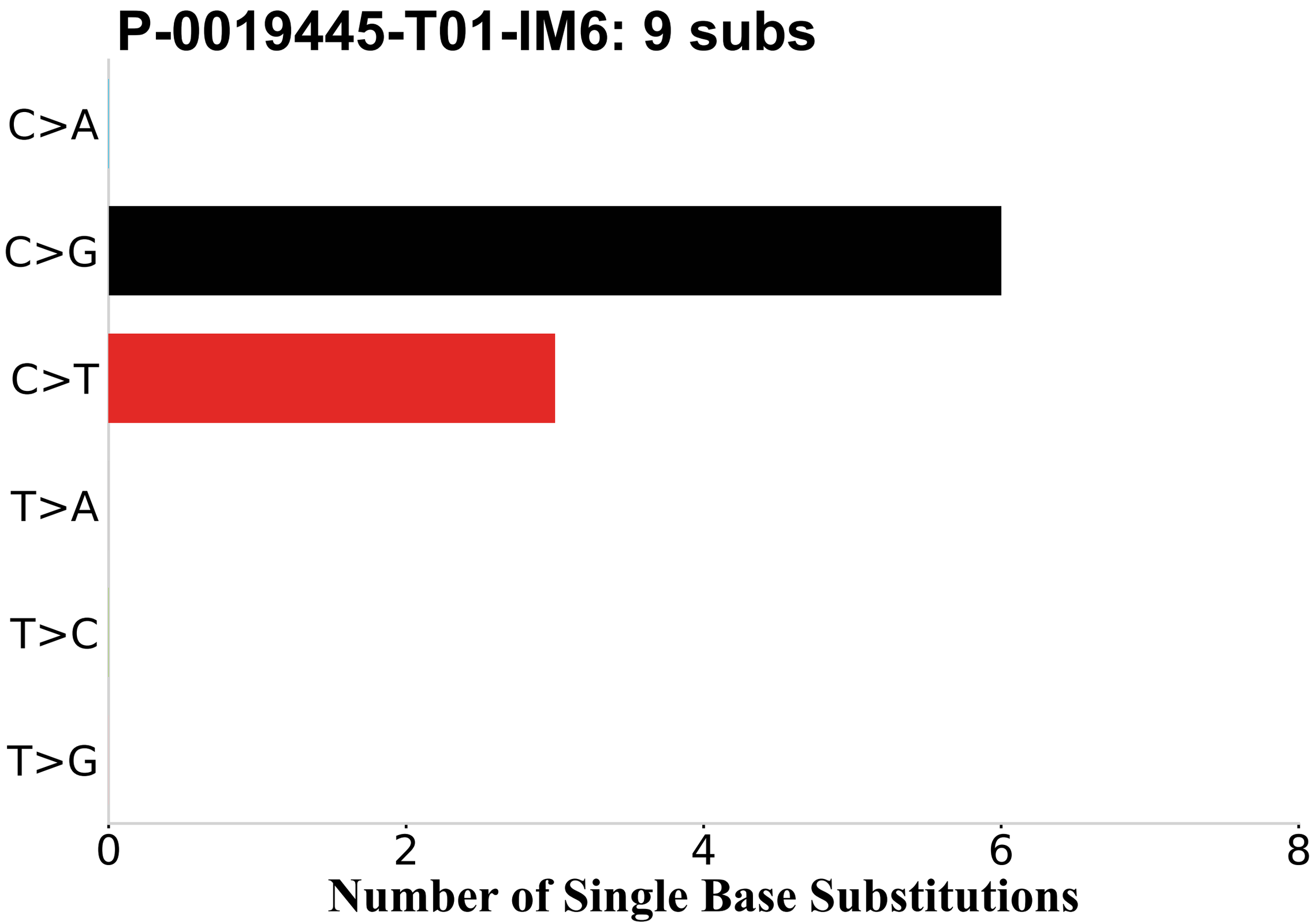
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0019445-T01-IM6: 9 subs
C>A
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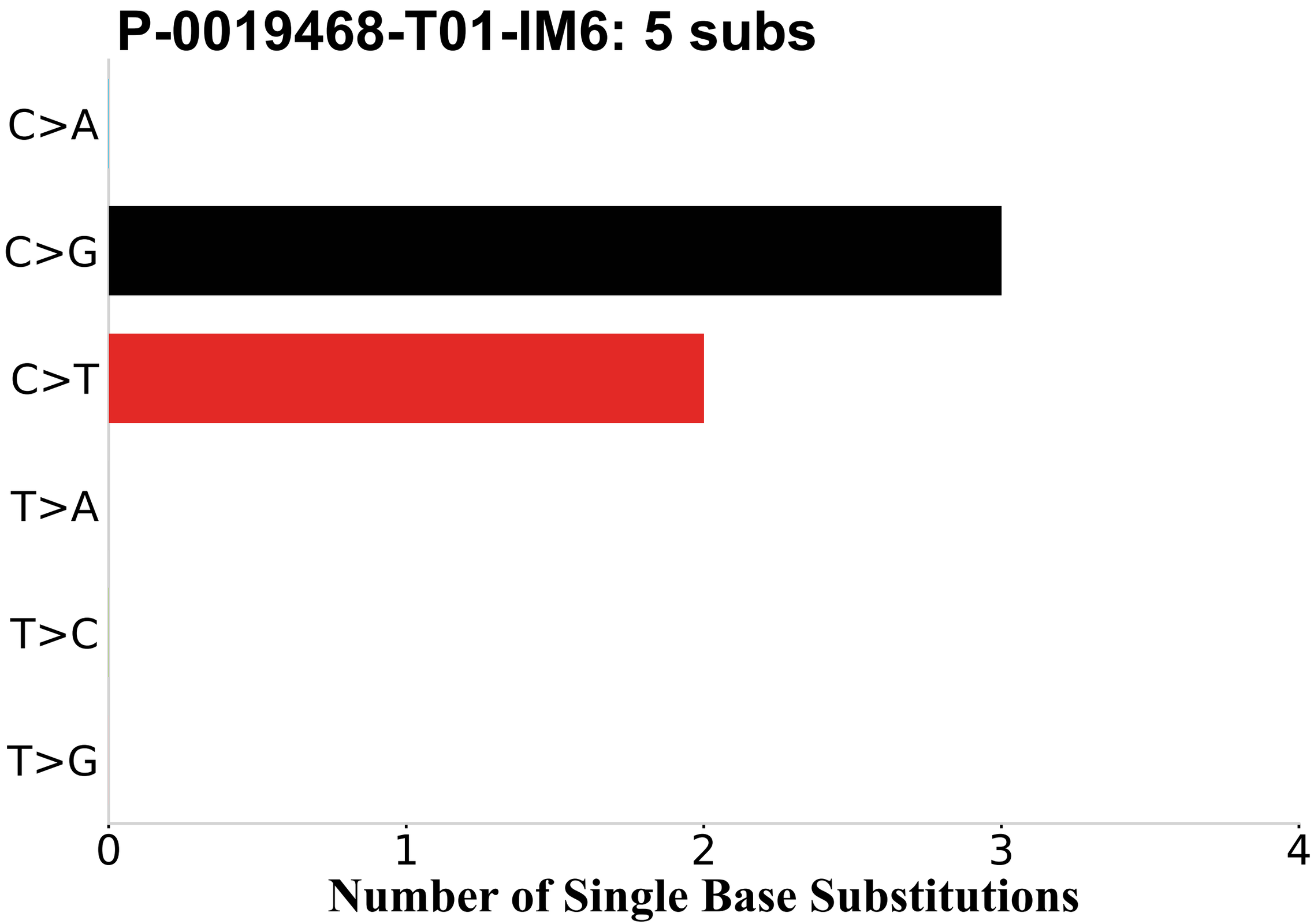
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0019468-T01-IM6: 5 subs
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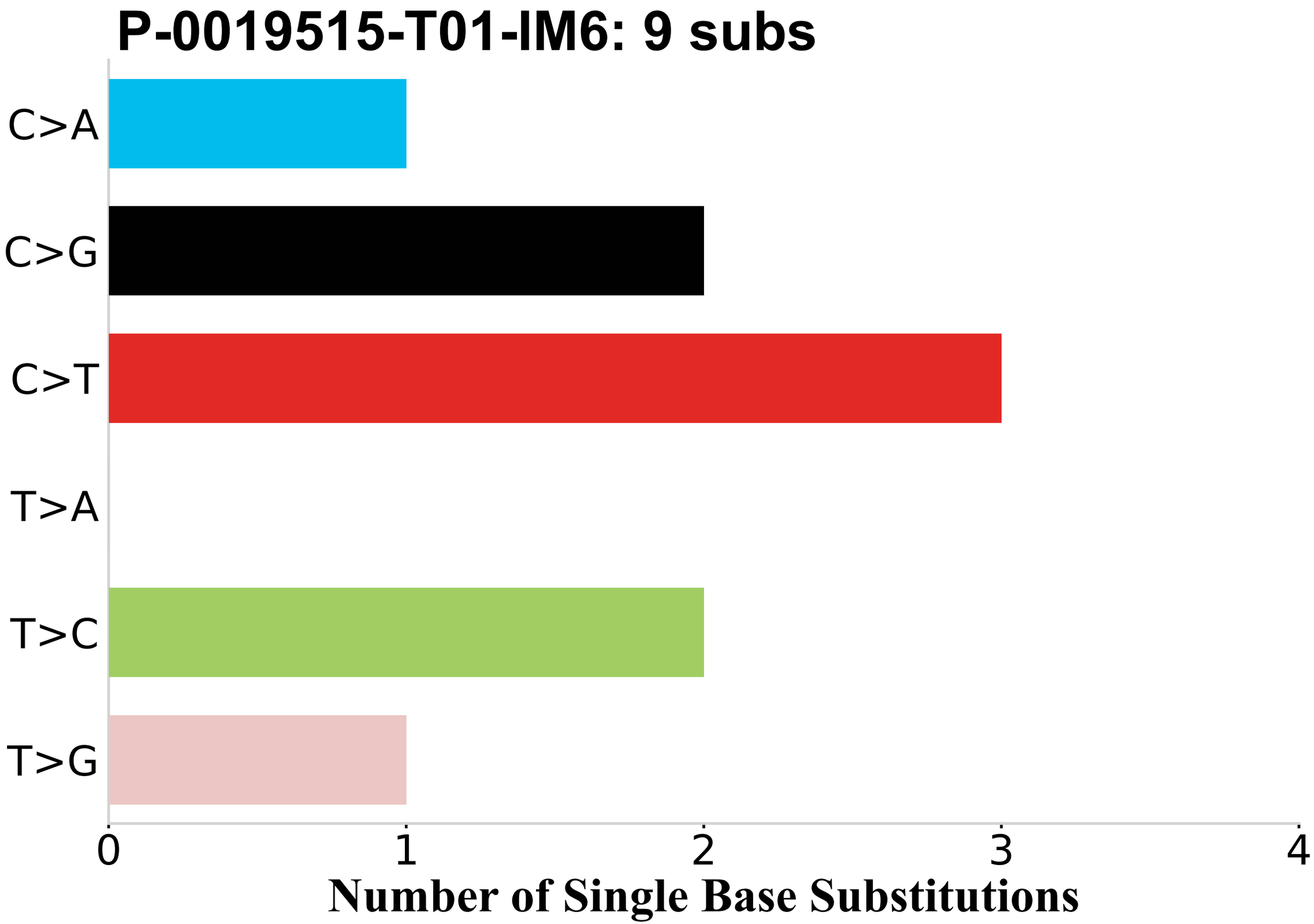
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0019515-T01-IM6: 9 subs
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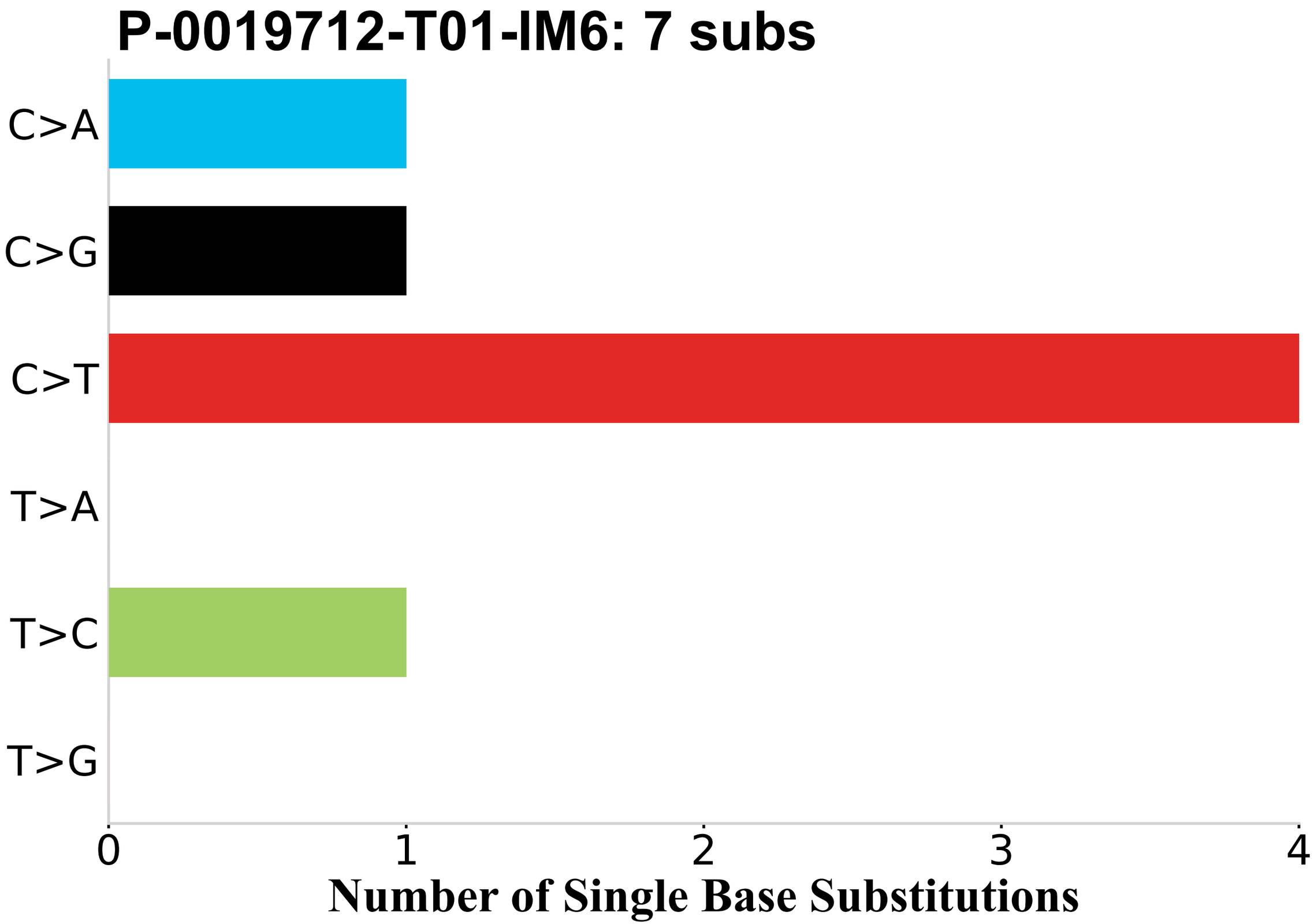
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0019712-T01-IM6: 7 subs
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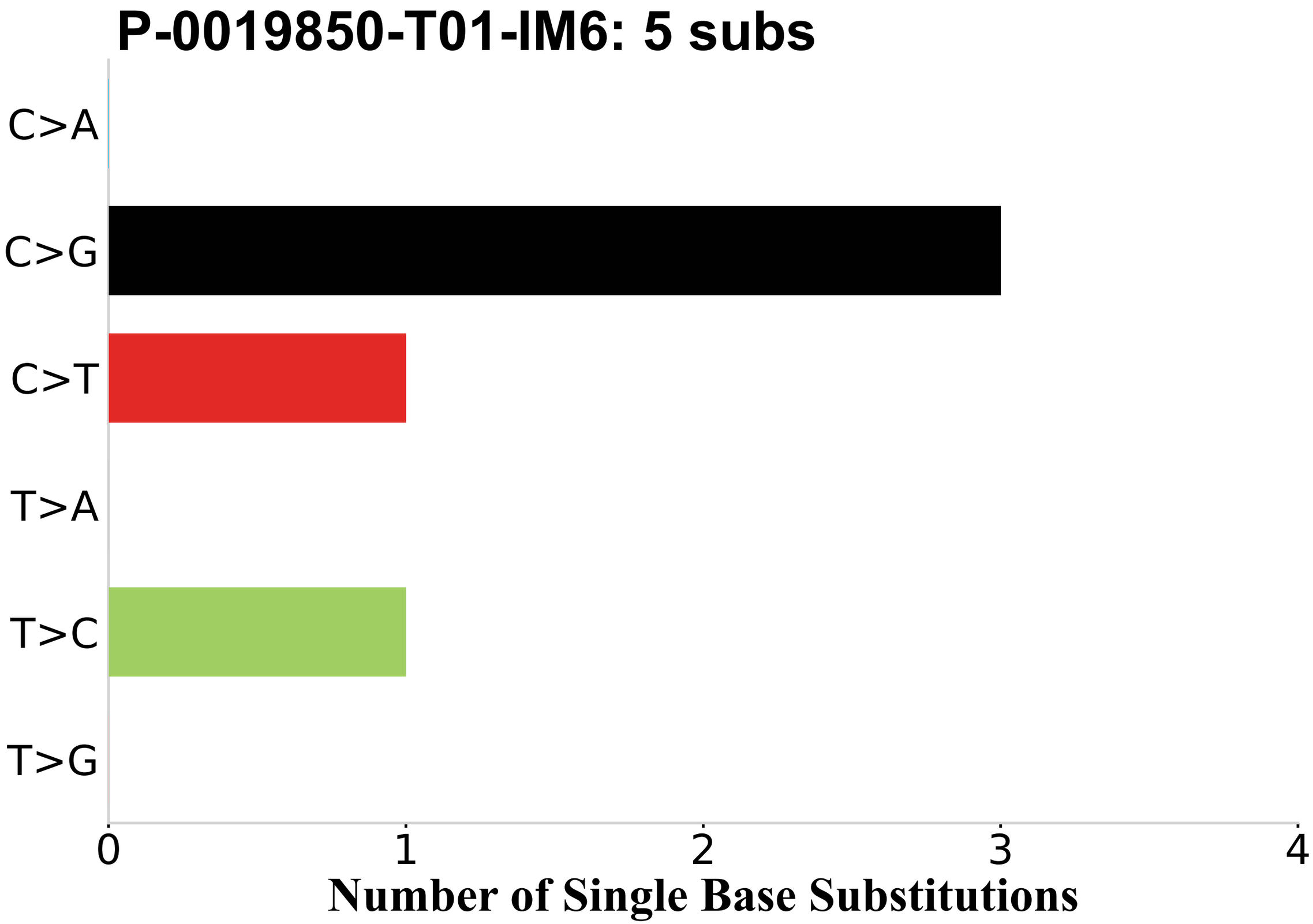
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0019850-T01-IM6: 5 subs
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C>T
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T>C
T>G
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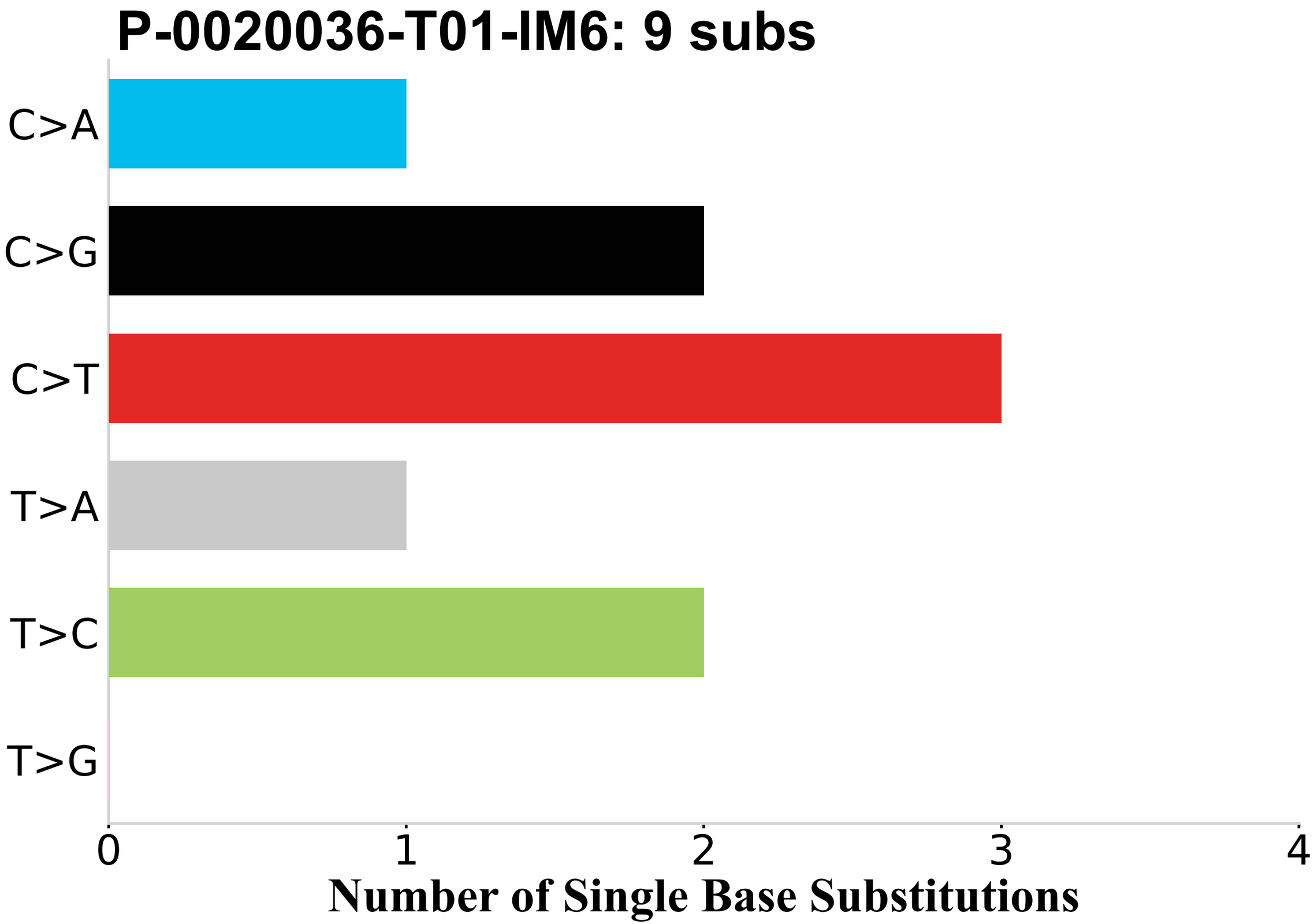
1
2
3
4
Number of Single Base Substitutions


P-0020036-T01-IM6: 9 subs
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T>C
T>G
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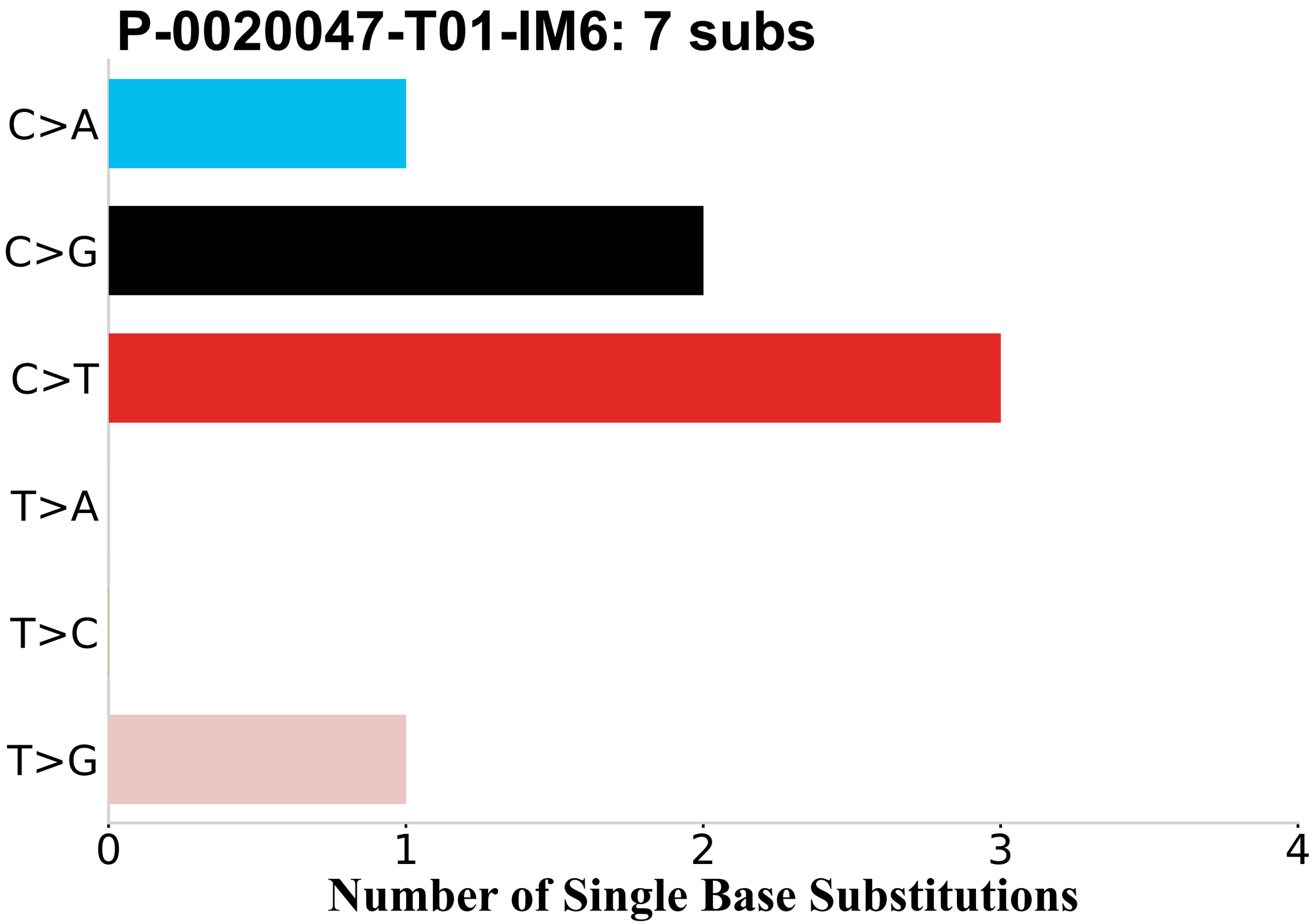
1
2
3
4
Number of Single Base Substitutions


P-0020047-T01-IM6: 7 subs
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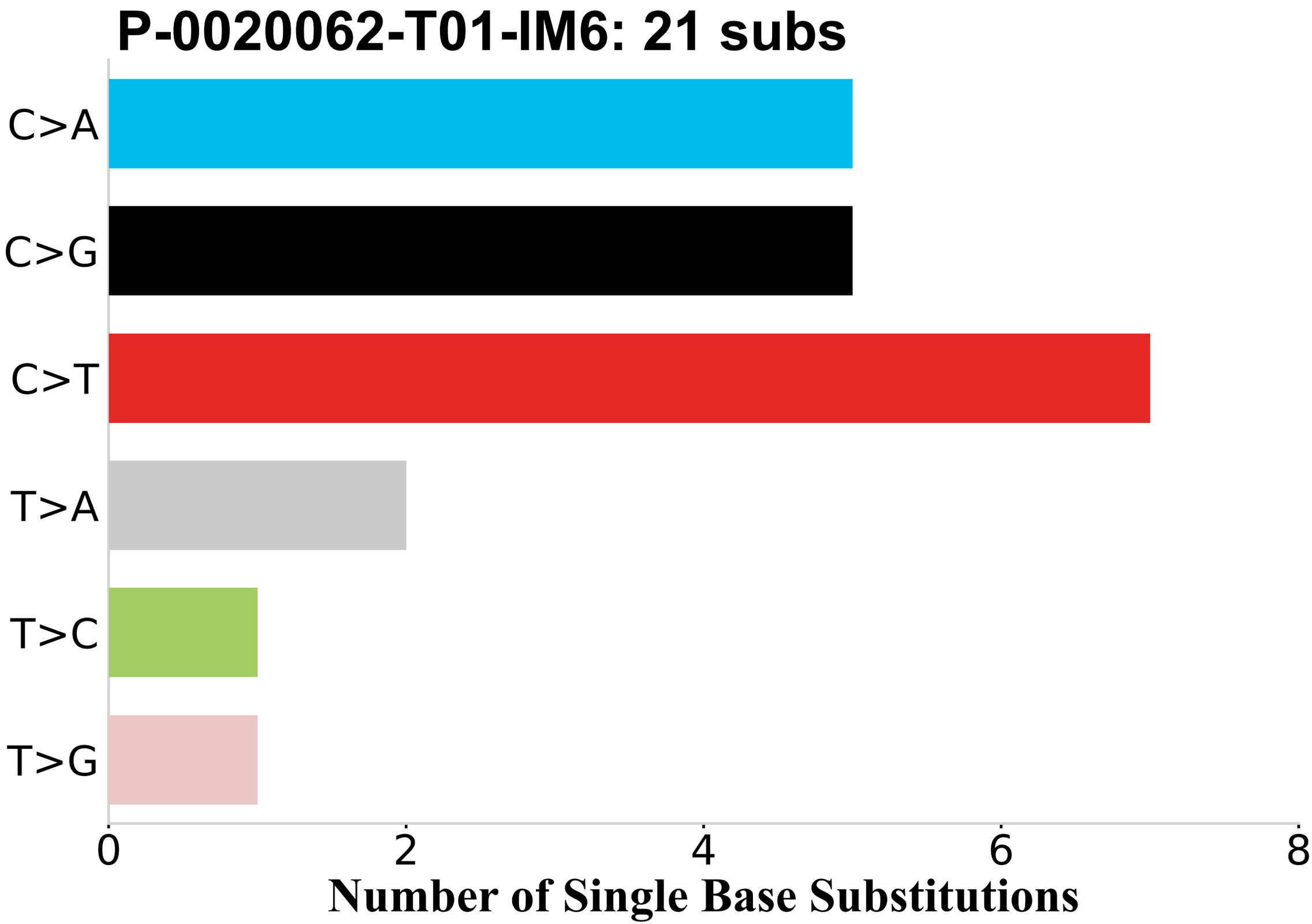
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0020062-T01-IM6: 21 subs
C>A
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C>T
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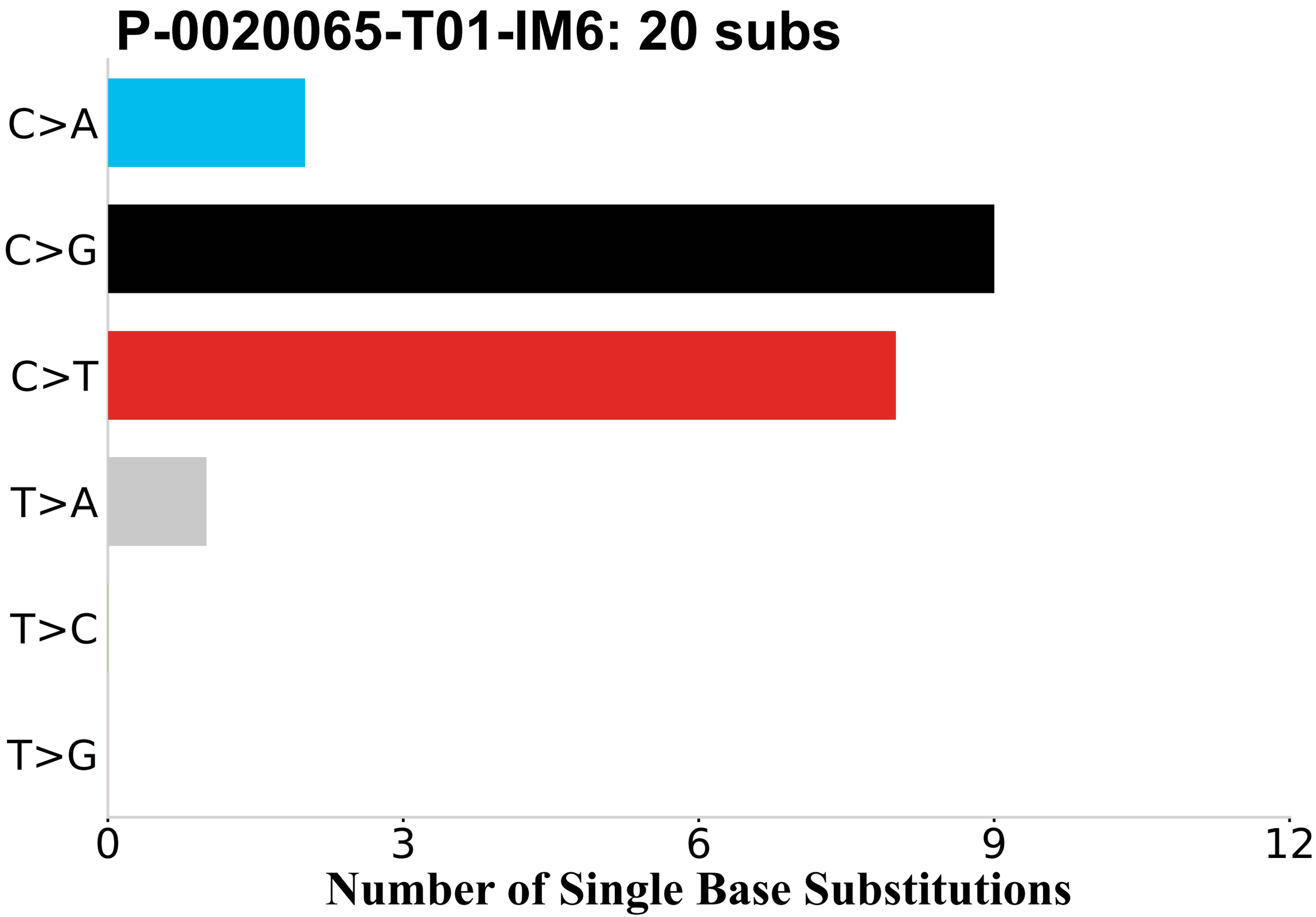
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0020065-T01-IM6: 20 subs
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C>T
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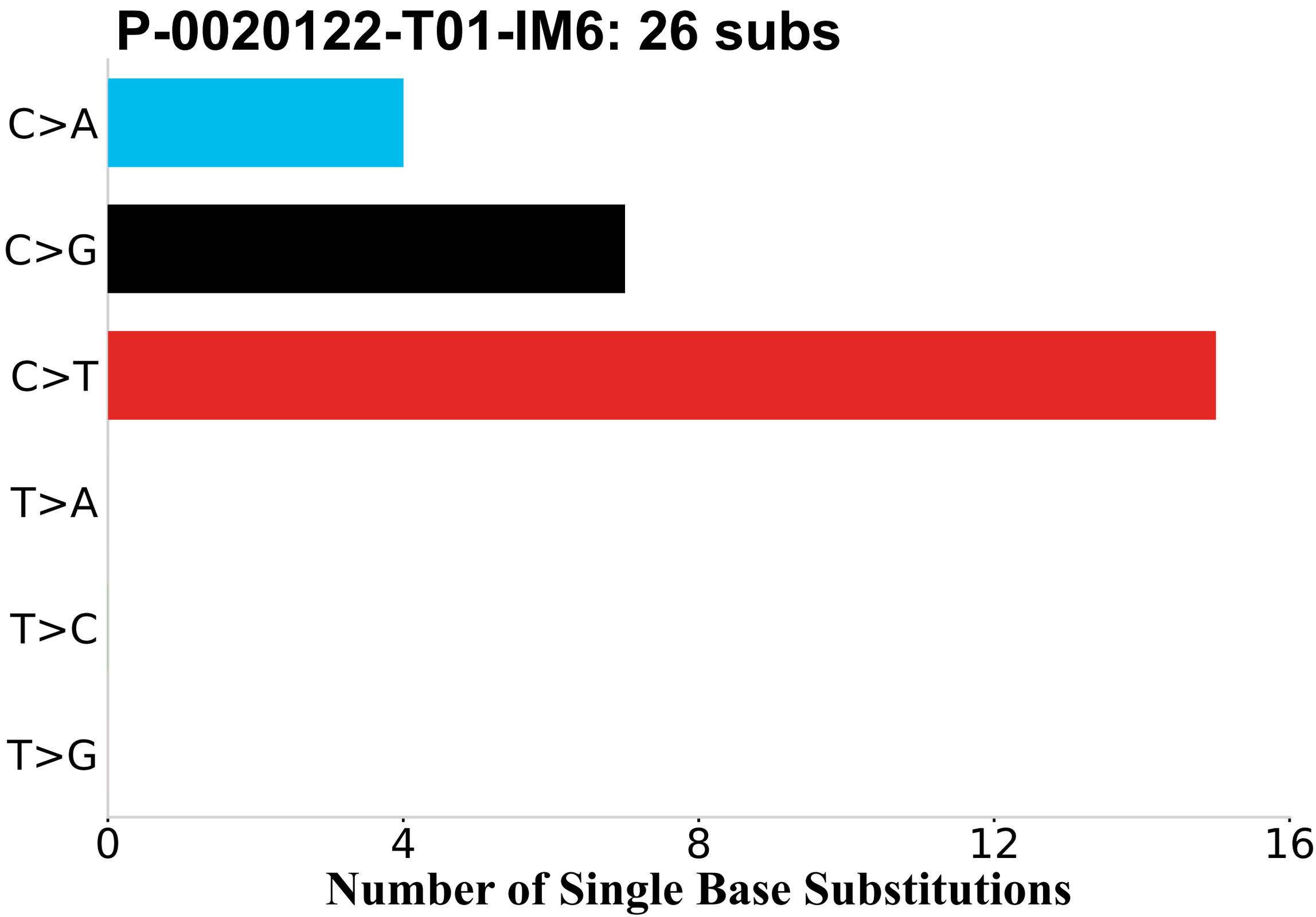
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0020122-T01-IM6: 26 subs
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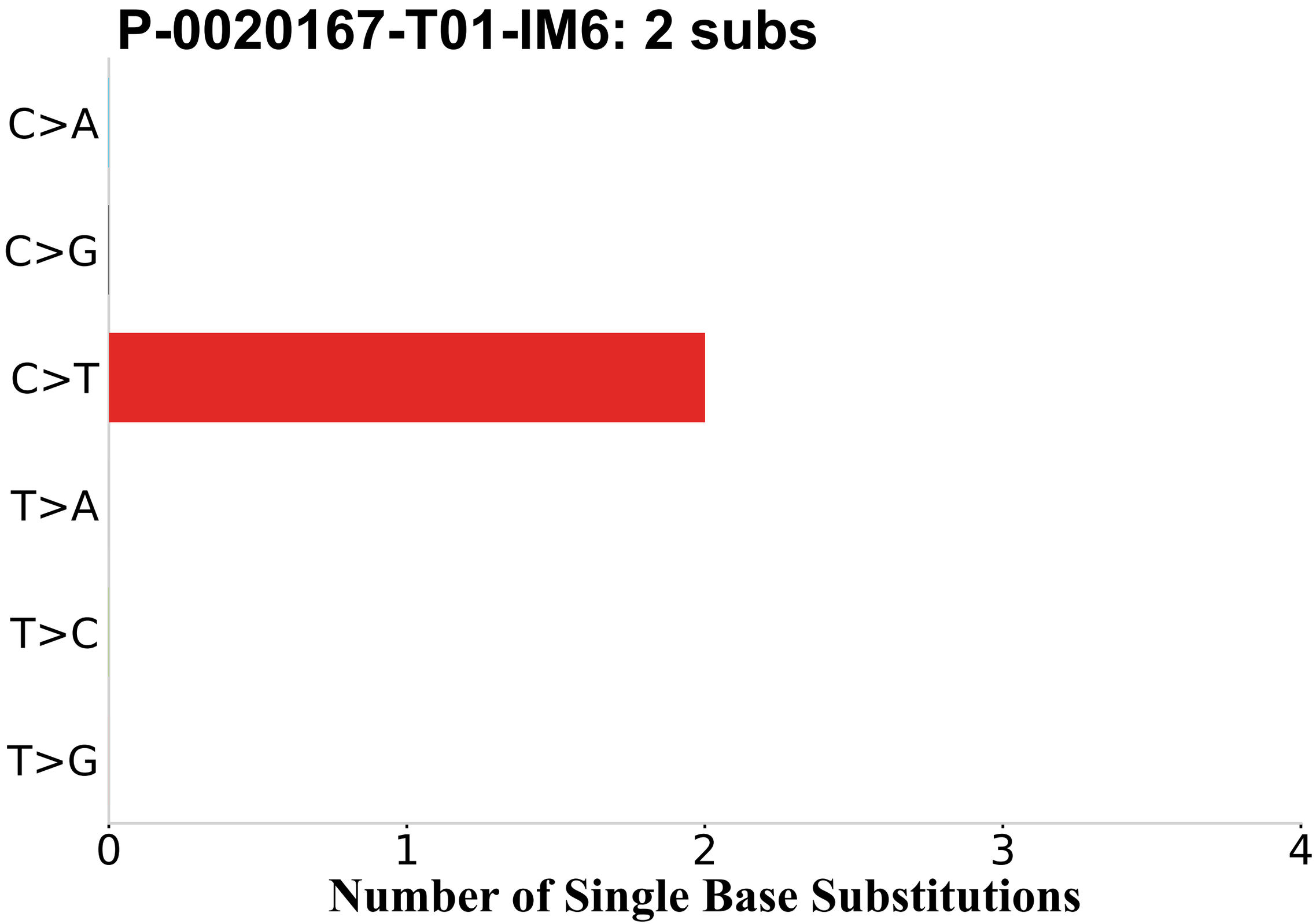
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0020167-T01-IM6: 2 subs
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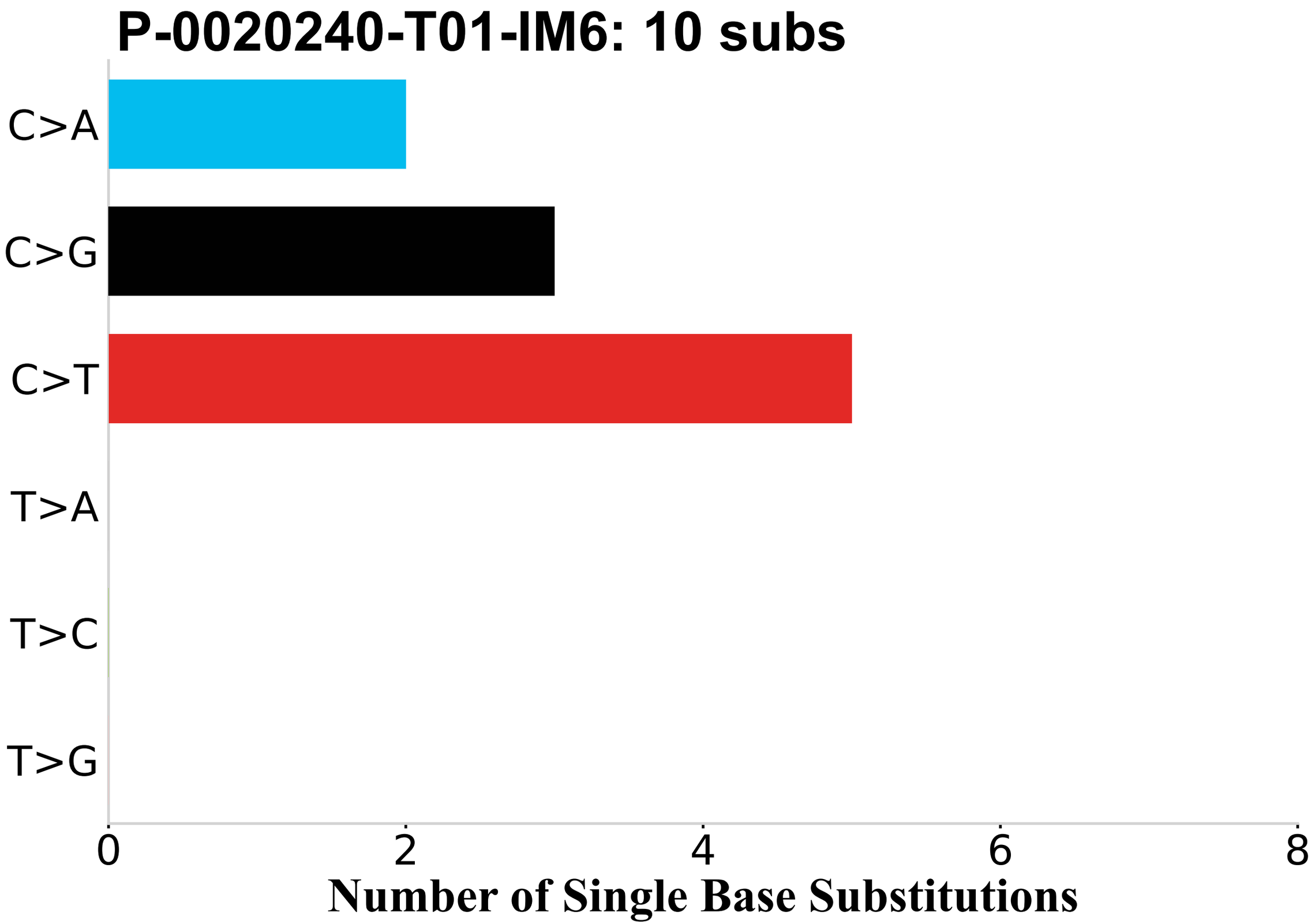
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0020240-T01-IM6: 10 subs
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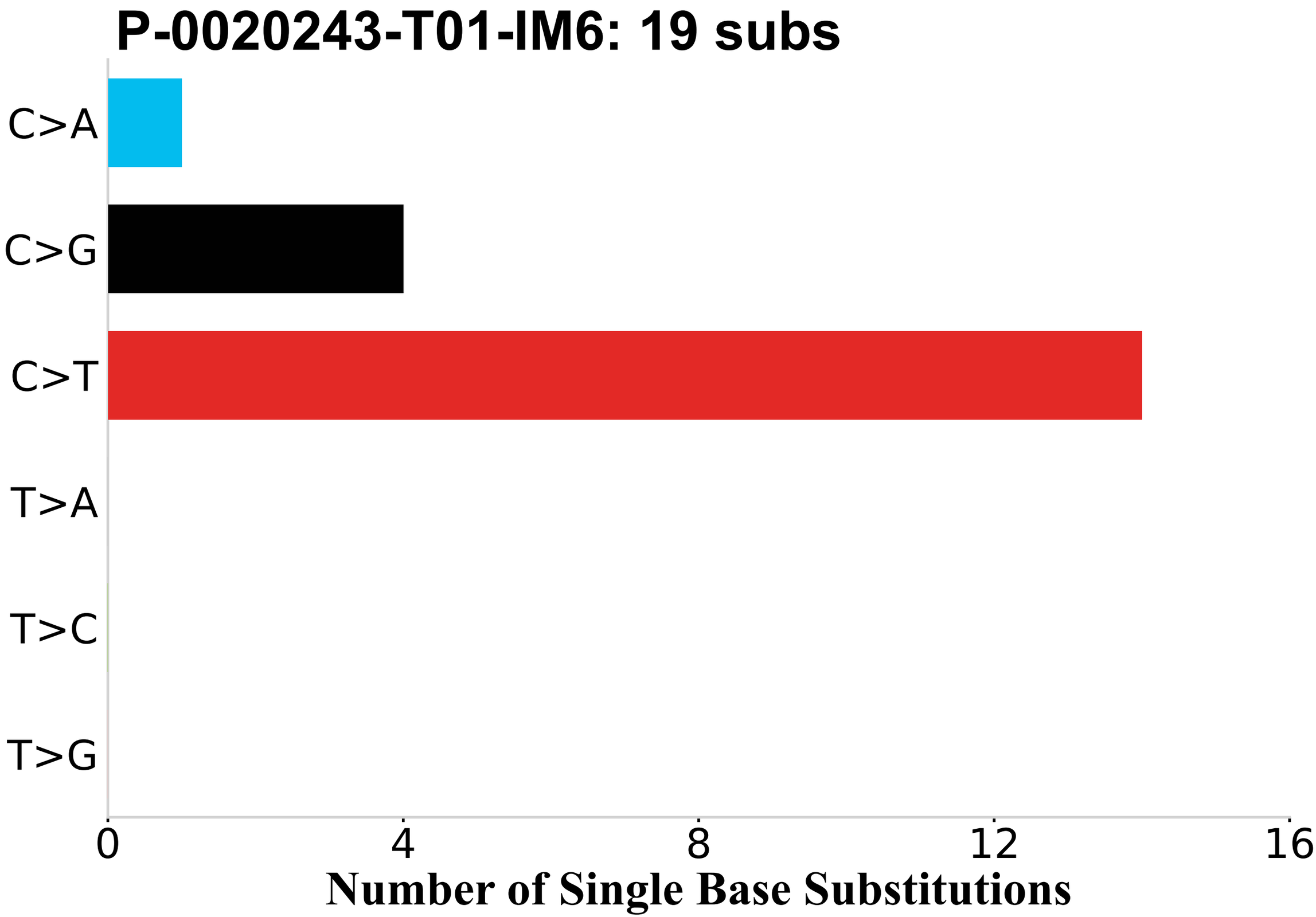
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0020243-T01-IM6: 19 subs
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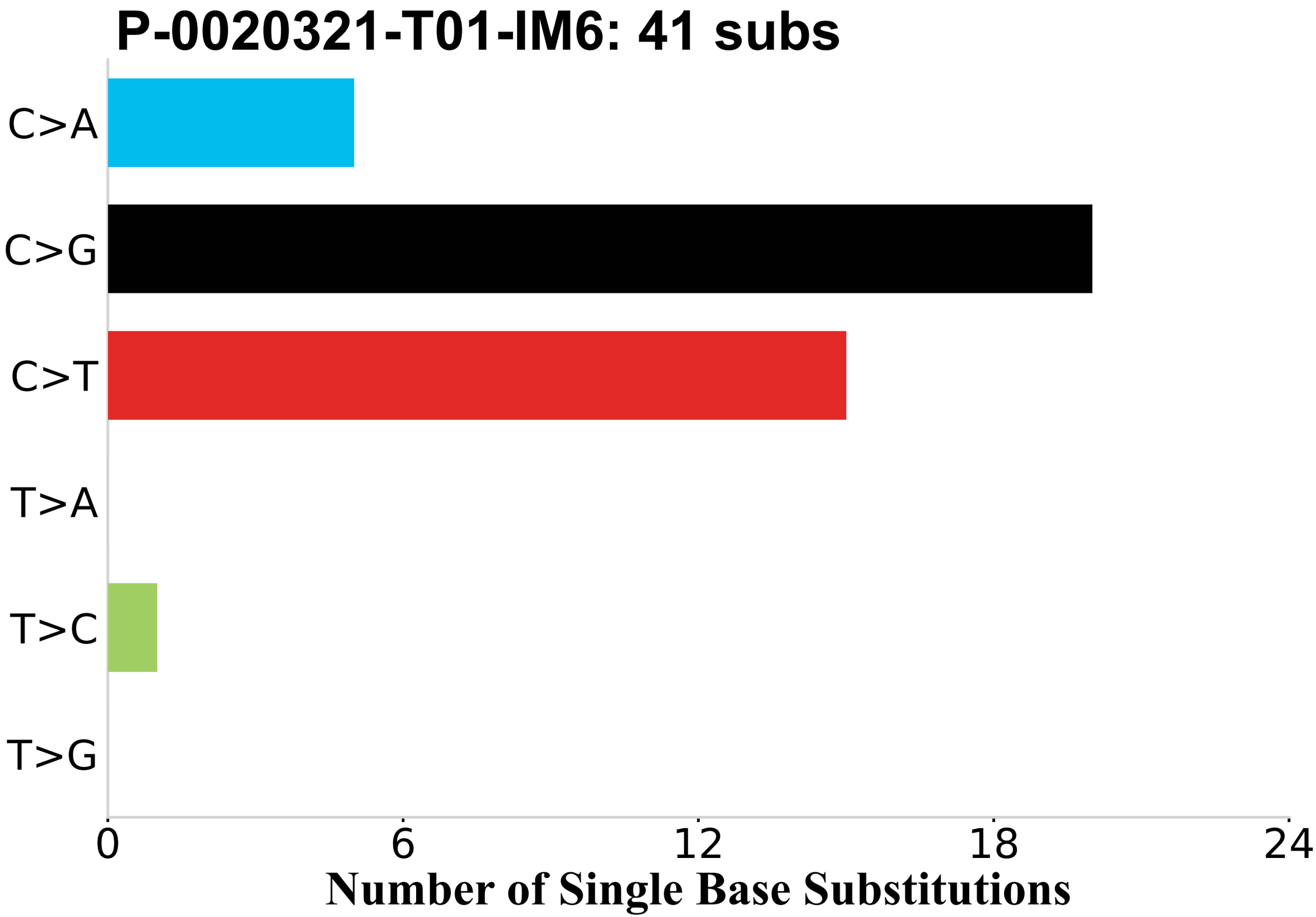
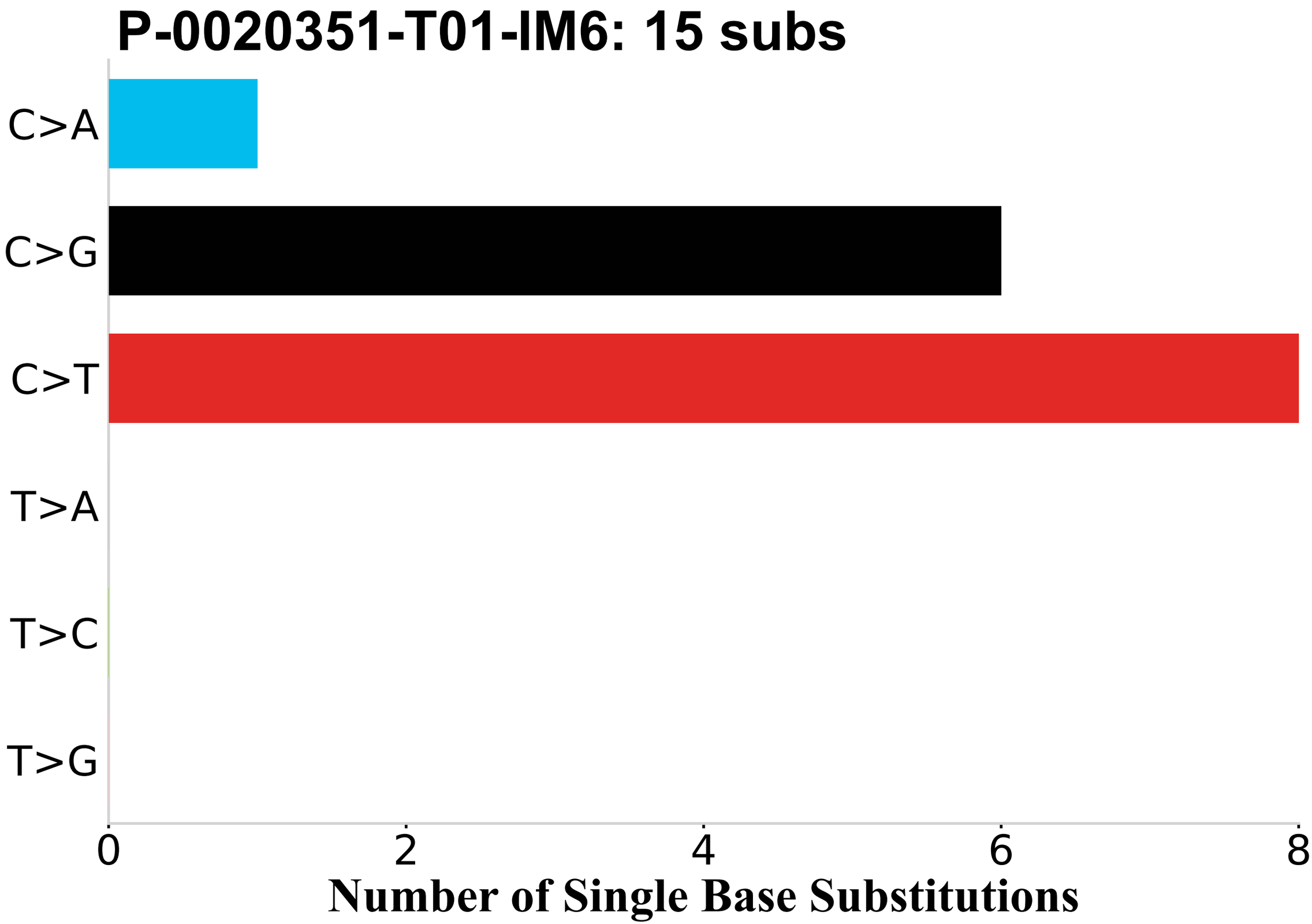
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0020321-T01-IM6: 41 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions


P-0020351-T01-IM6: 15 subs
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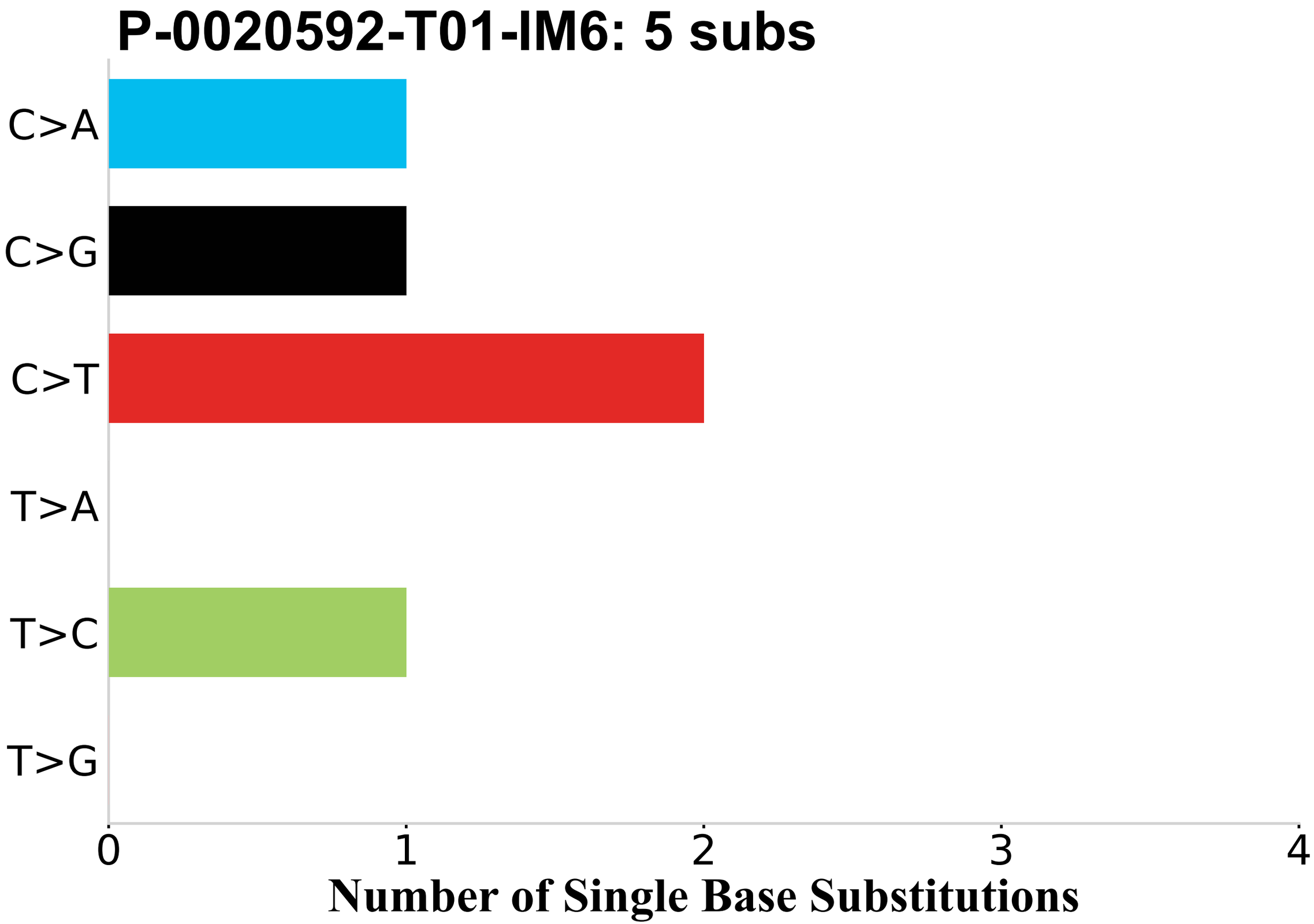
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0020592-T01-IM6: 5 subs
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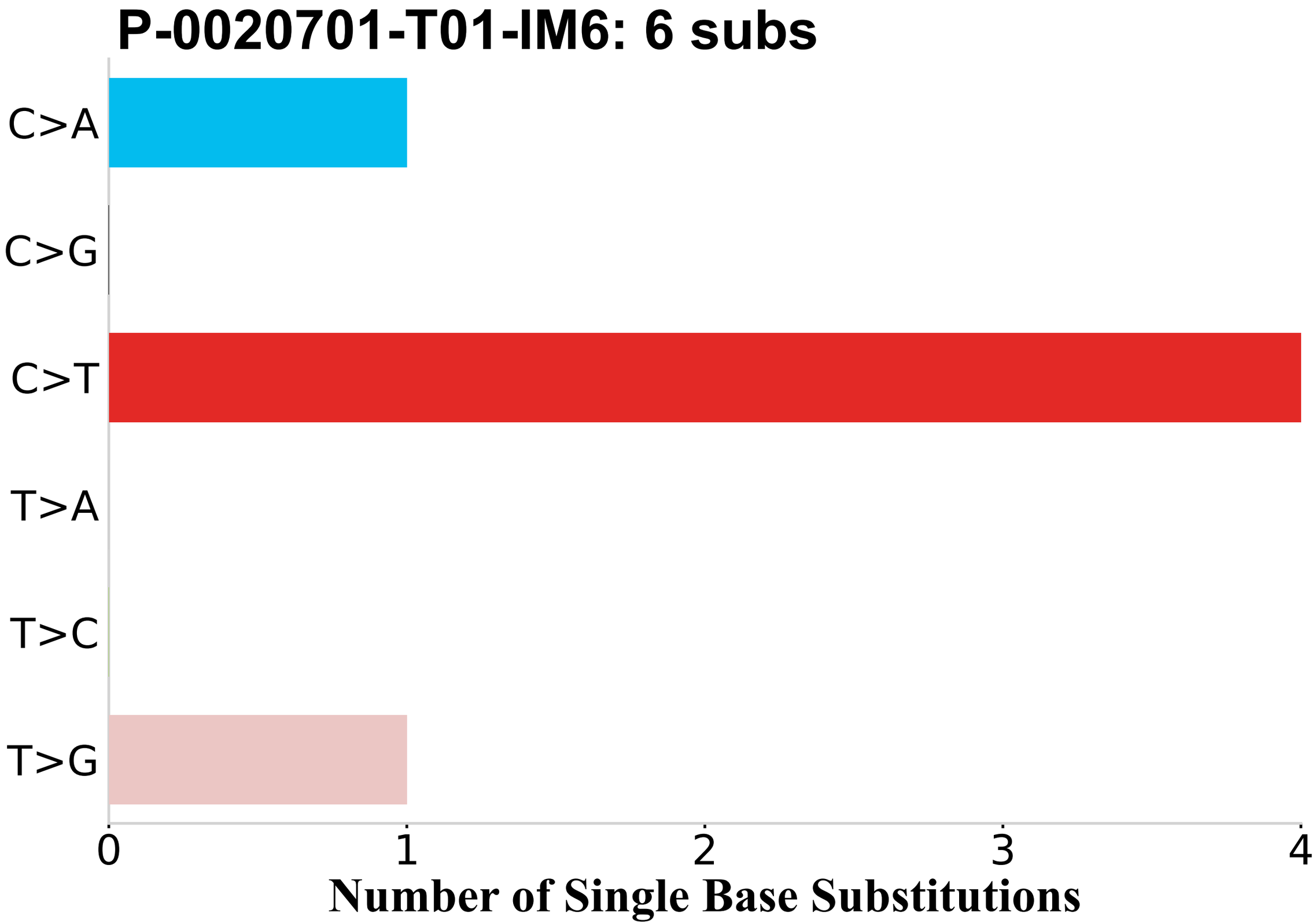
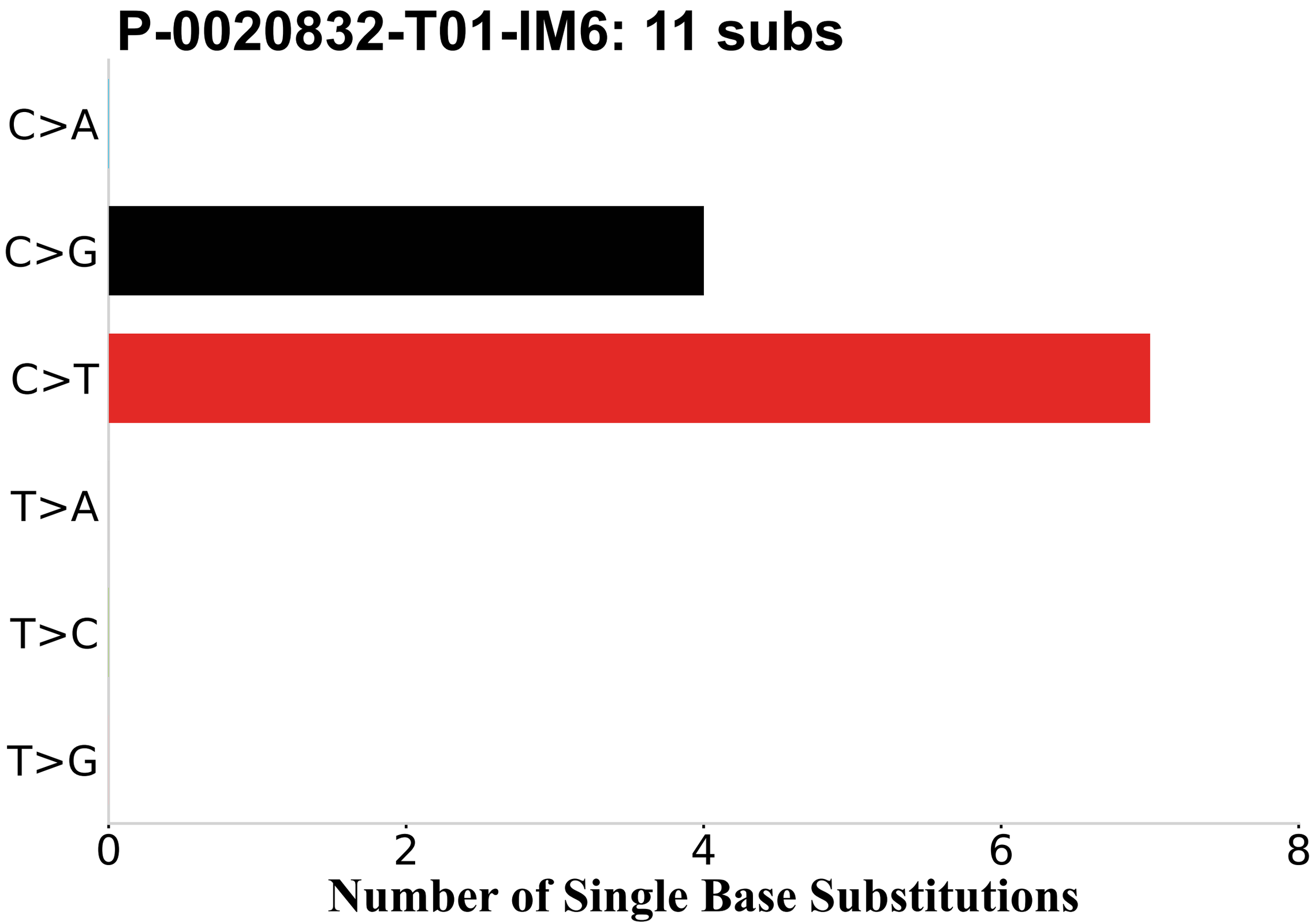
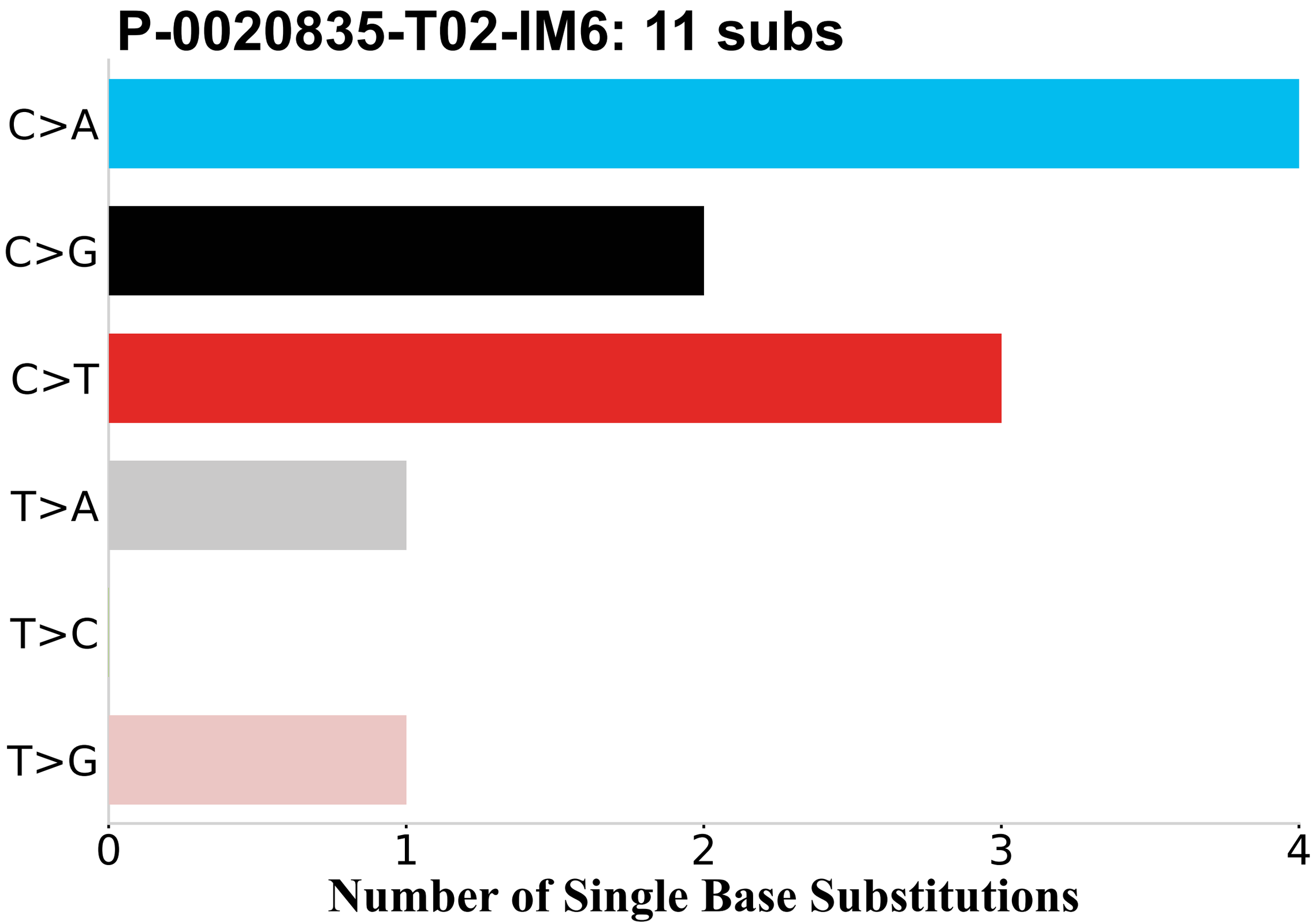
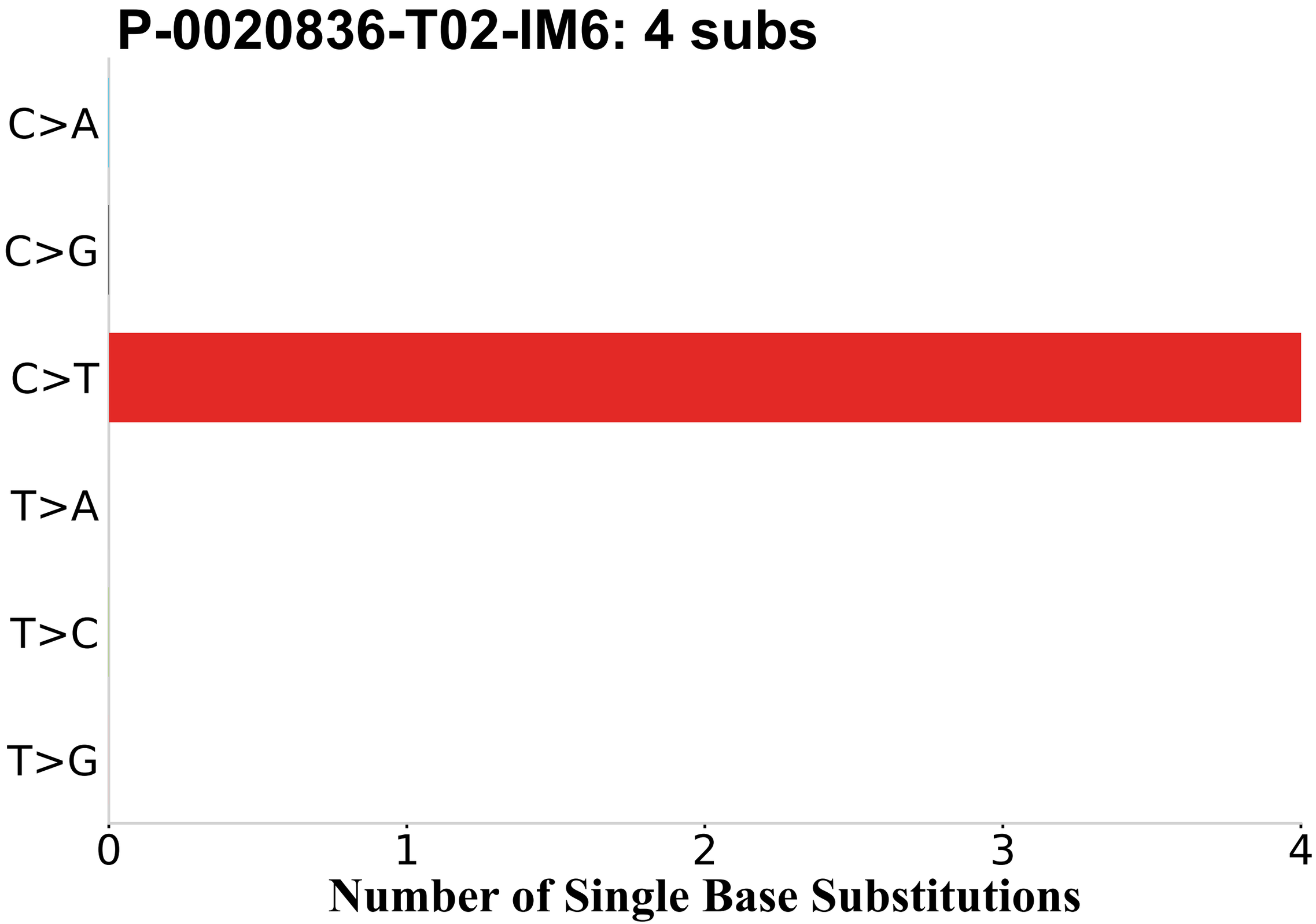
1
2
3
4
Number of Single Base Substitutions


P-0020701-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0020832-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0020835-T02-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0020836-T02-IM6: 4 subs
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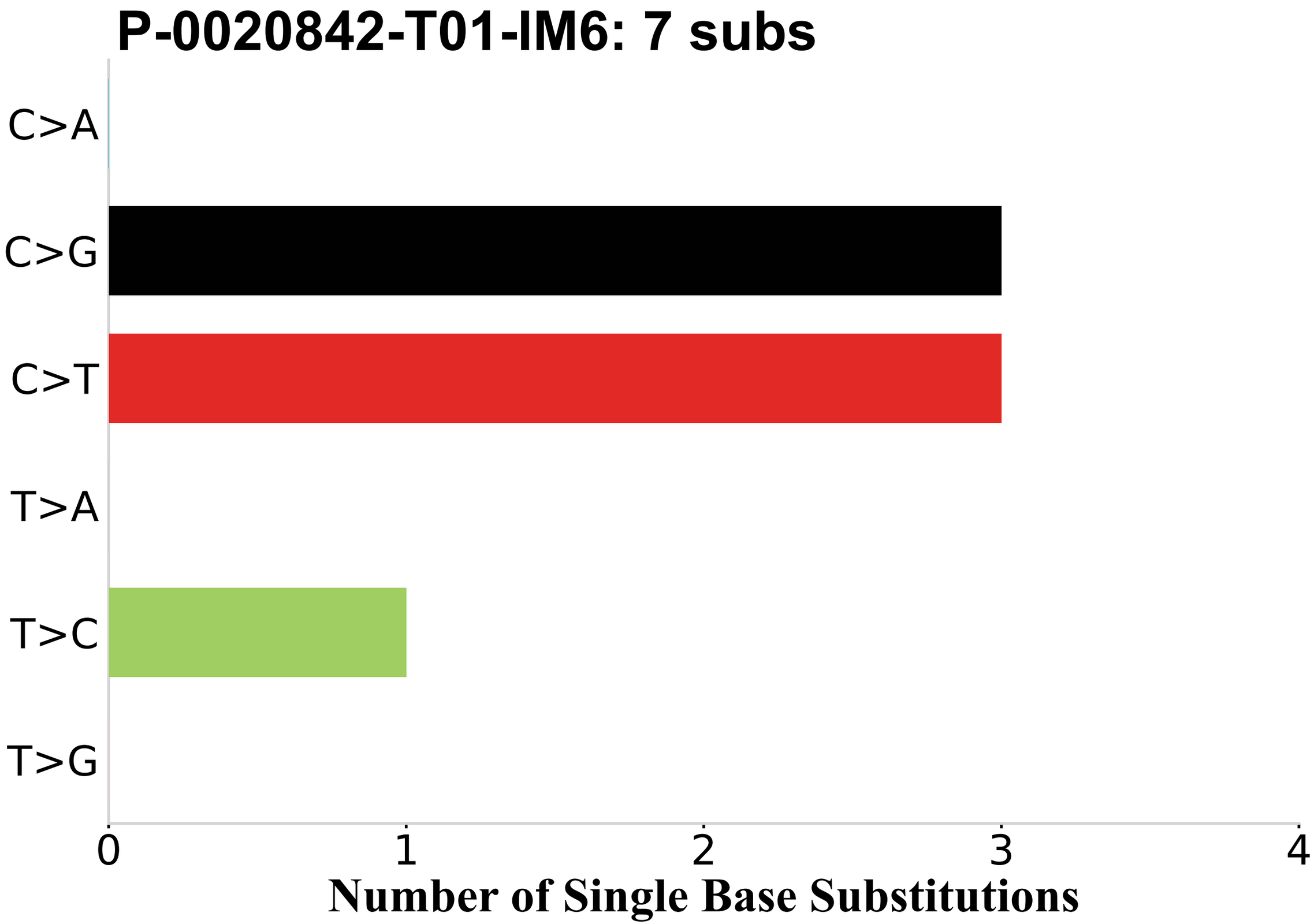
4
Number of Single Base Substitutions


P-0020842-T01-IM6: 7 subs
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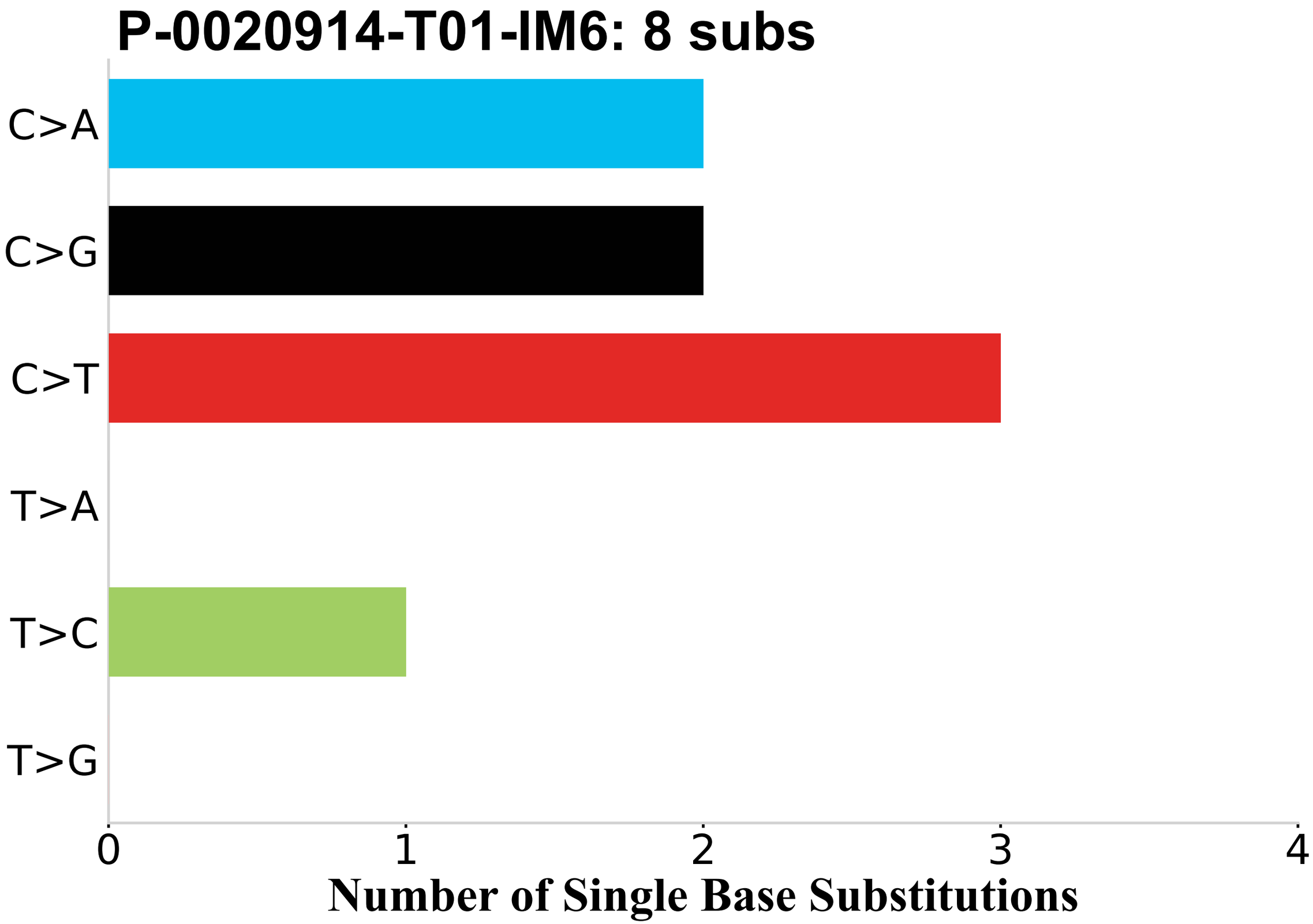
Number of Single Base Substitutions


P-0020914-T01-IM6: 8 subs
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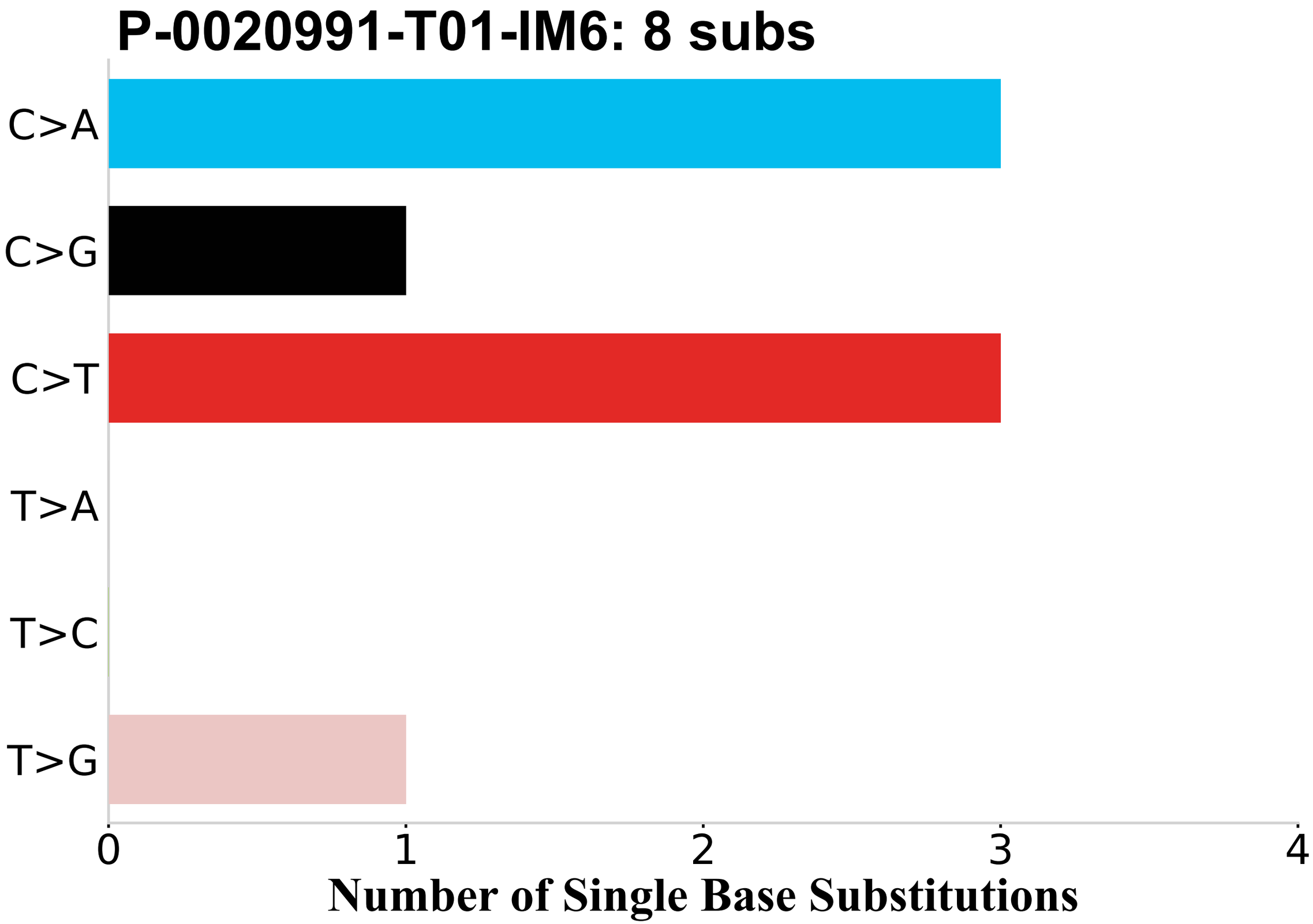
Number of Single Base Substitutions


P-0020991-T01-IM6: 8 subs
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T>C
T>G
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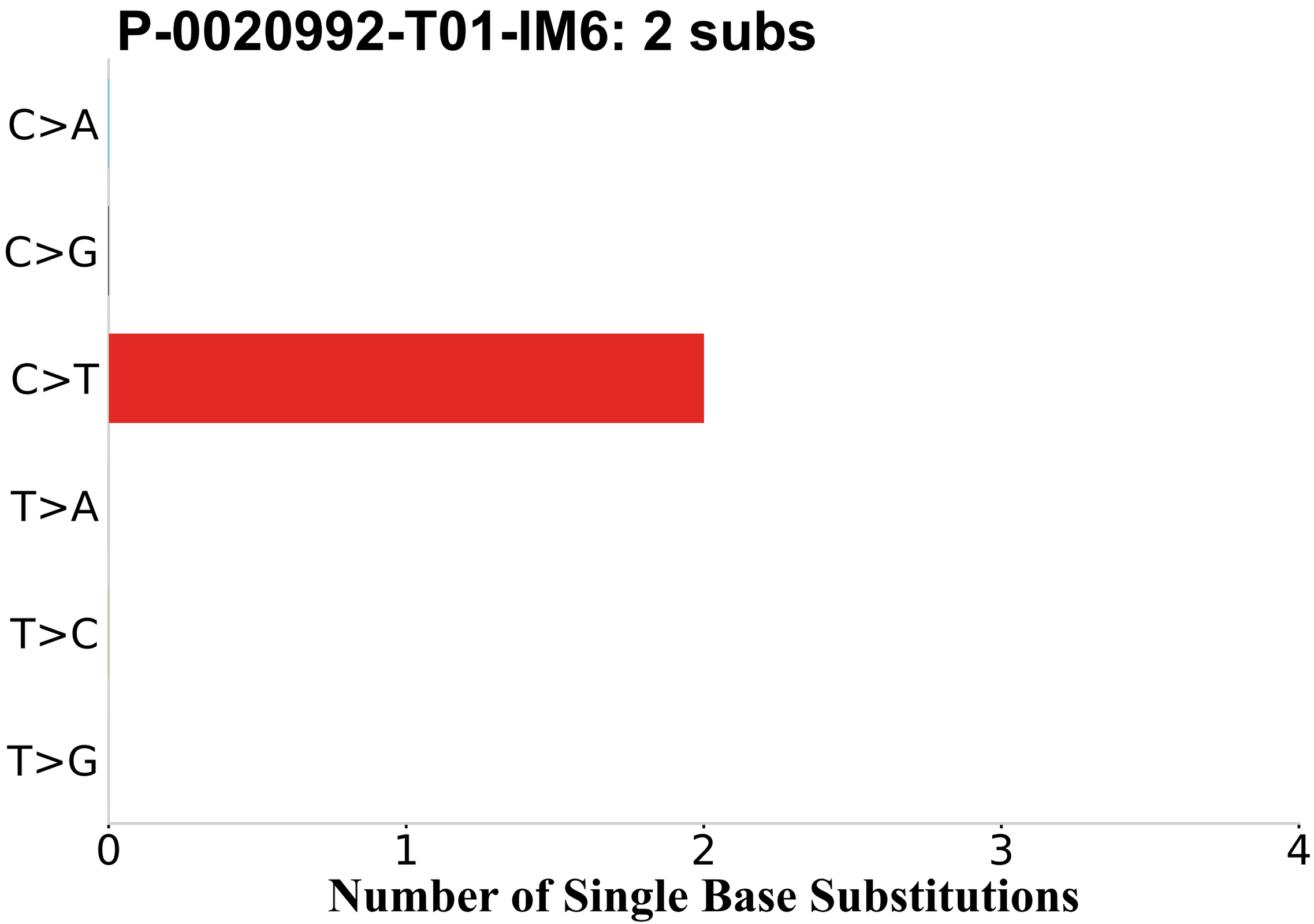
Number of Single Base Substitutions


P-0020992-T01-IM6: 2 subs
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T>C
T>G
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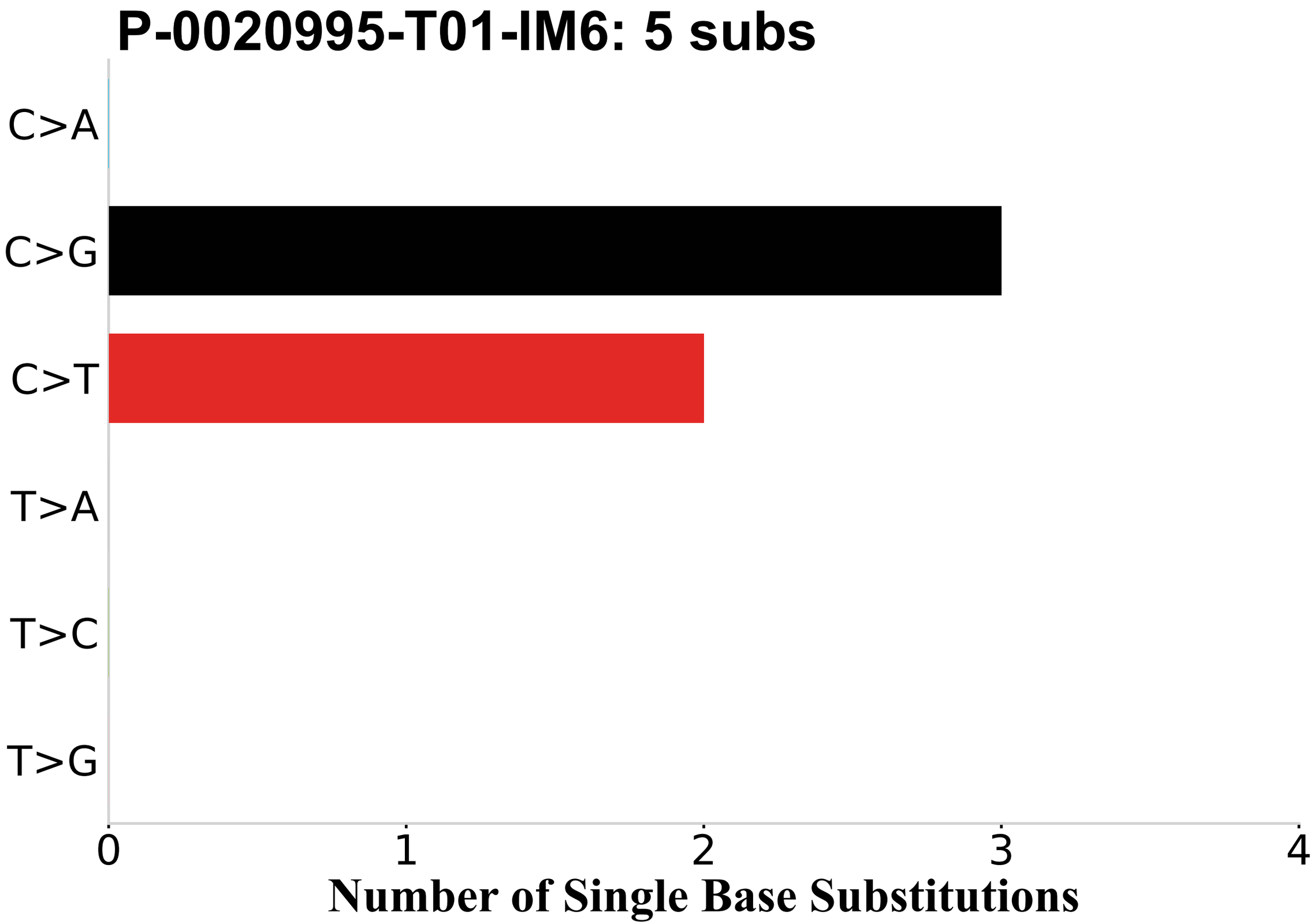
Number of Single Base Substitutions


P-0020995-T01-IM6: 5 subs
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T>C
T>G
0
1
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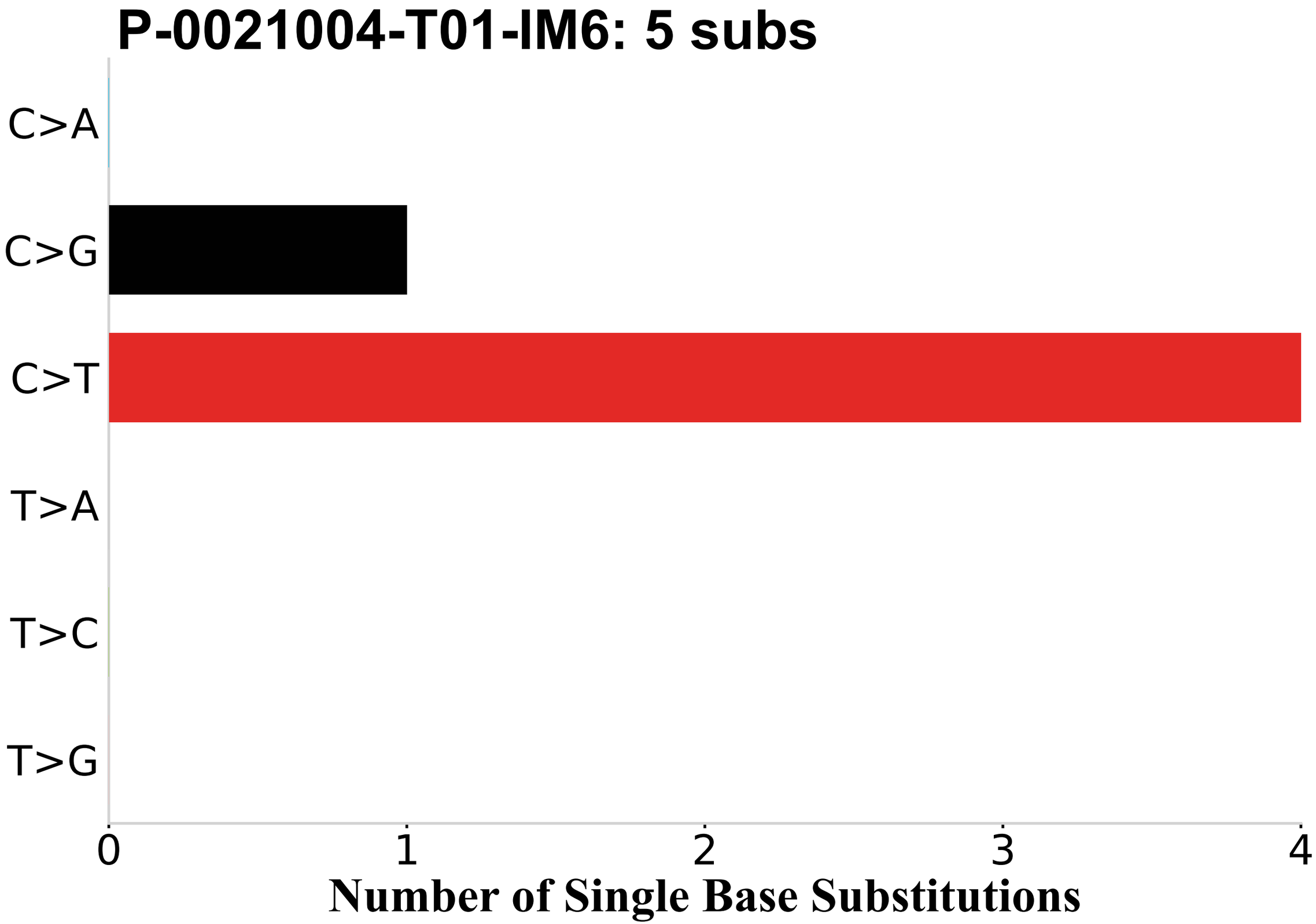
3
4
Number of Single Base Substitutions


P-0021004-T01-IM6: 5 subs
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T>C
T>G
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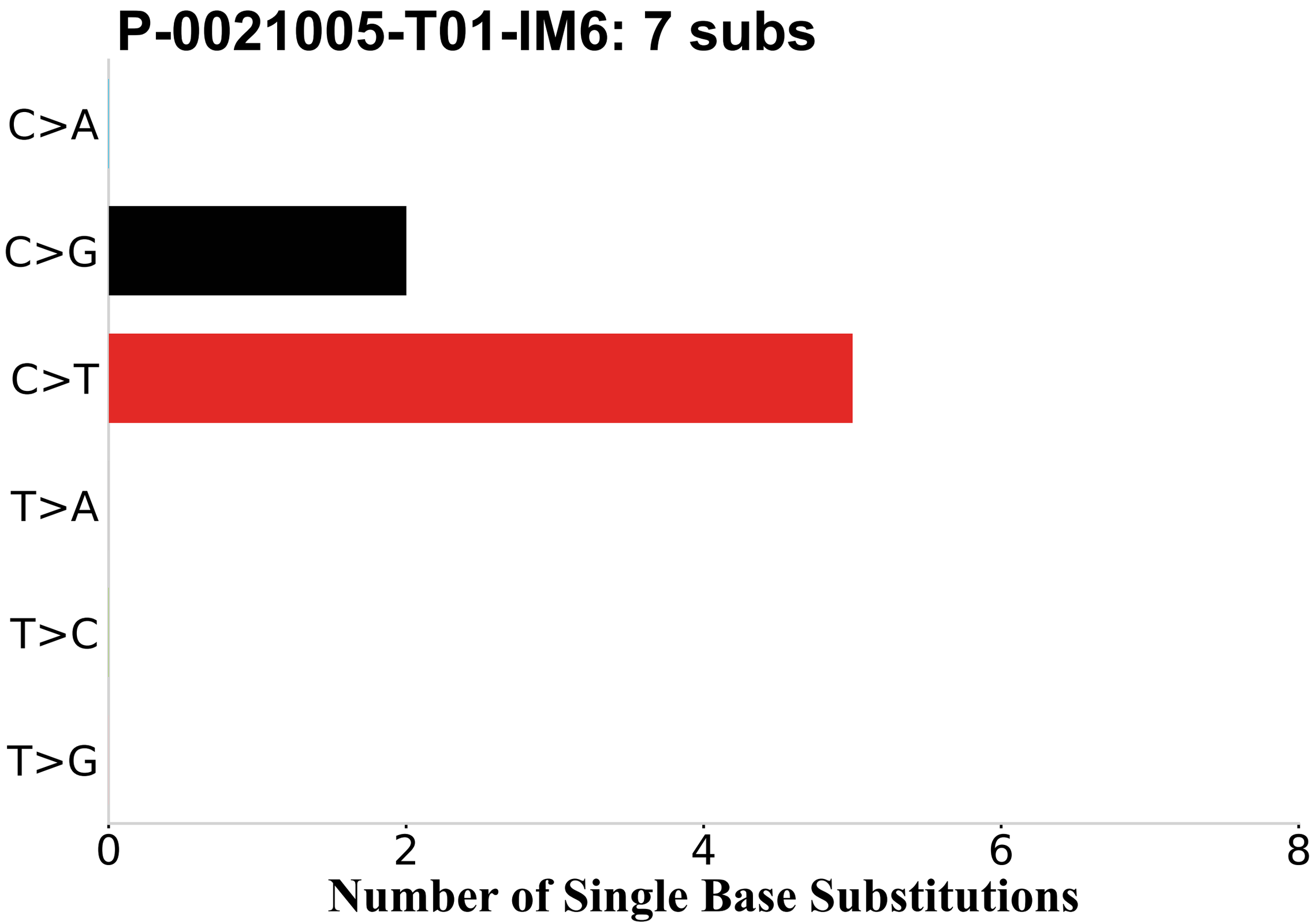
1
2
3
4
Number of Single Base Substitutions


P-0021005-T01-IM6: 7 subs
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T>C
T>G
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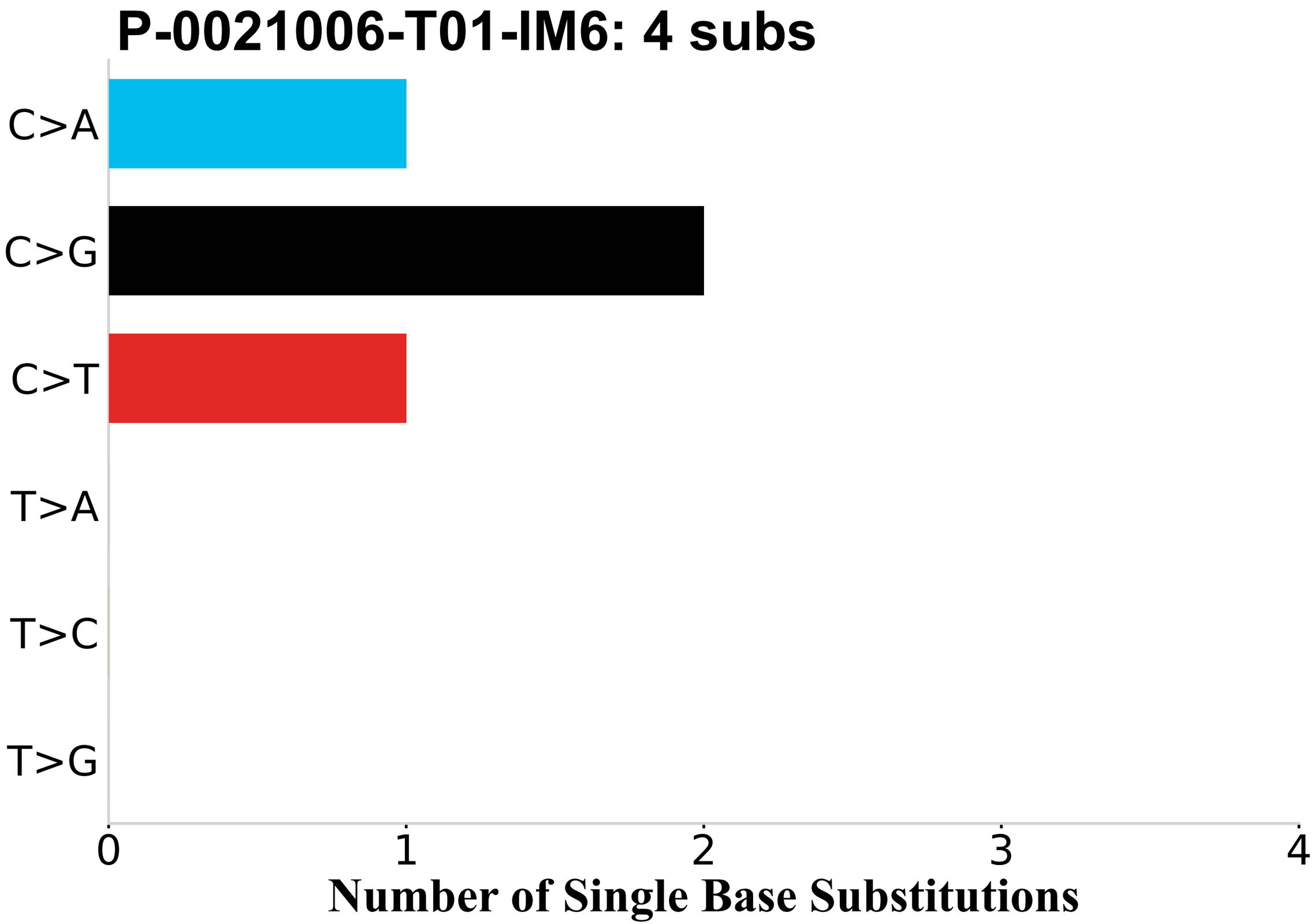
2
4
6
8
Number of Single Base Substitutions


P-0021006-T01-IM6: 4 subs
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T>C
T>G
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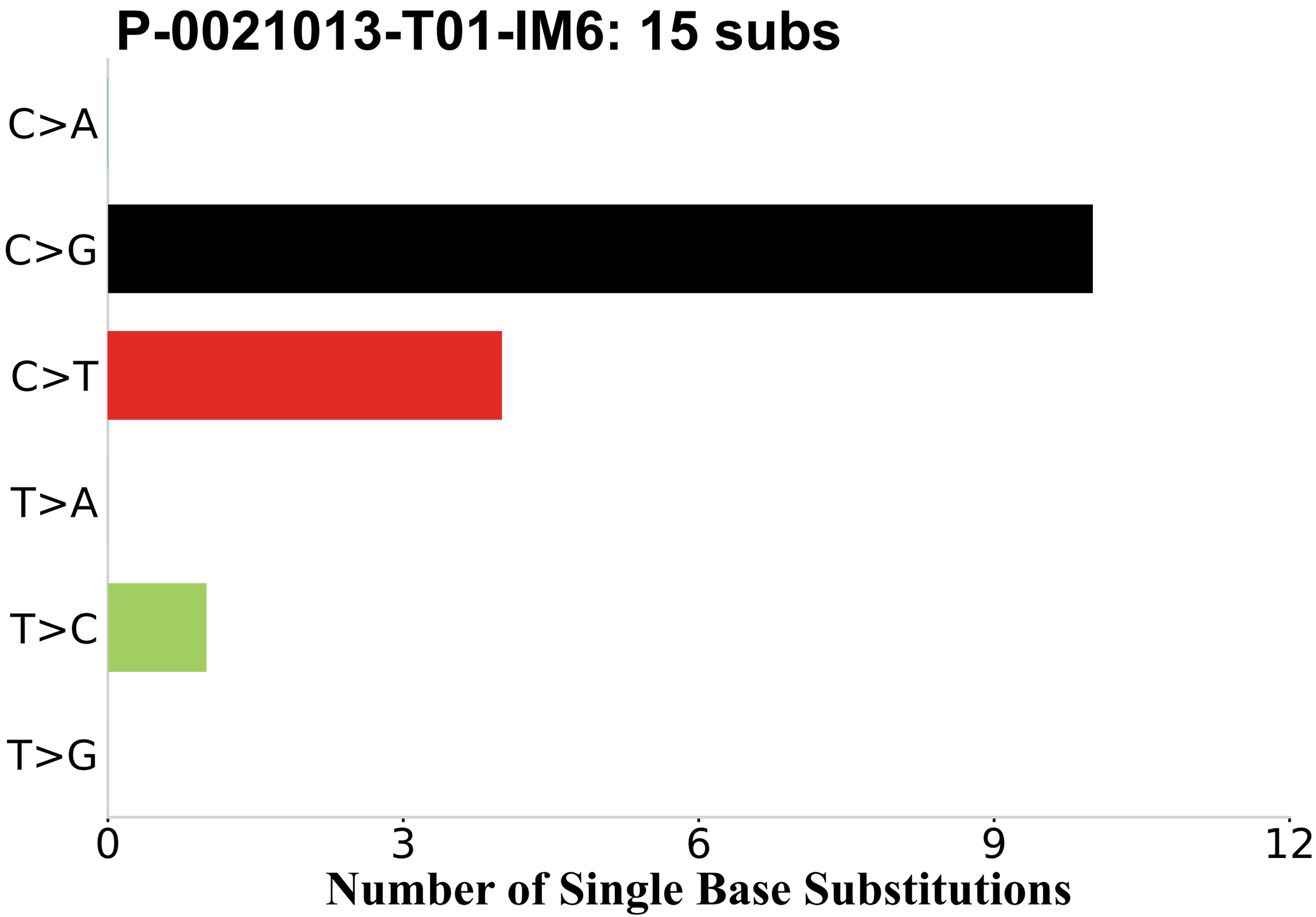
4
Number of Single Base Substitutions


P-0021013-T01-IM6: 15 subs
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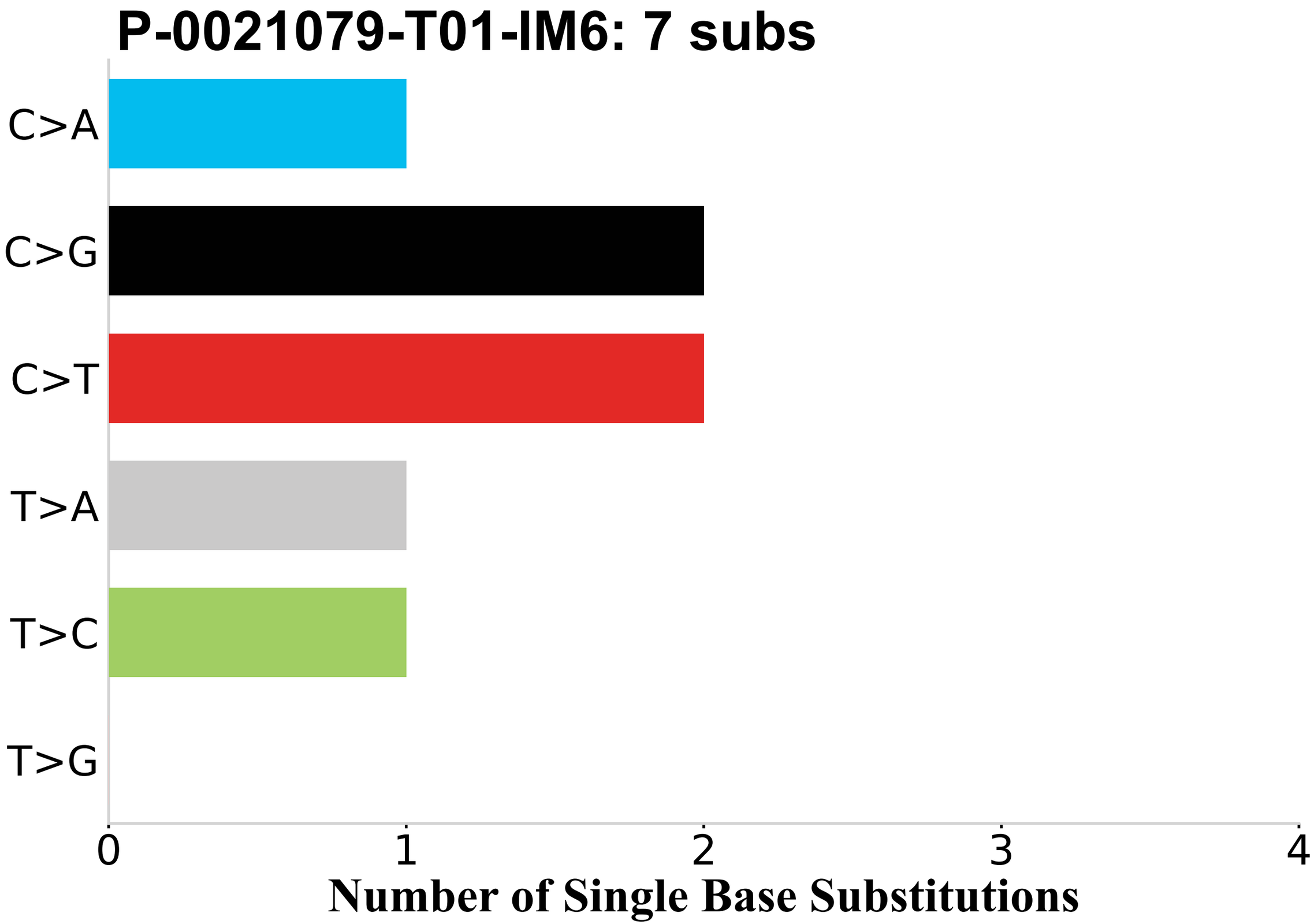
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0021079-T01-IM6: 7 subs
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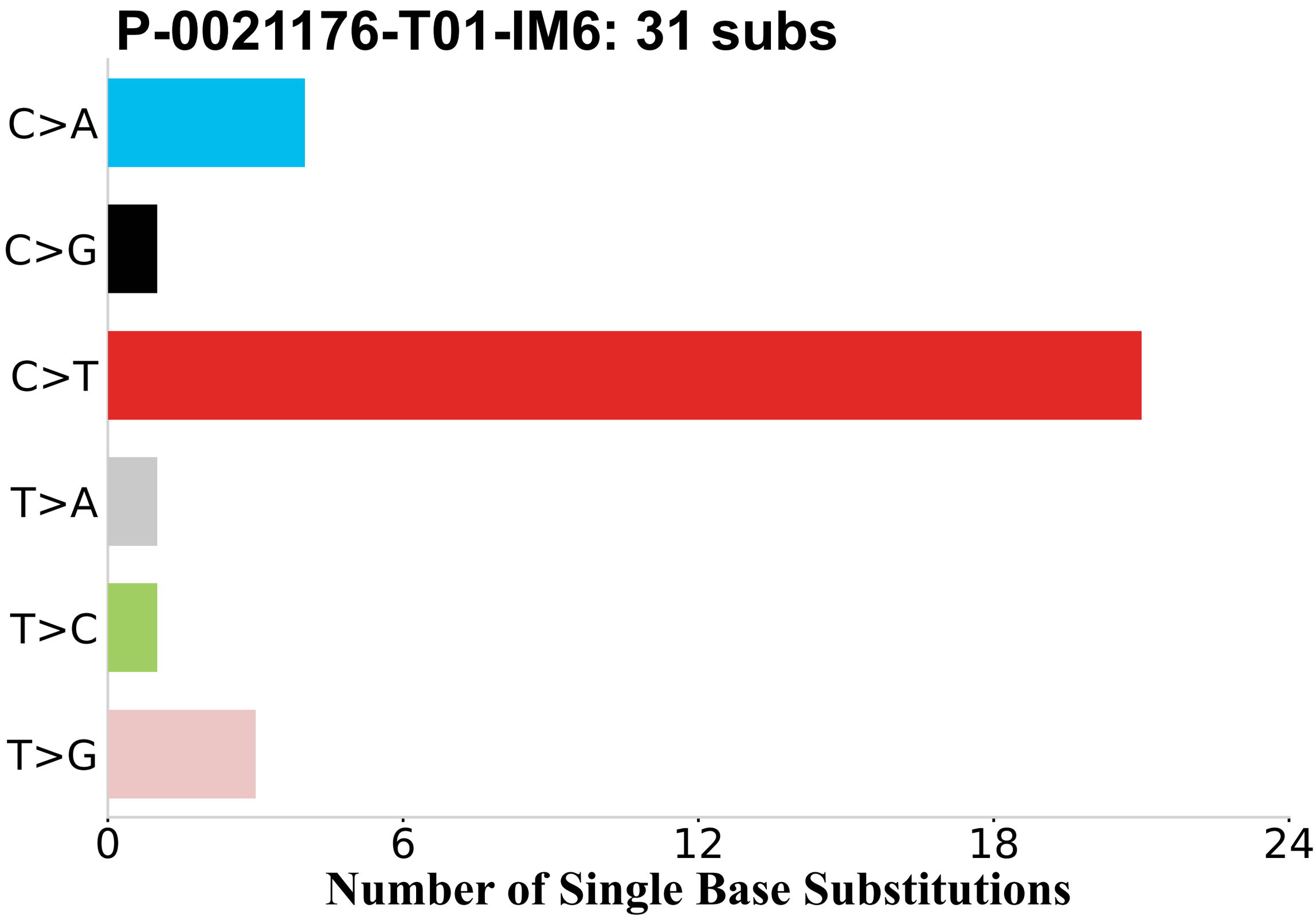
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0021176-T01-IM6: 31 subs
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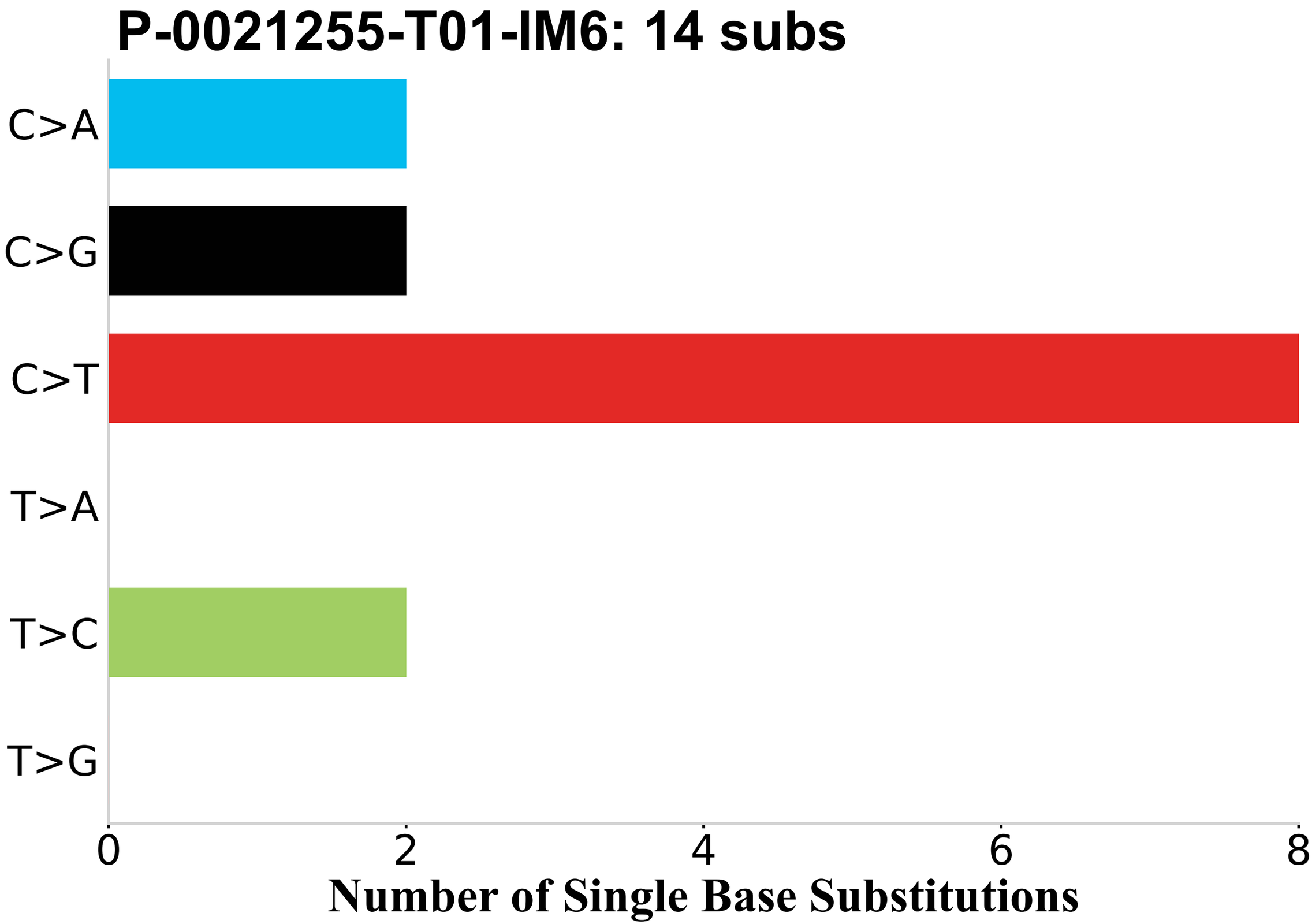
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions


P-0021255-T01-IM6: 14 subs
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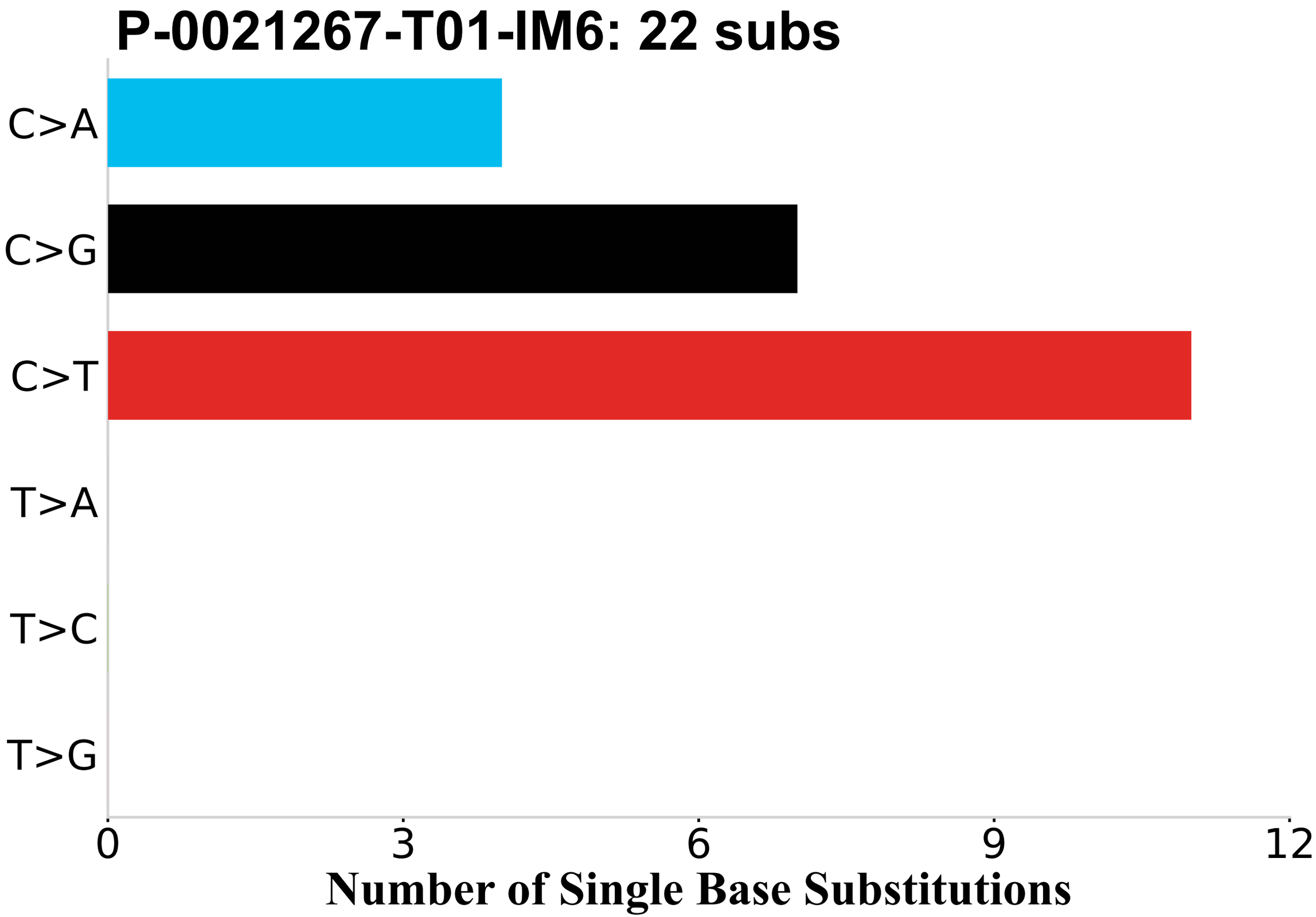
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0021267-T01-IM6: 22 subs
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C>T
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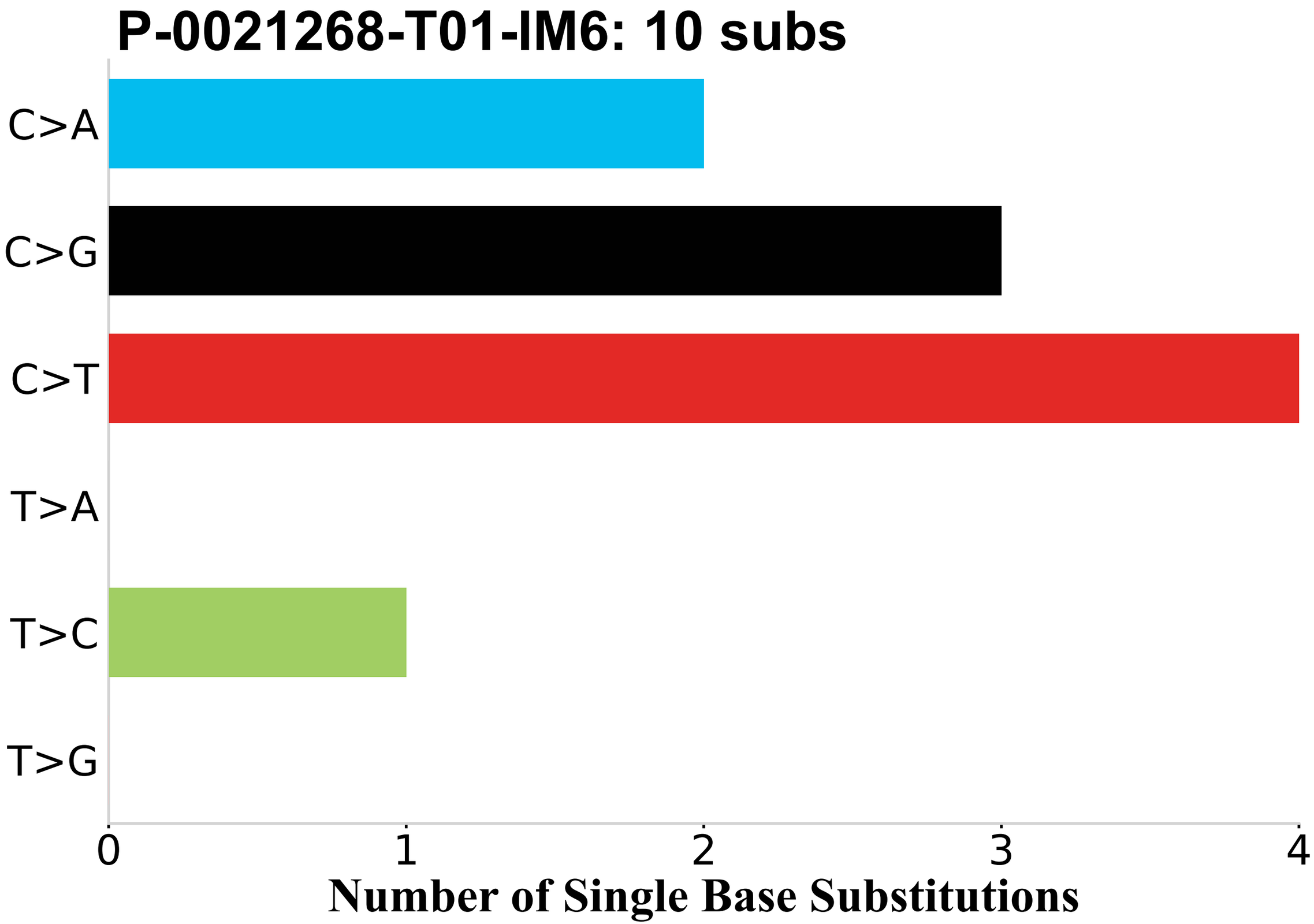
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0021268-T01-IM6: 10 subs
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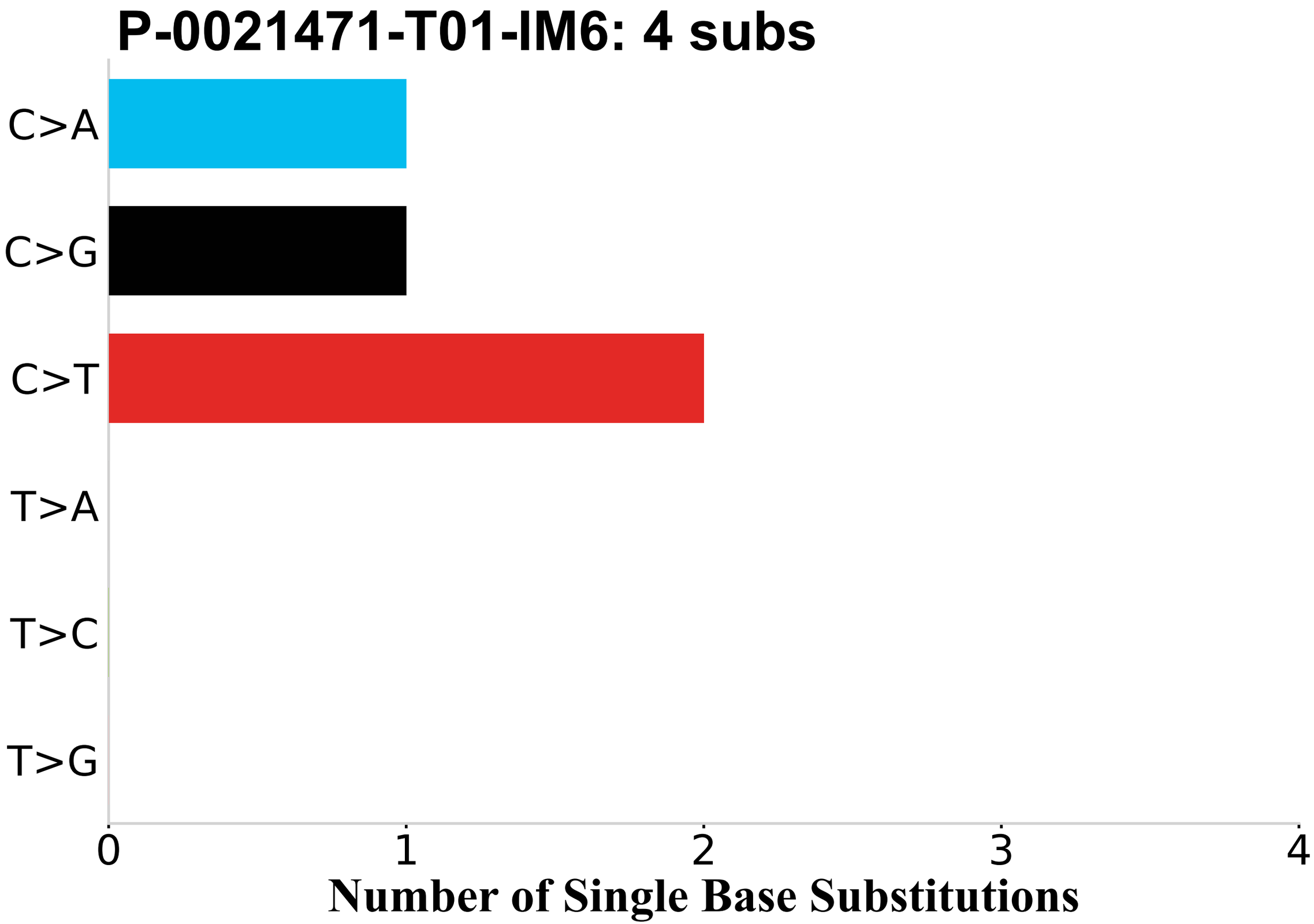
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0021471-T01-IM6: 4 subs
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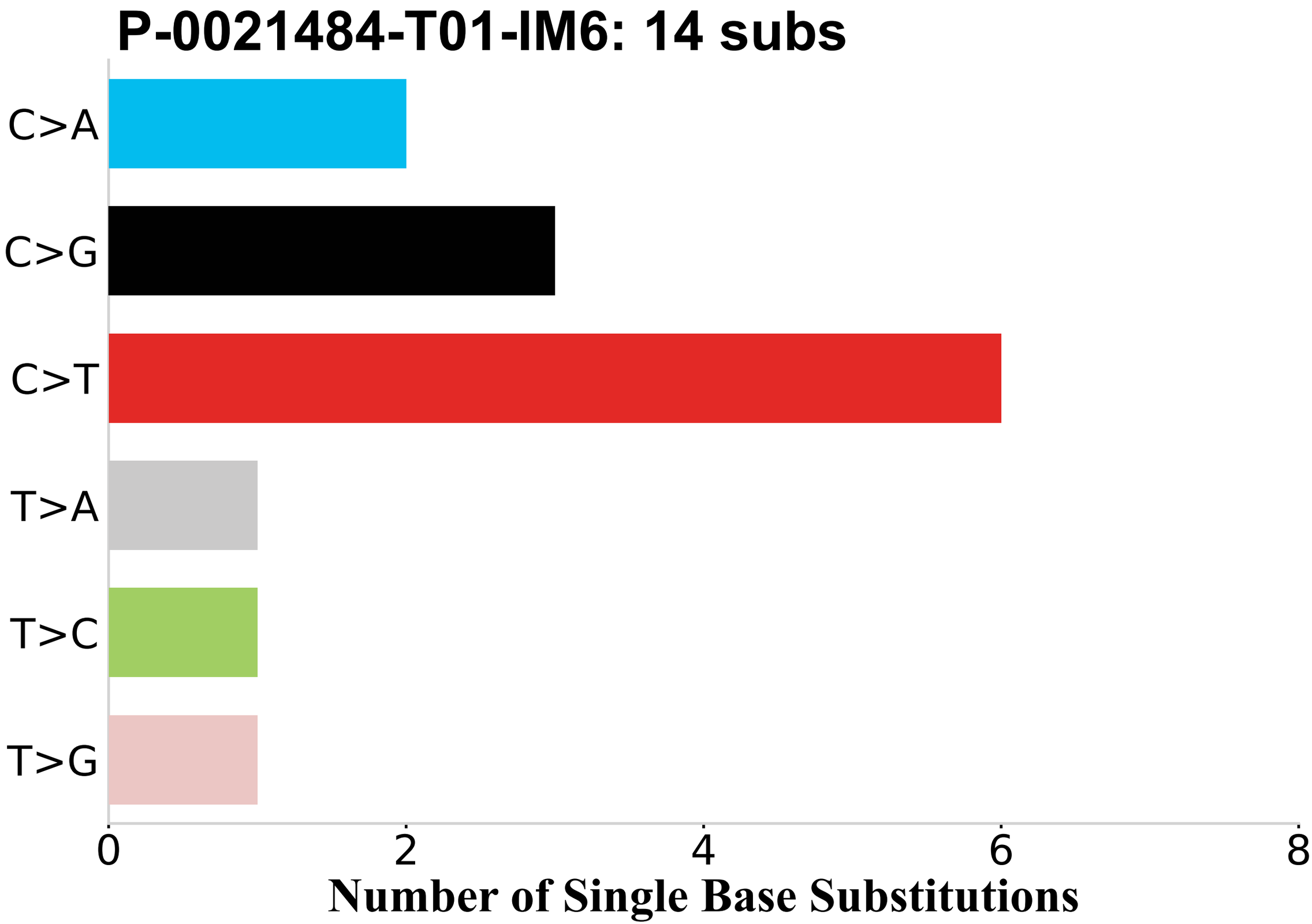
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0021484-T01-IM6: 14 subs
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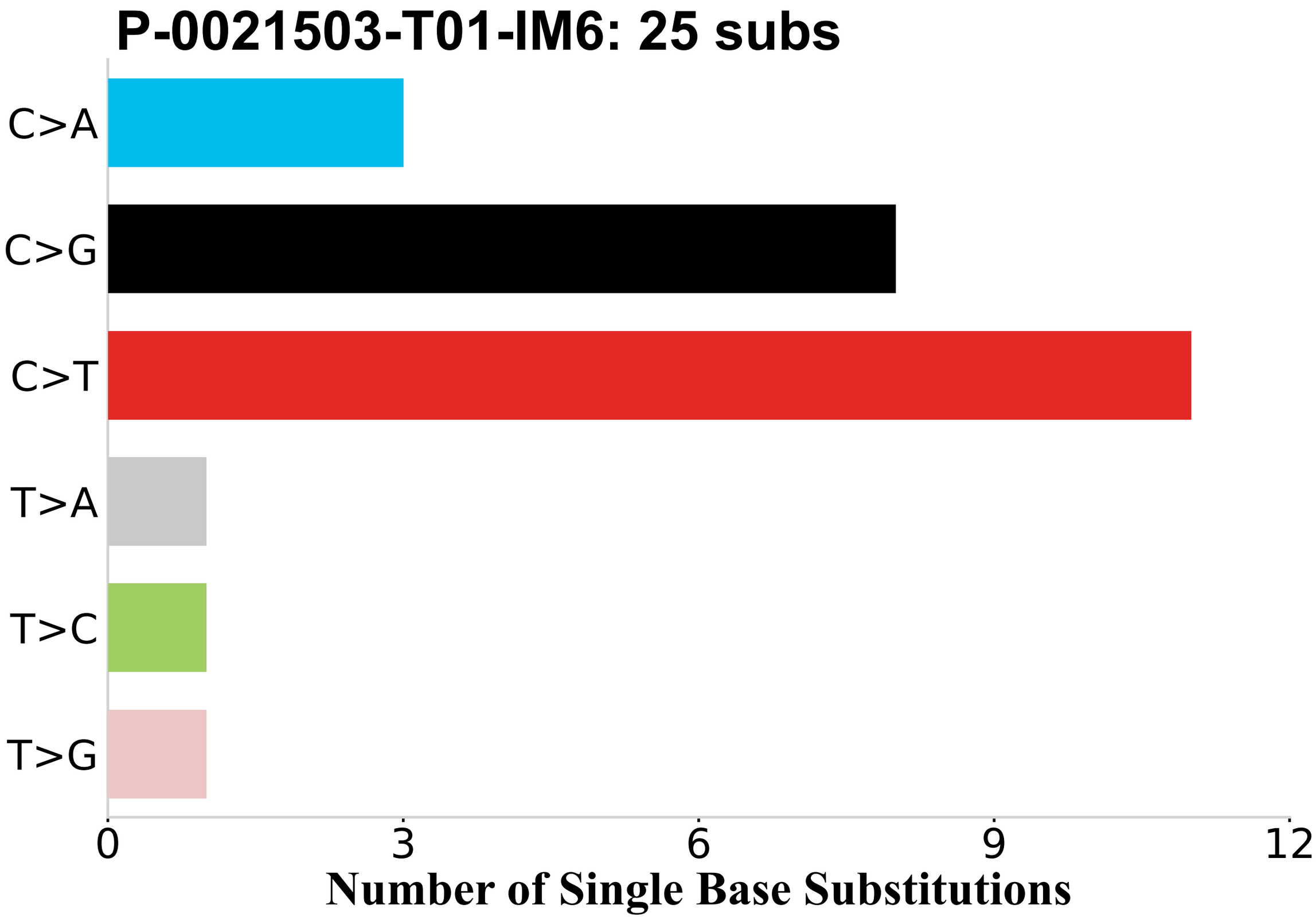
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0021503-T01-IM6: 25 subs
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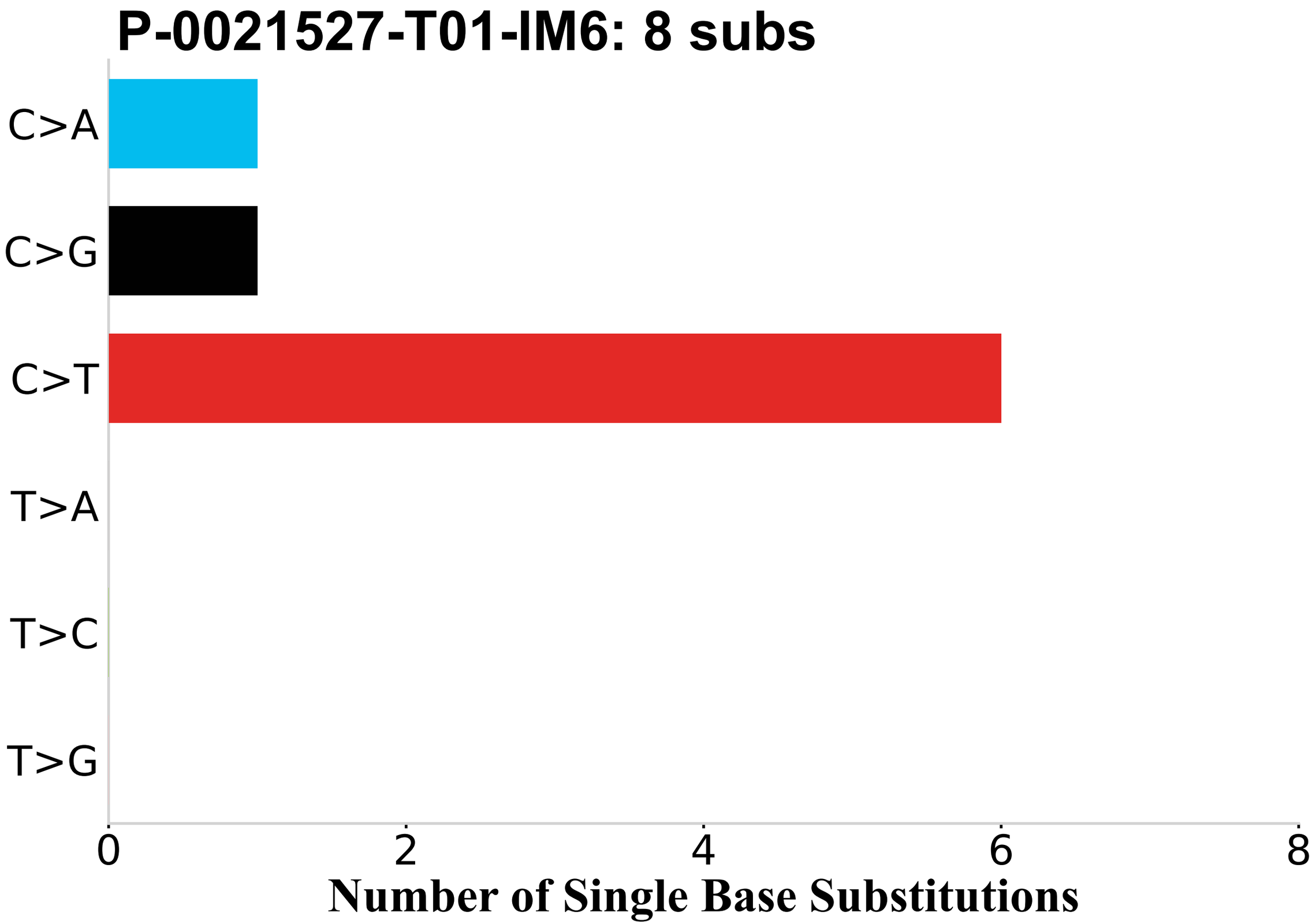
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0021527-T01-IM6: 8 subs
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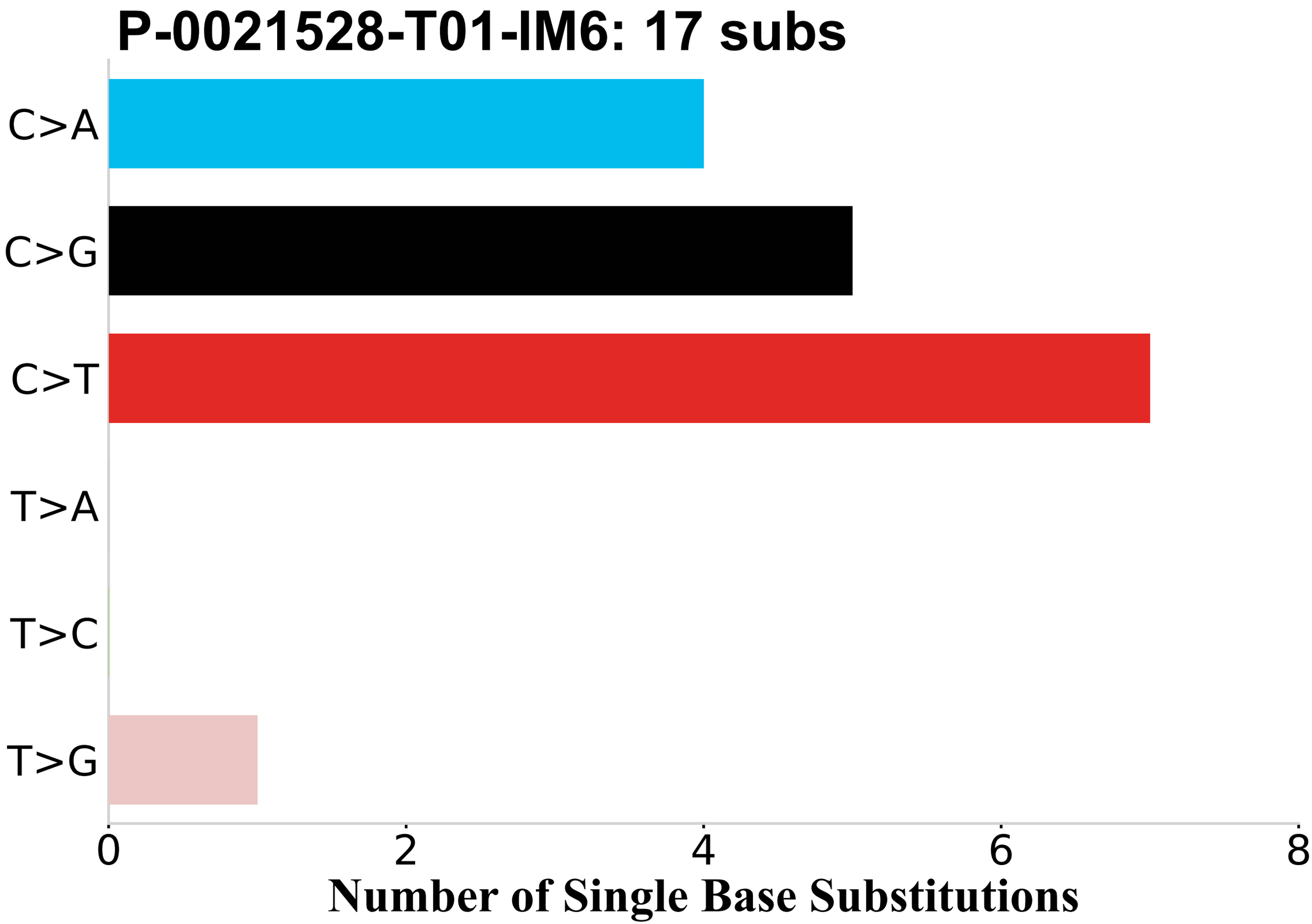
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0021528-T01-IM6: 17 subs
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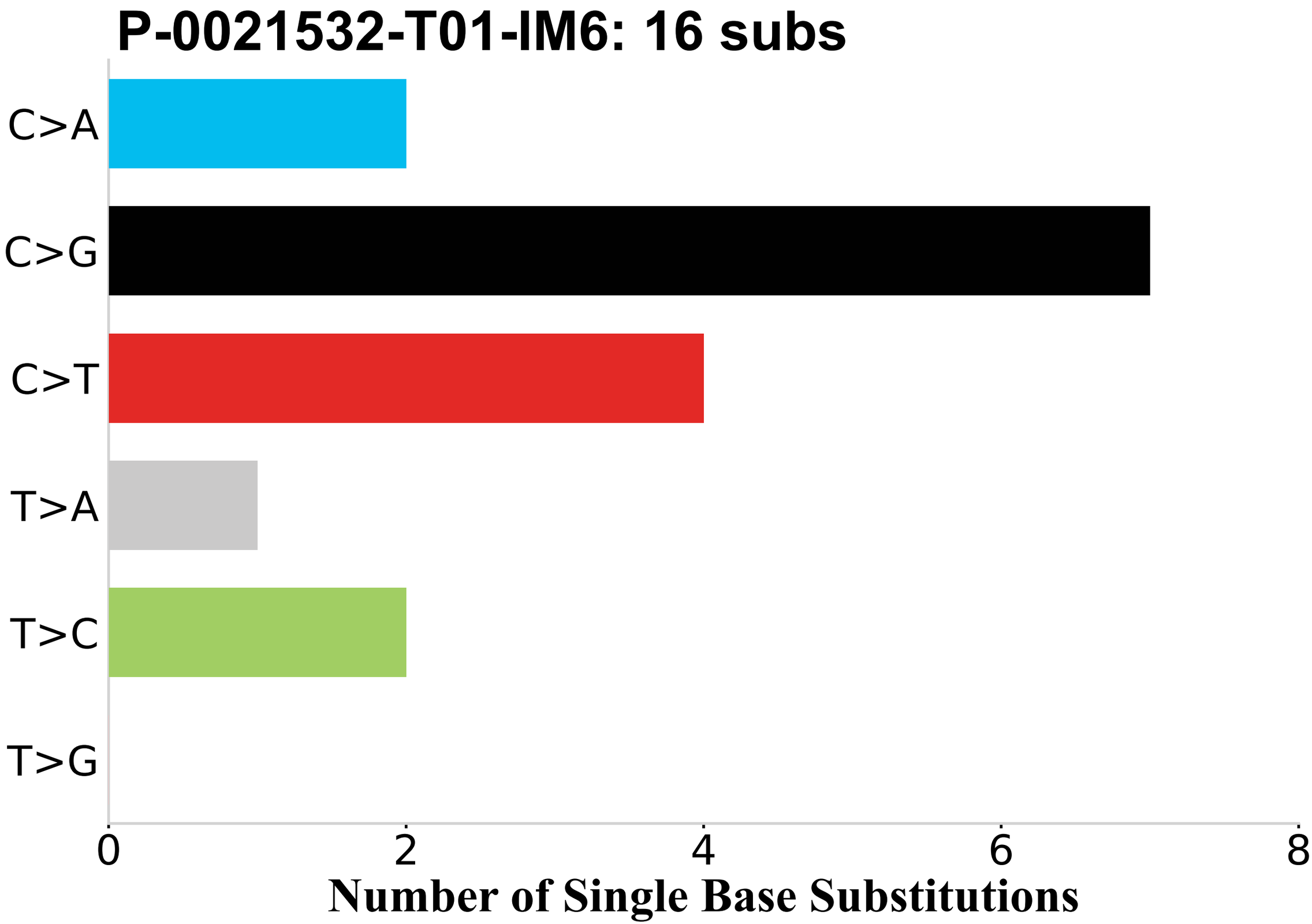
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0021532-T01-IM6: 16 subs
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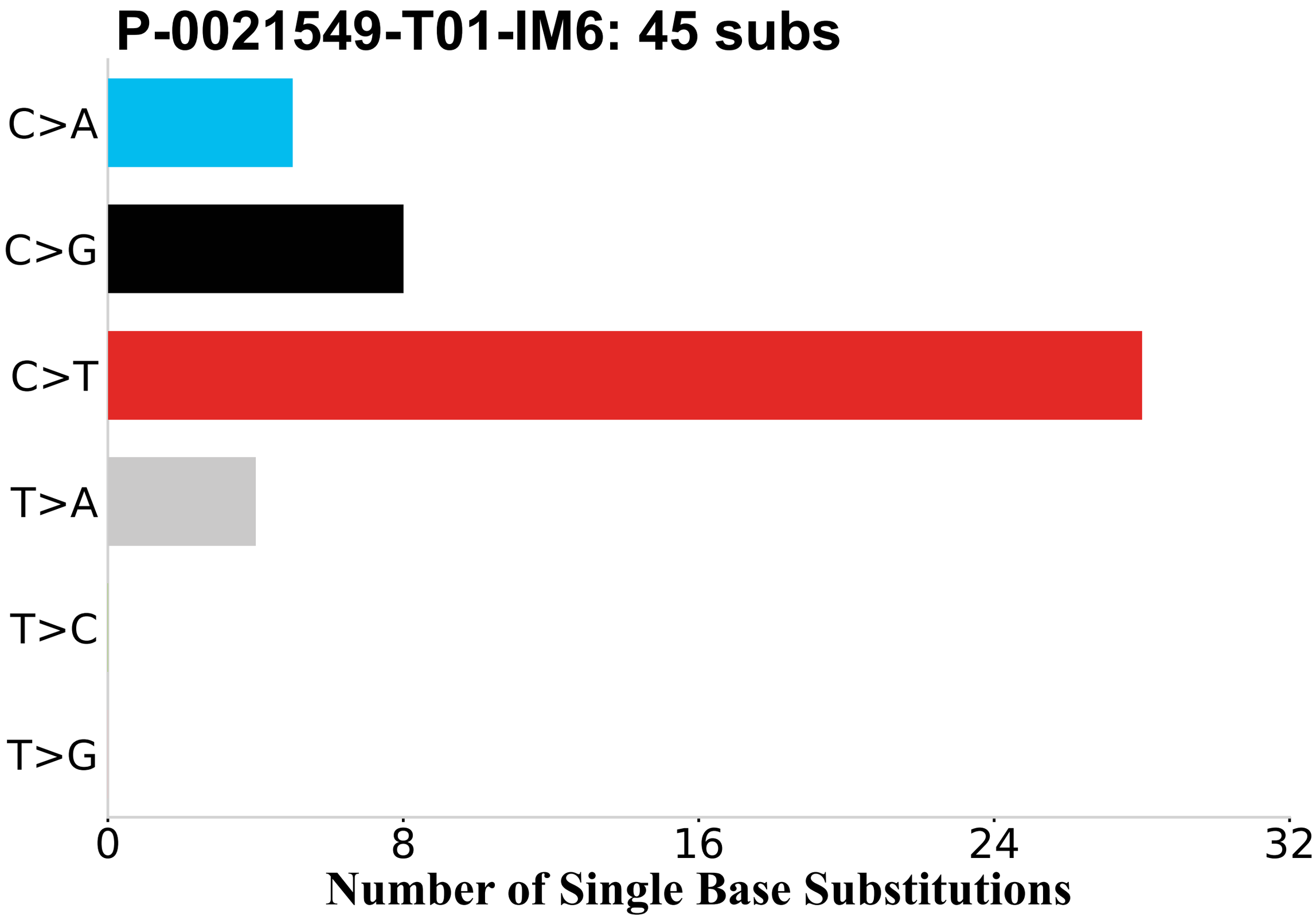
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0021549-T01-IM6: 45 subs
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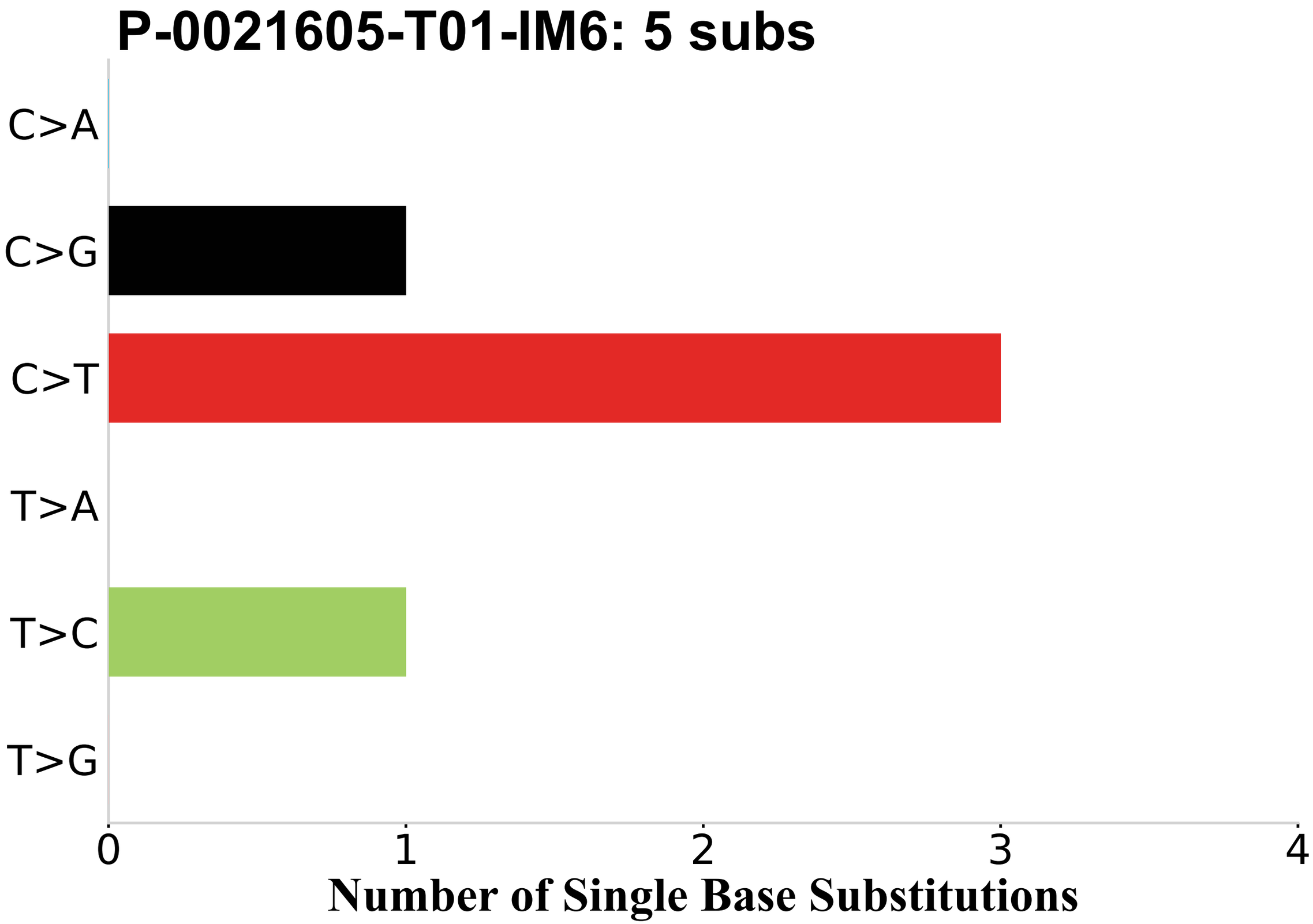
C>T
T>A
T>C
T>G
0
8
16
24
32
Number of Single Base Substitutions


P-0021605-T01-IM6: 5 subs
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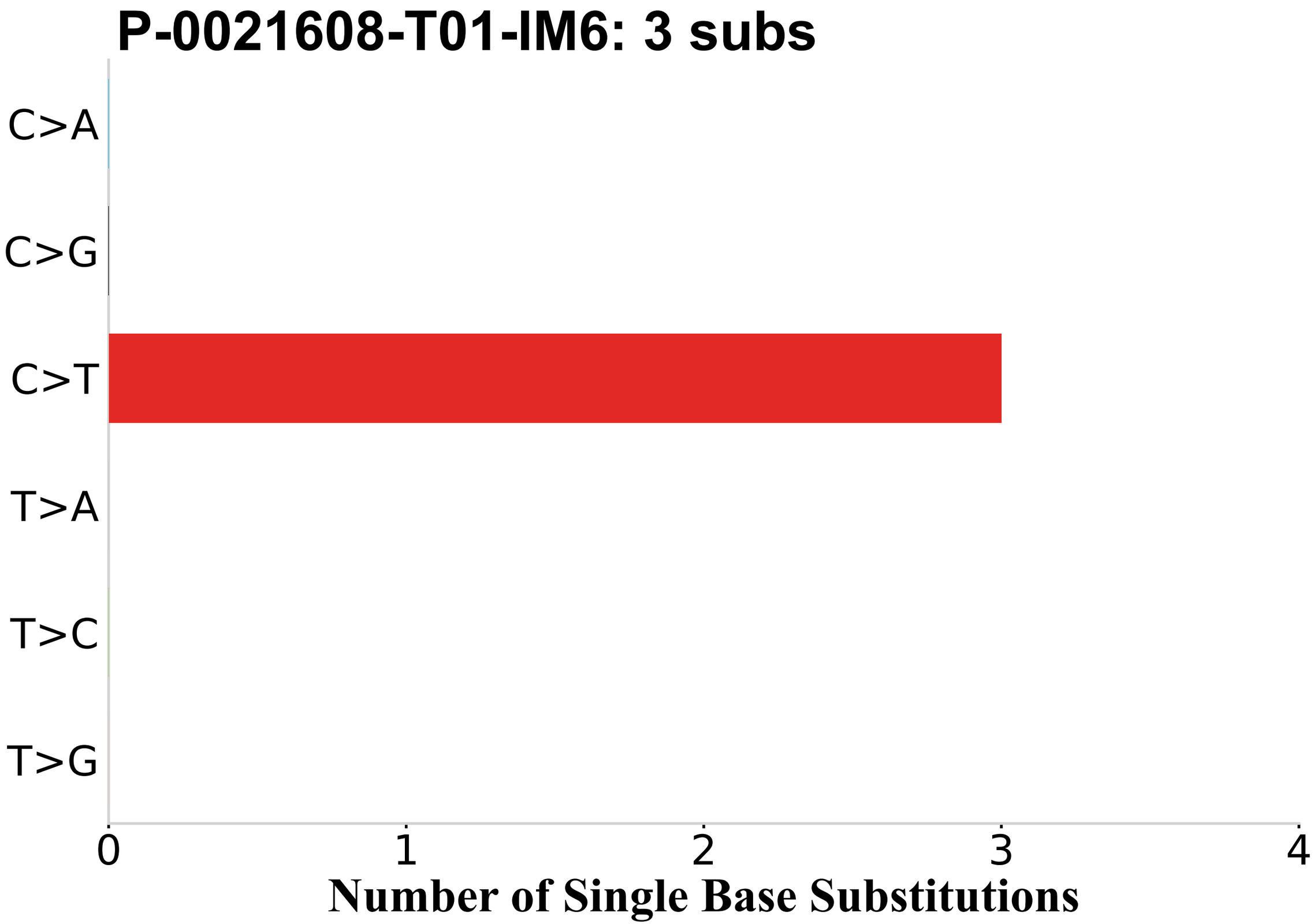
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0021608-T01-IM6: 3 subs
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T>C
T>G
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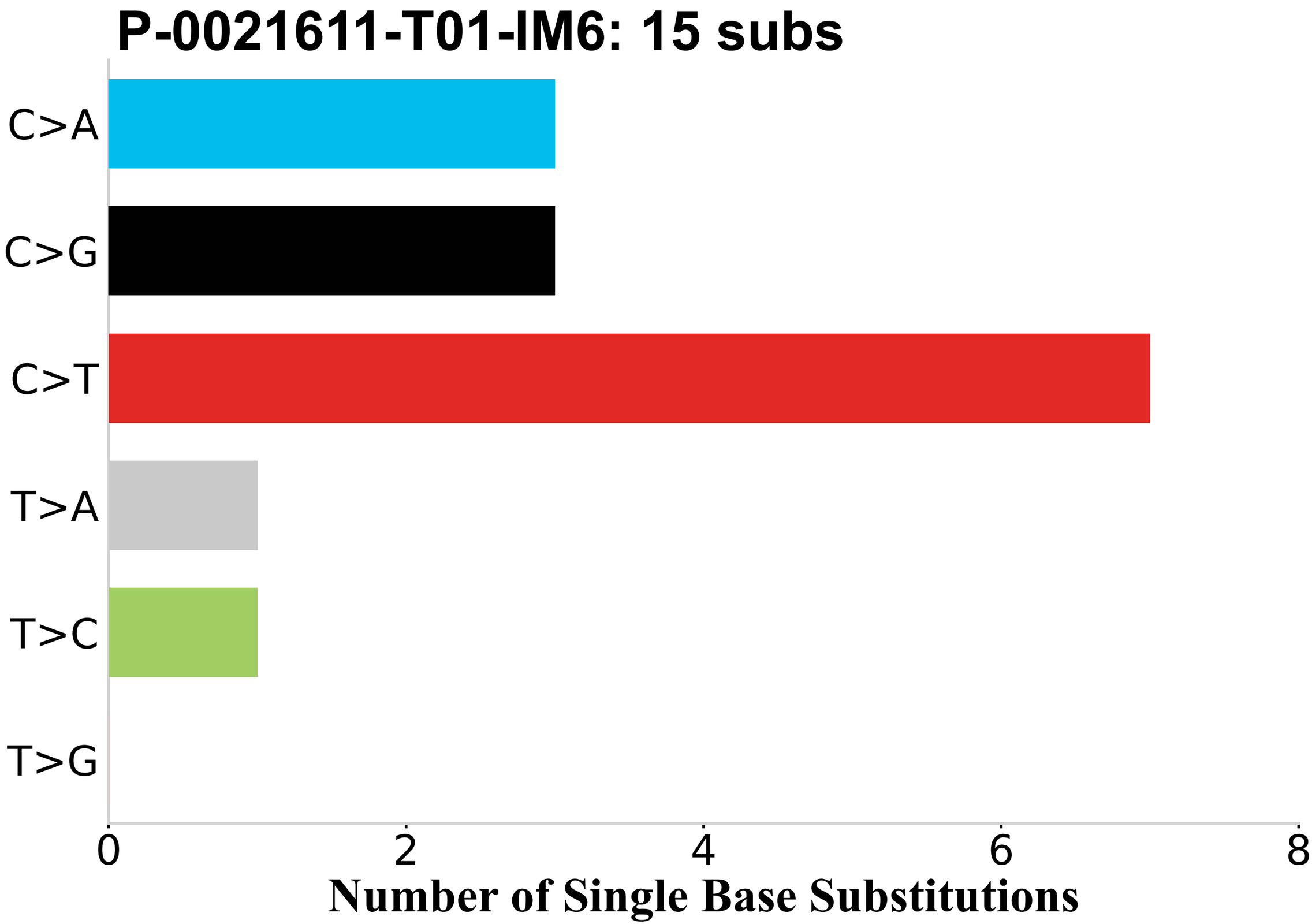
1
2
3
4
Number of Single Base Substitutions


P-0021611-T01-IM6: 15 subs
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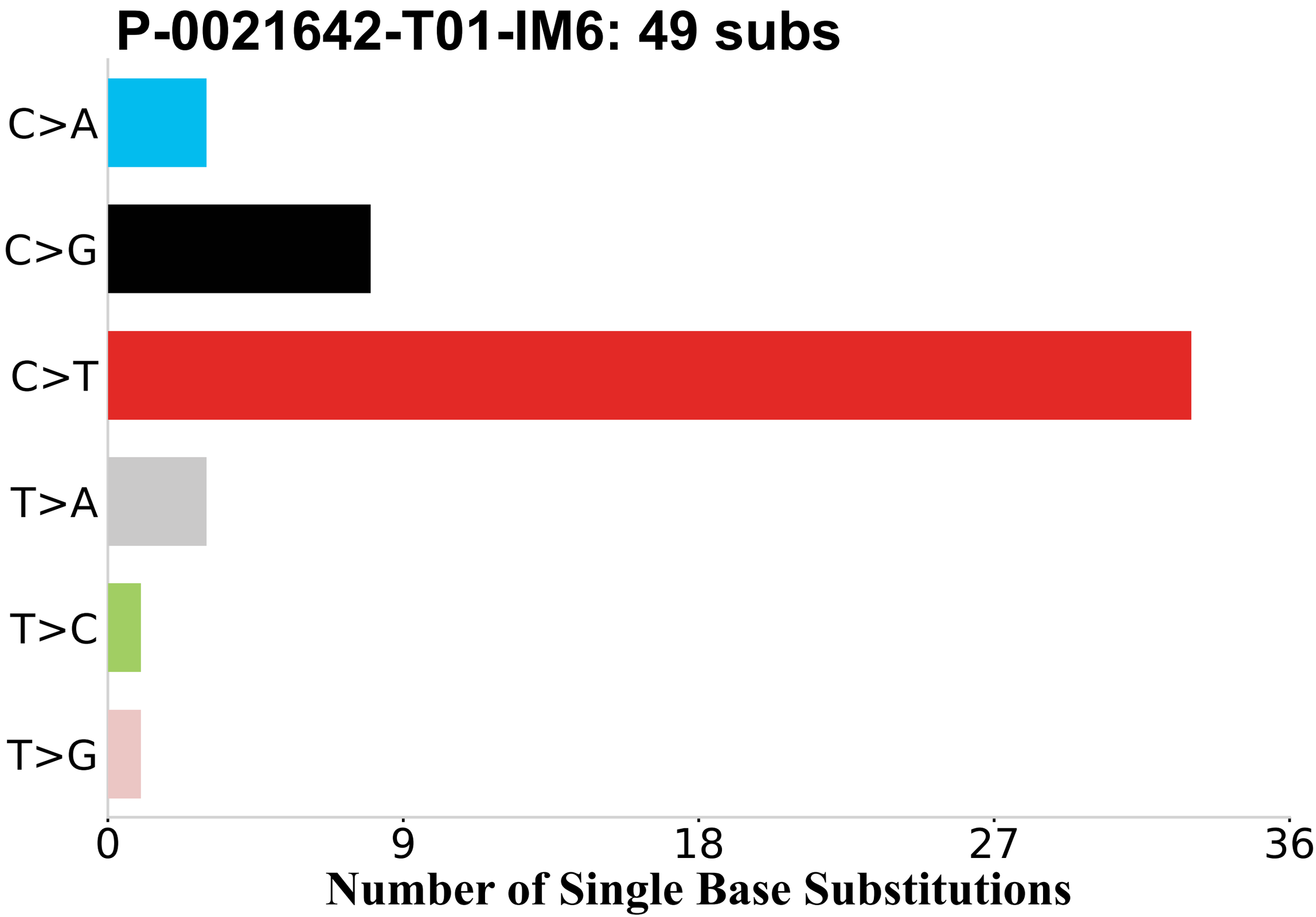
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0021642-T01-IM6: 49 subs
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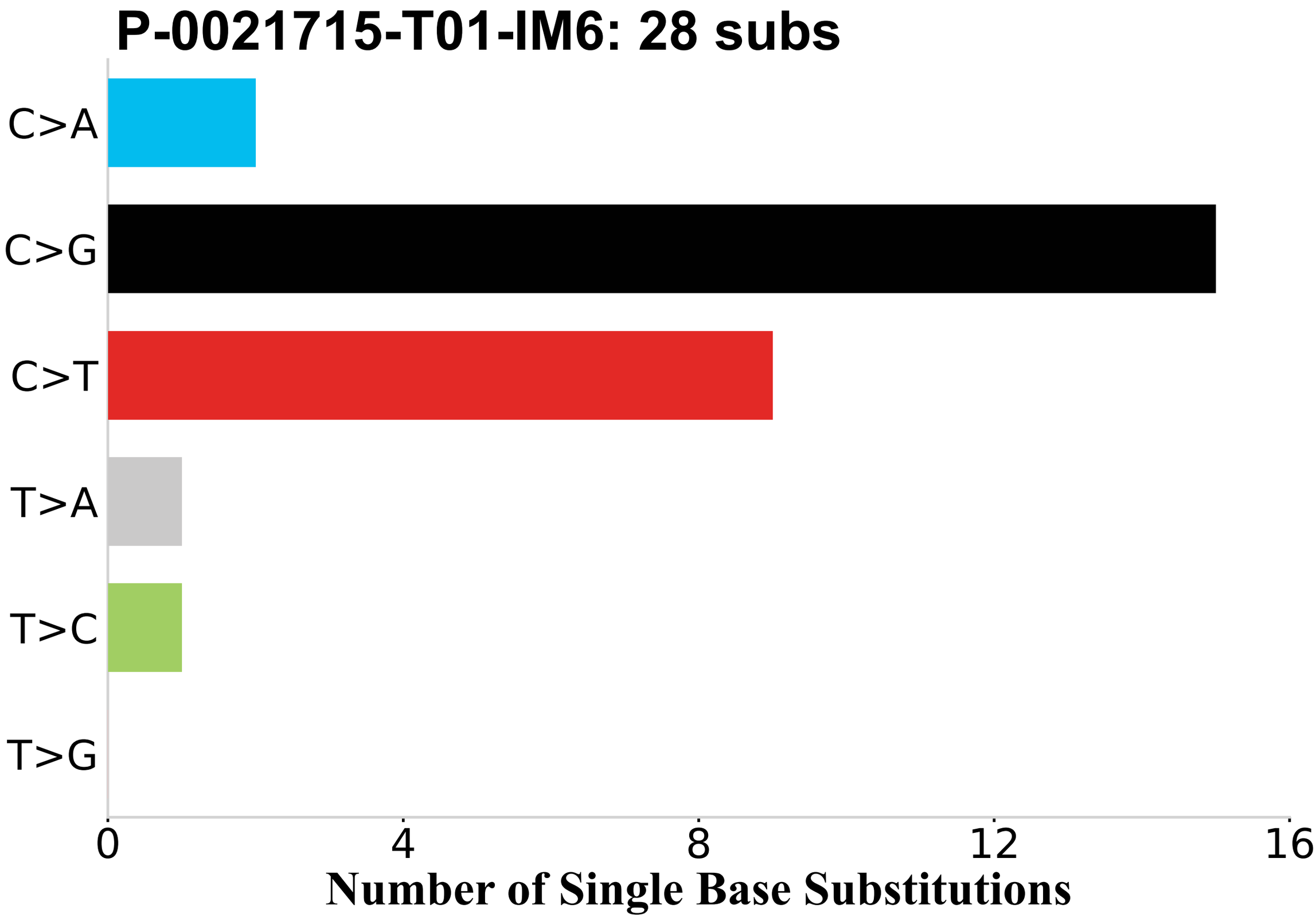
C>T
T>A
T>C
T>G
0
9
18
27
36
Number of Single Base Substitutions


P-0021715-T01-IM6: 28 subs
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C>T
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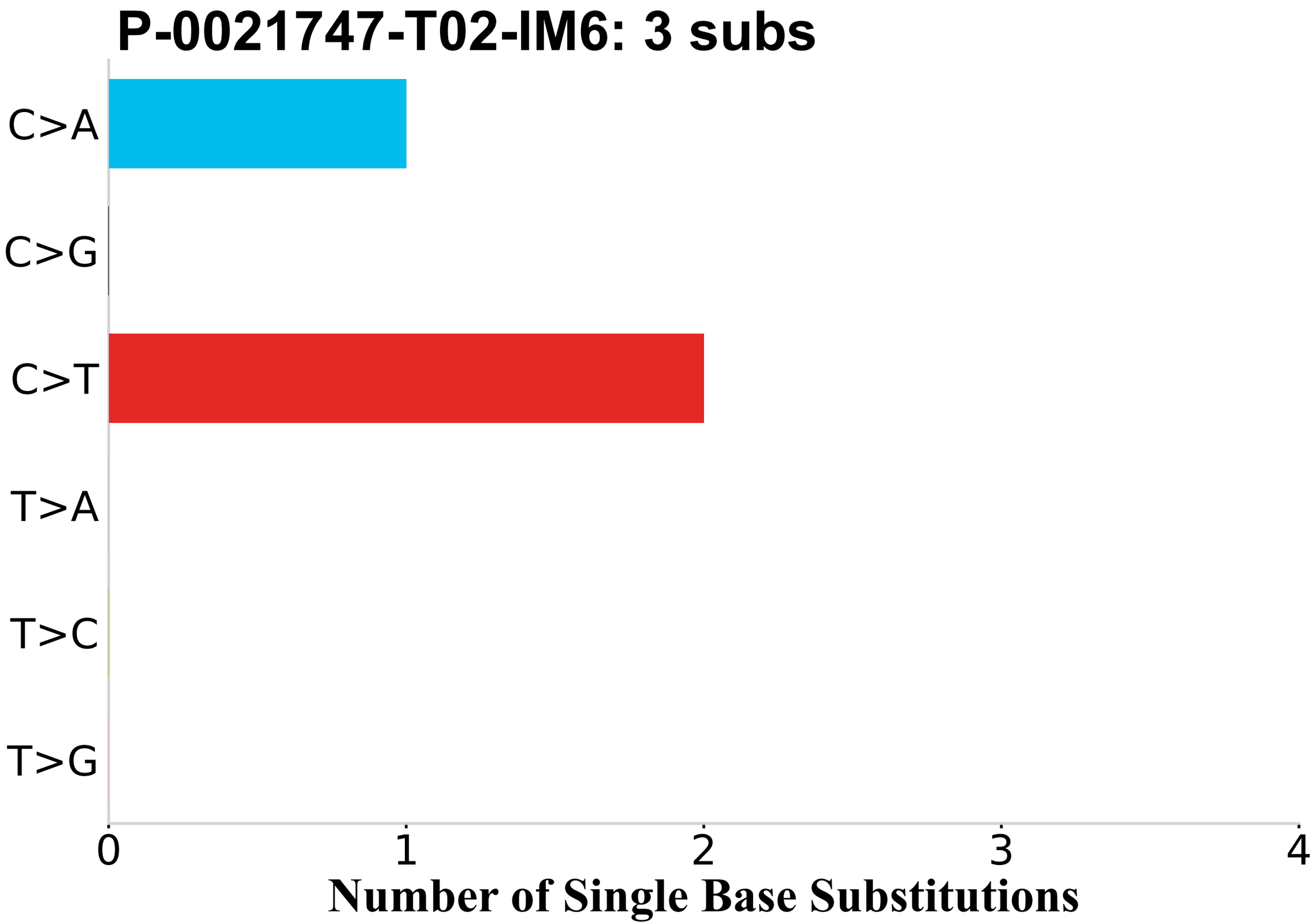
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0021747-T02-IM6: 3 subs
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T>C
T>G
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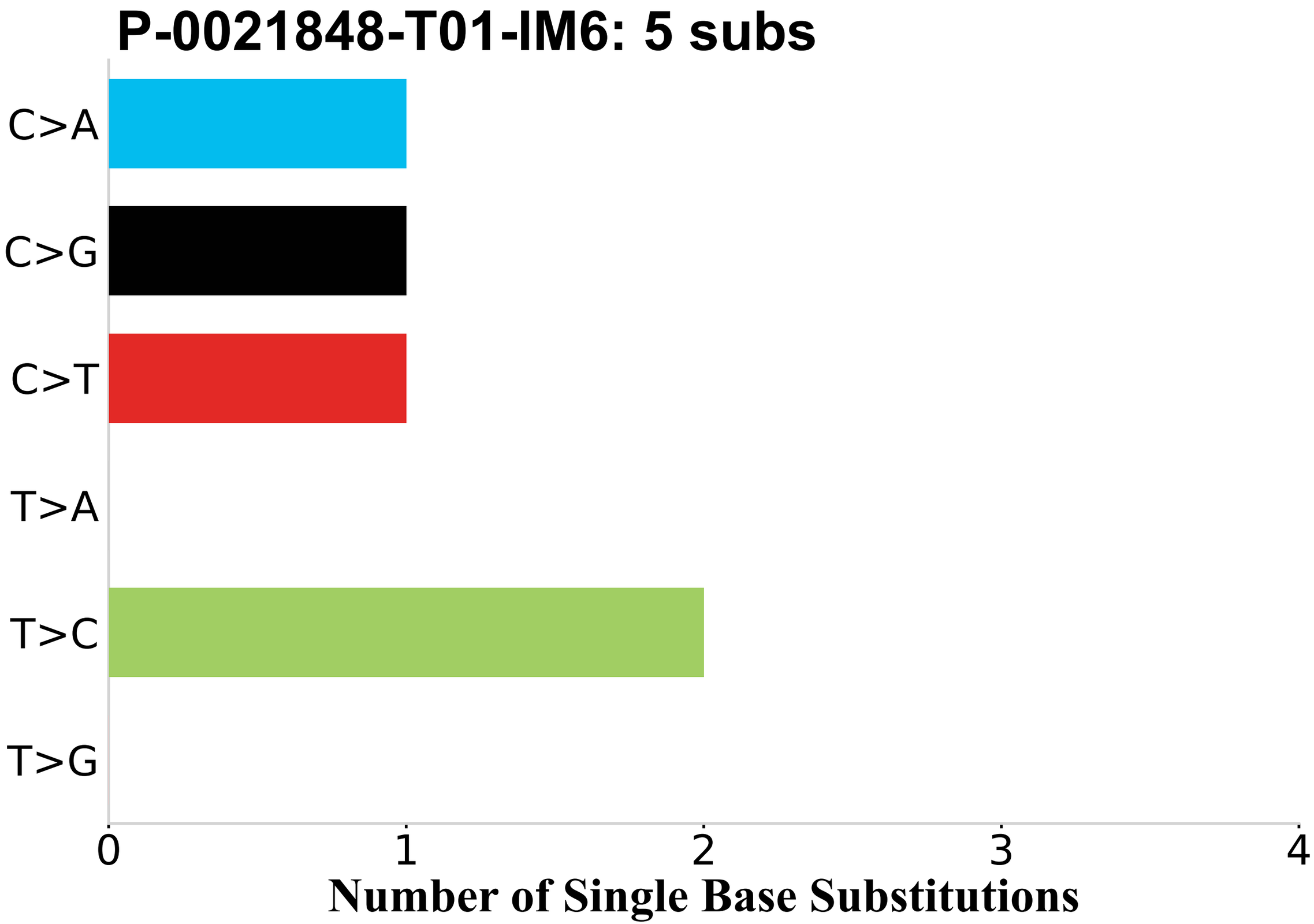
1
2
3
4
Number of Single Base Substitutions


P-0021848-T01-IM6: 5 subs
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T>A
T>C
T>G
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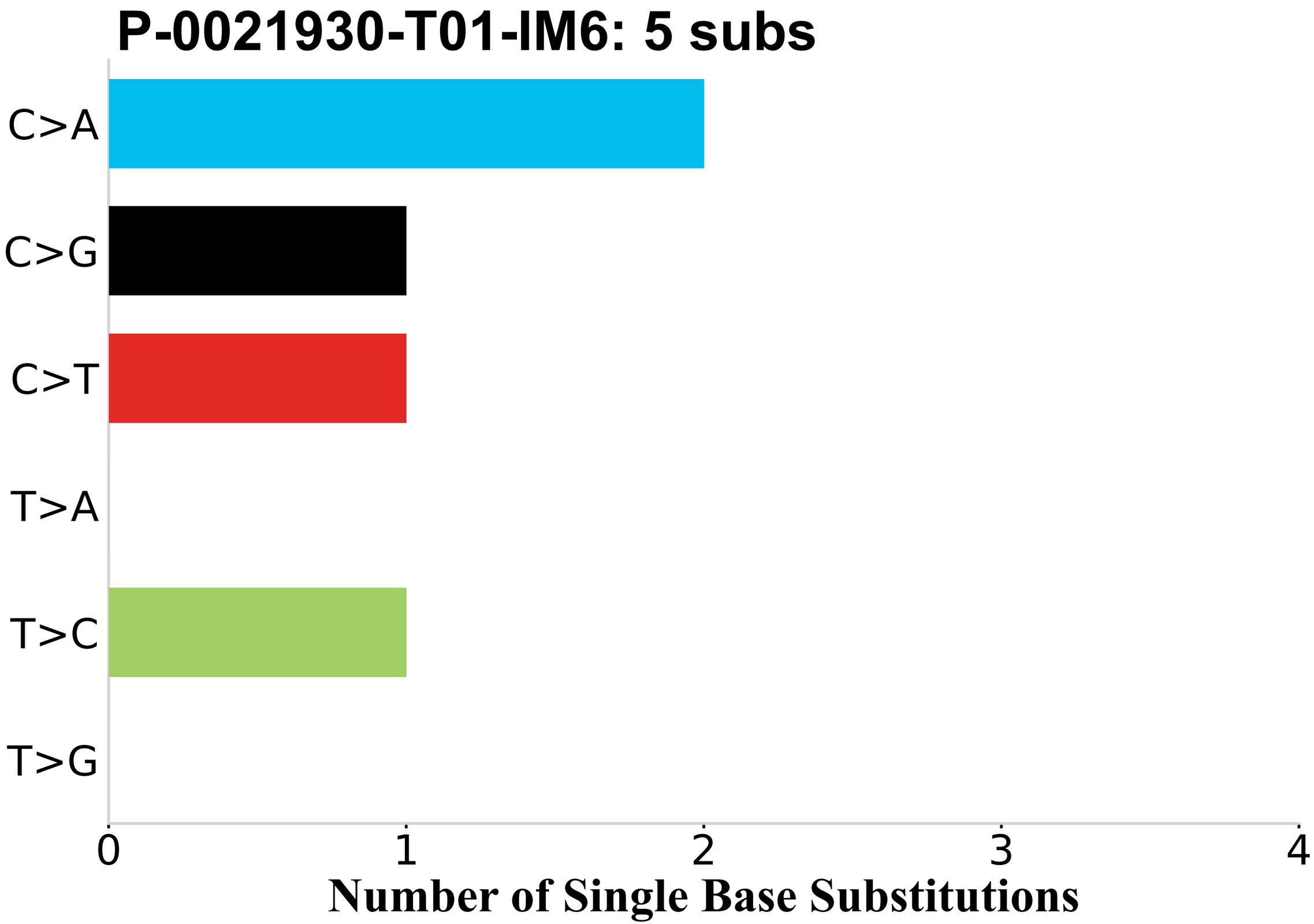
1
2
3
4
Number of Single Base Substitutions


P-0021930-T01-IM6: 5 subs
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C>G
C>T
T>A
T>C
T>G
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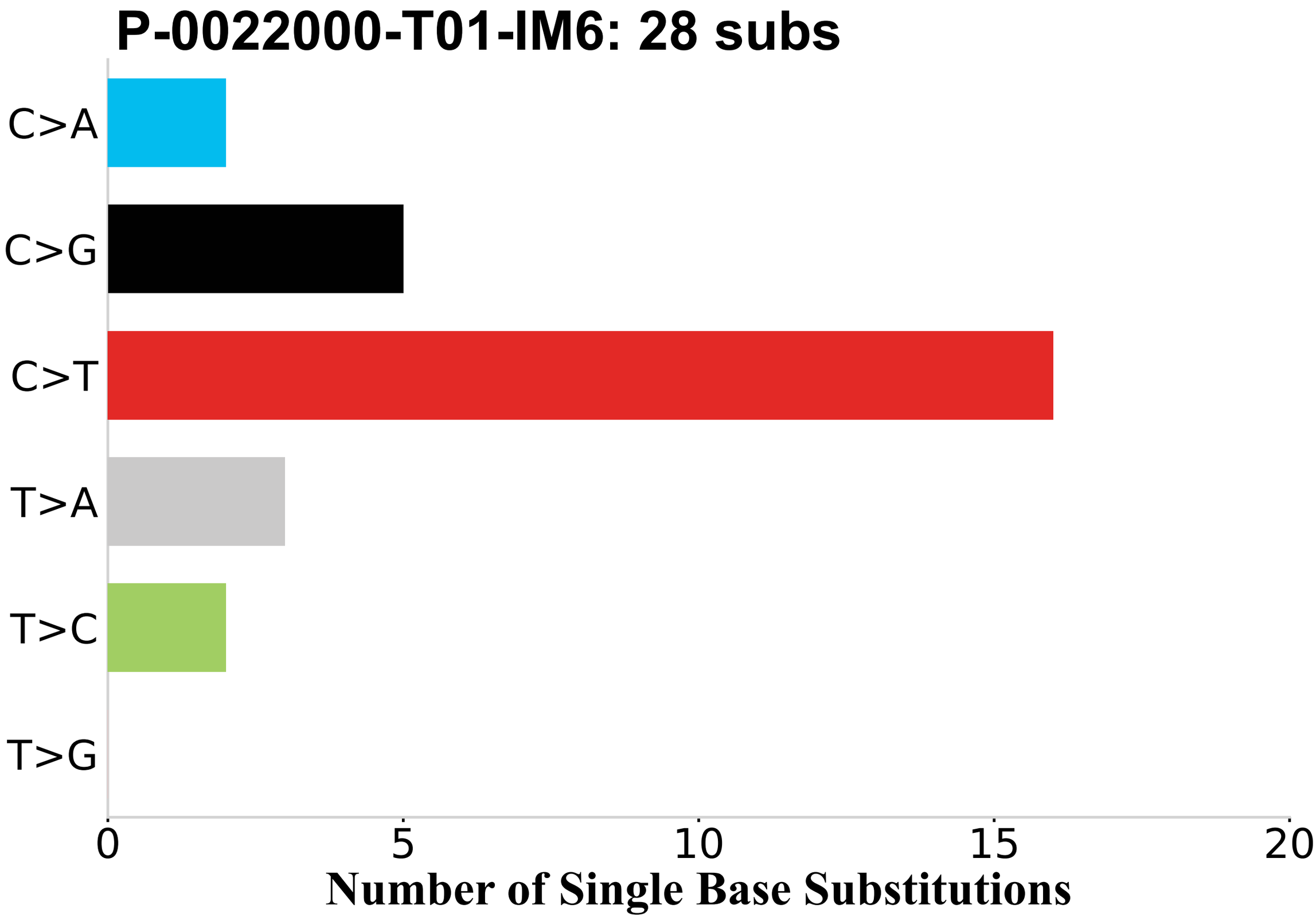
1
2
3
4
Number of Single Base Substitutions


P-0022000-T01-IM6: 28 subs
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C>G
C>T
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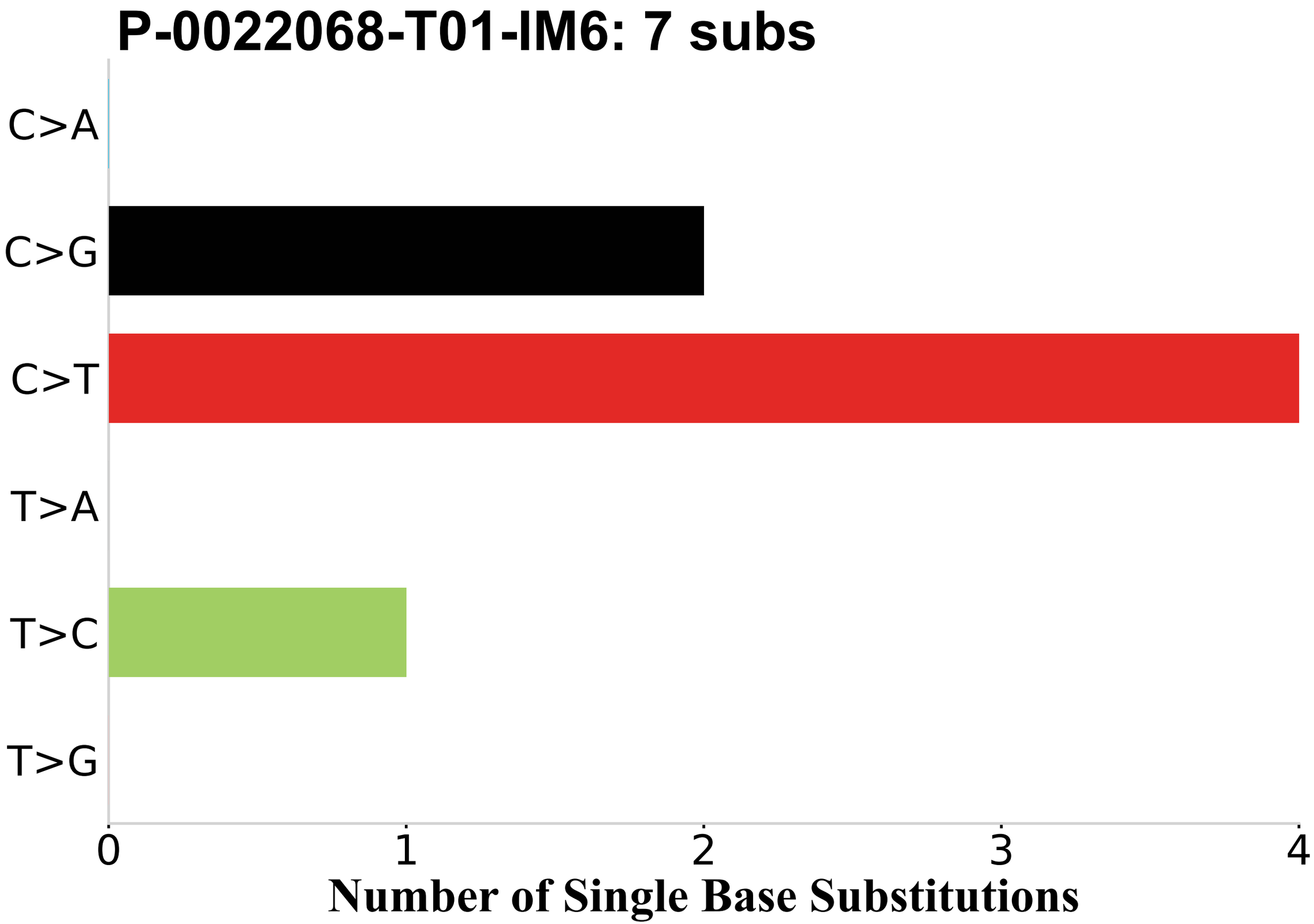
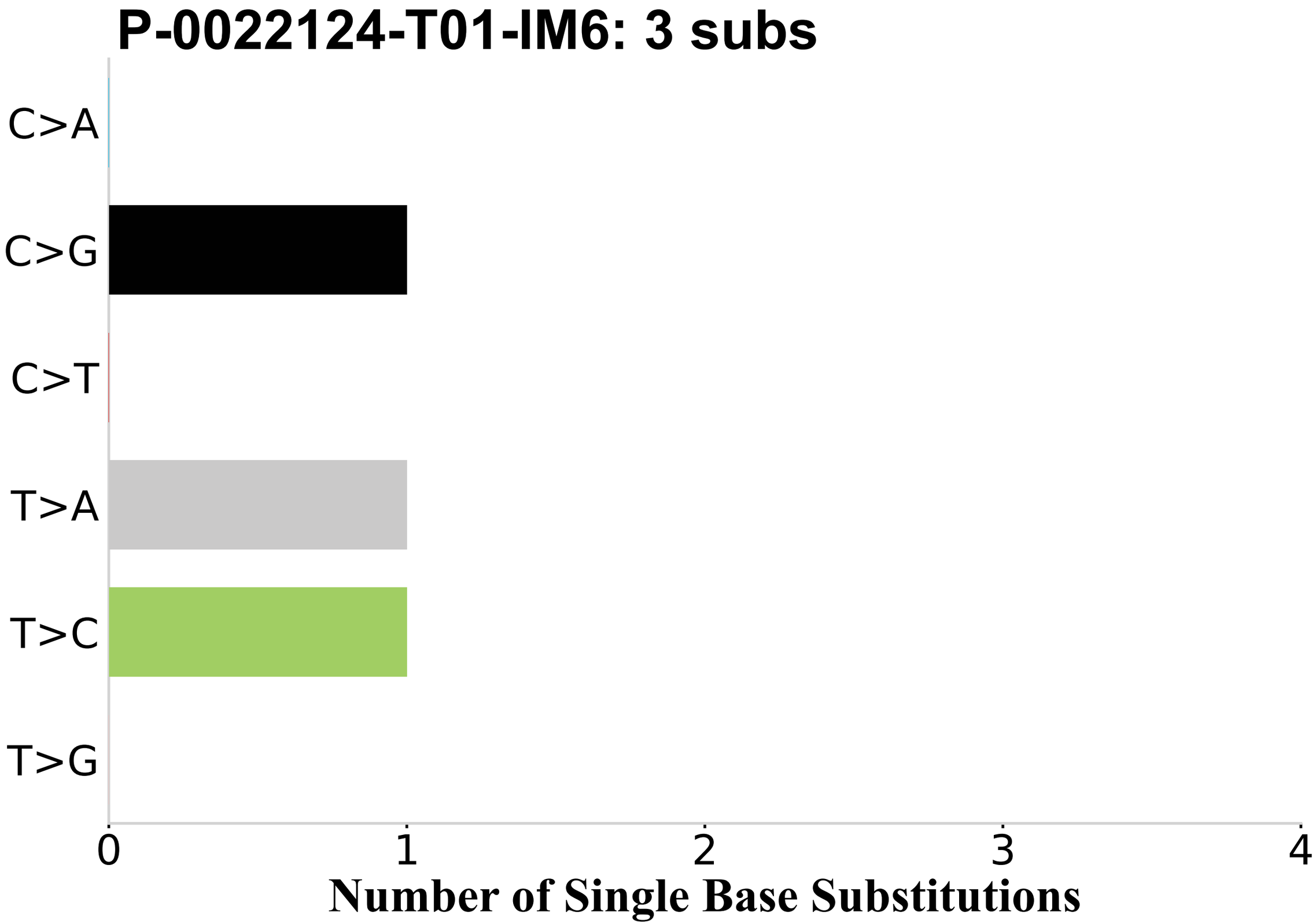
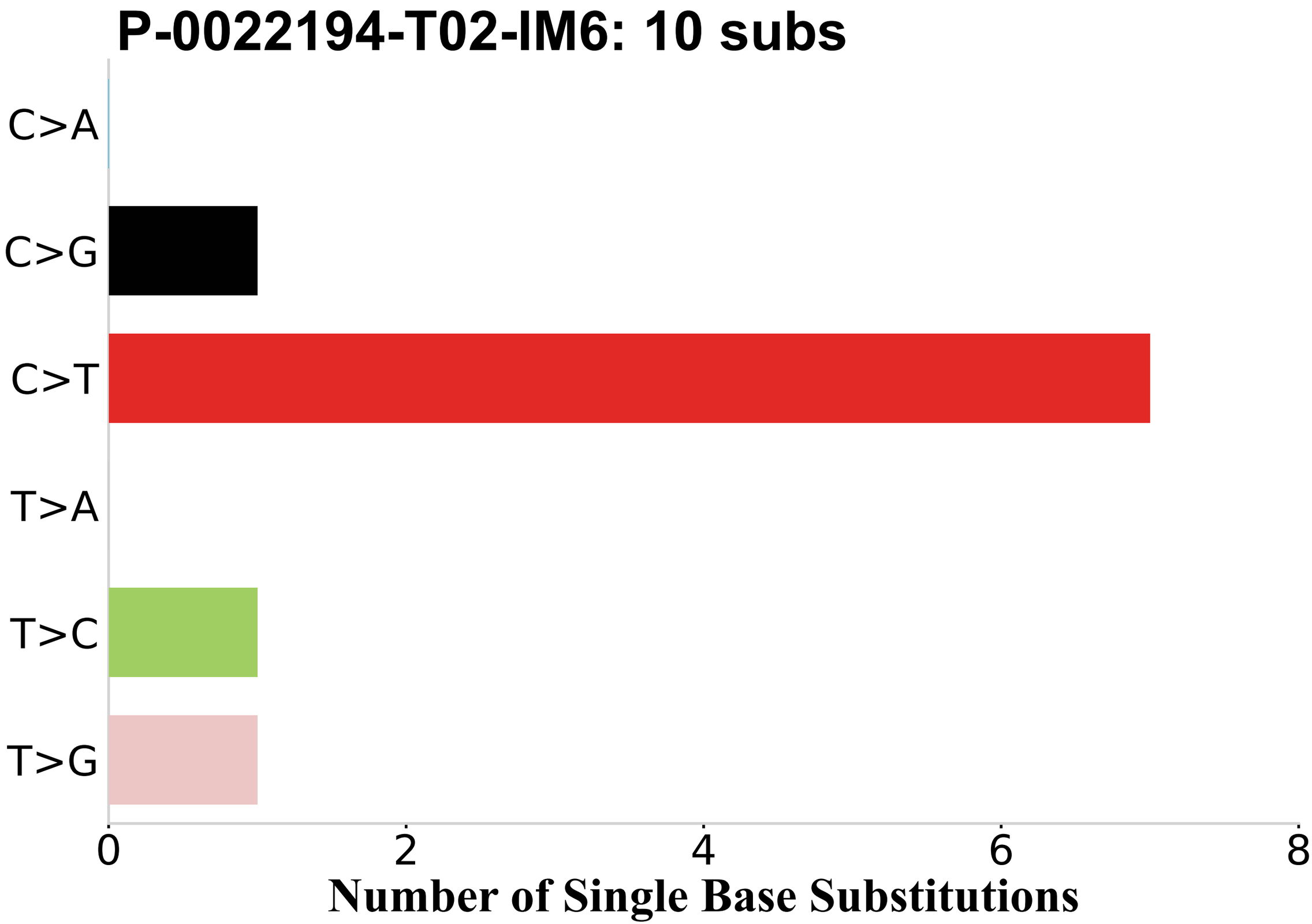
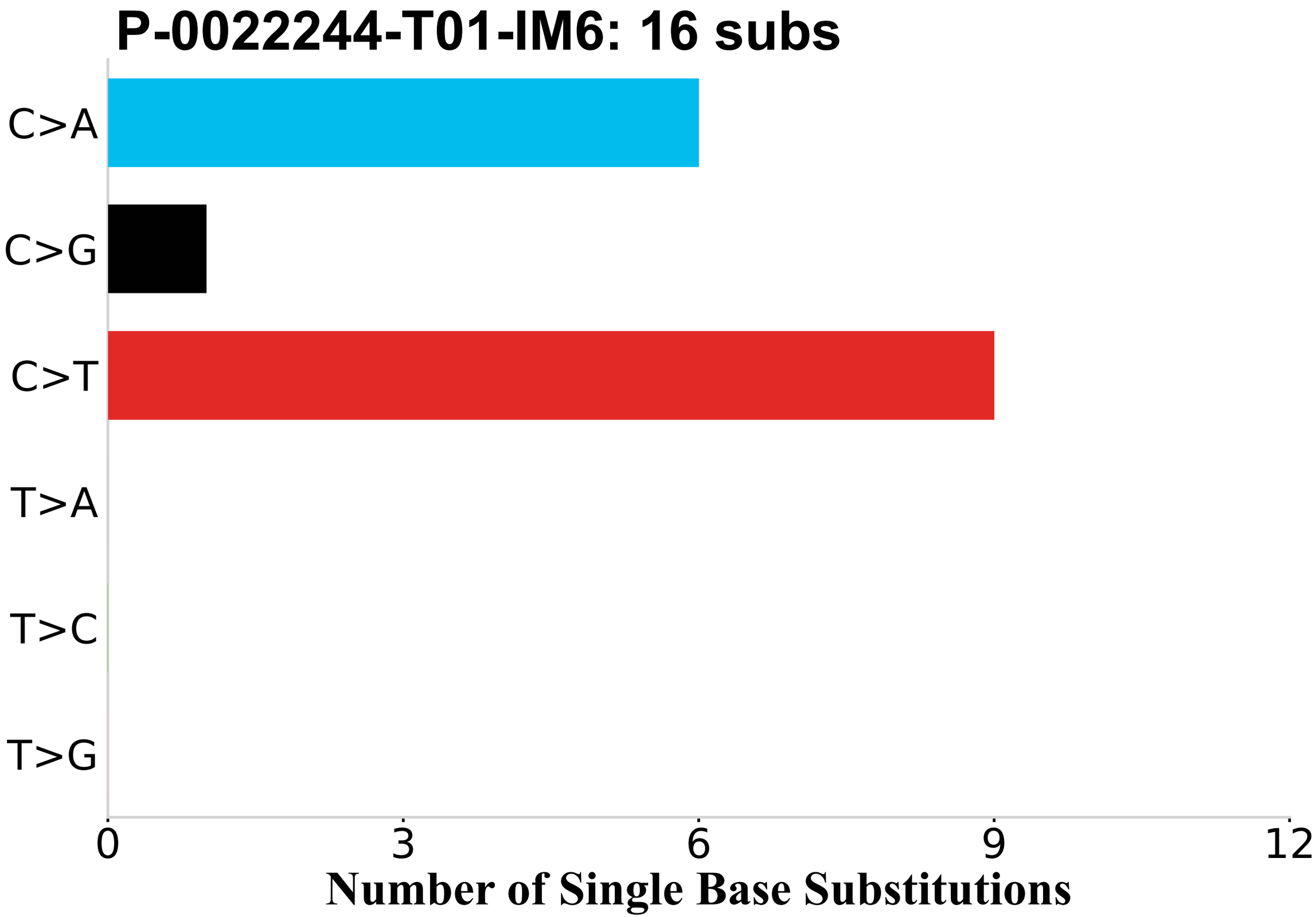
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0022068-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0022124-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0022194-T02-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0022244-T01-IM6: 16 subs
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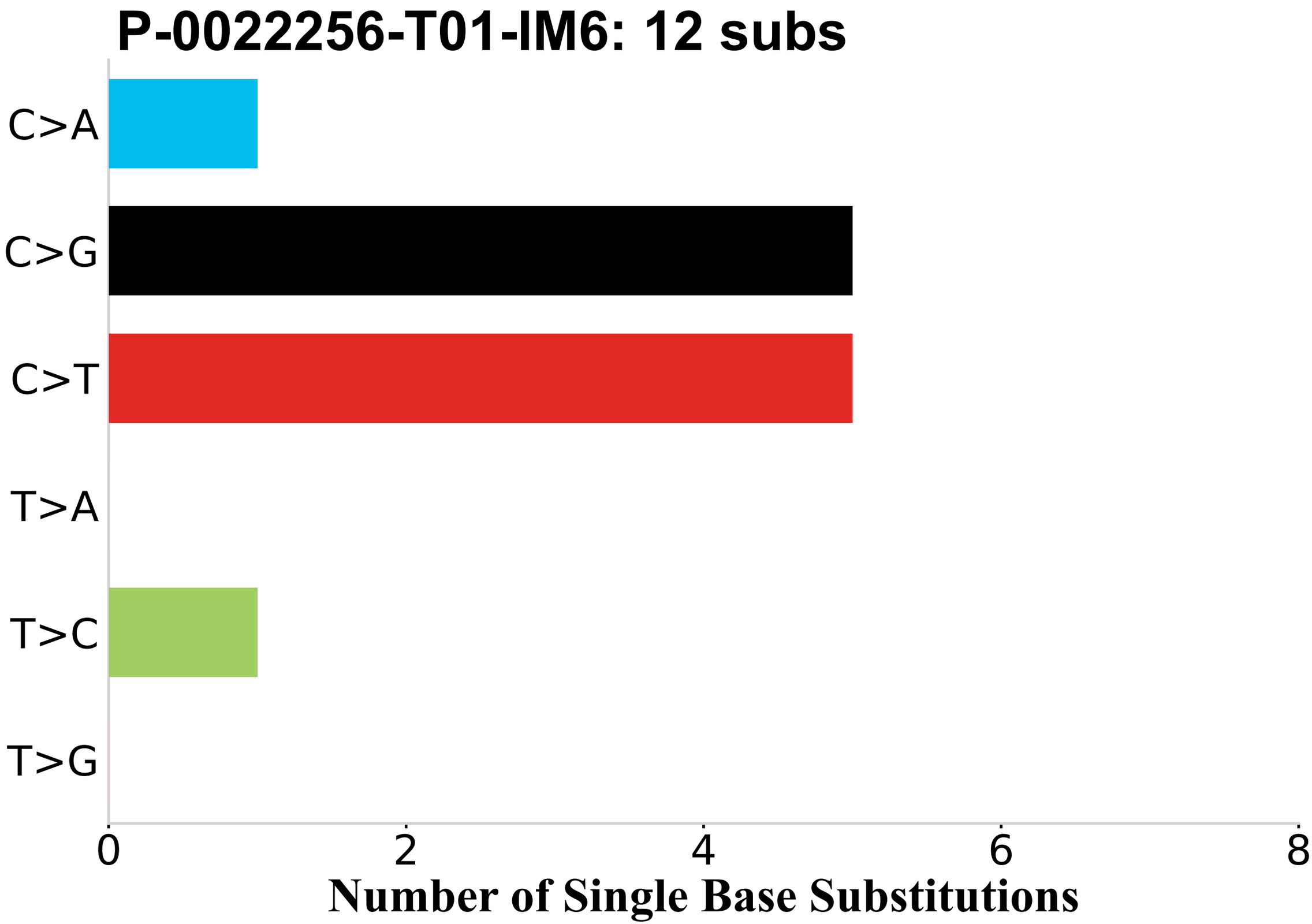
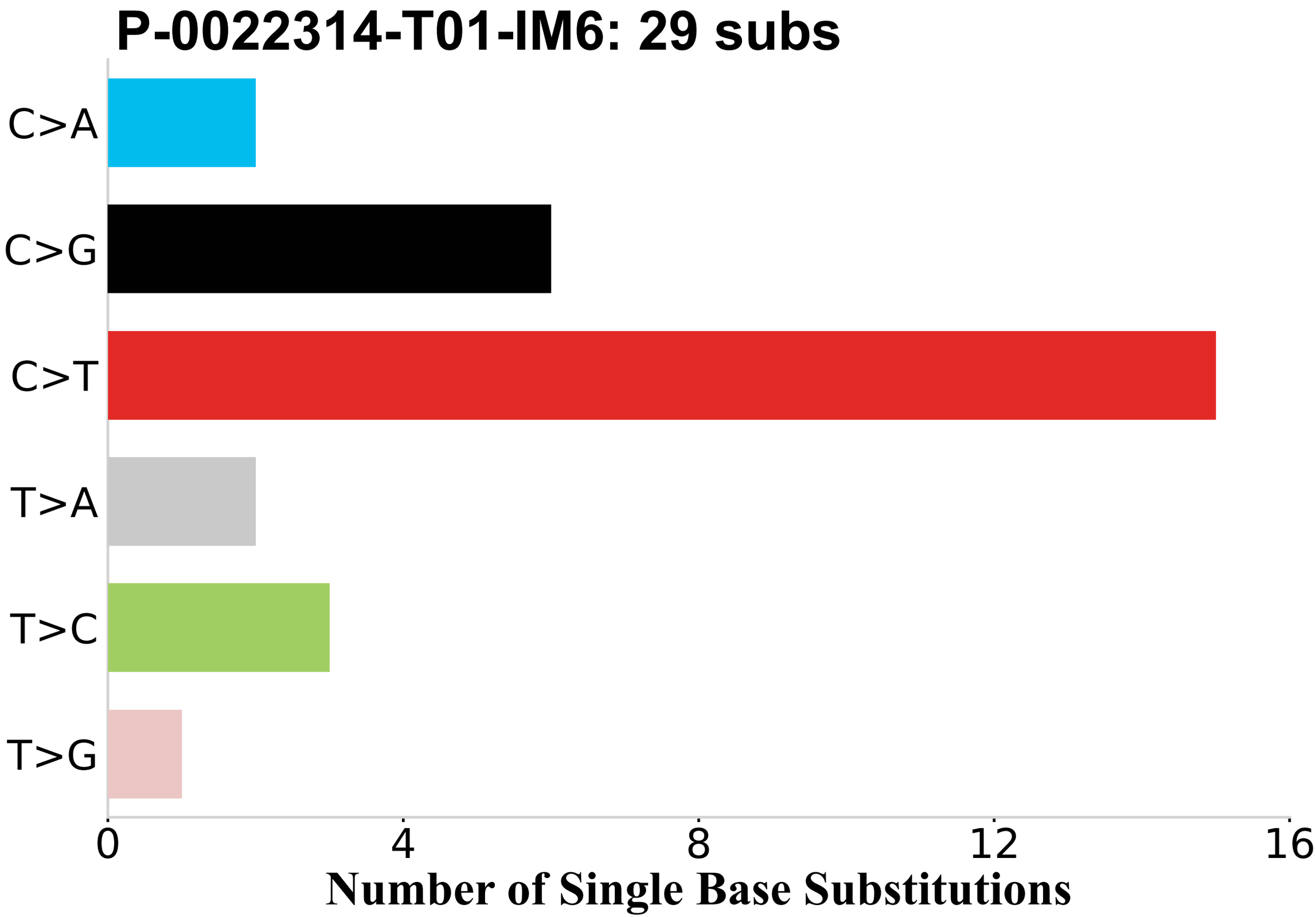
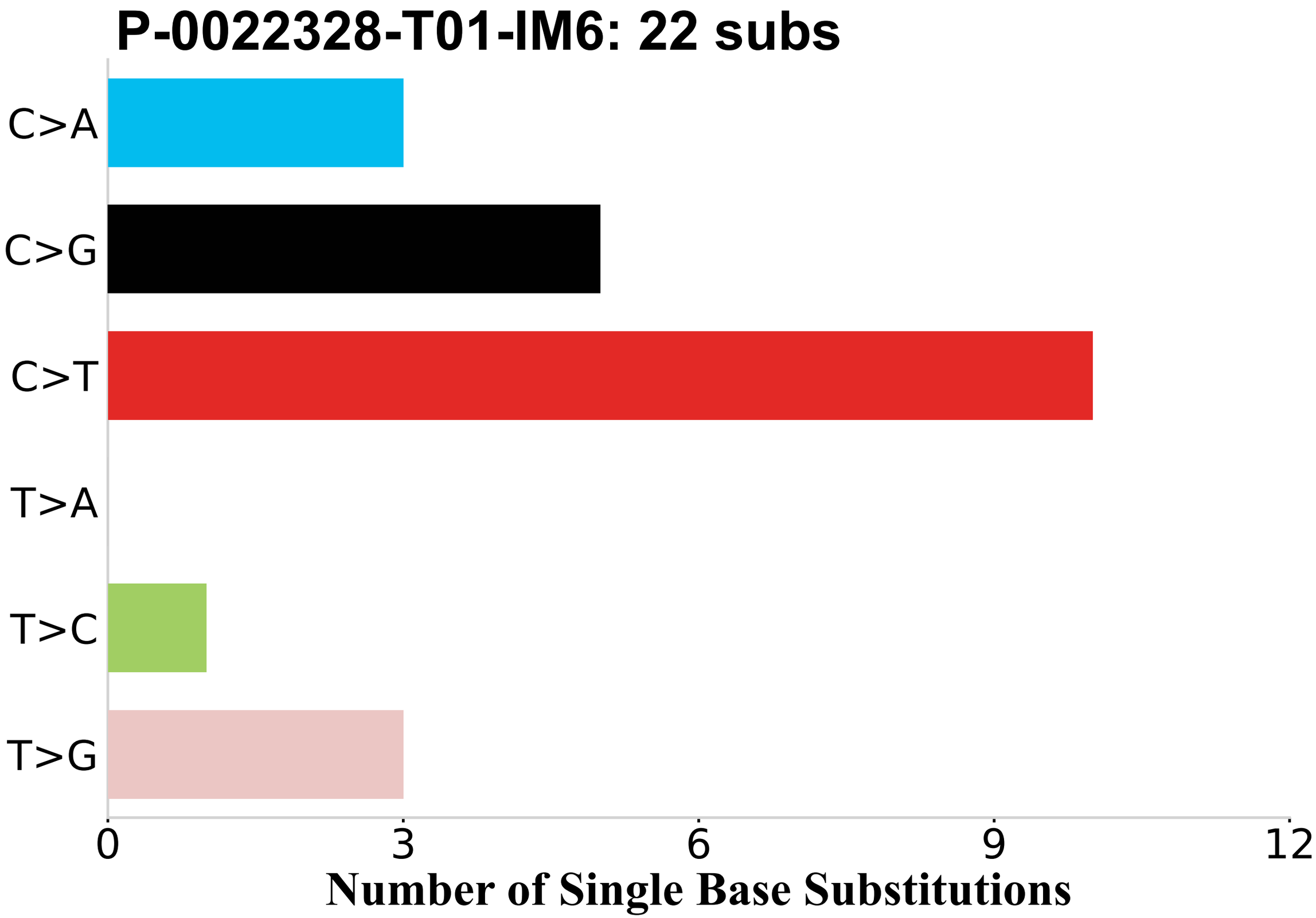
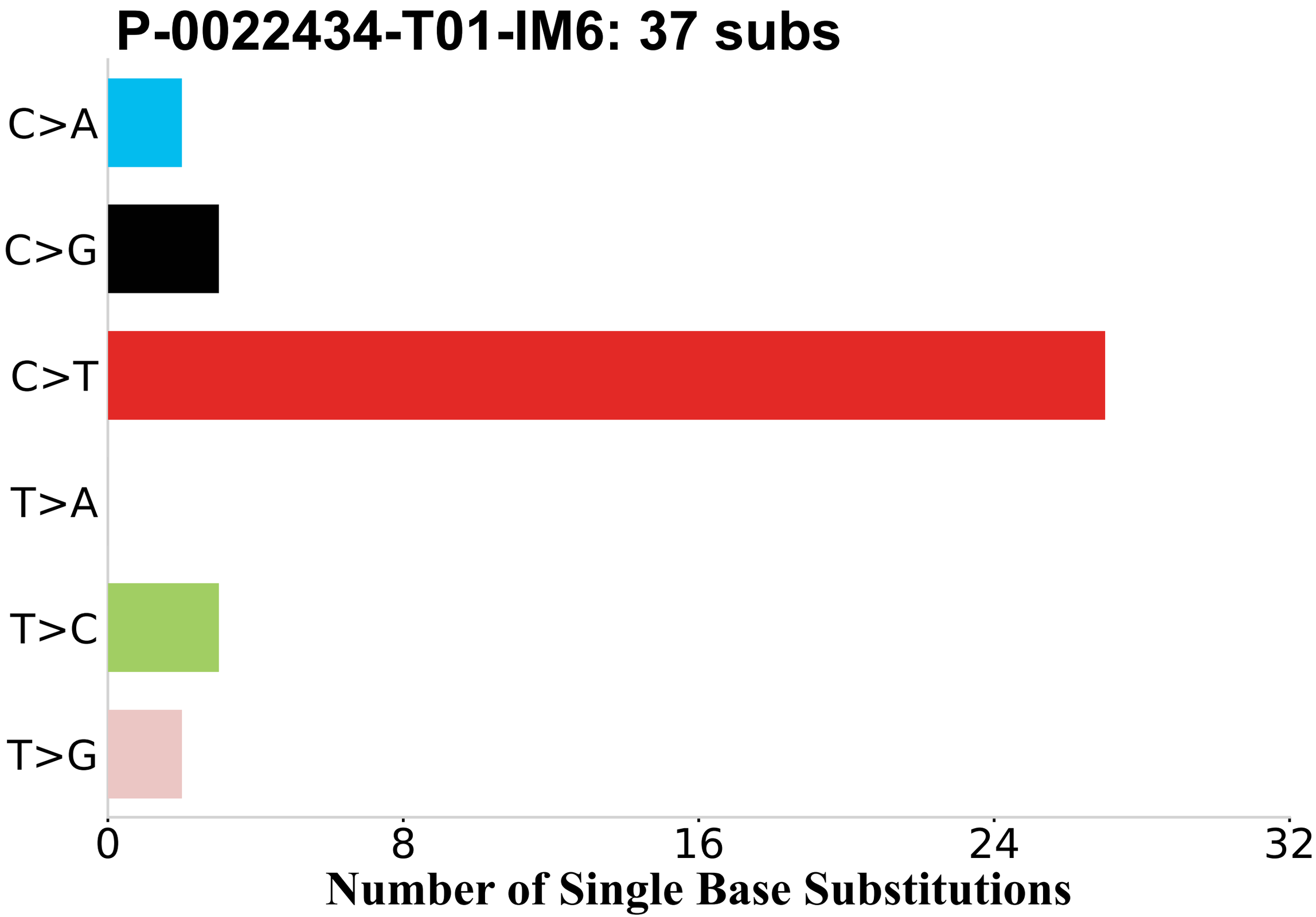
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0022256-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0022314-T01-IM6: 29 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0022328-T01-IM6: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0022434-T01-IM6: 37 subs
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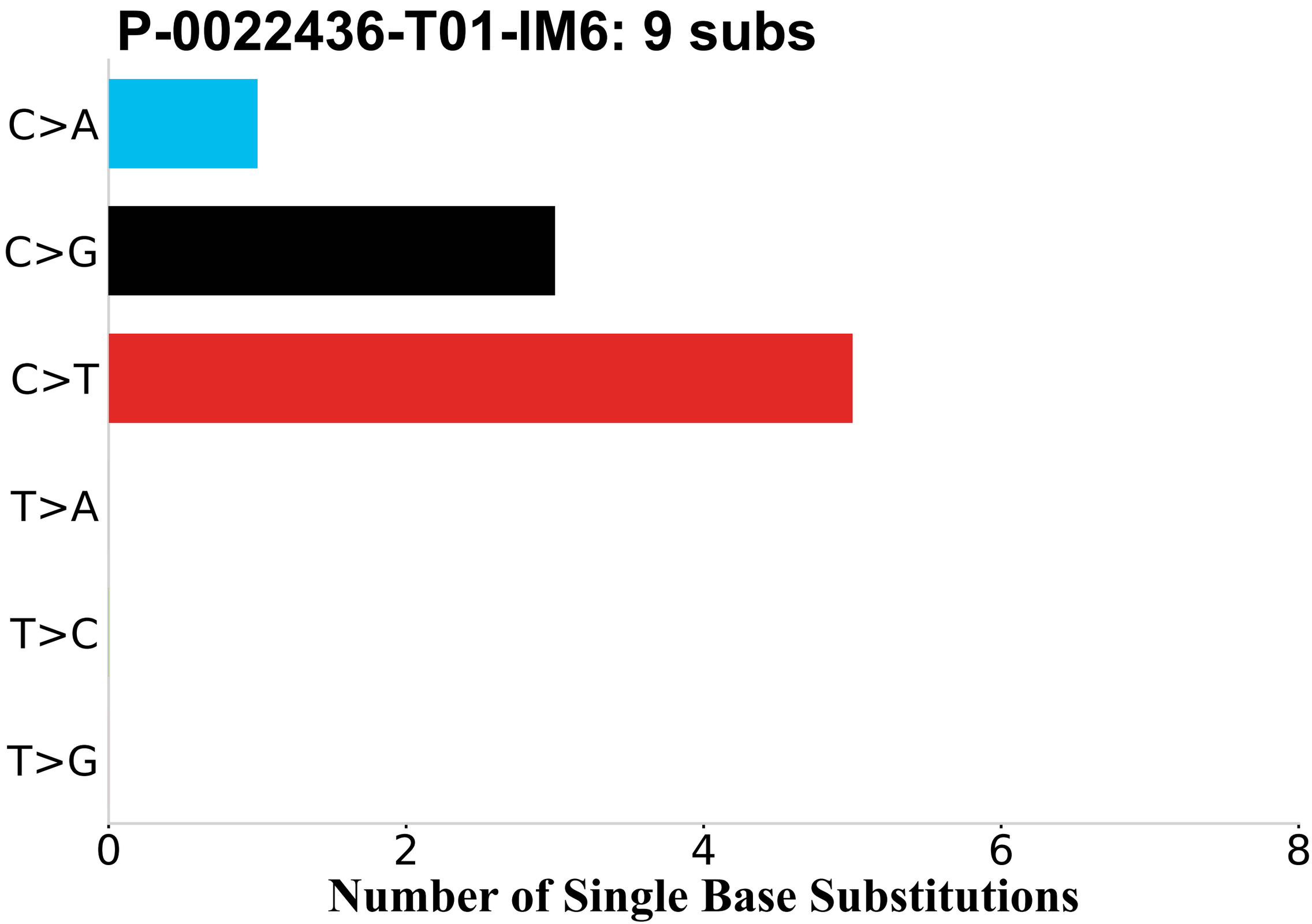
T>C
T>G
0
8
16
24
32
Number of Single Base Substitutions


P-0022436-T01-IM6: 9 subs
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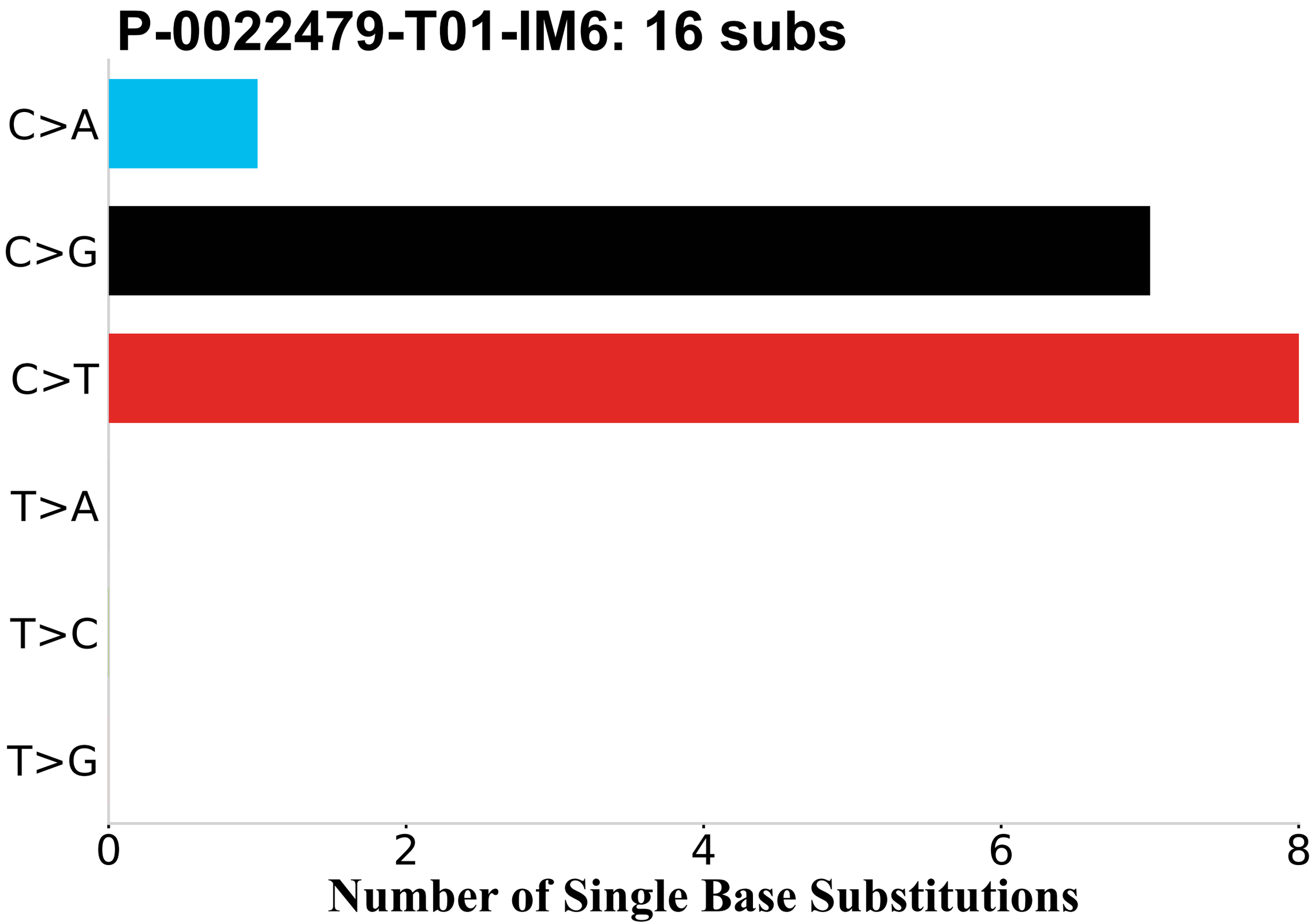
2
4
6
8
Number of Single Base Substitutions


P-0022479-T01-IM6: 16 subs
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T>G
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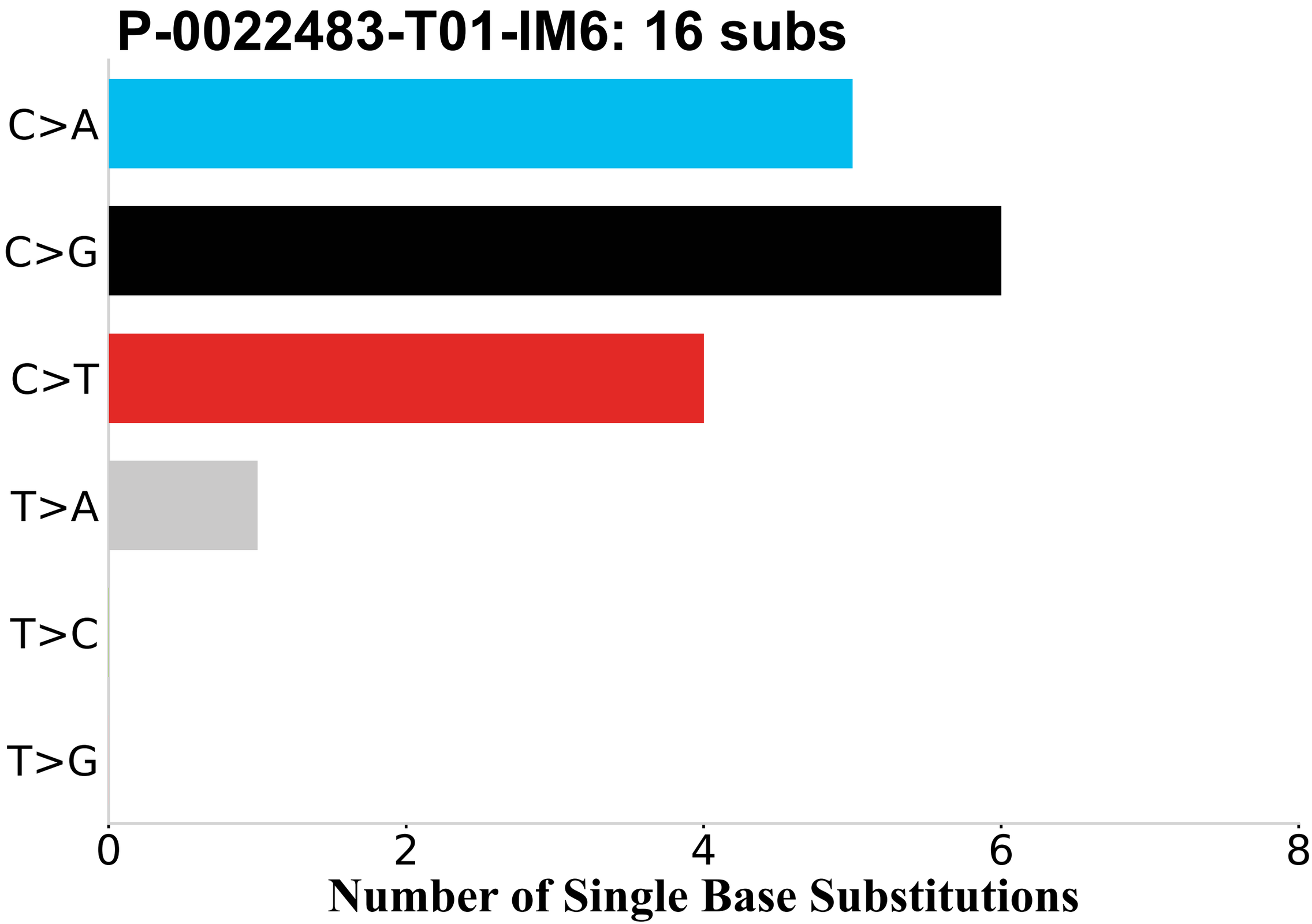
4
6
8
Number of Single Base Substitutions


P-0022483-T01-IM6: 16 subs
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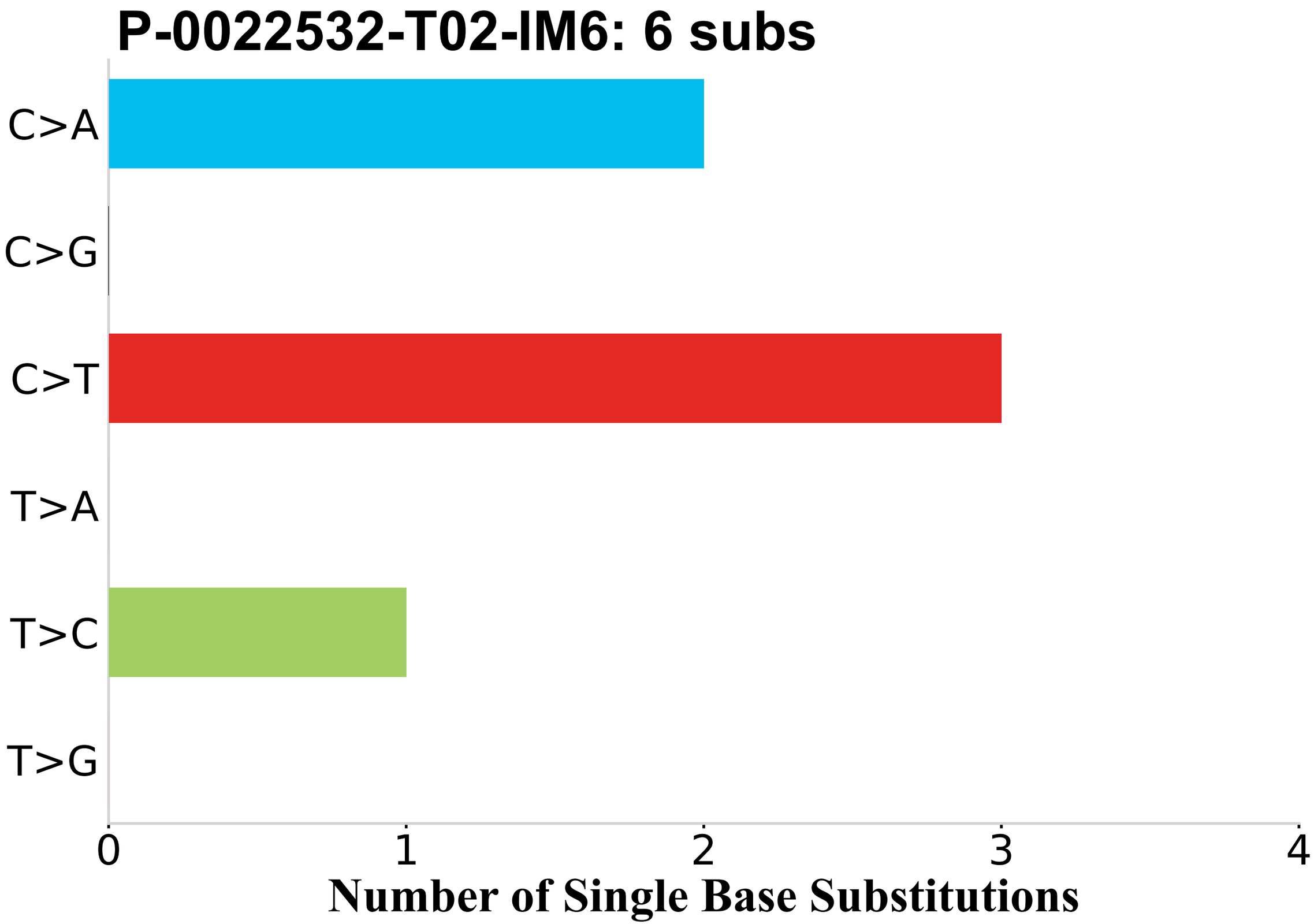
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0022532-T02-IM6: 6 subs
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C>T
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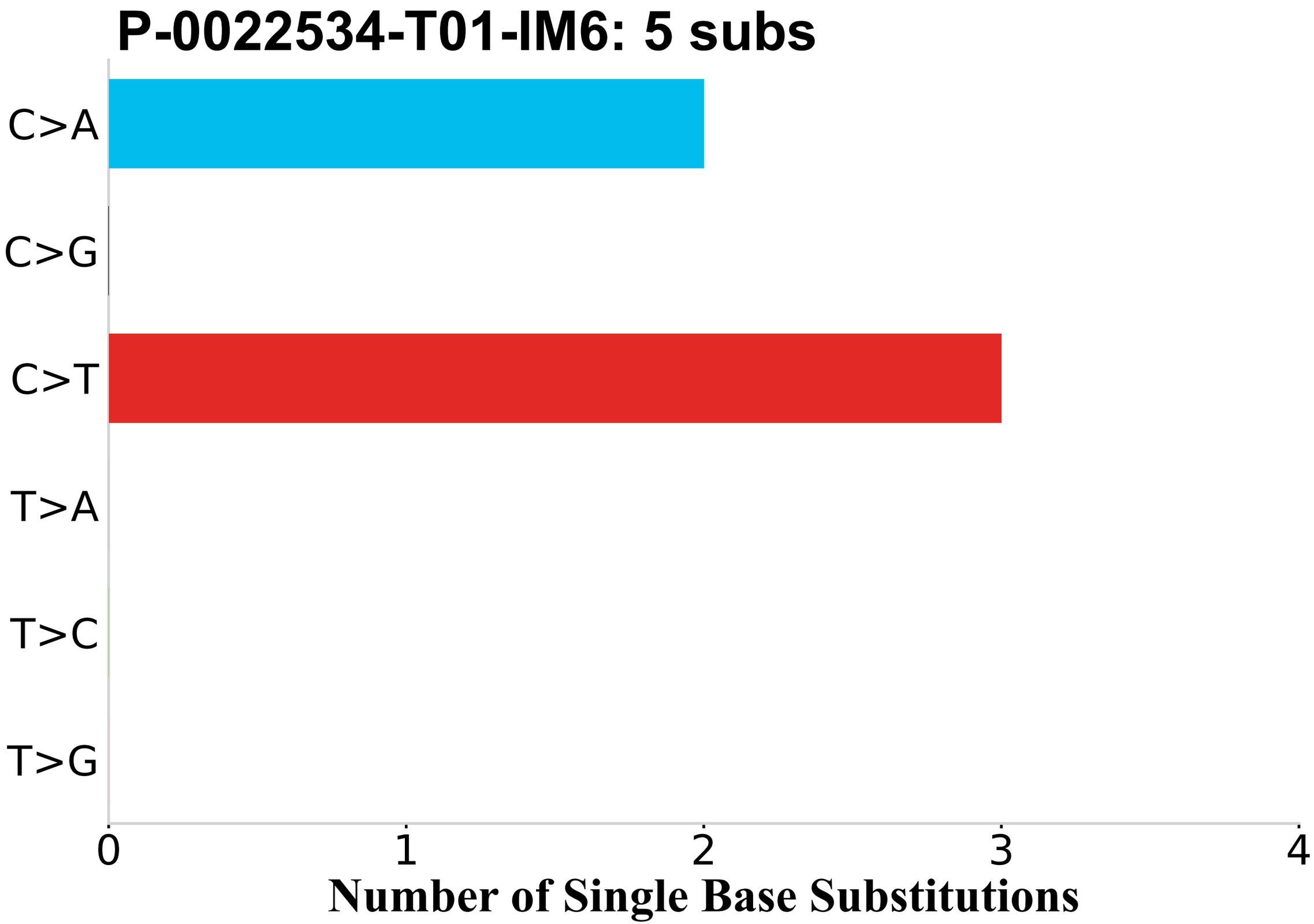
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0022534-T01-IM6: 5 subs
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C>G
C>T
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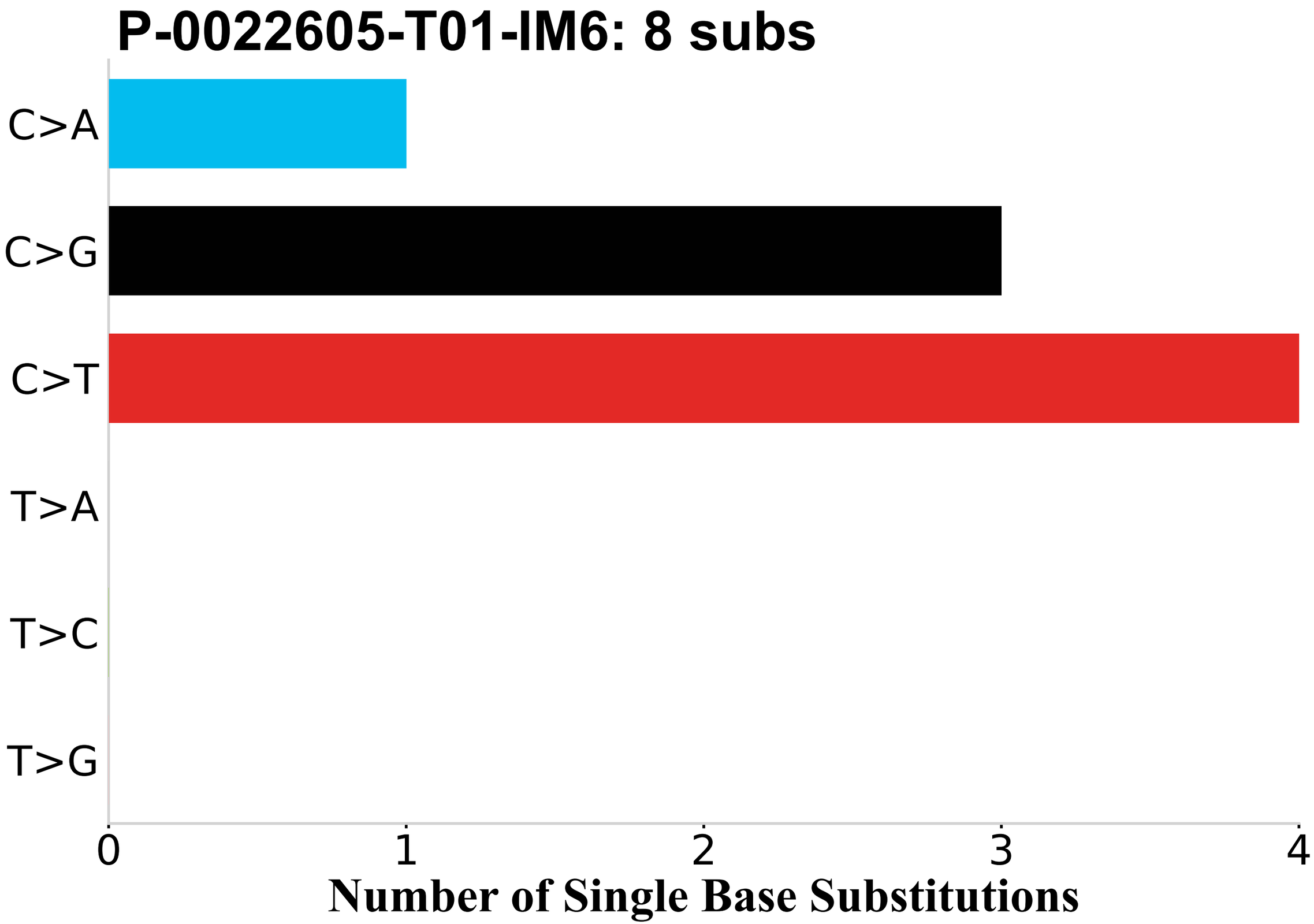
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0022605-T01-IM6: 8 subs
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T>G
0
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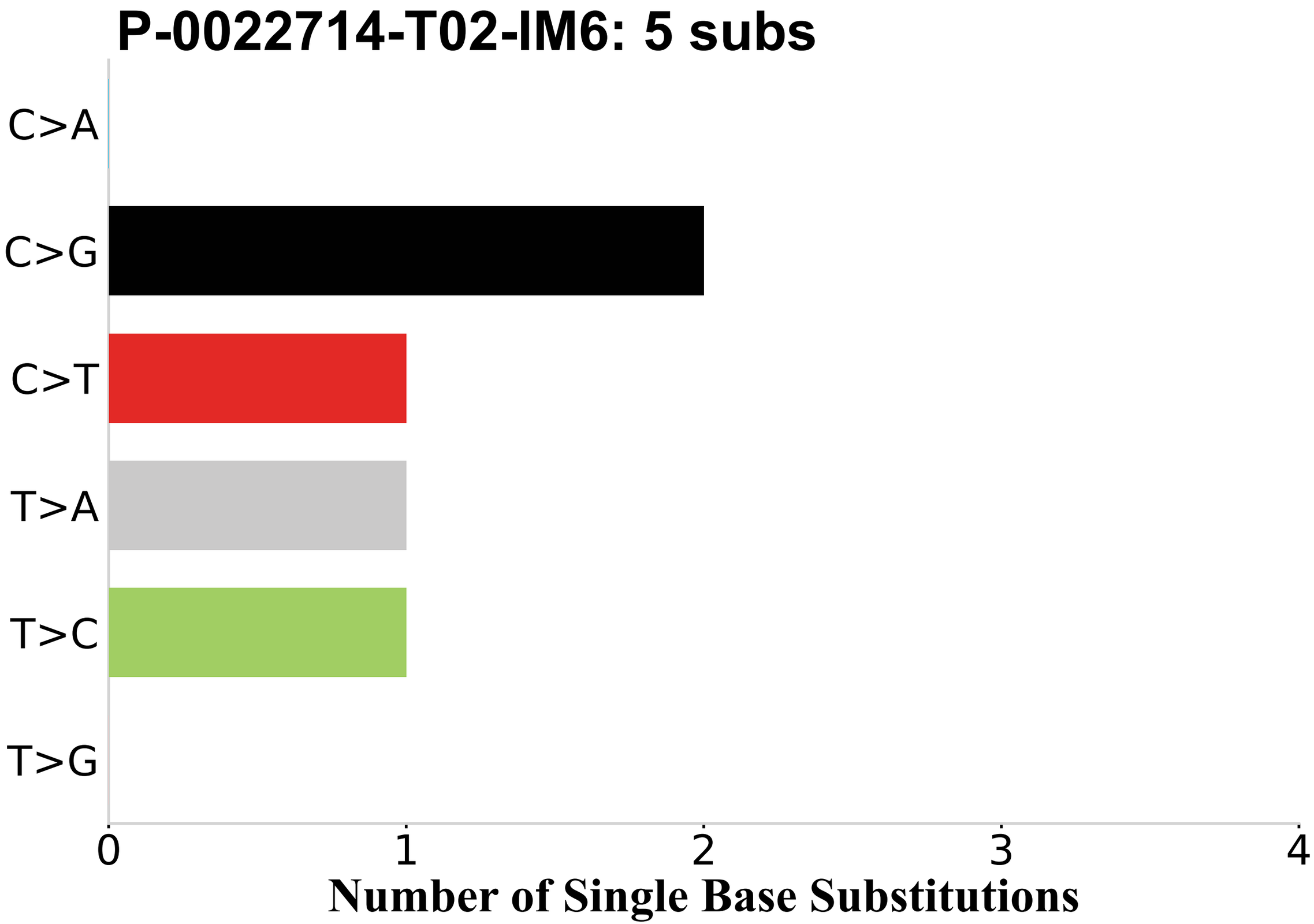
2
3
4
Number of Single Base Substitutions


P-0022714-T02-IM6: 5 subs
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C>T
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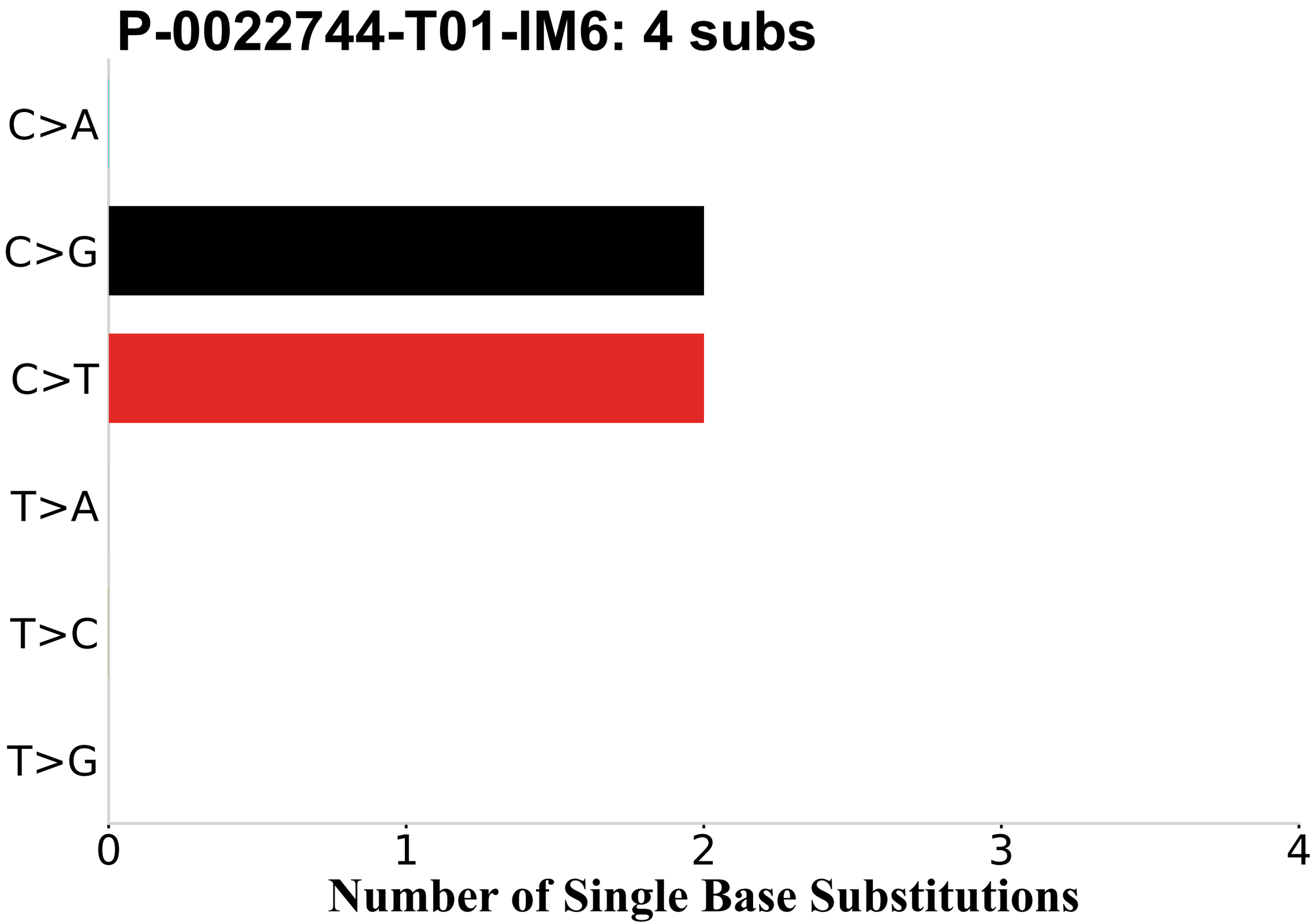
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0022744-T01-IM6: 4 subs
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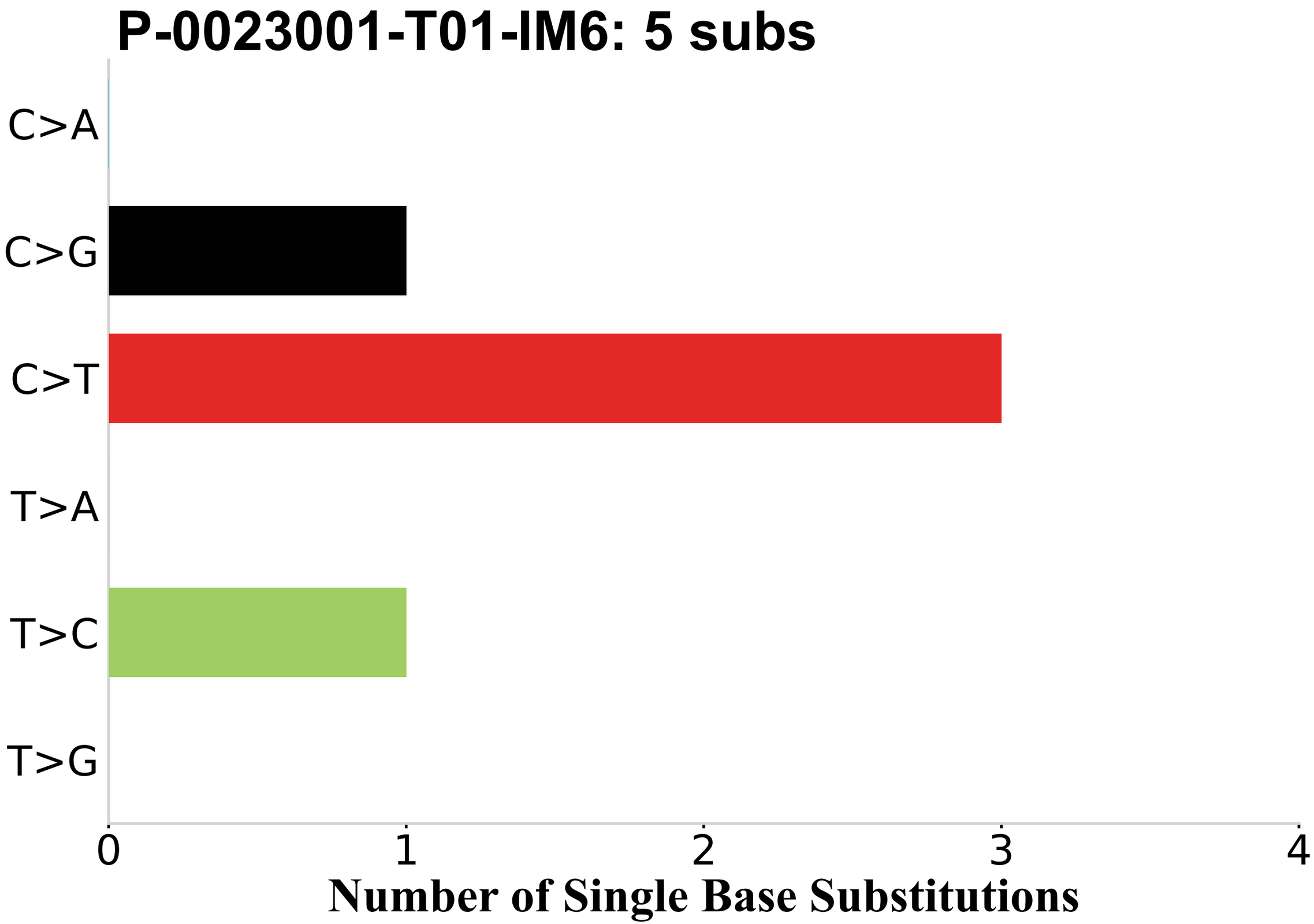
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023001-T01-IM6: 5 subs
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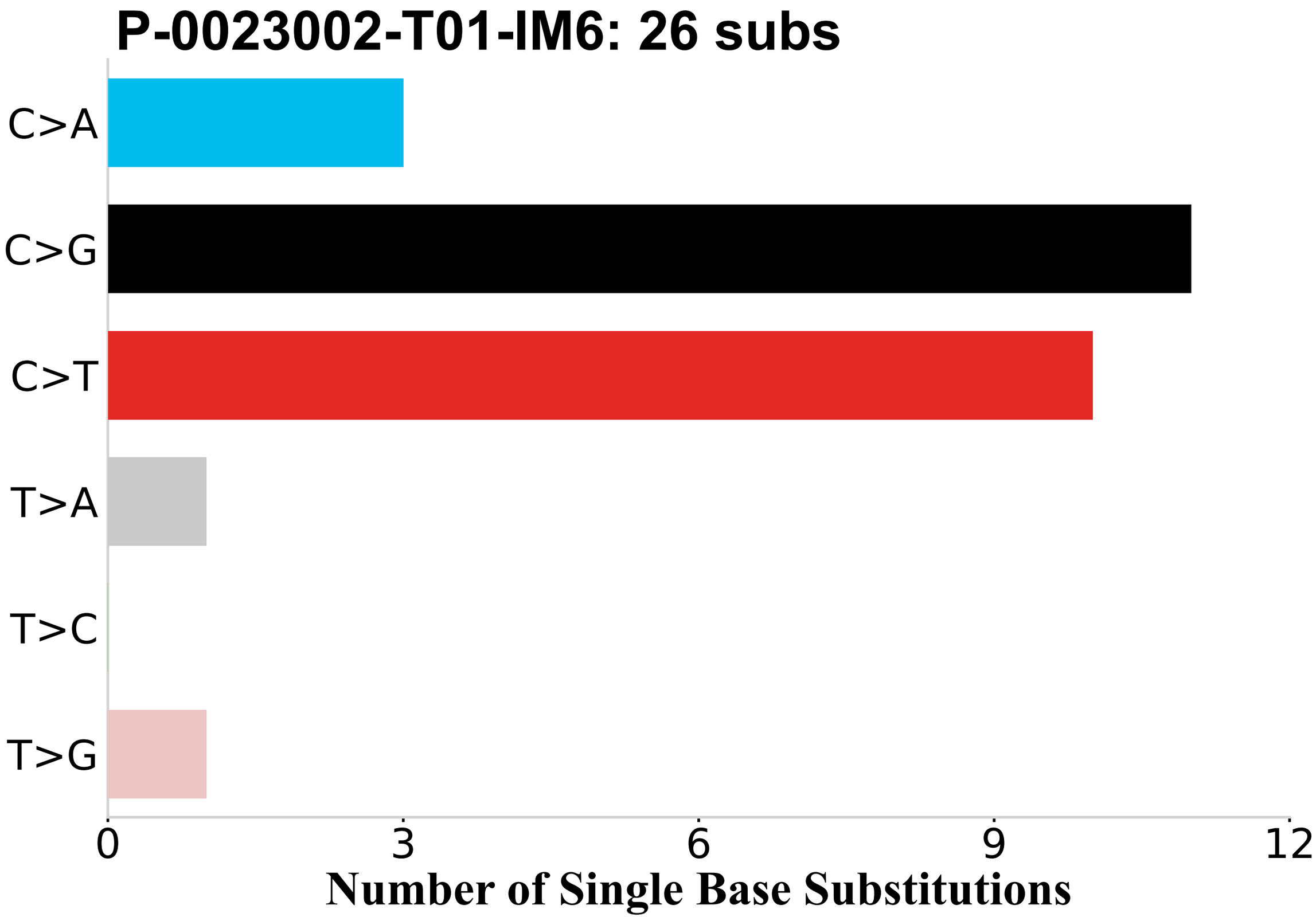
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023002-T01-IM6: 26 subs
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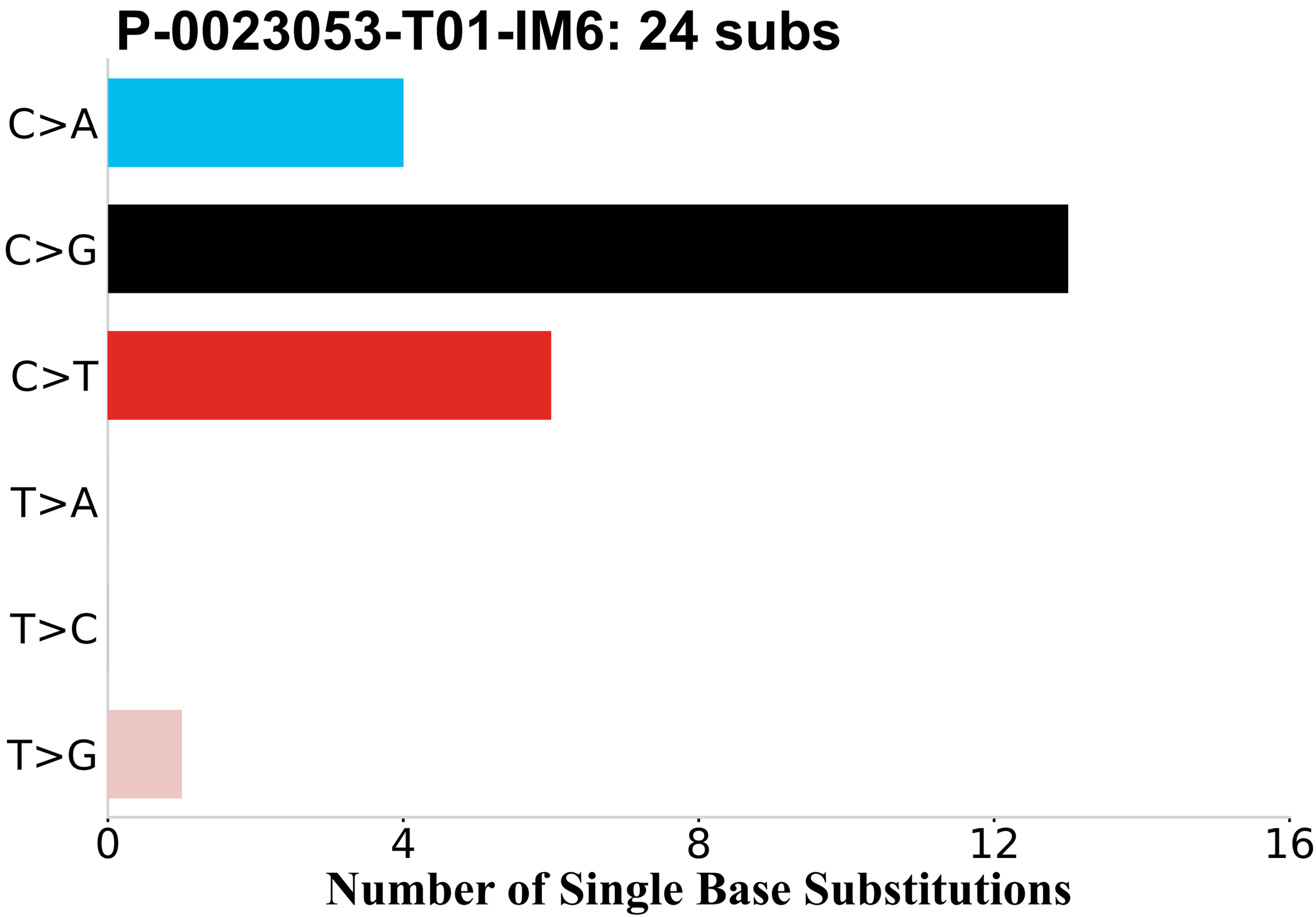
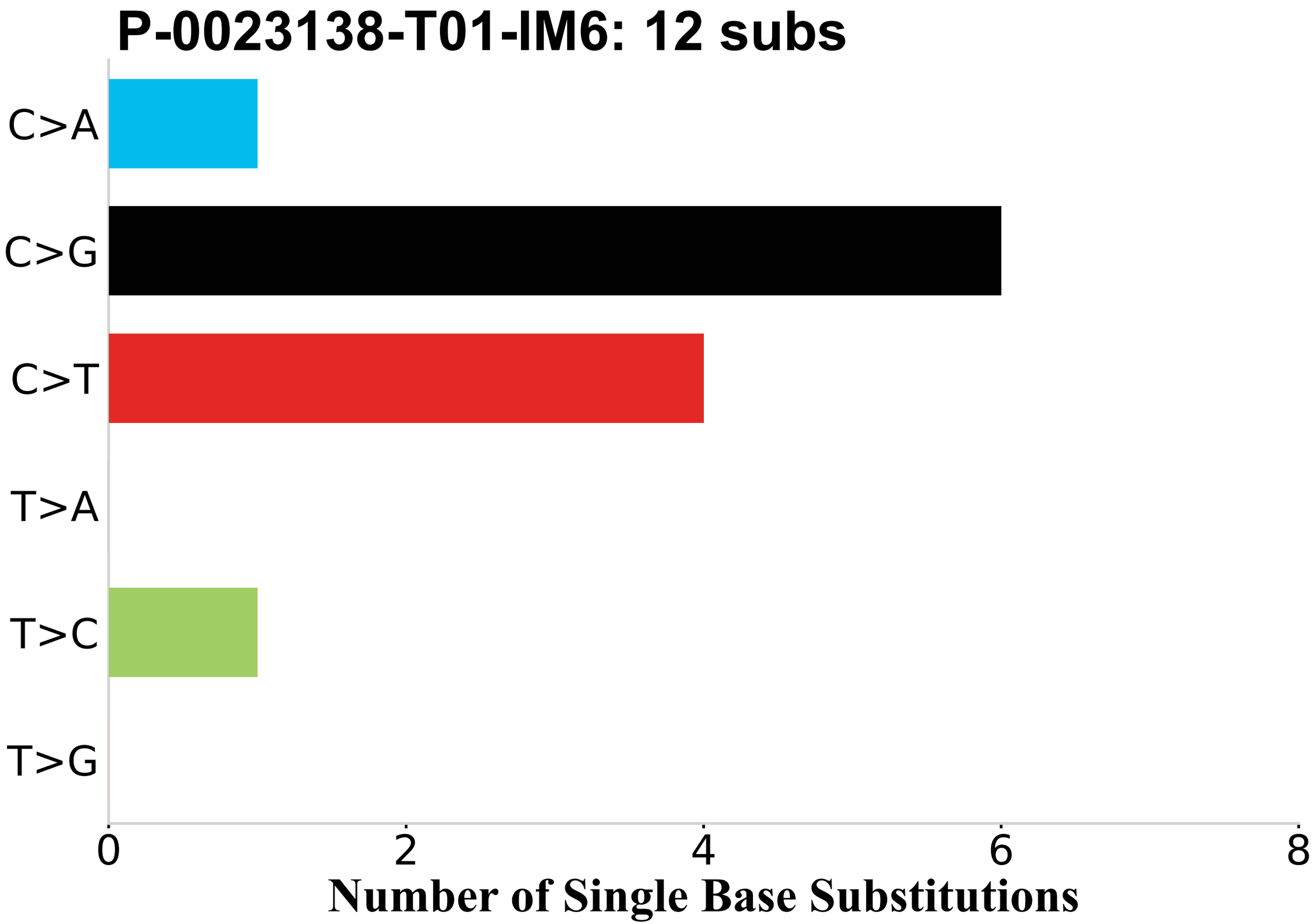
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0023053-T01-IM6: 24 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0023138-T01-IM6: 12 subs
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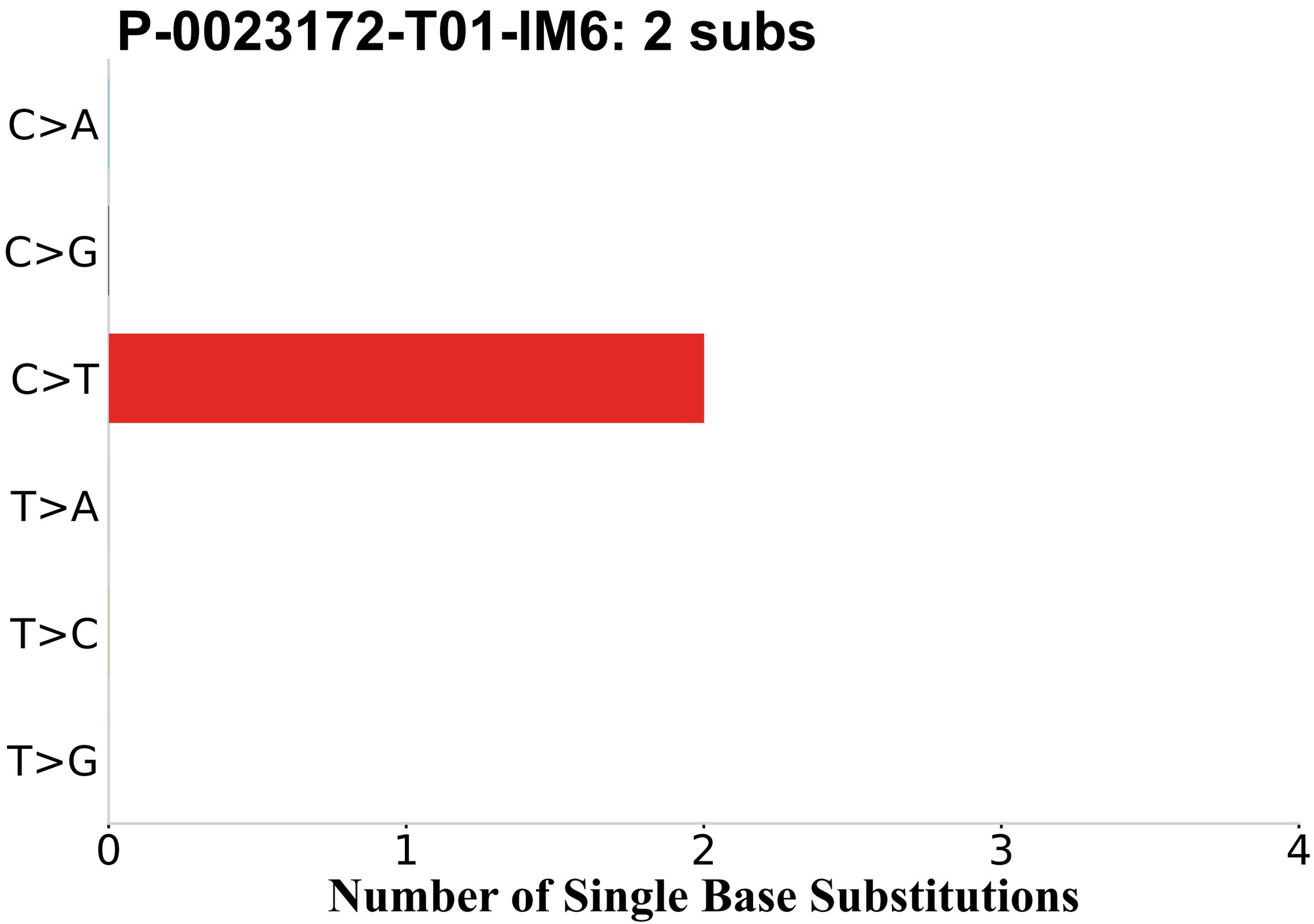
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0023172-T01-IM6: 2 subs
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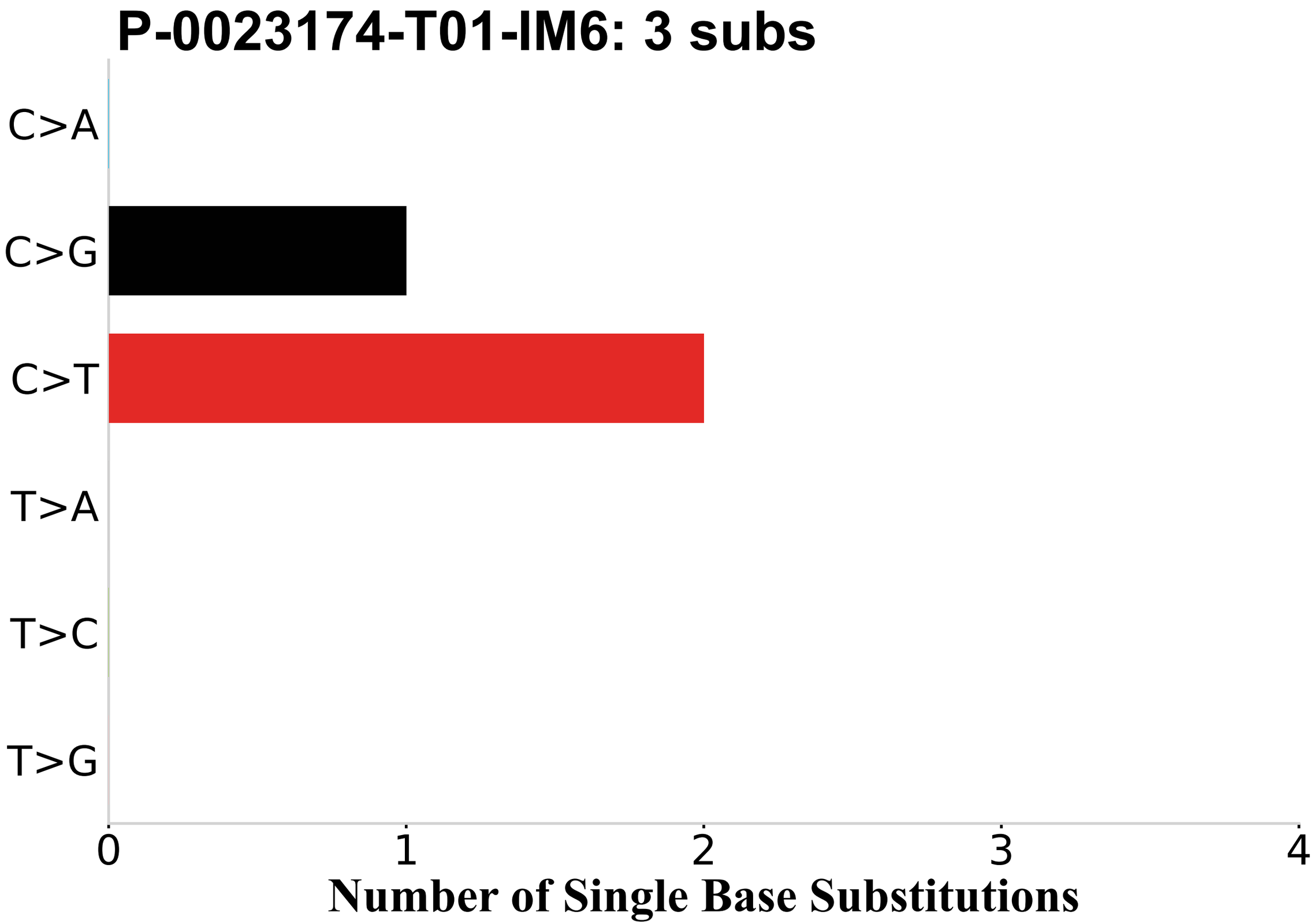
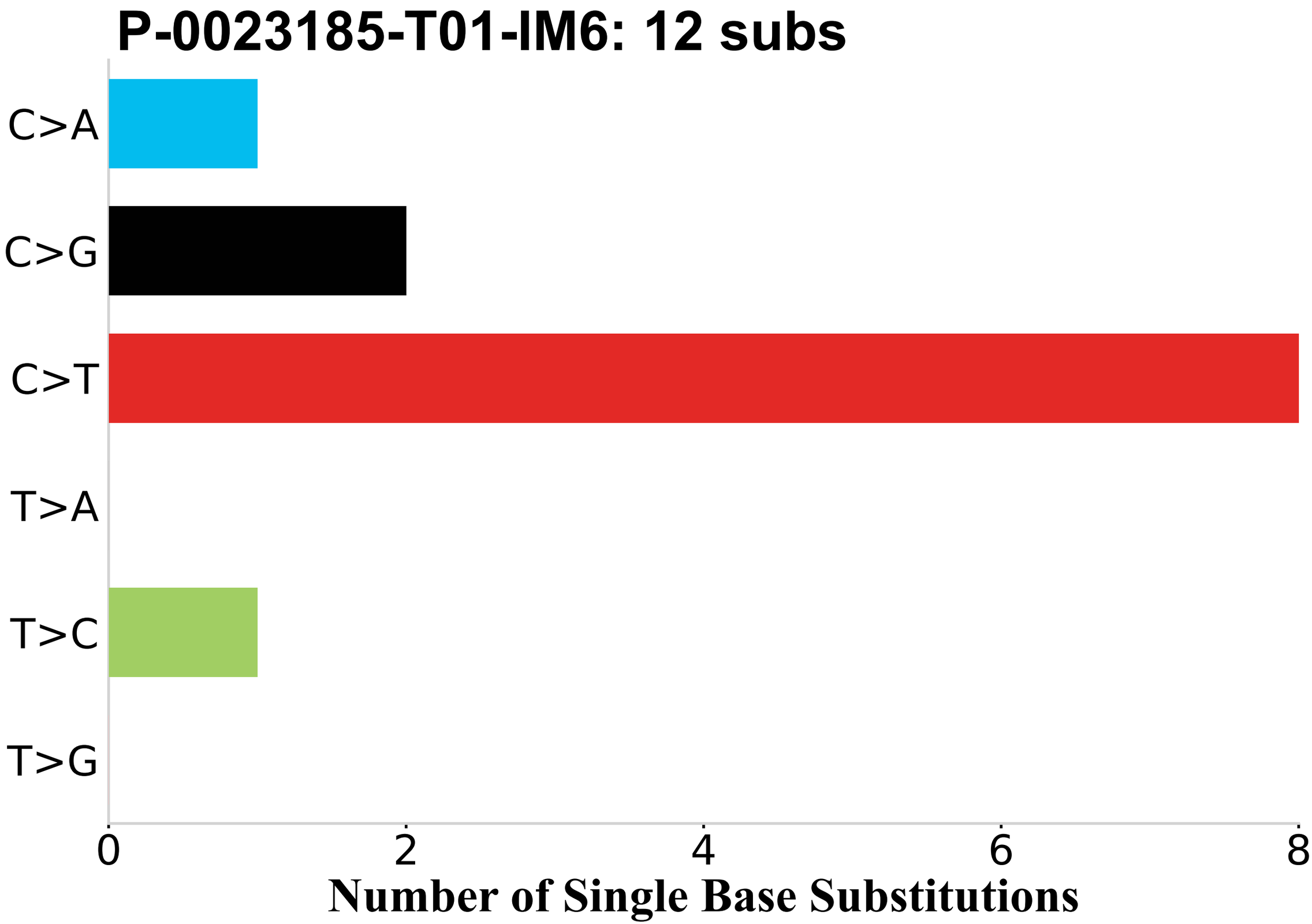
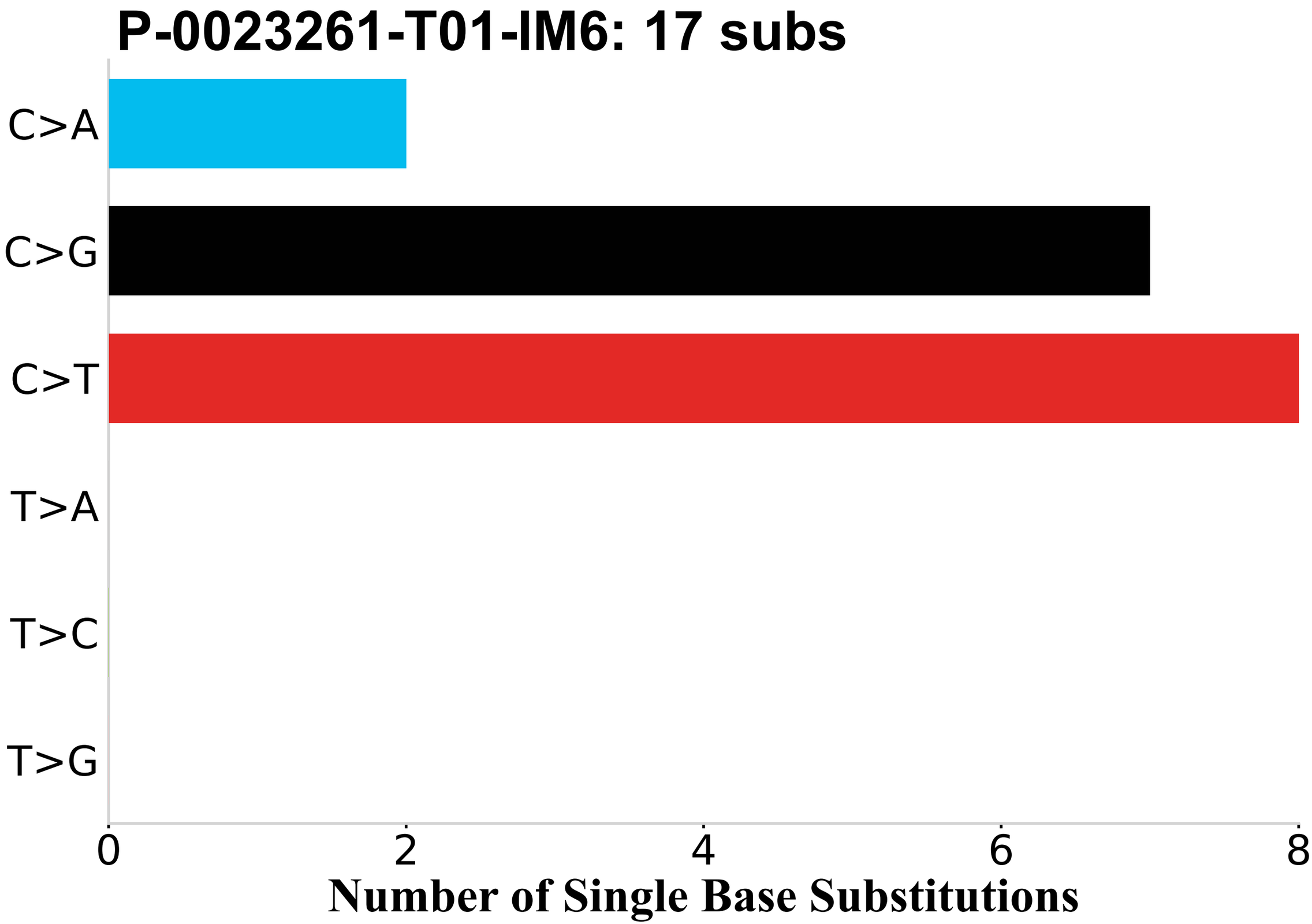
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023174-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023185-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0023261-T01-IM6: 17 subs
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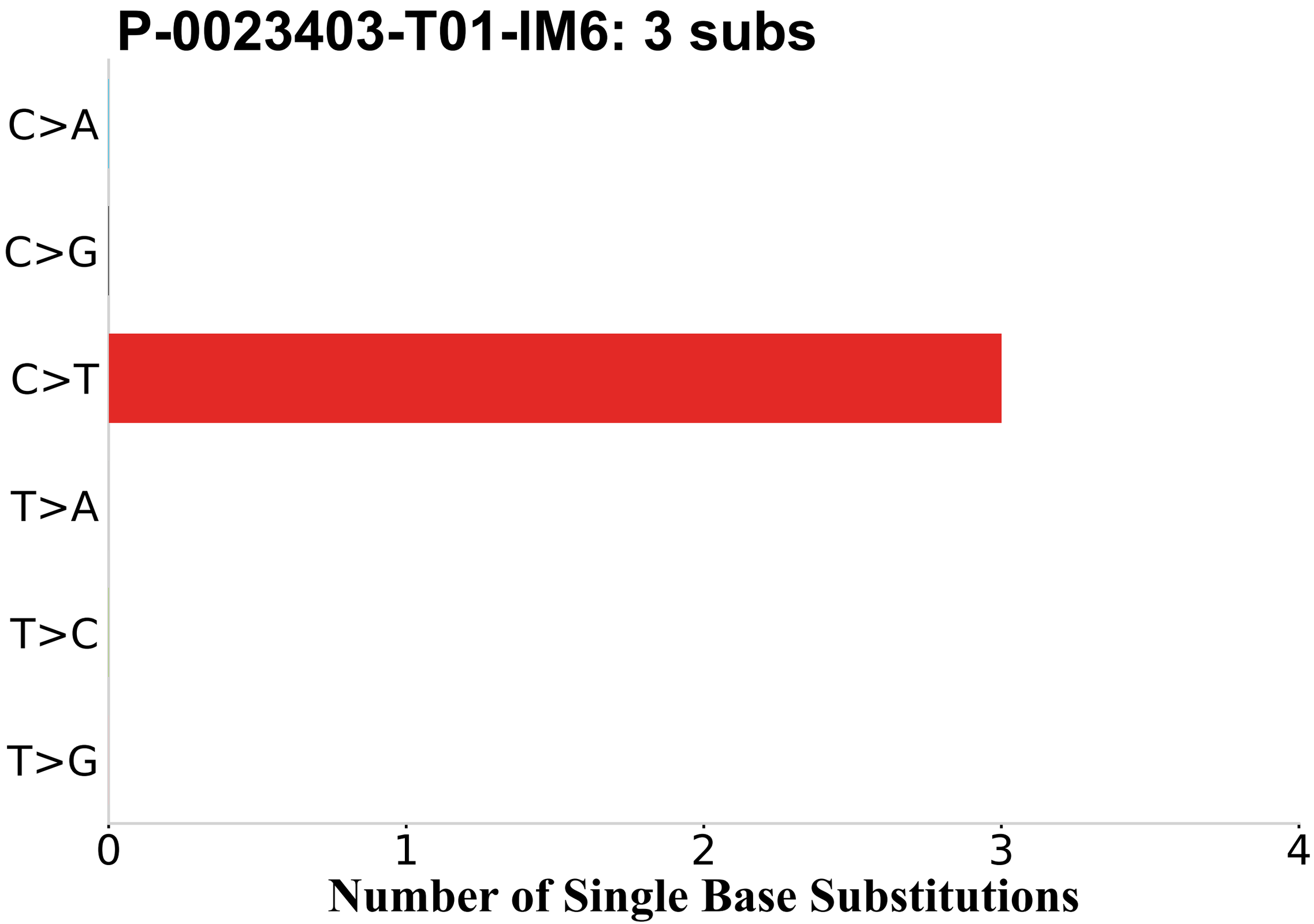
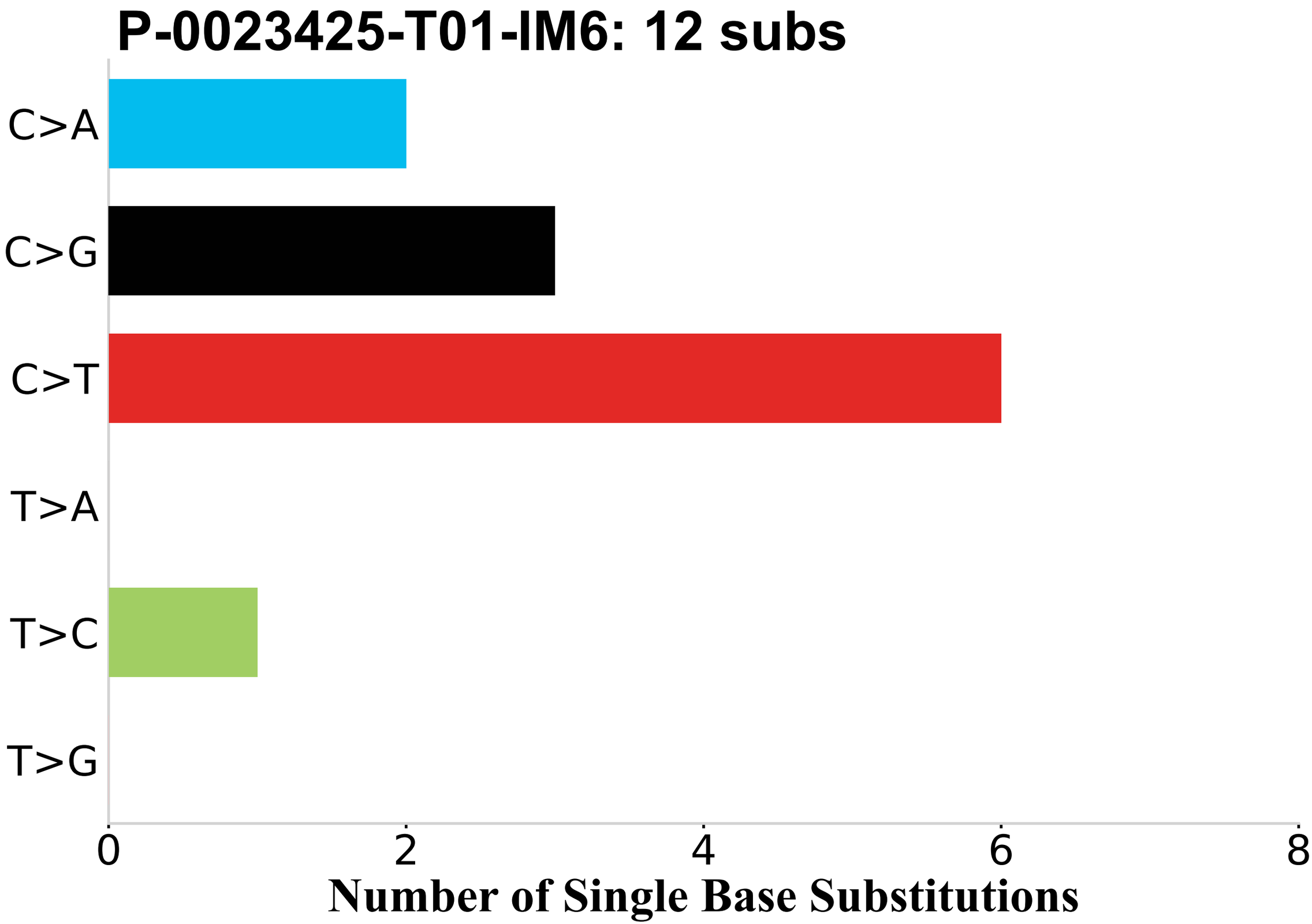
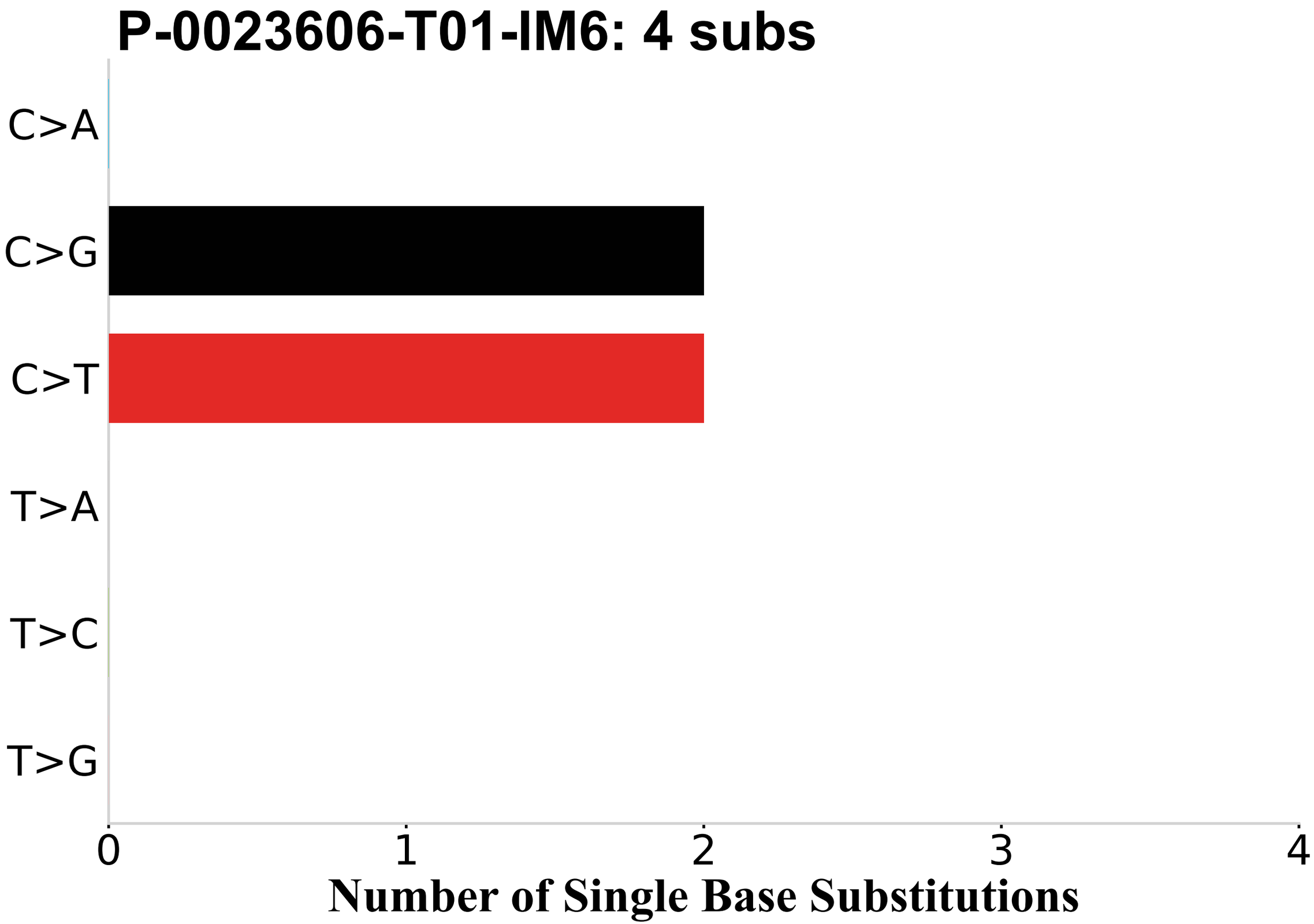
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0023403-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023425-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0023606-T01-IM6: 4 subs
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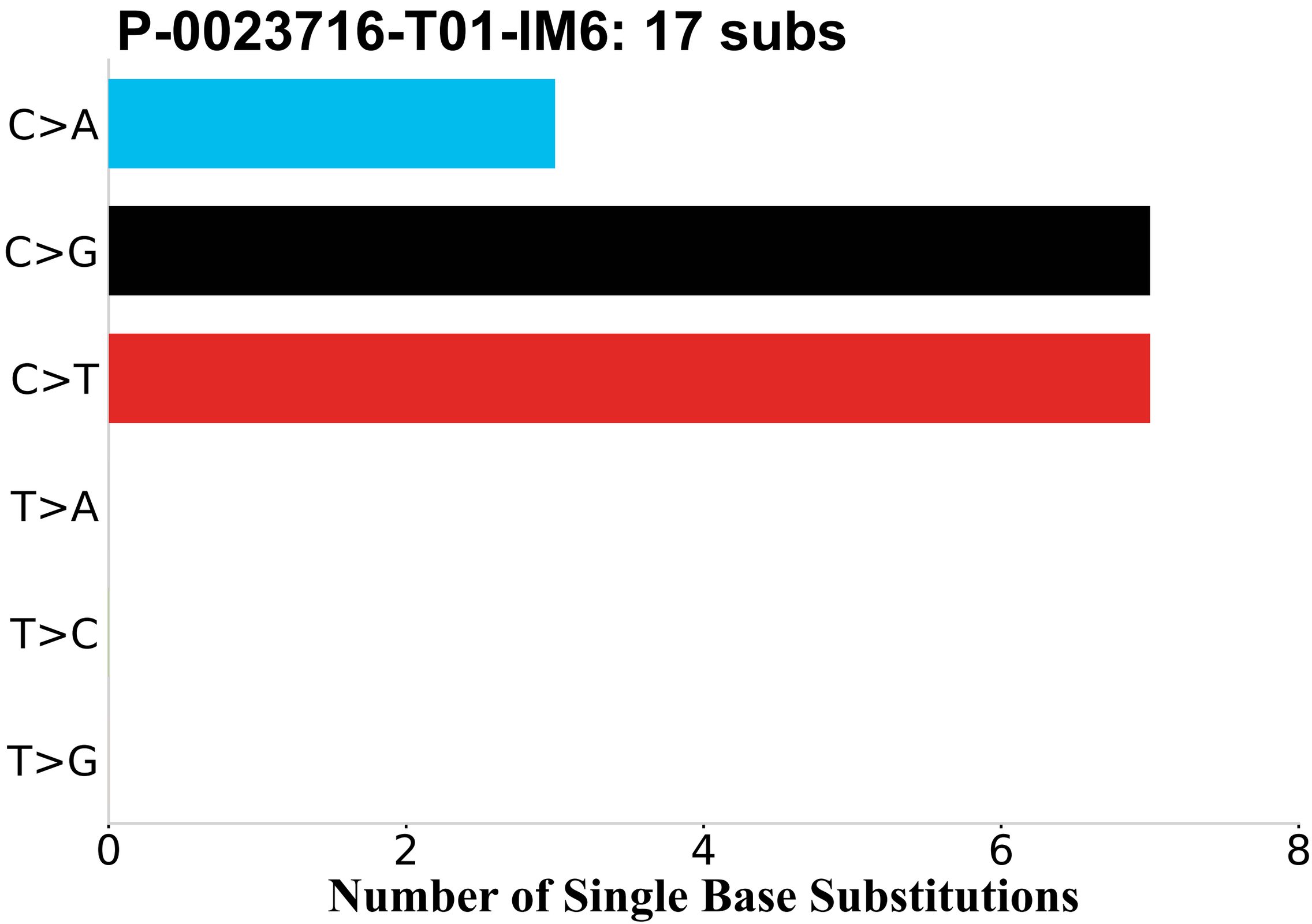
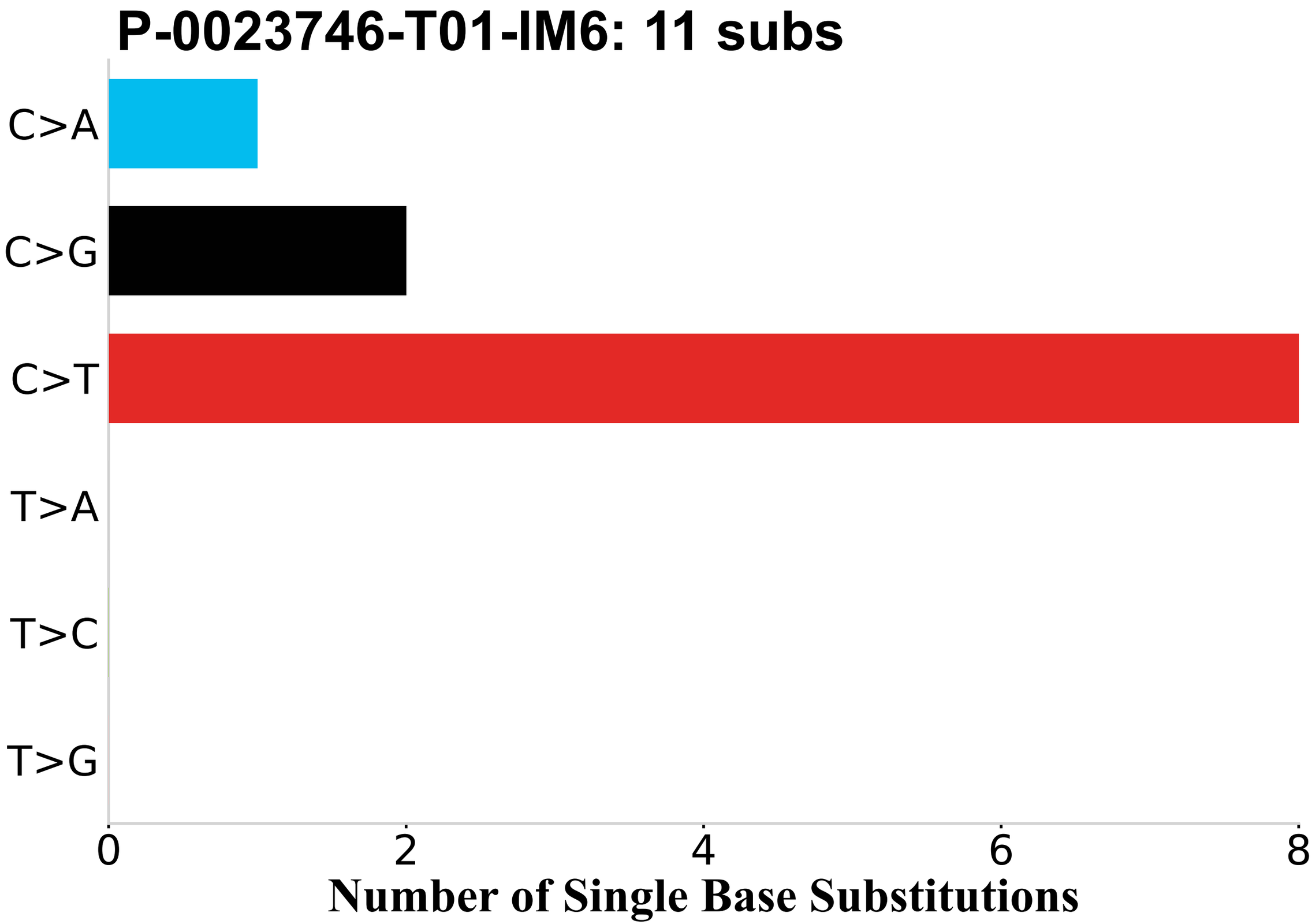
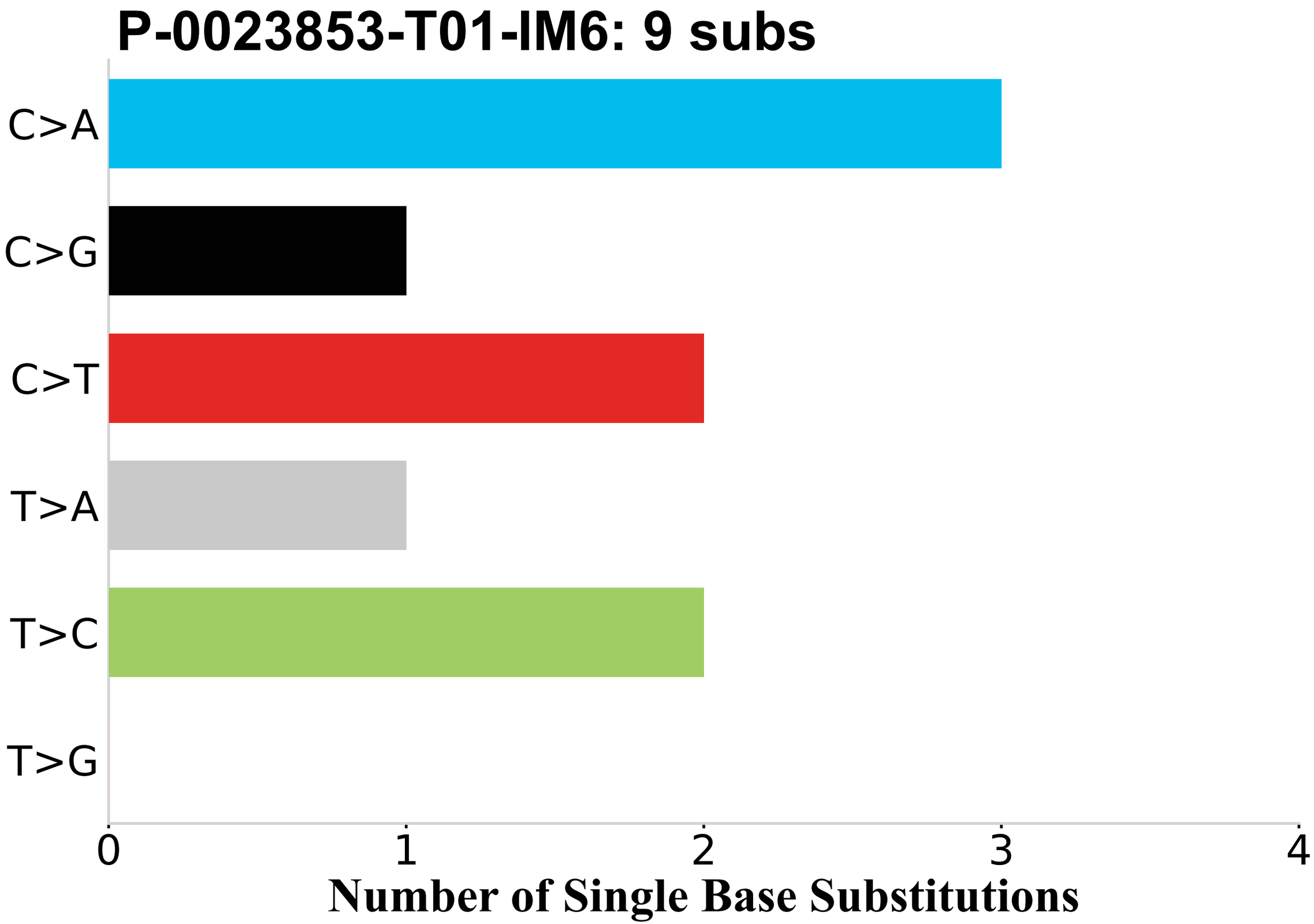
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023716-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0023746-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0023853-T01-IM6: 9 subs
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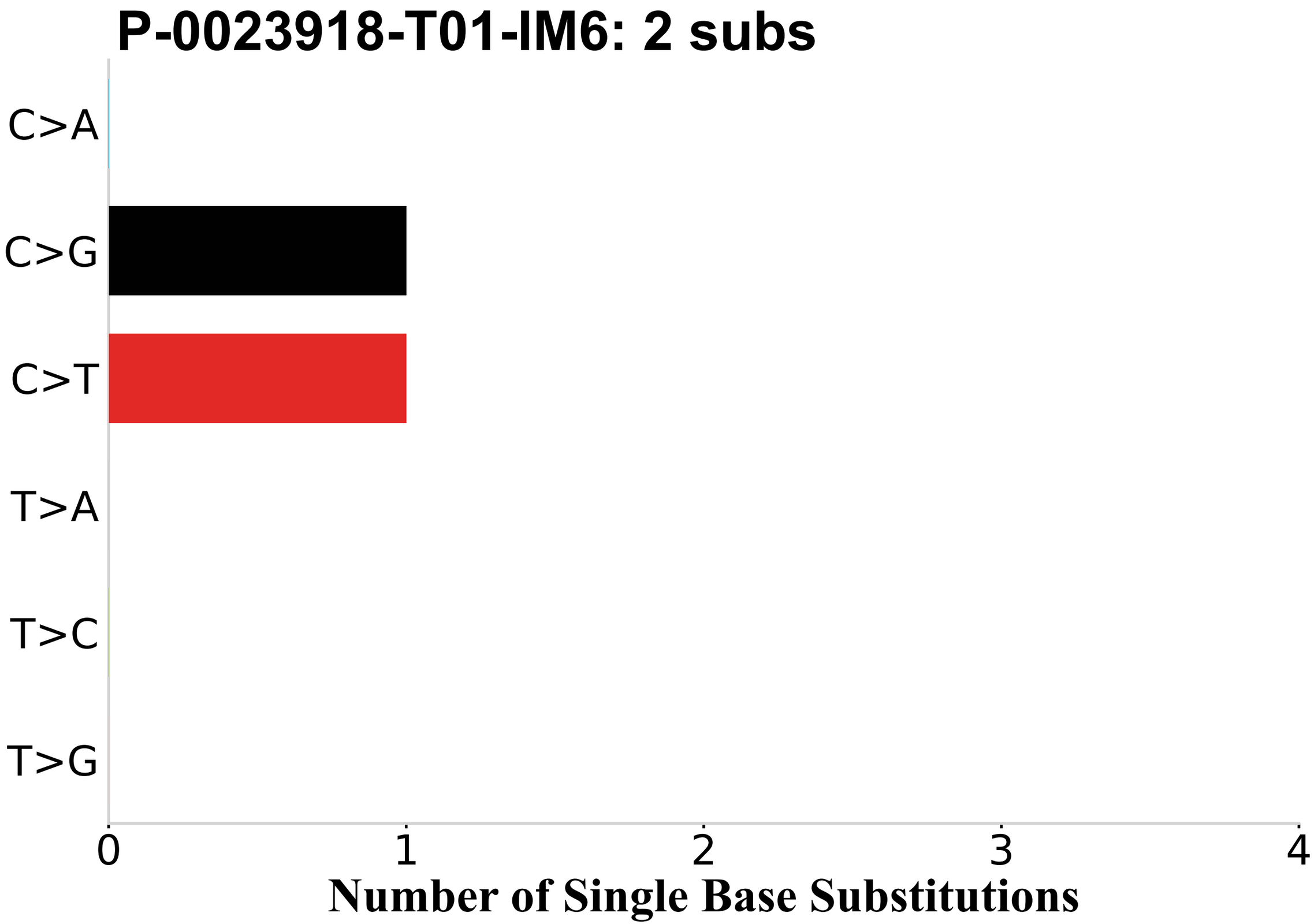
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0023918-T01-IM6: 2 subs
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C>G
C>T
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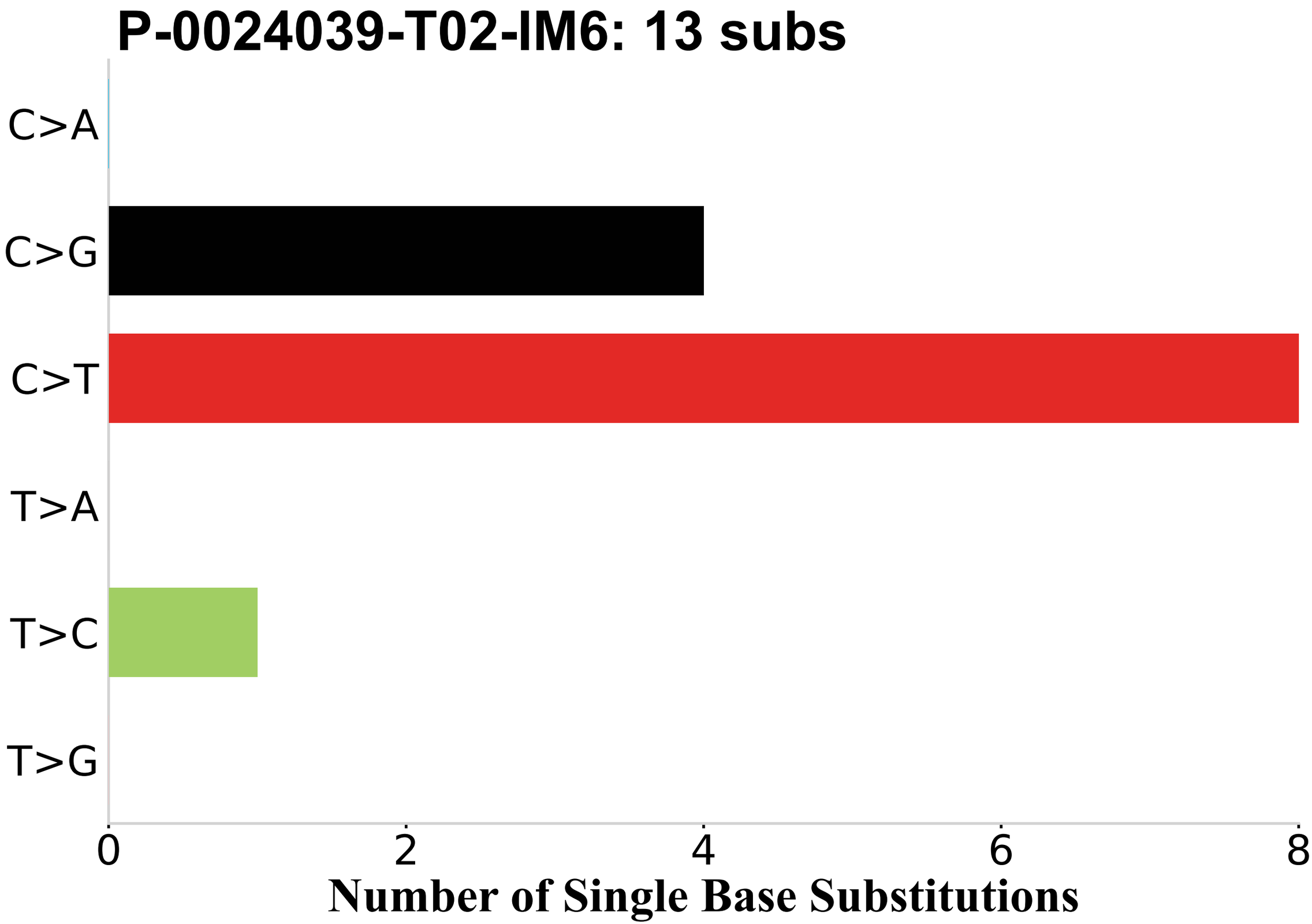
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0024039-T02-IM6: 13 subs
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C>G
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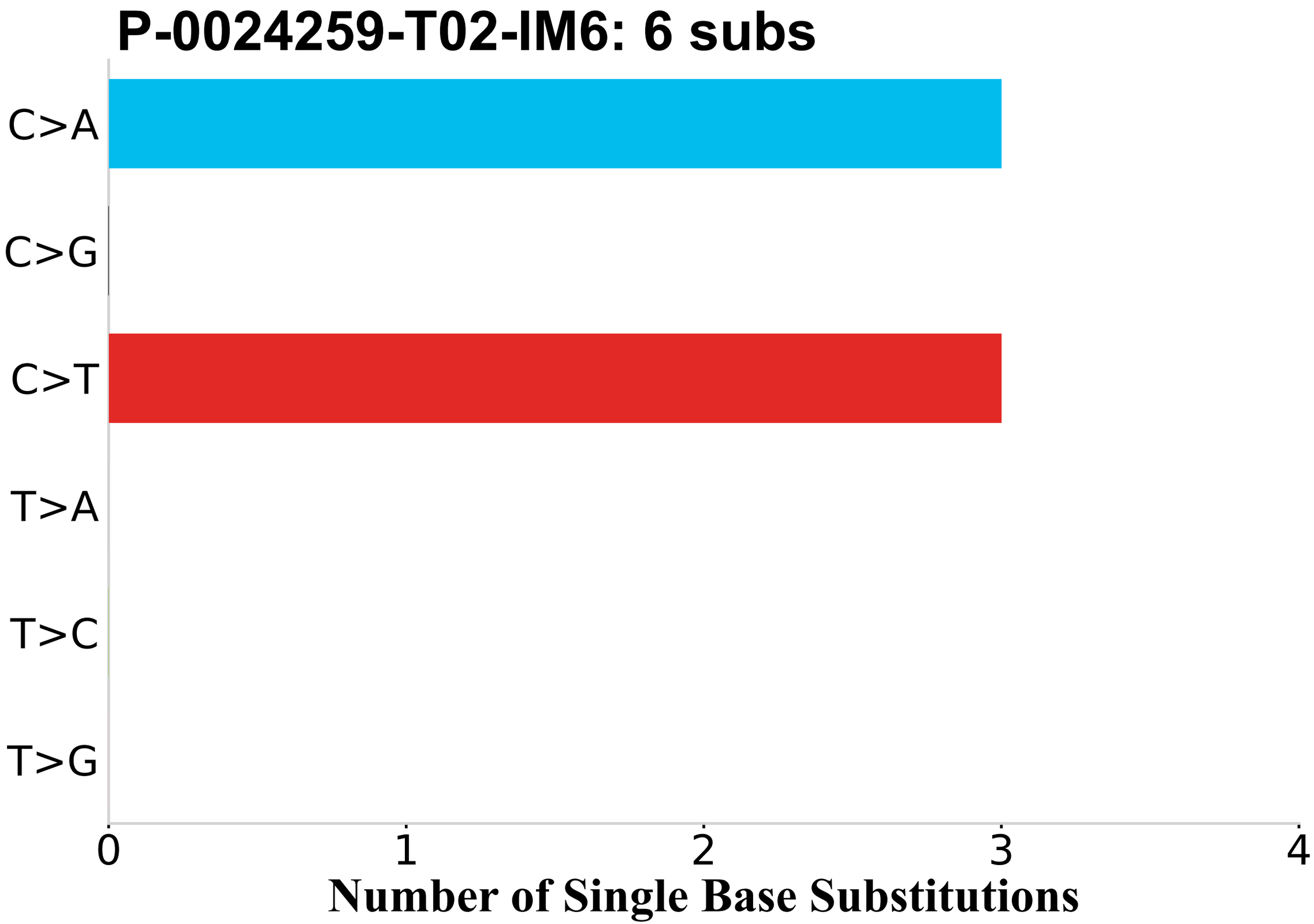
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0024259-T02-IM6: 6 subs
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T>C
T>G
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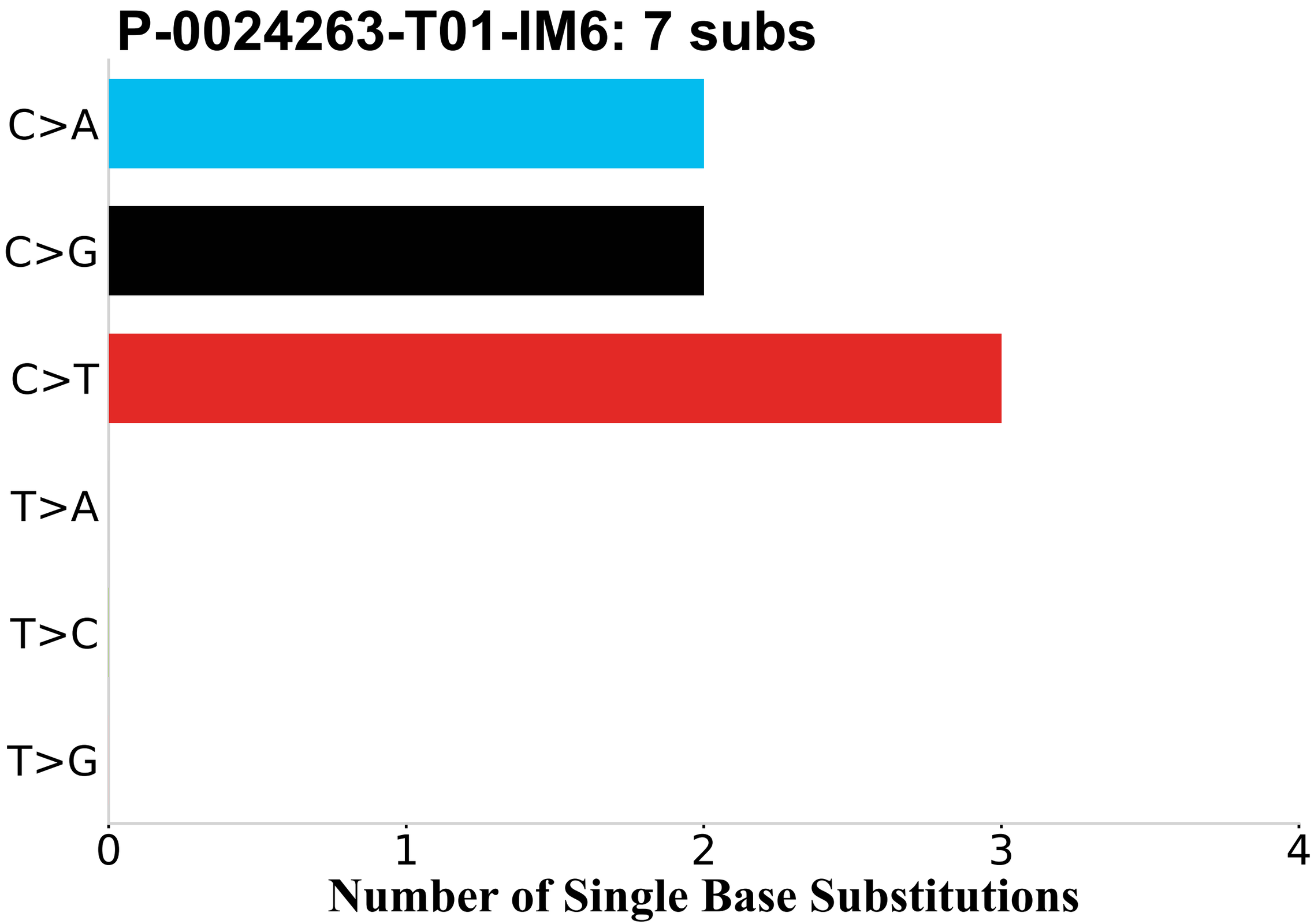
1
2
3
4
Number of Single Base Substitutions


P-0024263-T01-IM6: 7 subs
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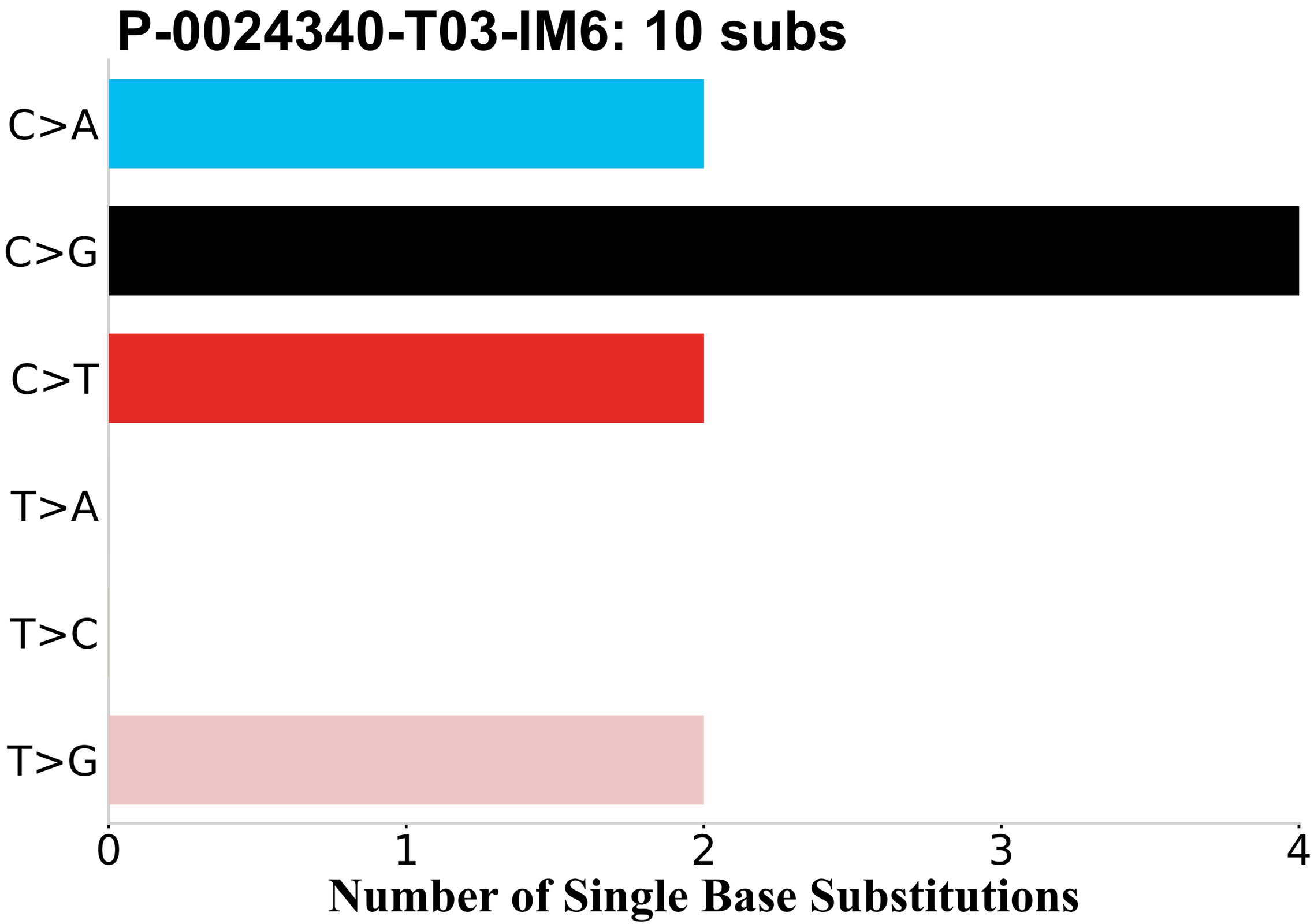
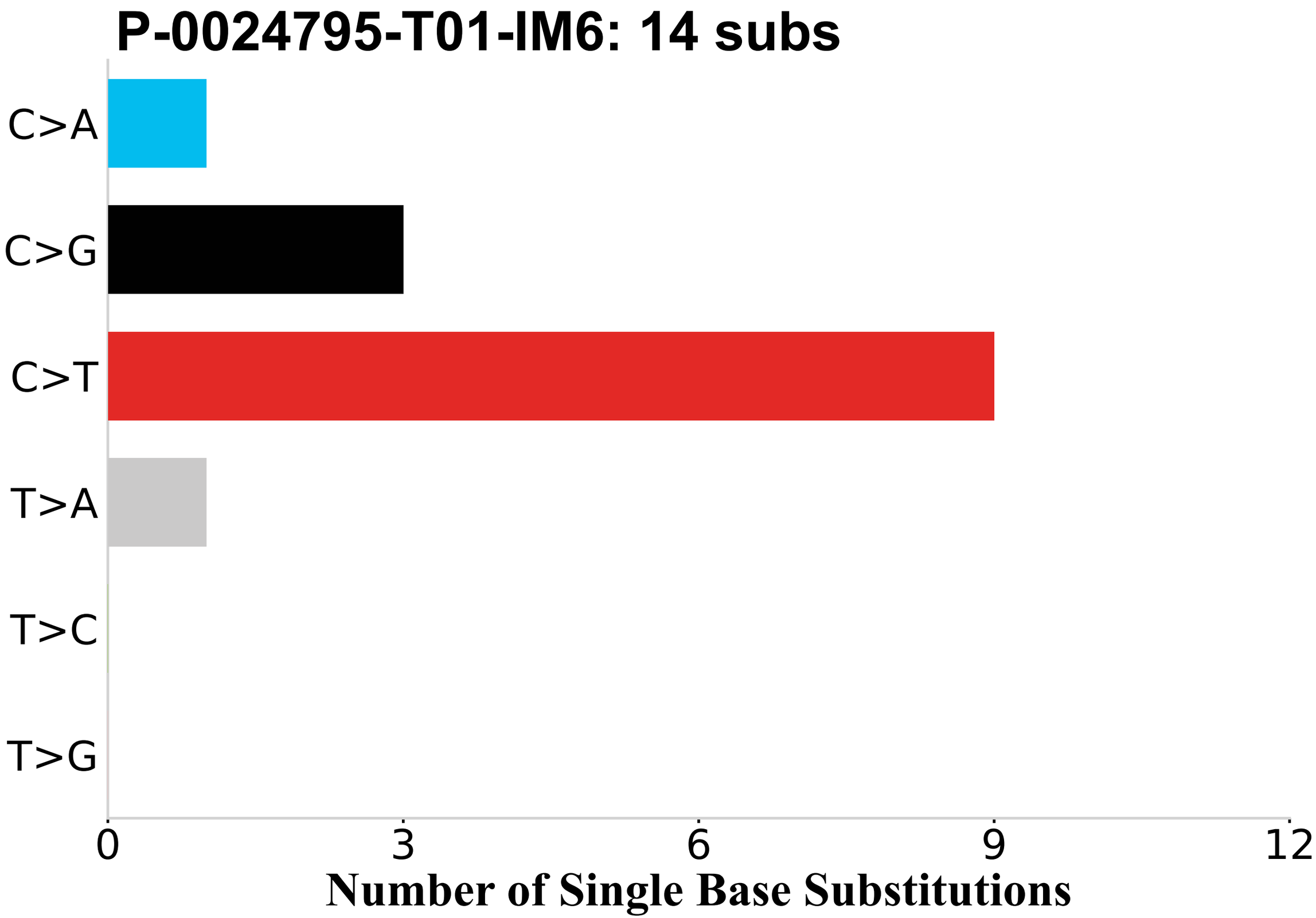
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0024340-T03-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

P-0024353-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0024795-T01-IM6: 14 subs
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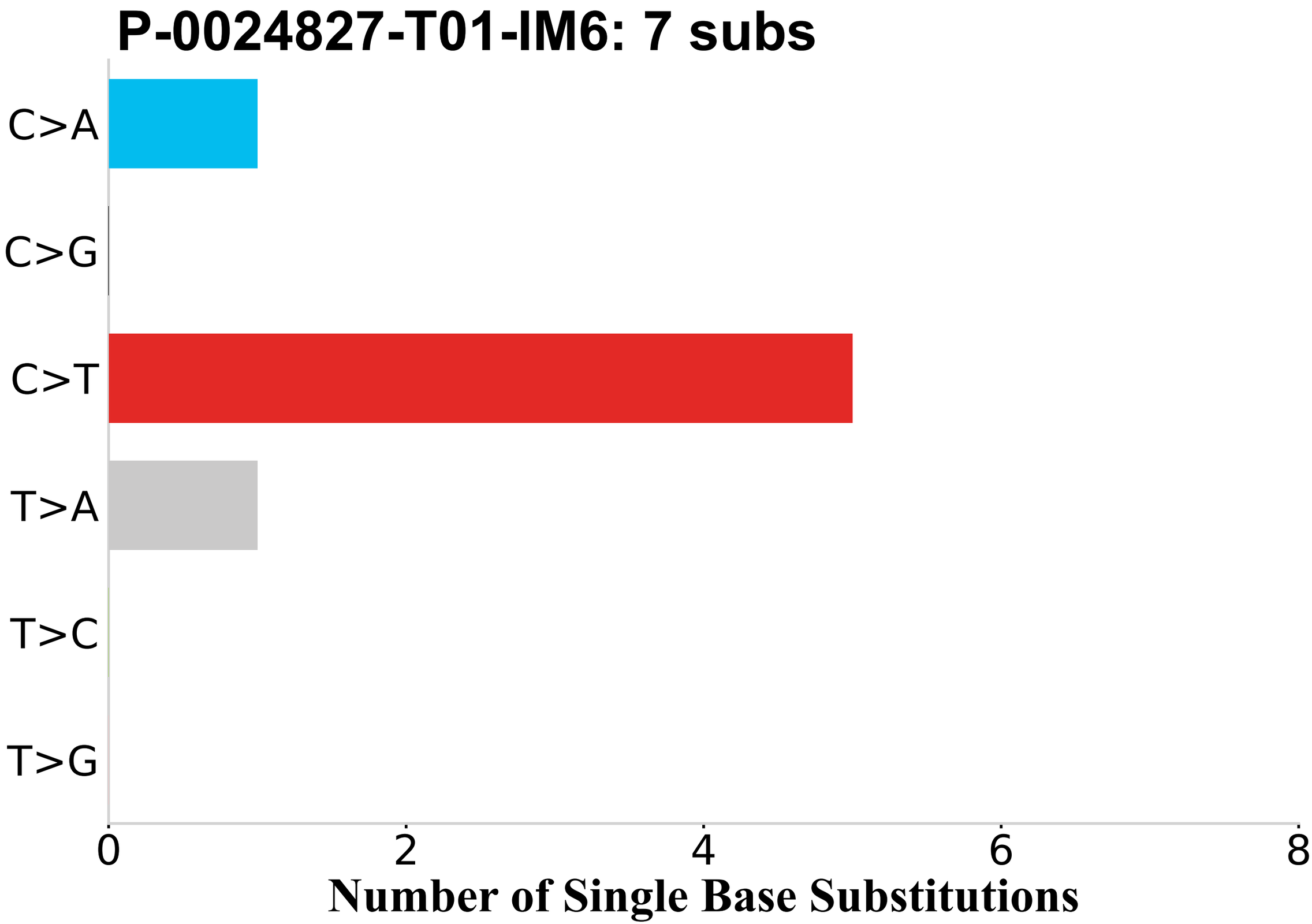
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0024827-T01-IM6: 7 subs
C>A
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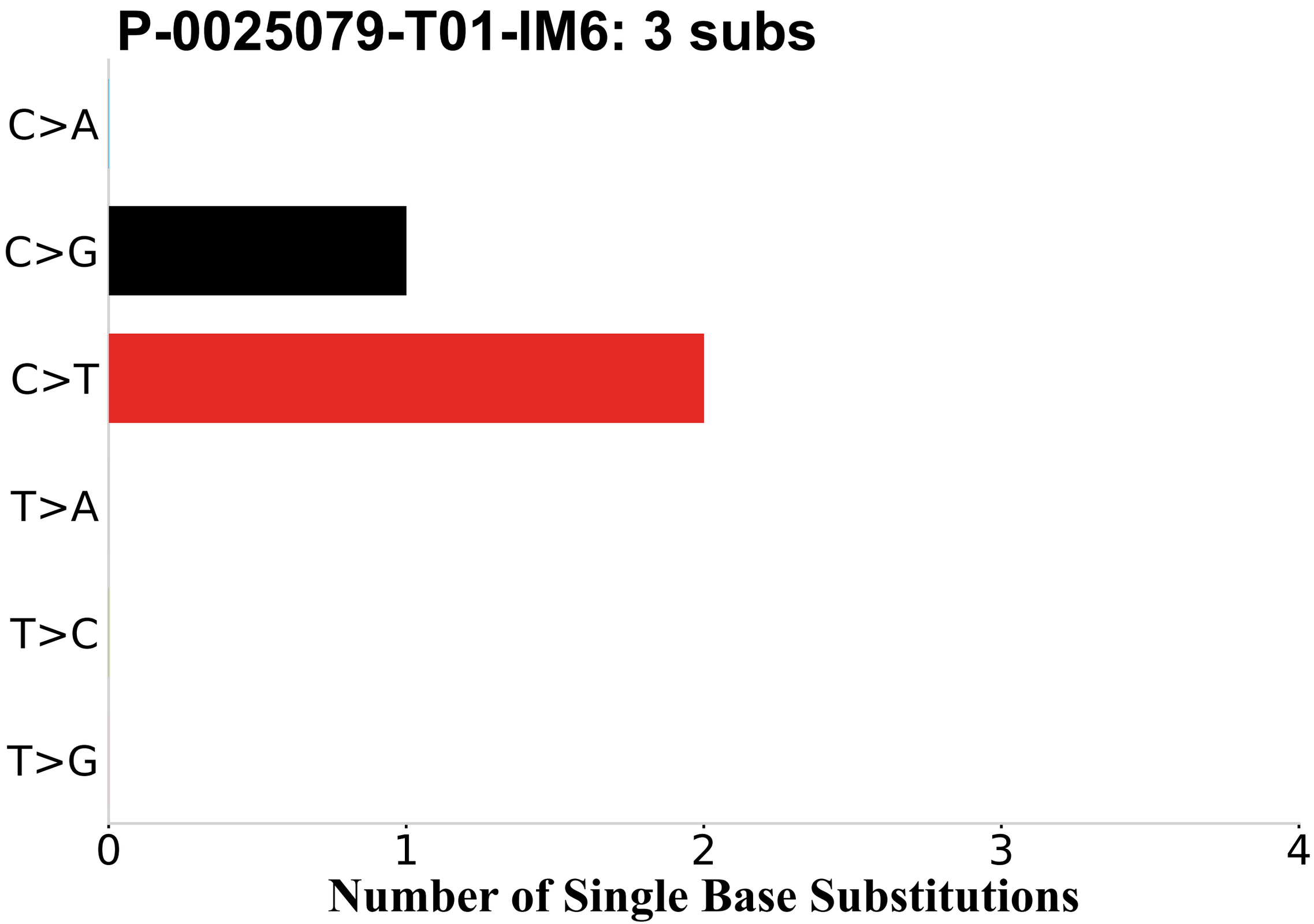
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0025079-T01-IM6: 3 subs
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C>T
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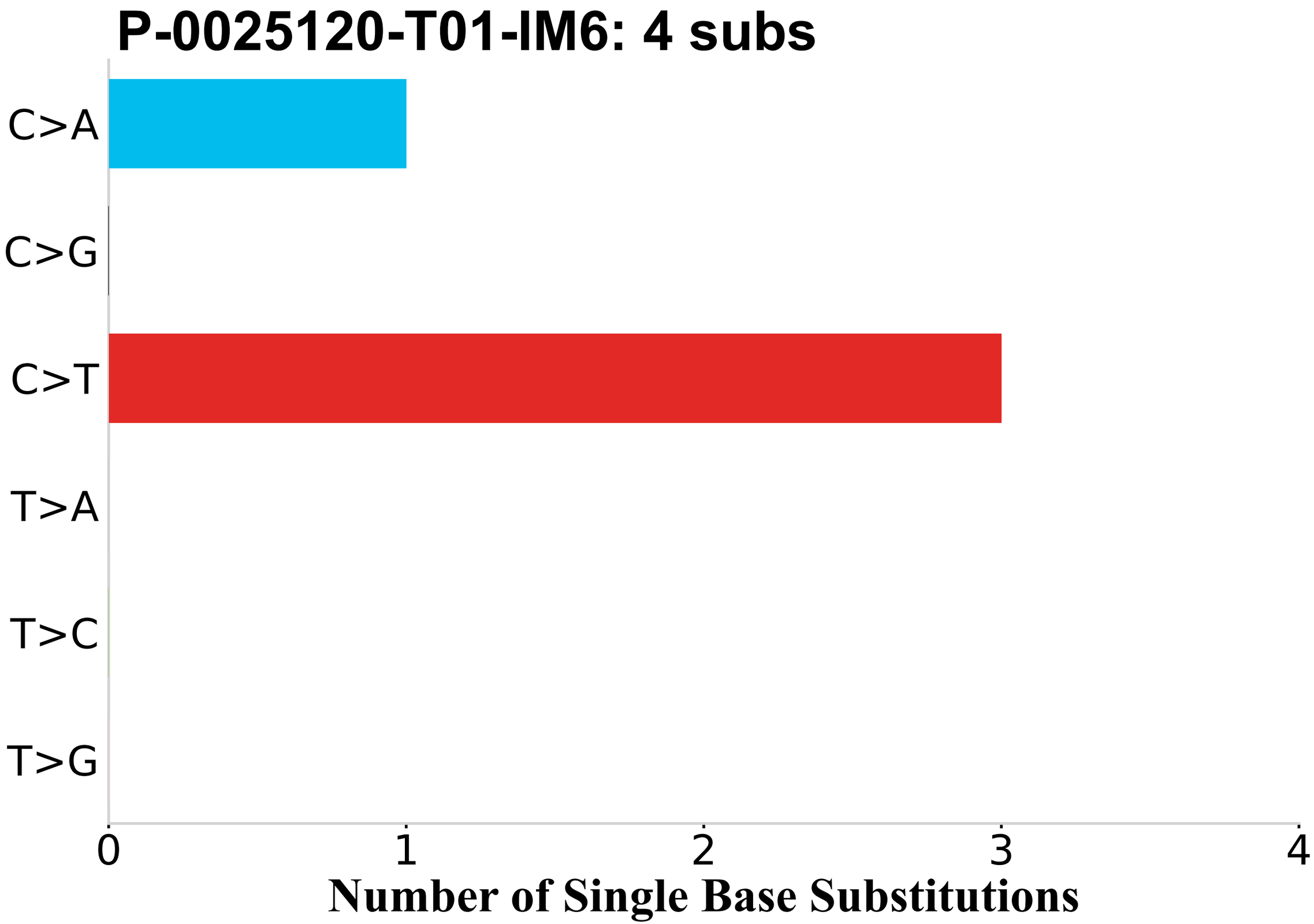
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0025120-T01-IM6: 4 subs
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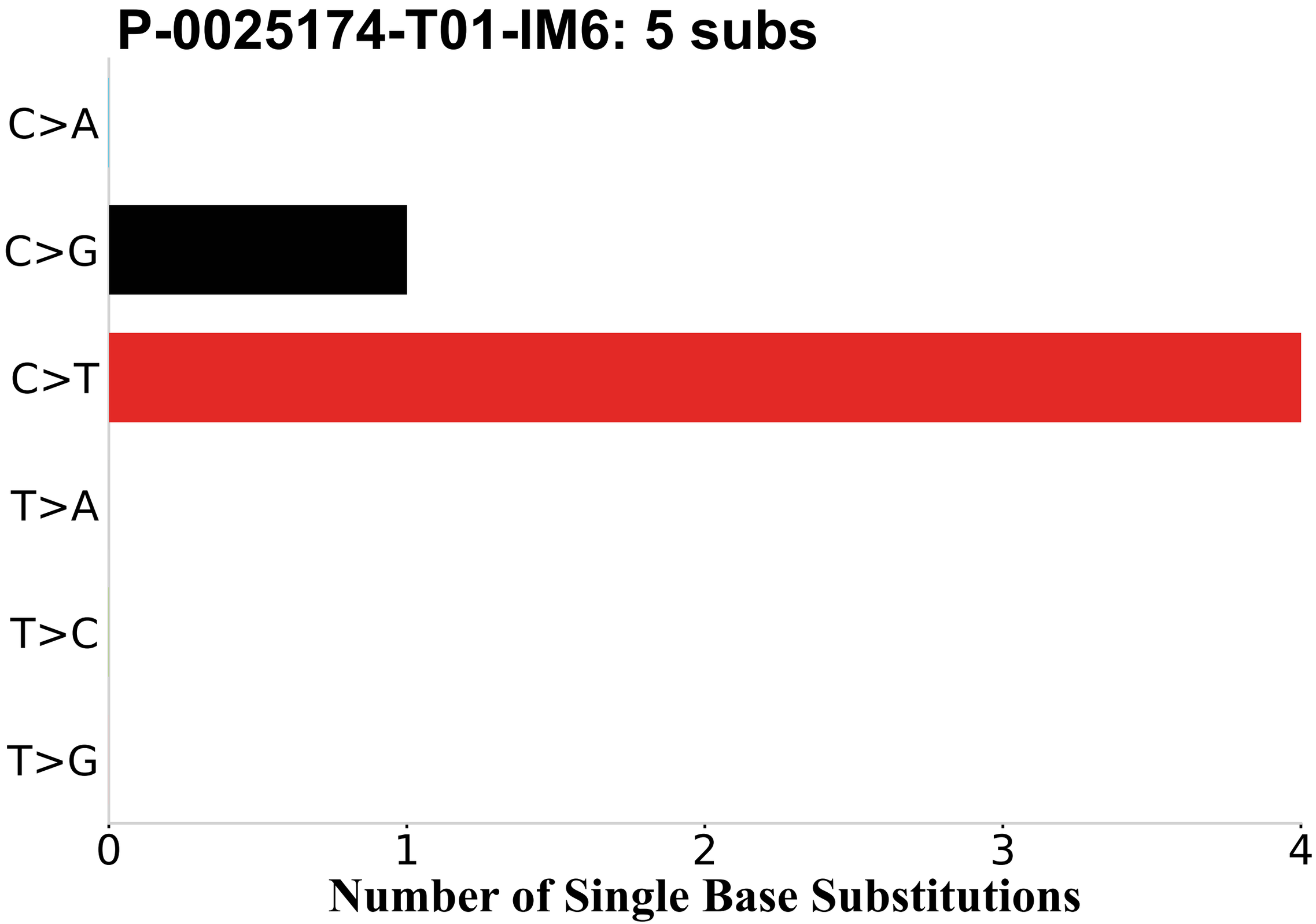
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0025174-T01-IM6: 5 subs
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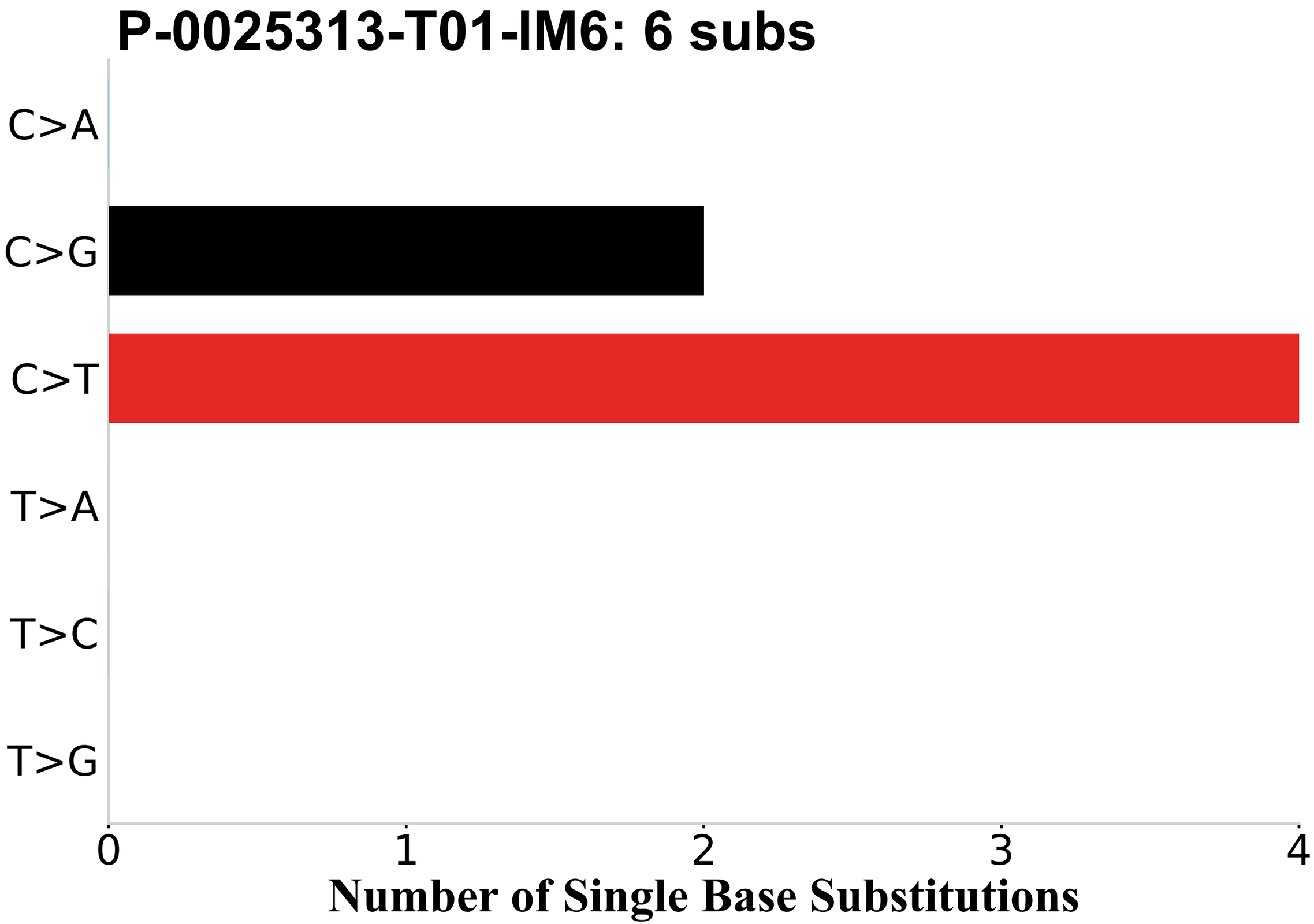
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0025313-T01-IM6: 6 subs
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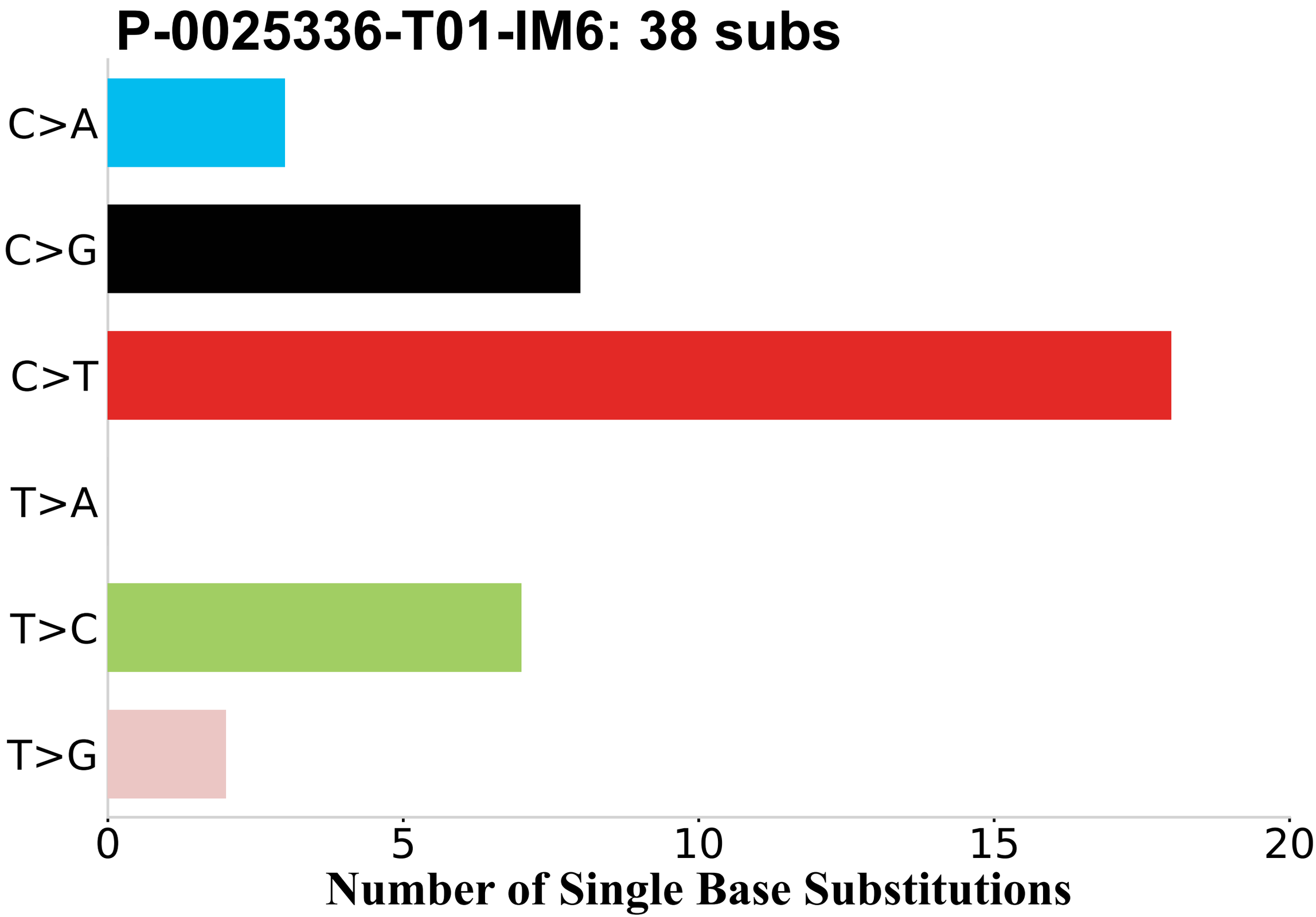
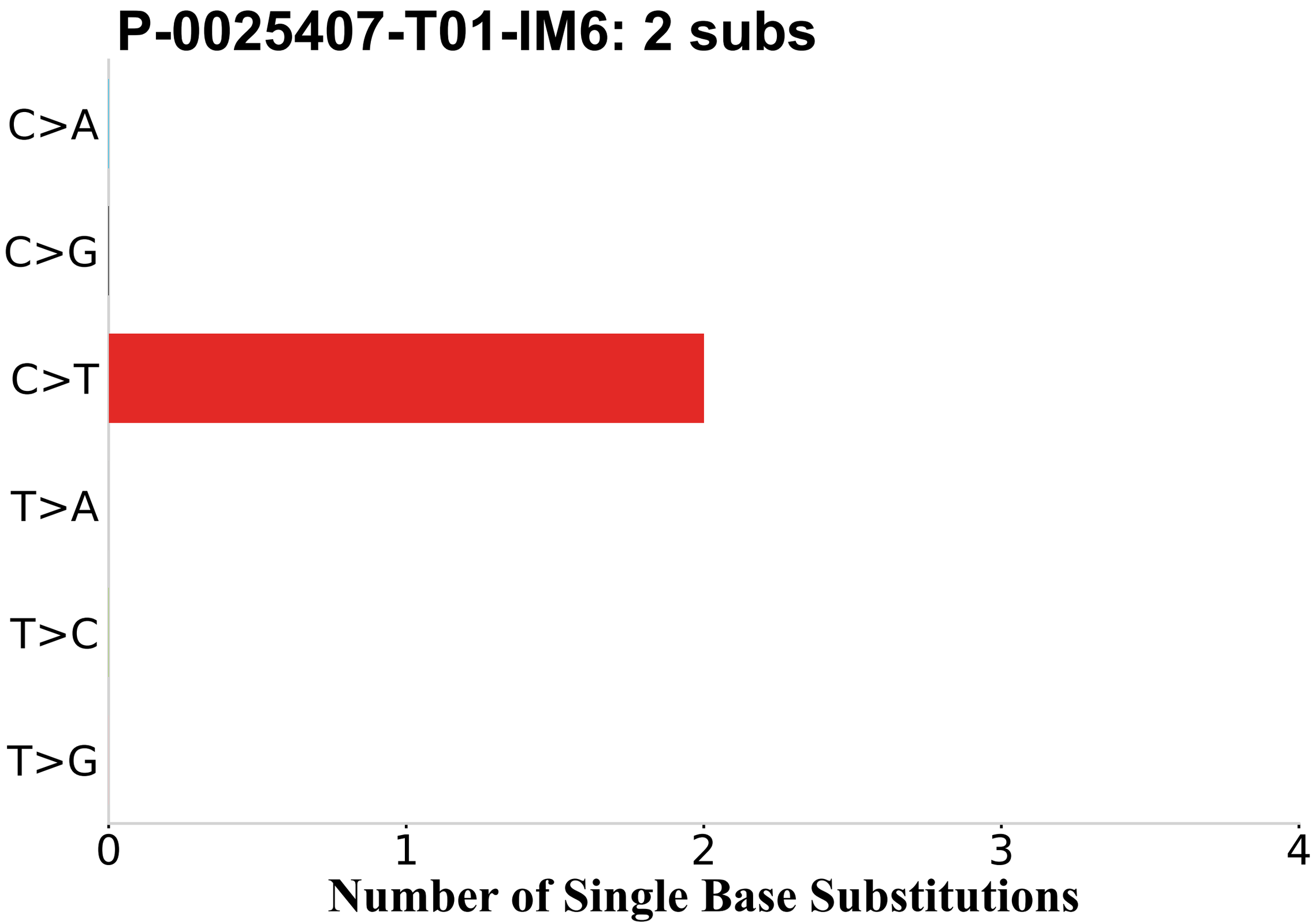
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0025336-T01-IM6: 38 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0025407-T01-IM6: 2 subs
C>A
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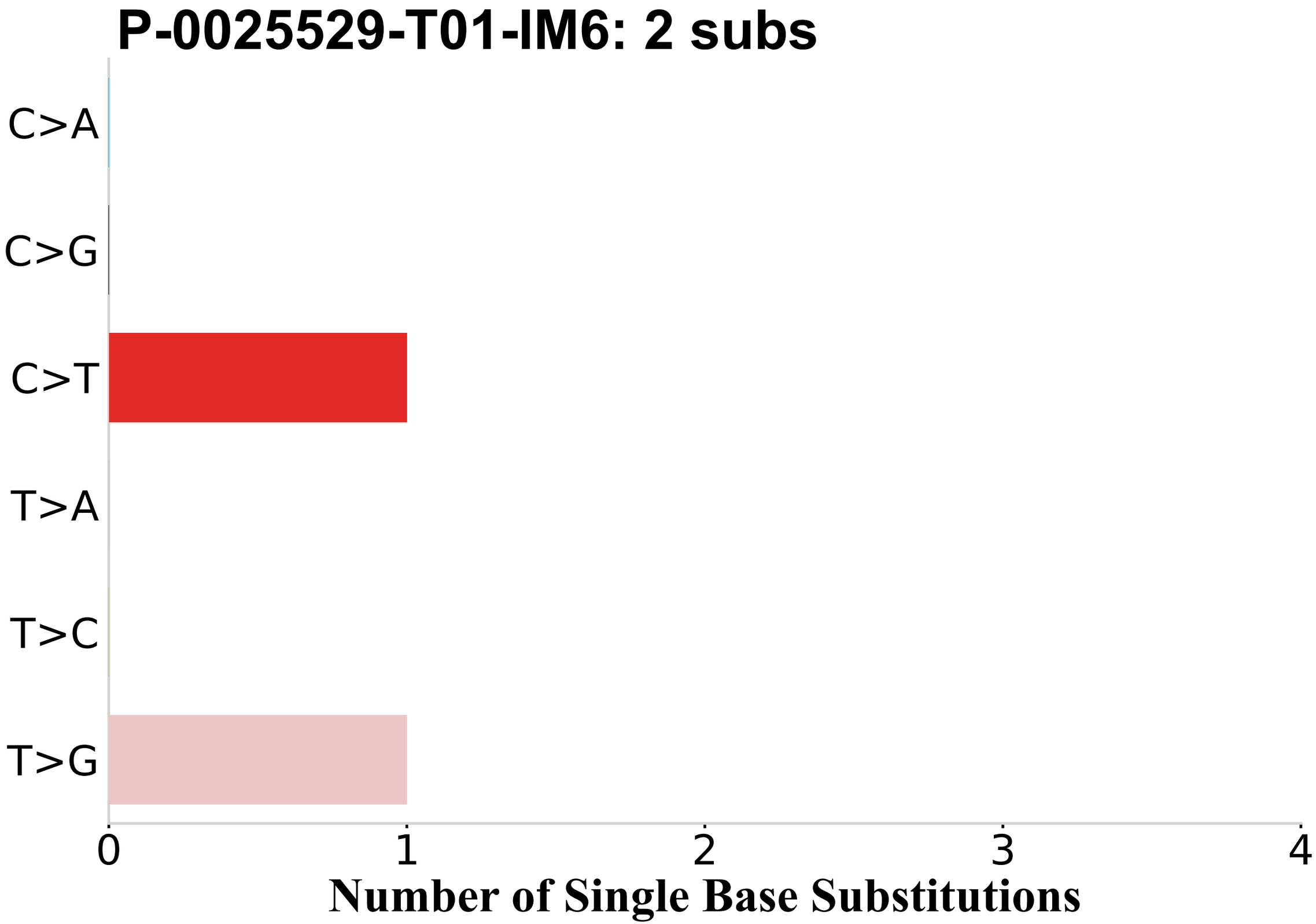
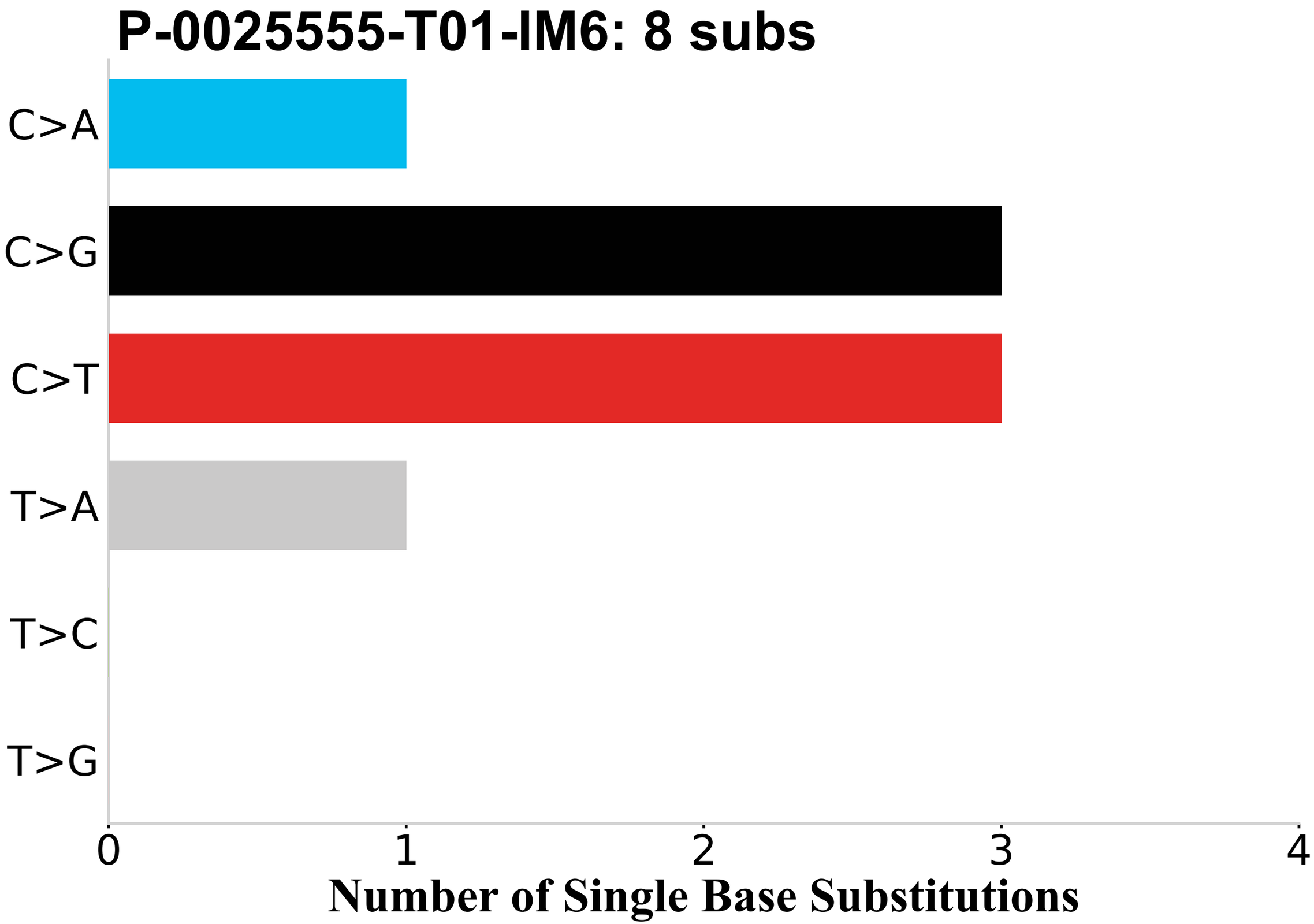
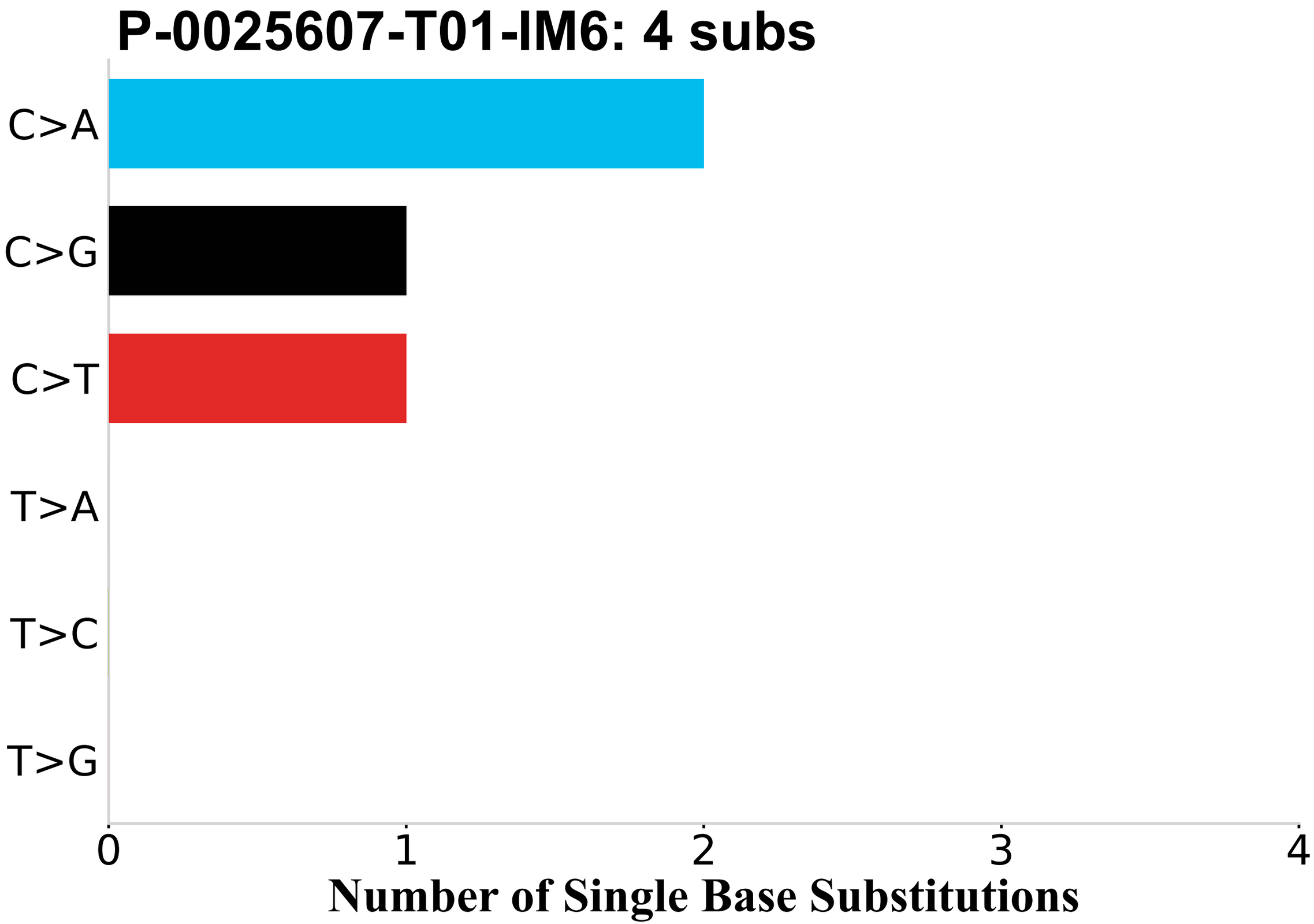
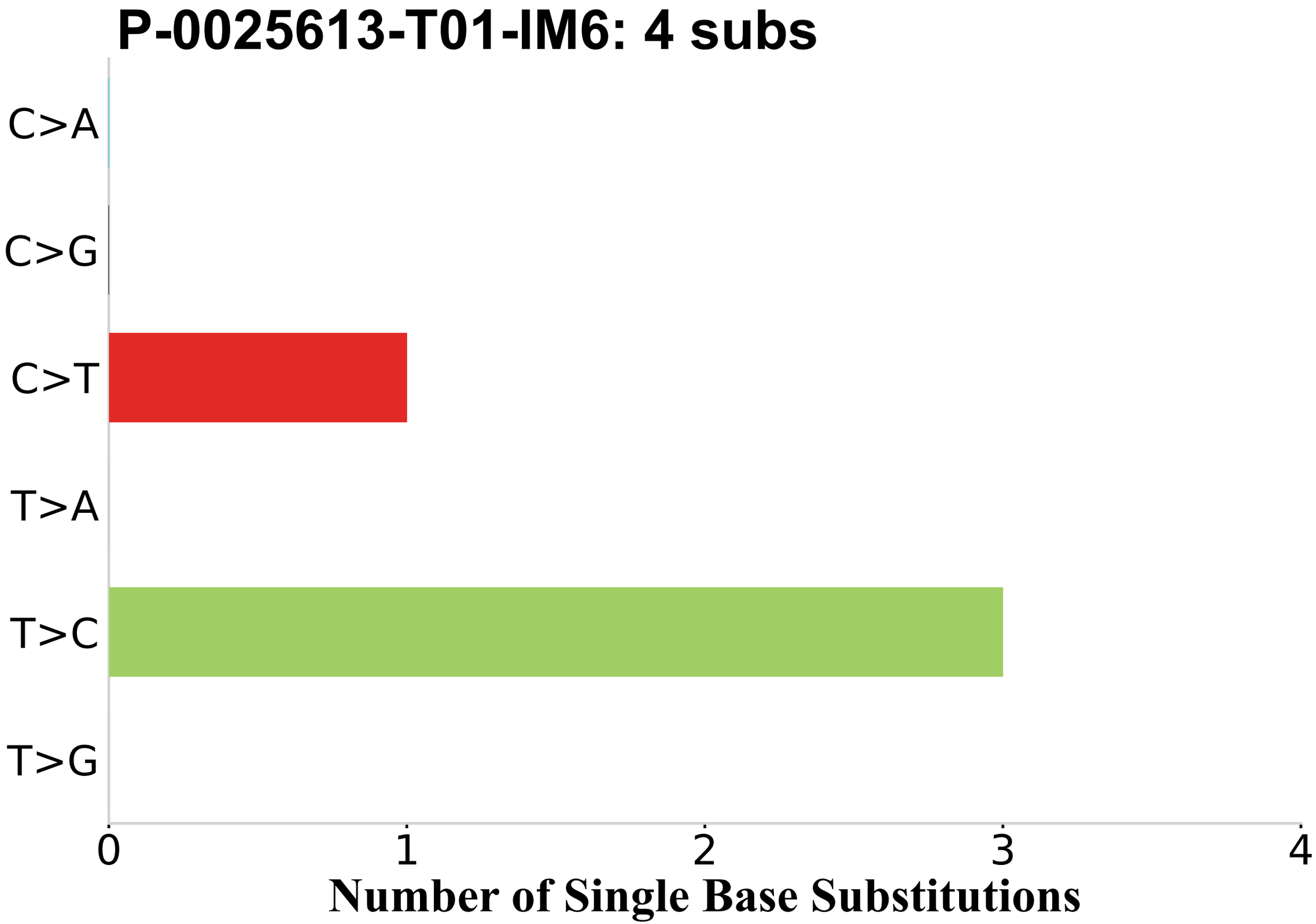
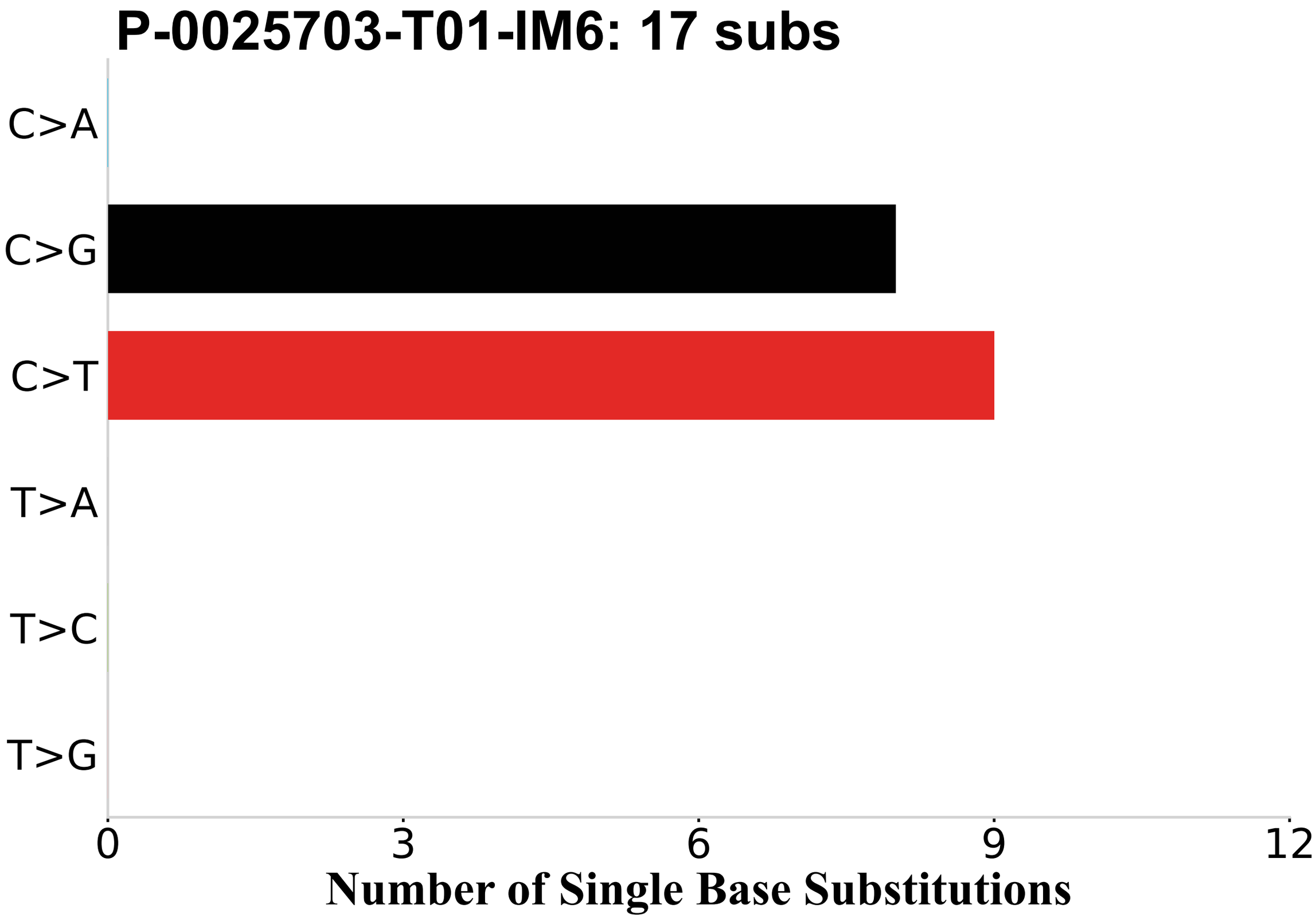
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

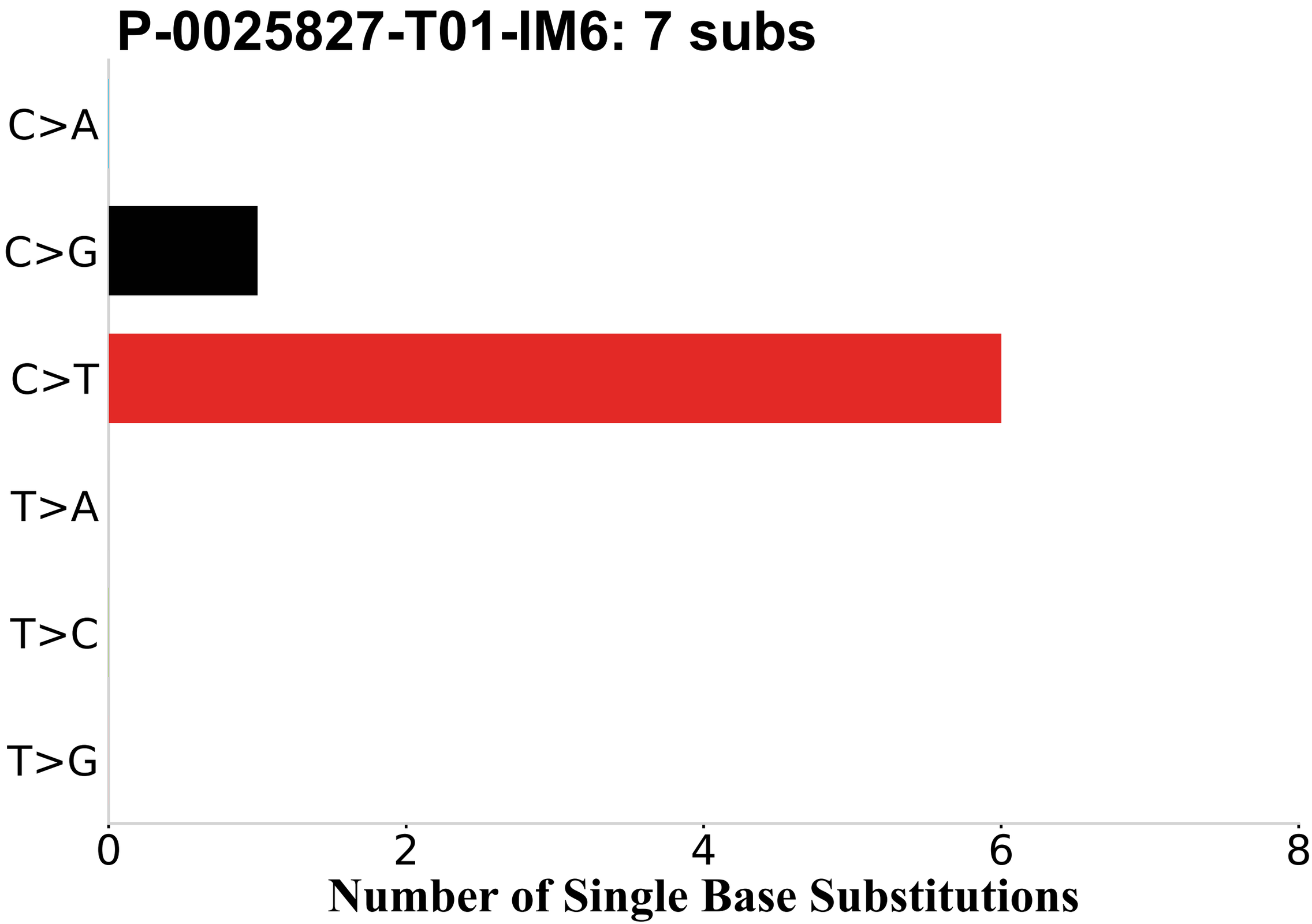

P-0025529-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

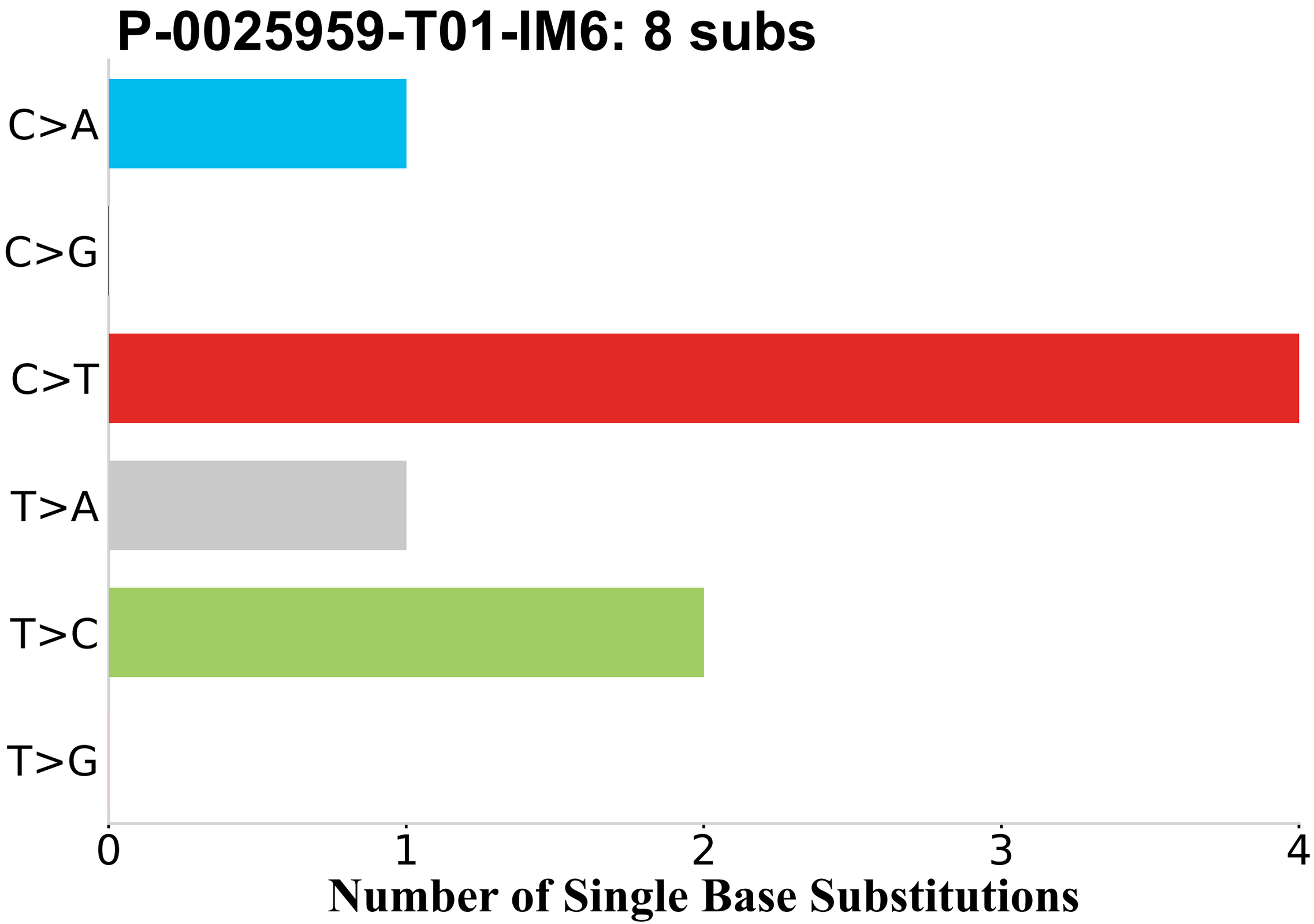

P-0025555-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

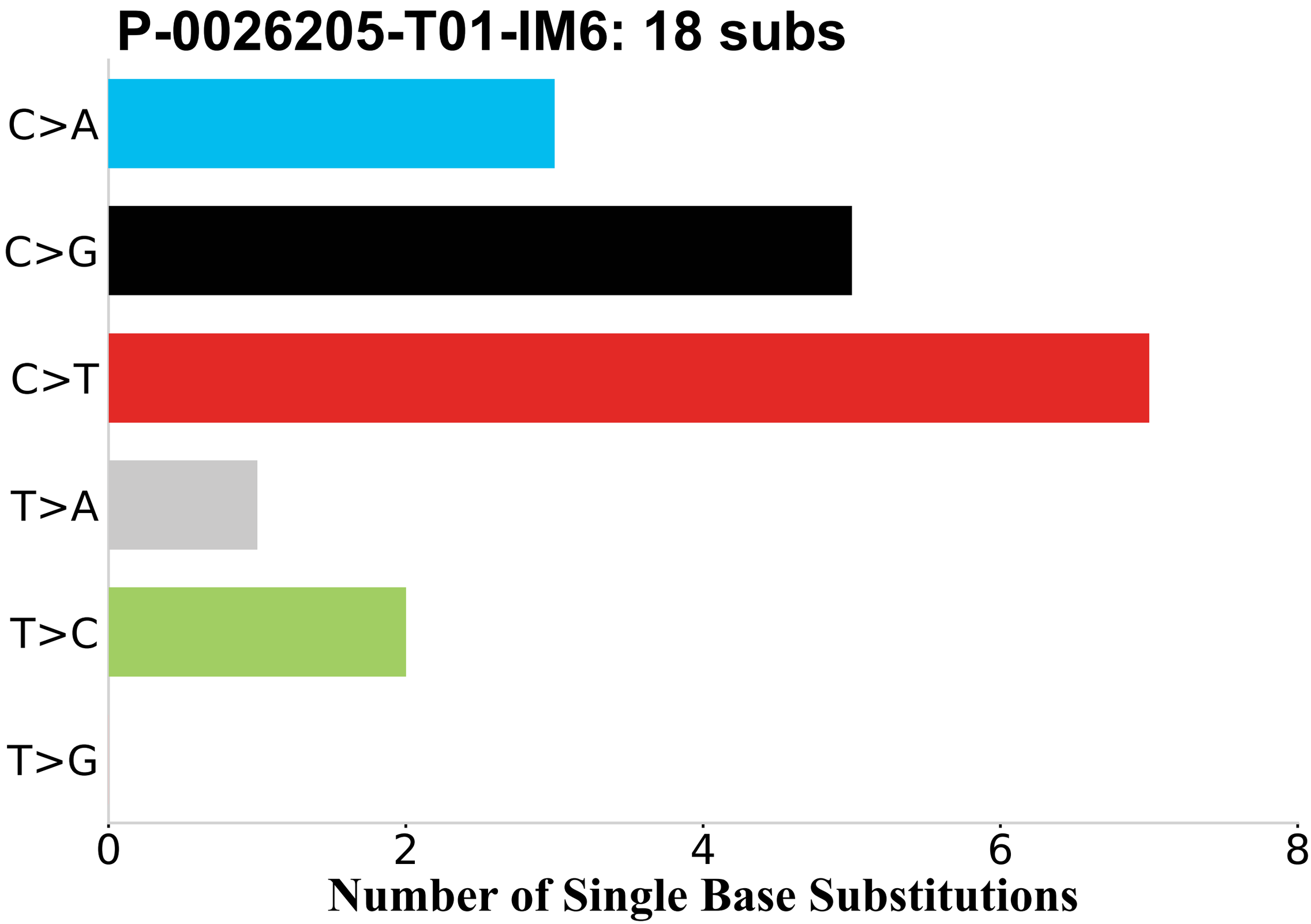

P-0025607-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0025613-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0025703-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0025827-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0025959-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0026205-T01-IM6: 18 subs
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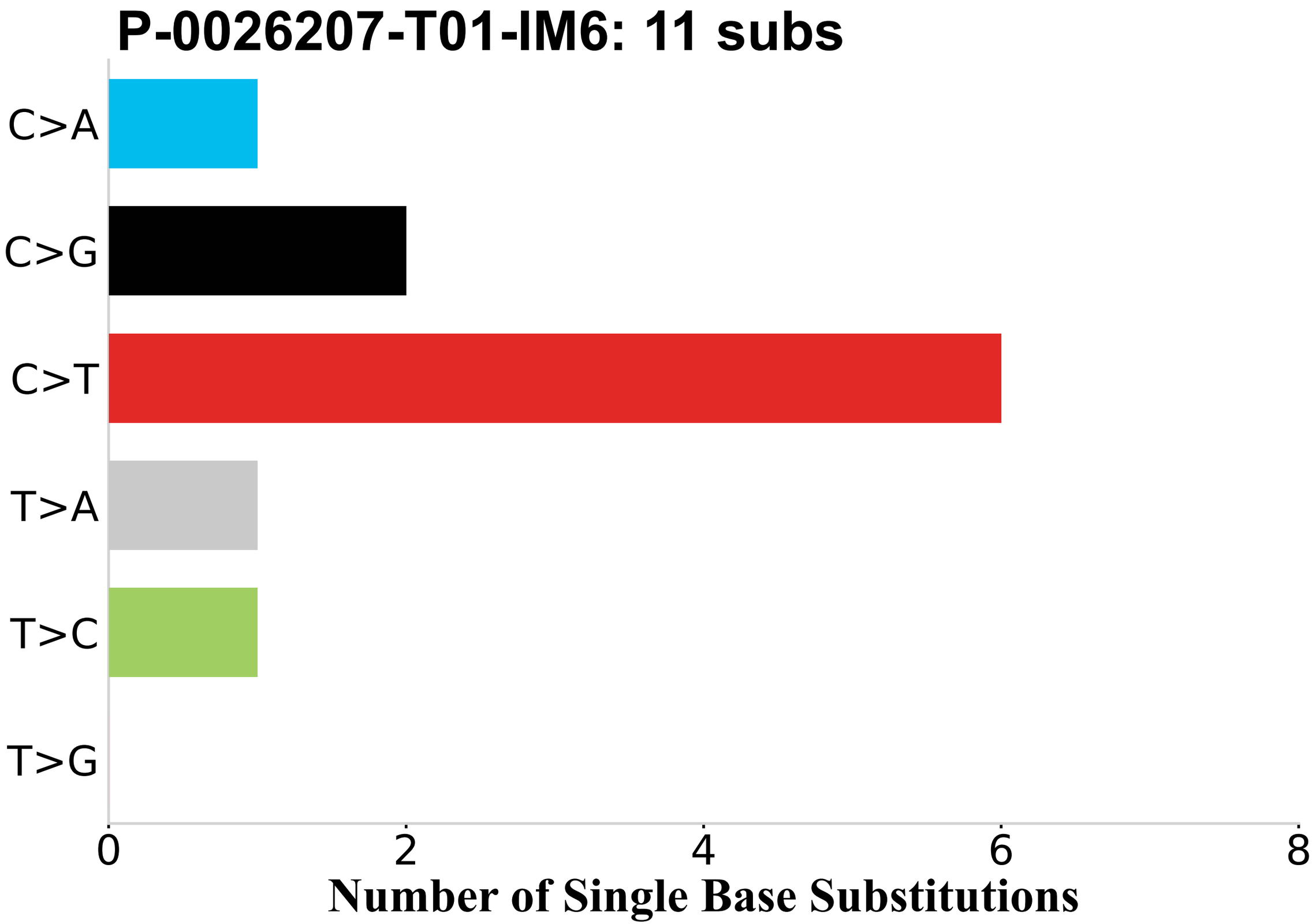
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0026207-T01-IM6: 11 subs
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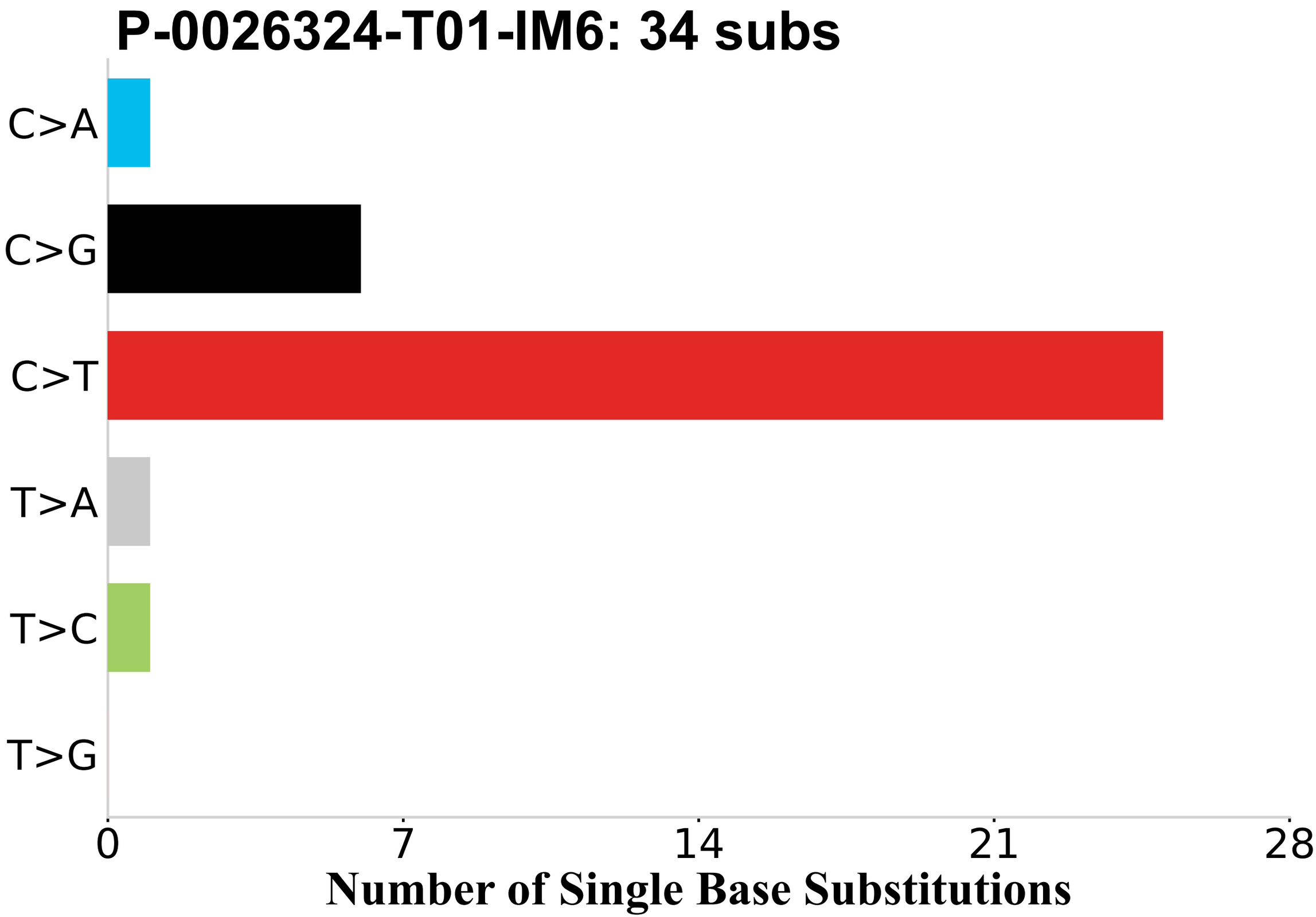
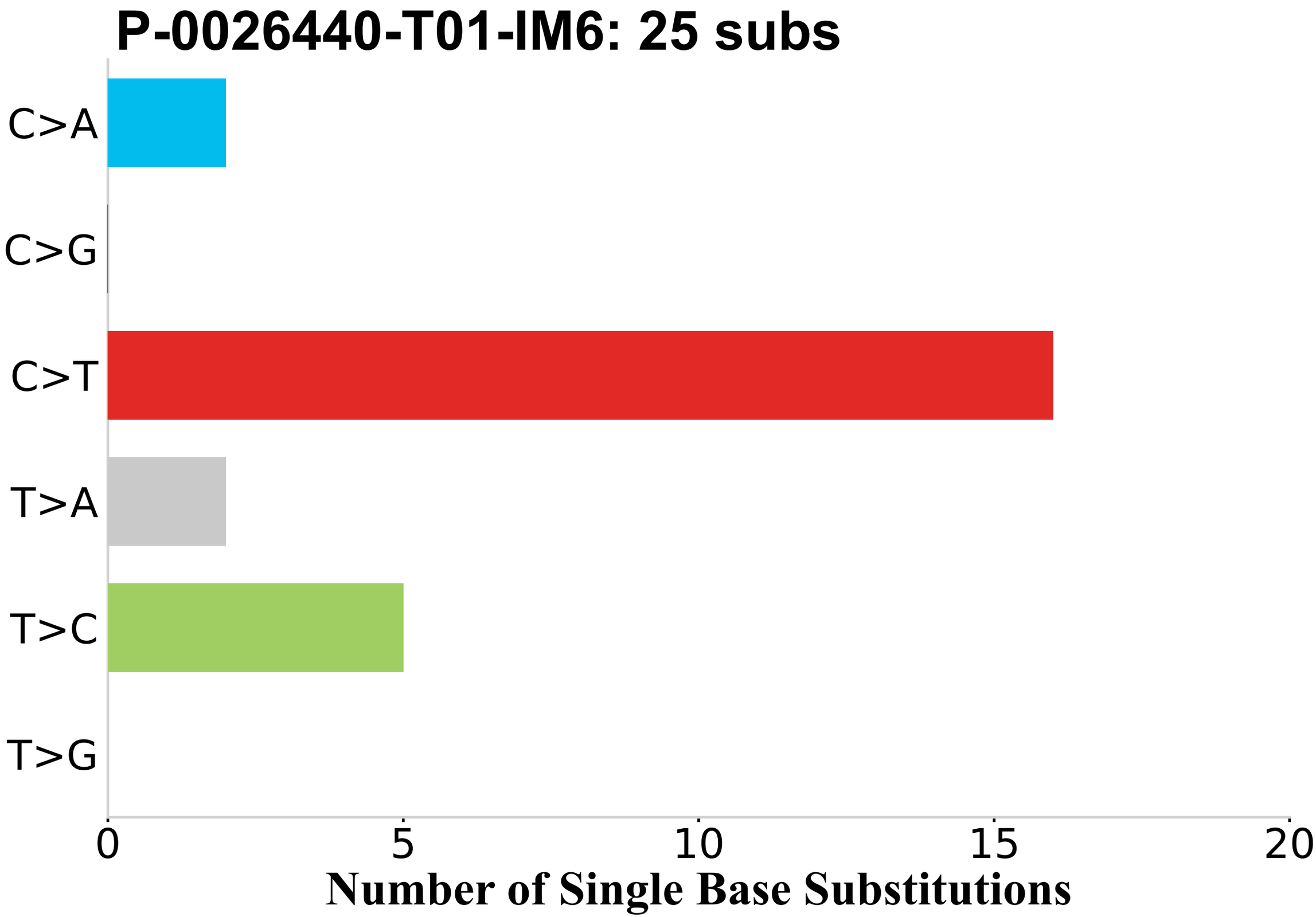
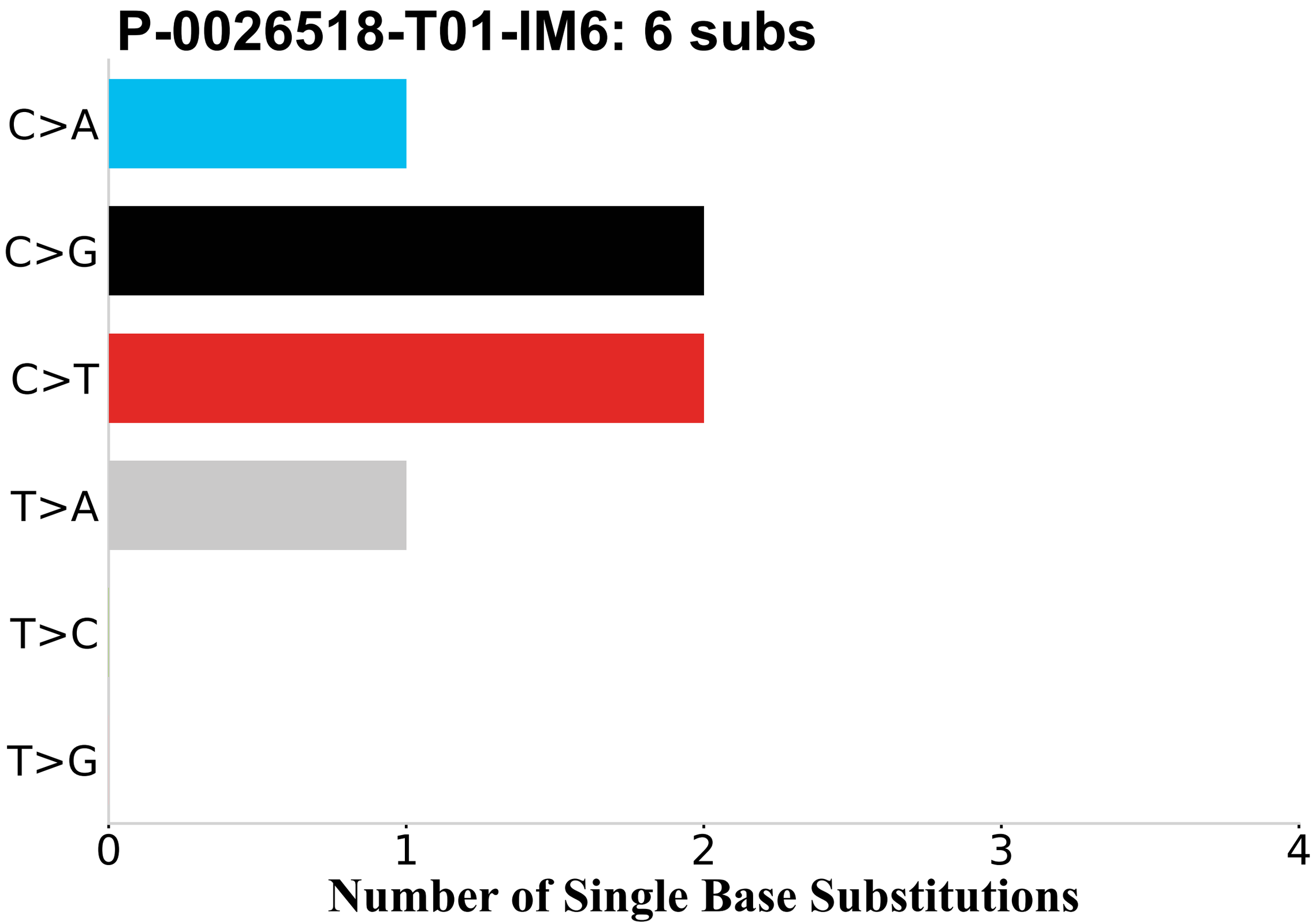
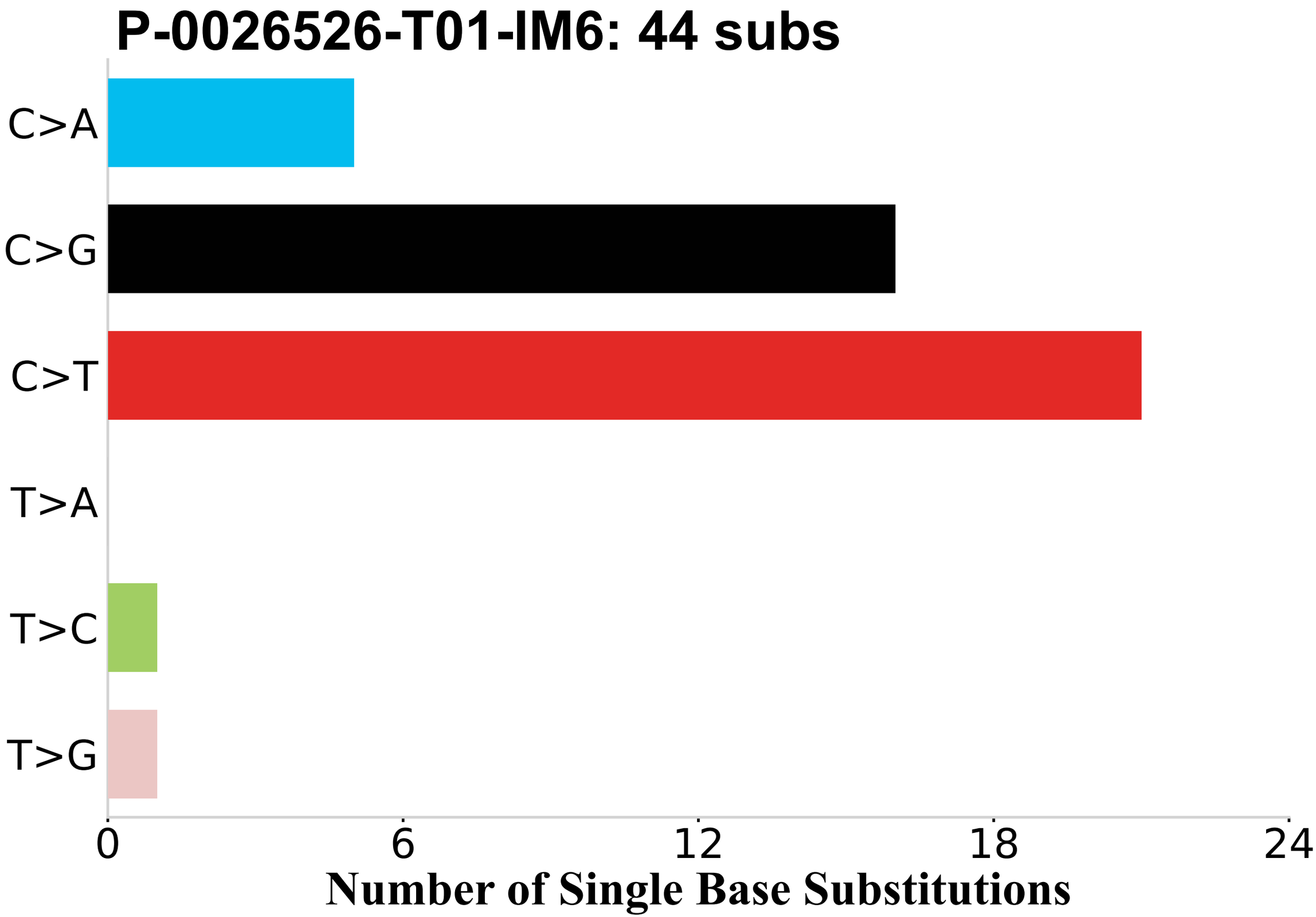
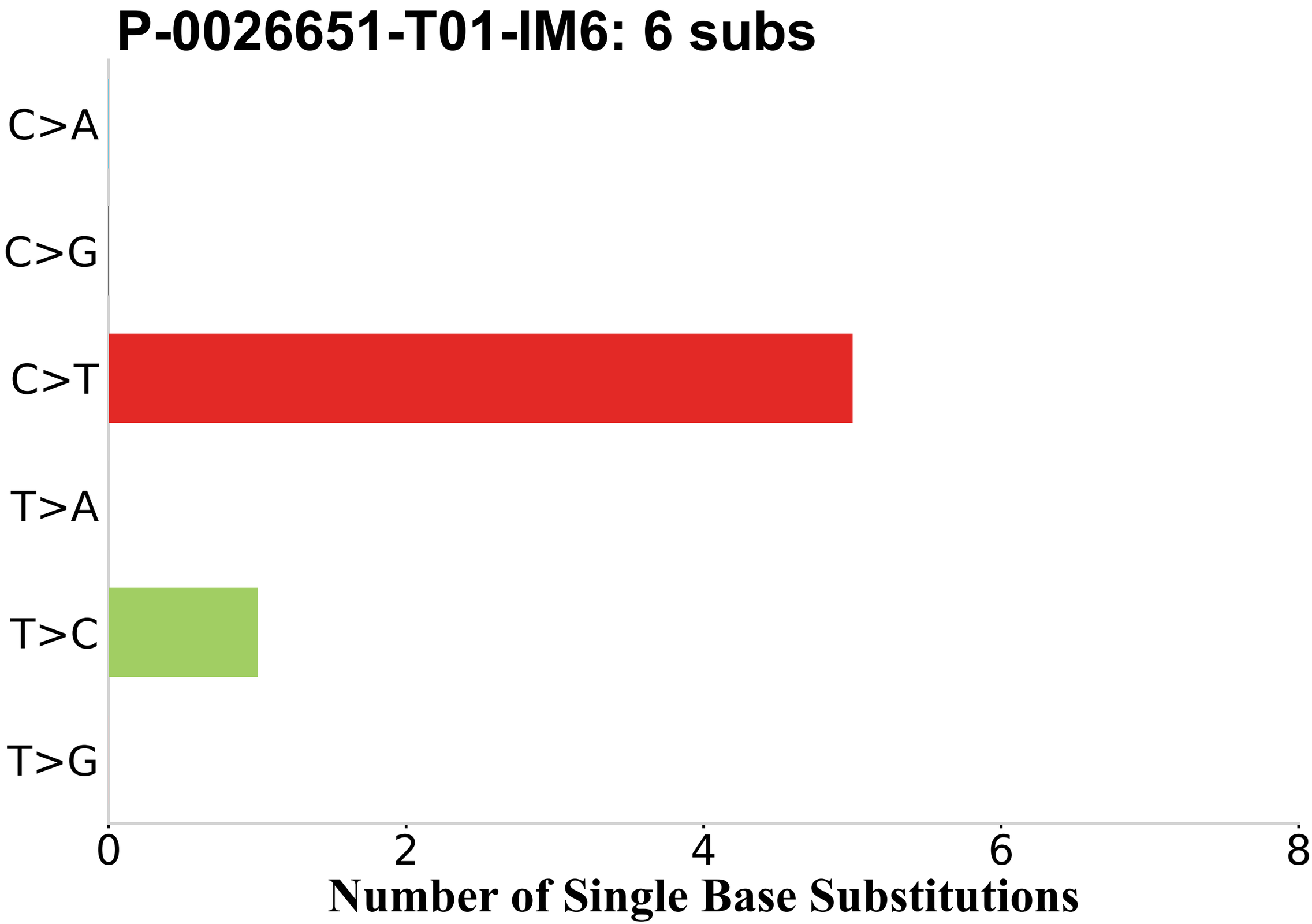
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

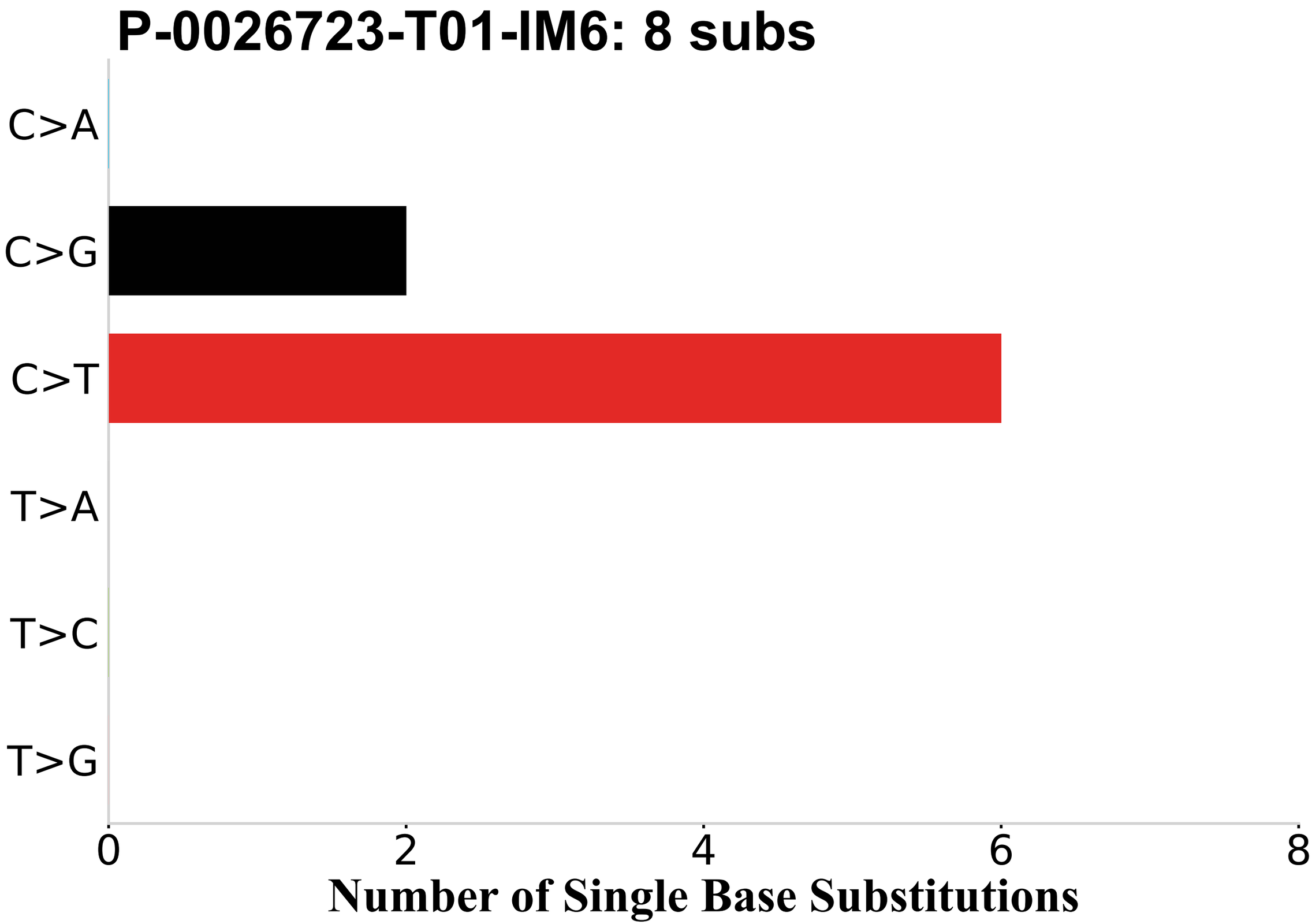

P-0026324-T01-IM6: 34 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions

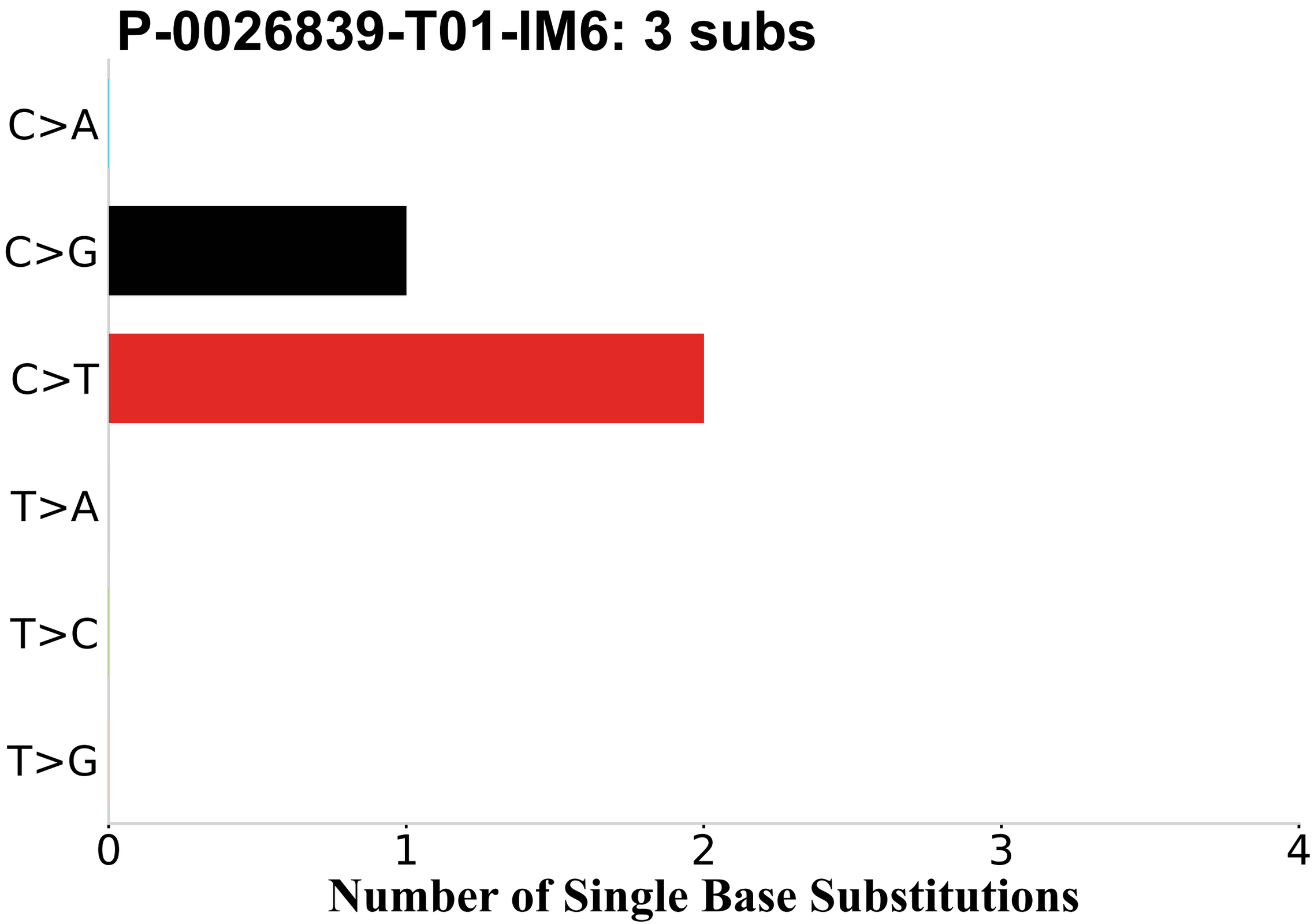

P-0026440-T01-IM6: 25 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

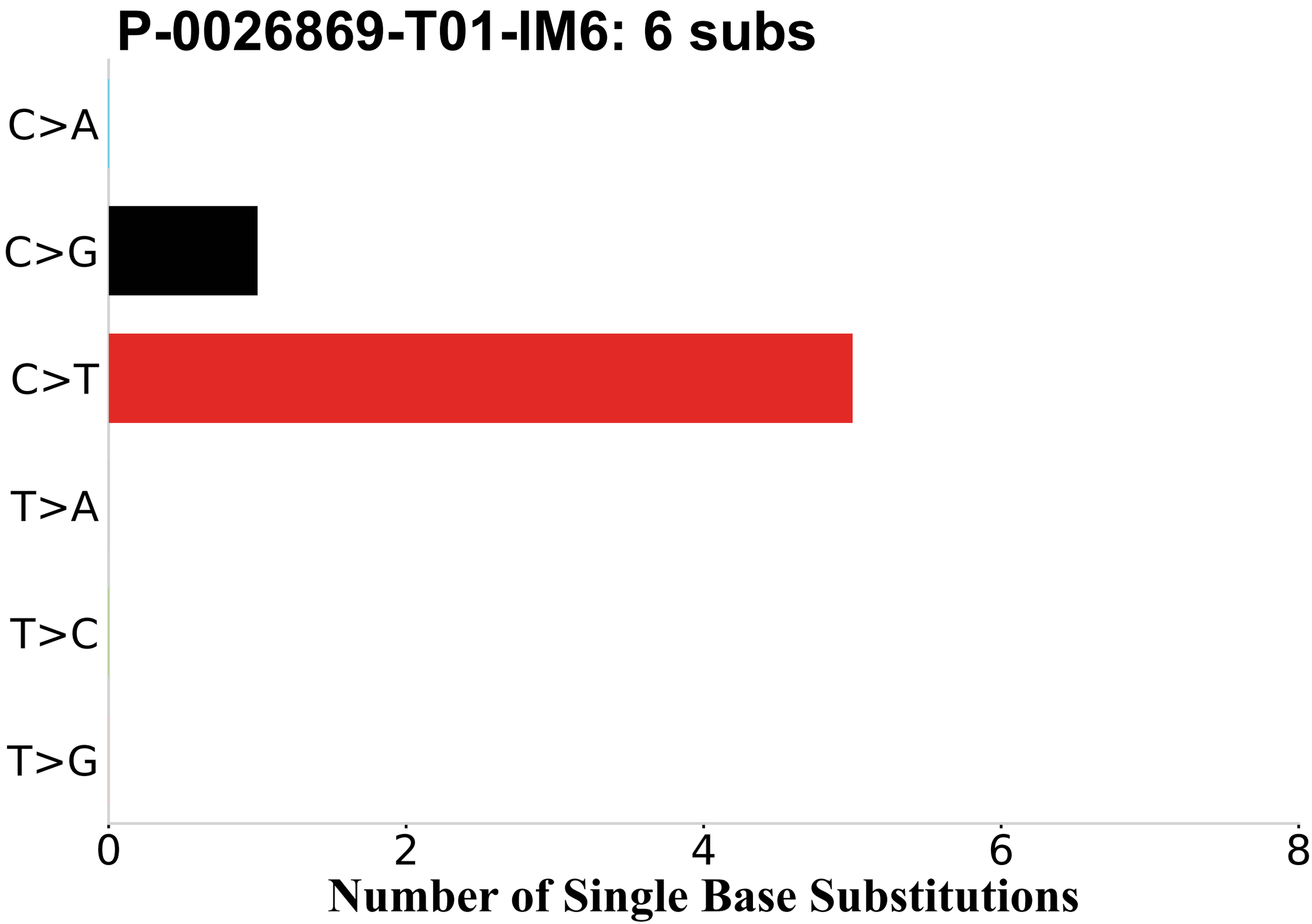

P-0026518-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

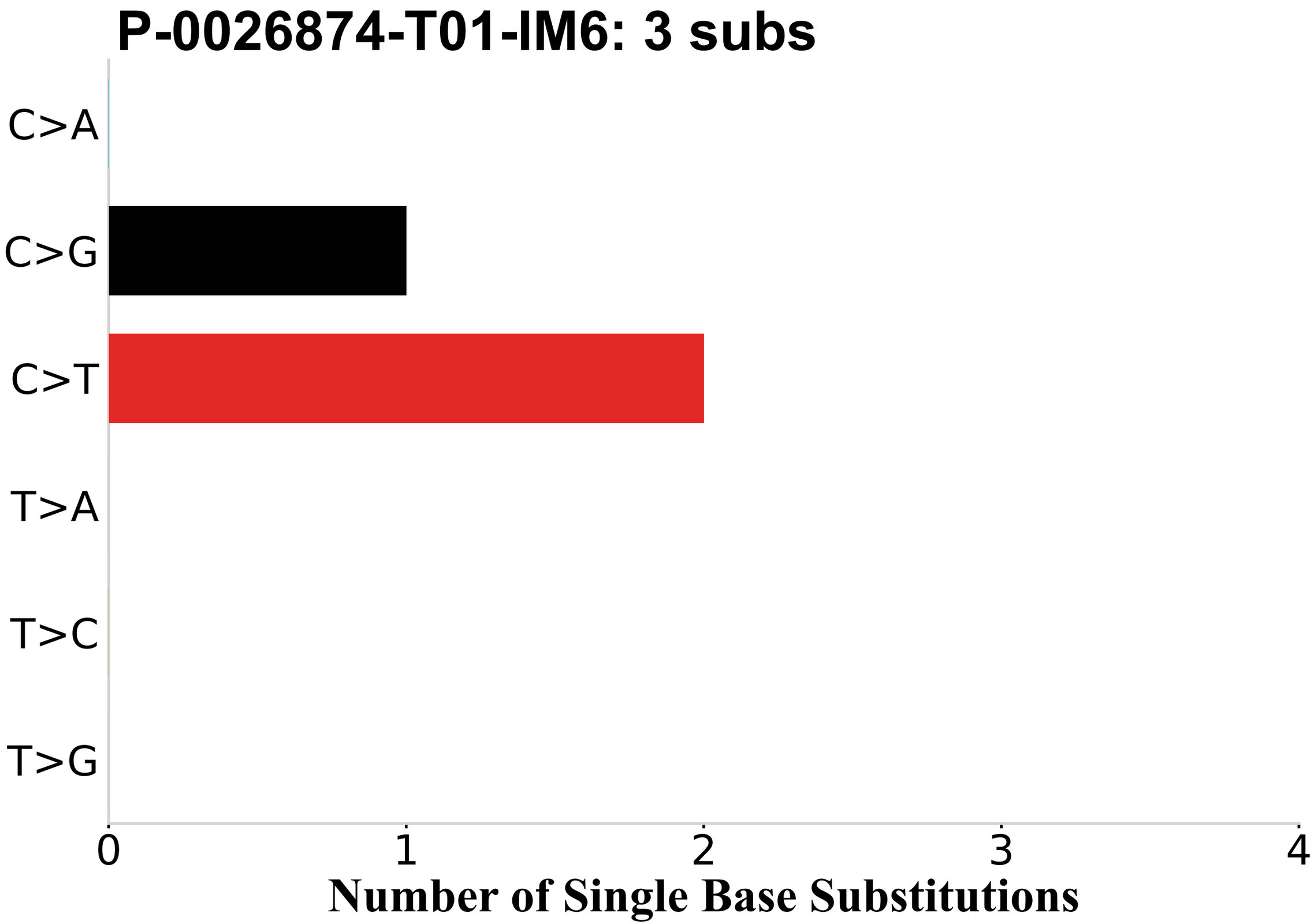

P-0026526-T01-IM6: 44 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions

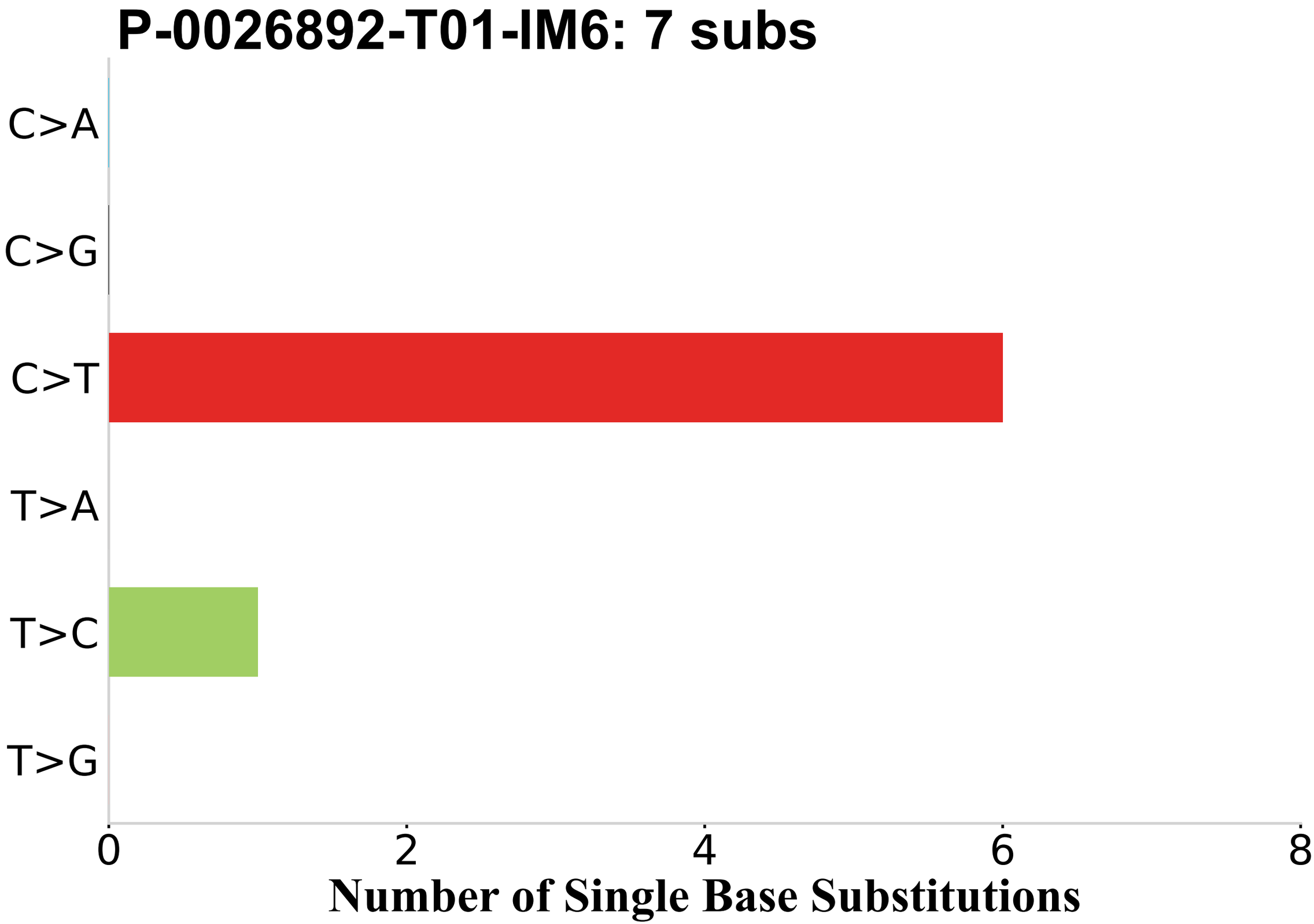

P-0026651-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

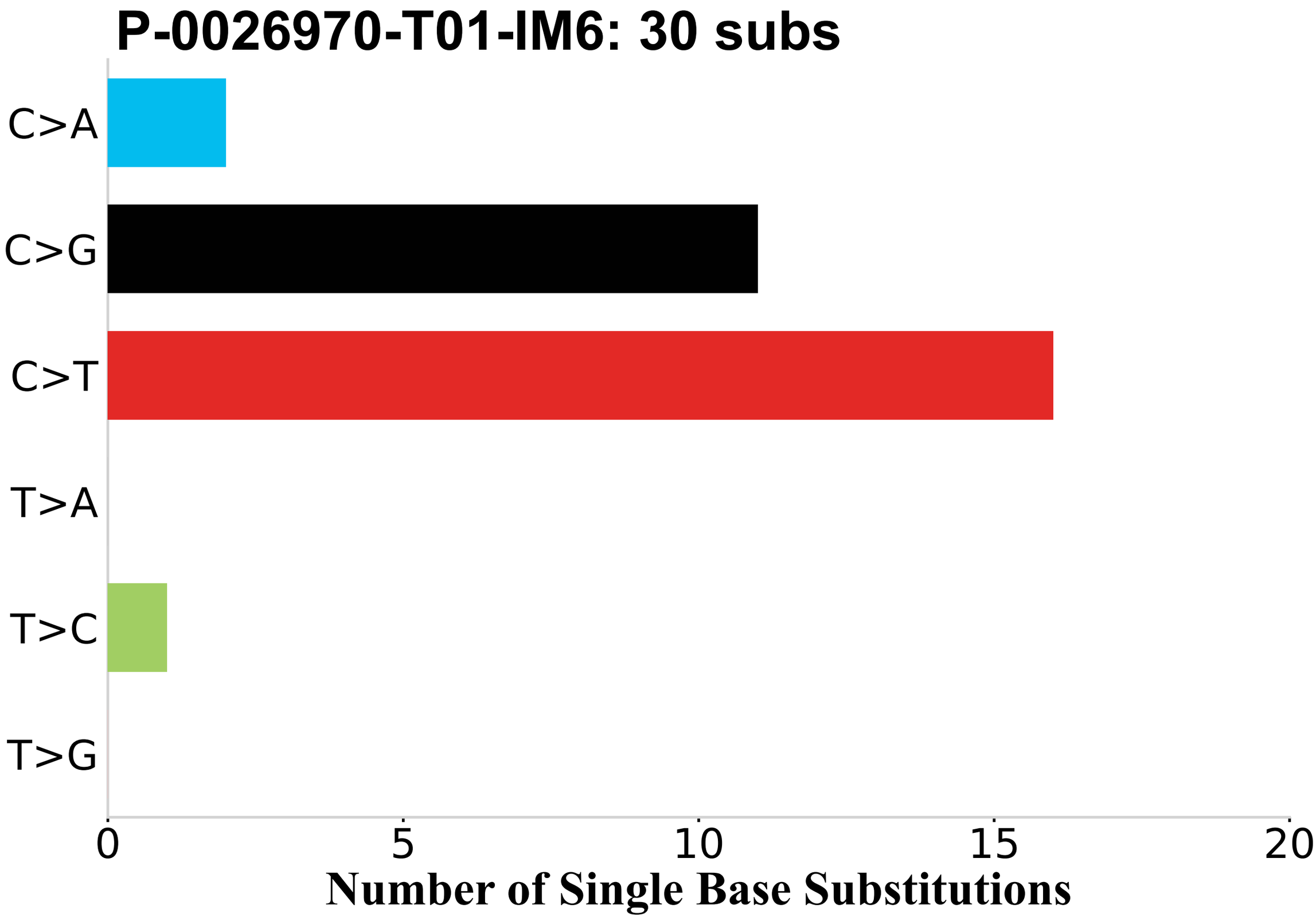

P-0026723-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

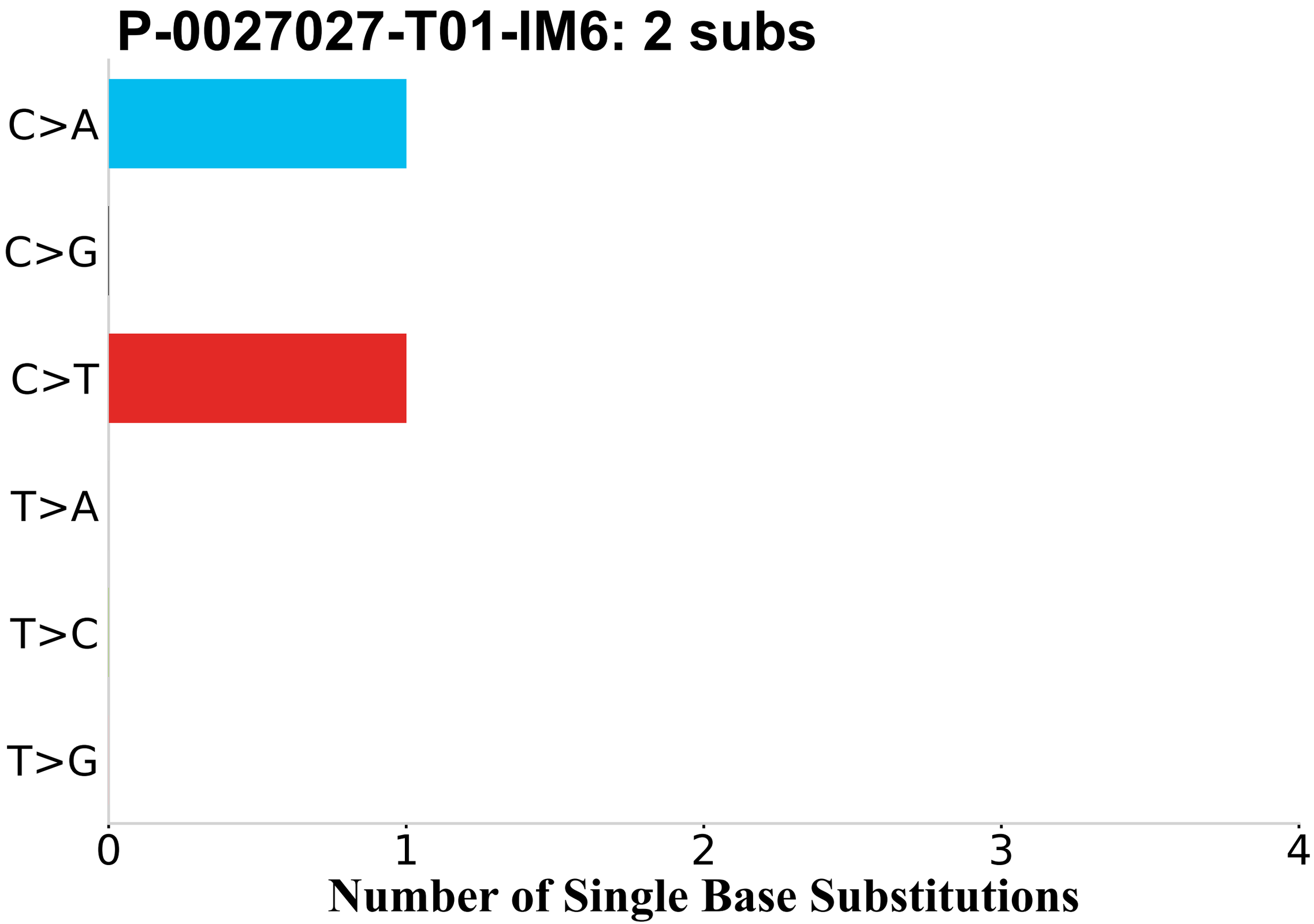

P-0026839-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

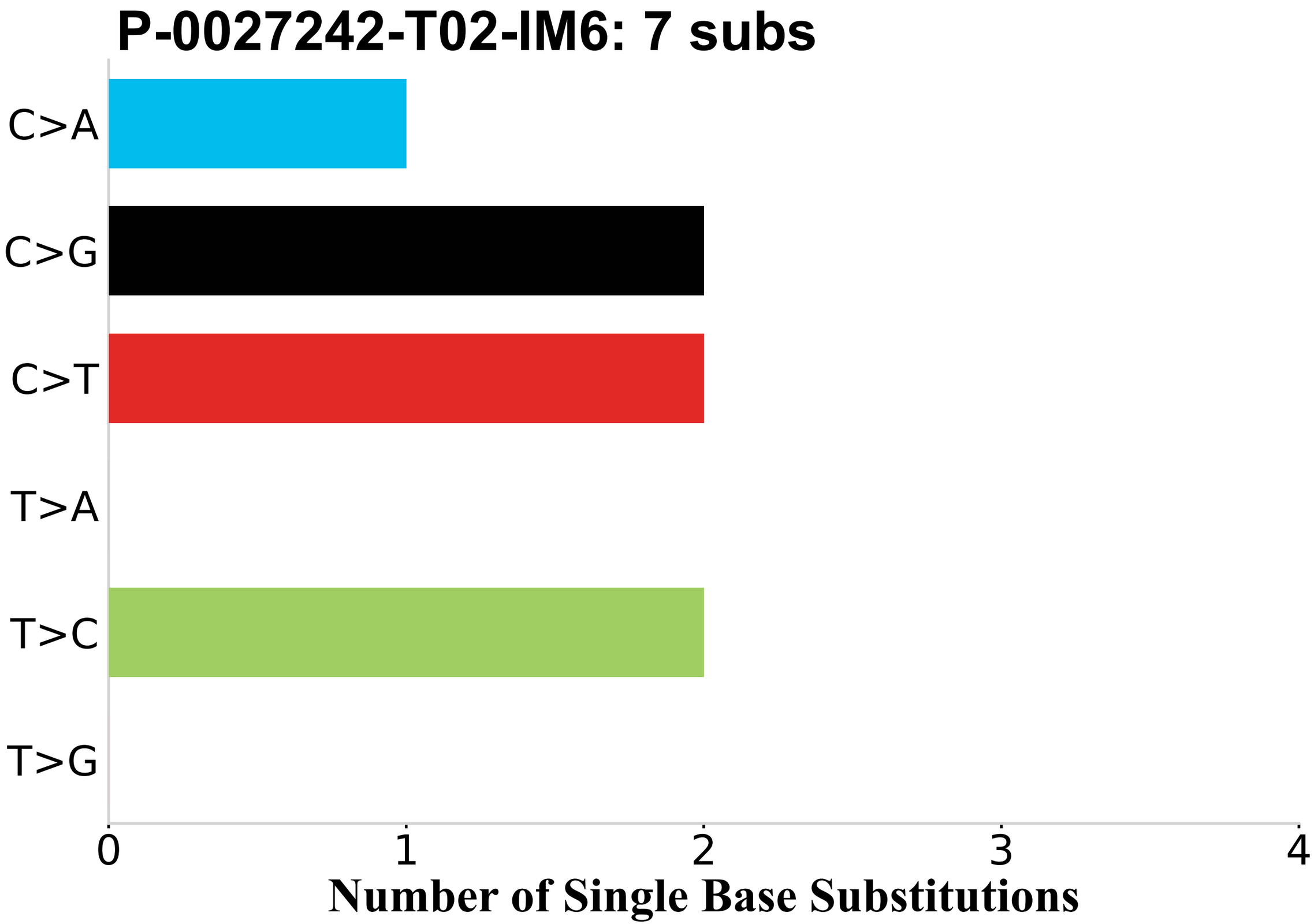

P-0026869-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

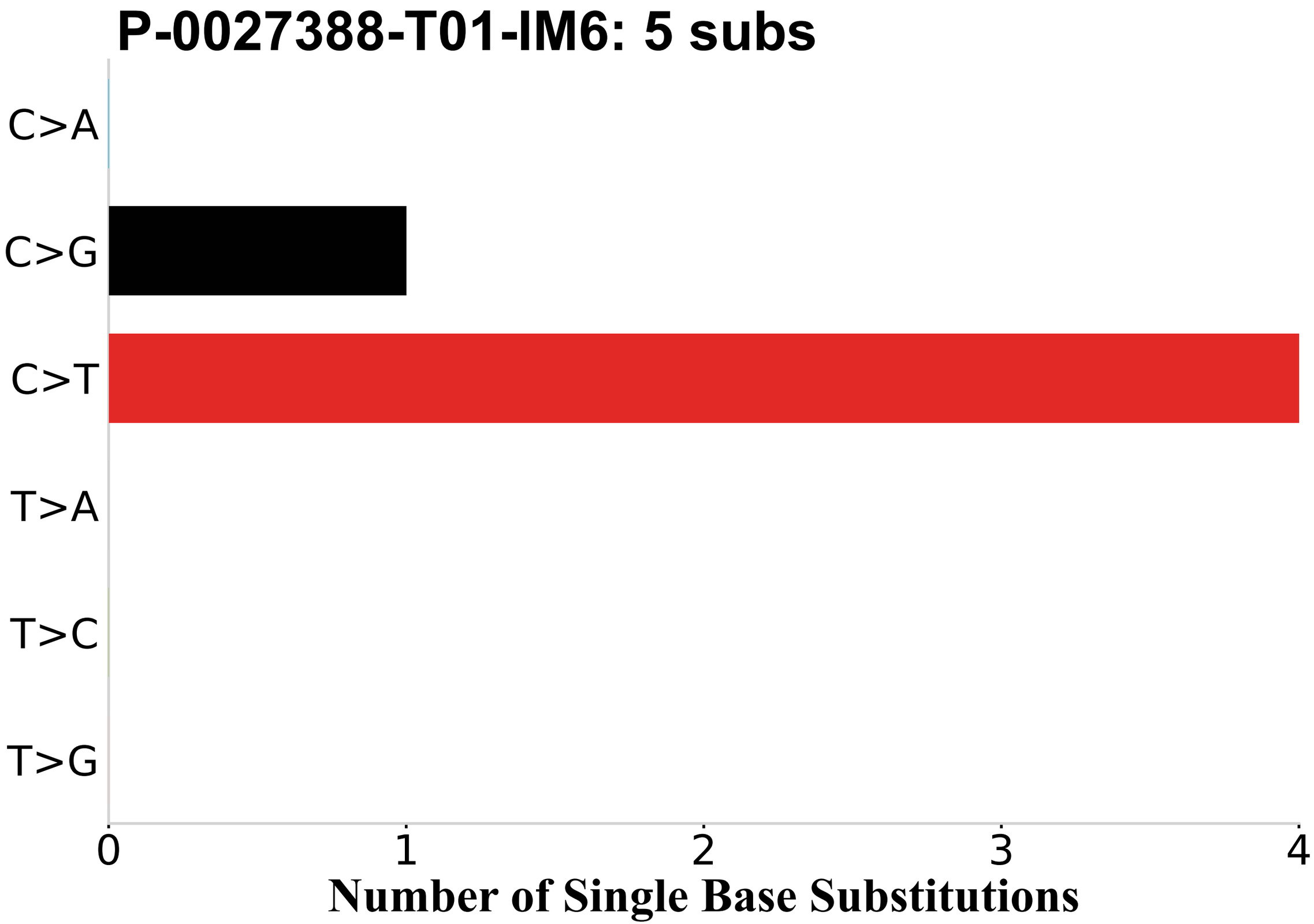

P-0026874-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

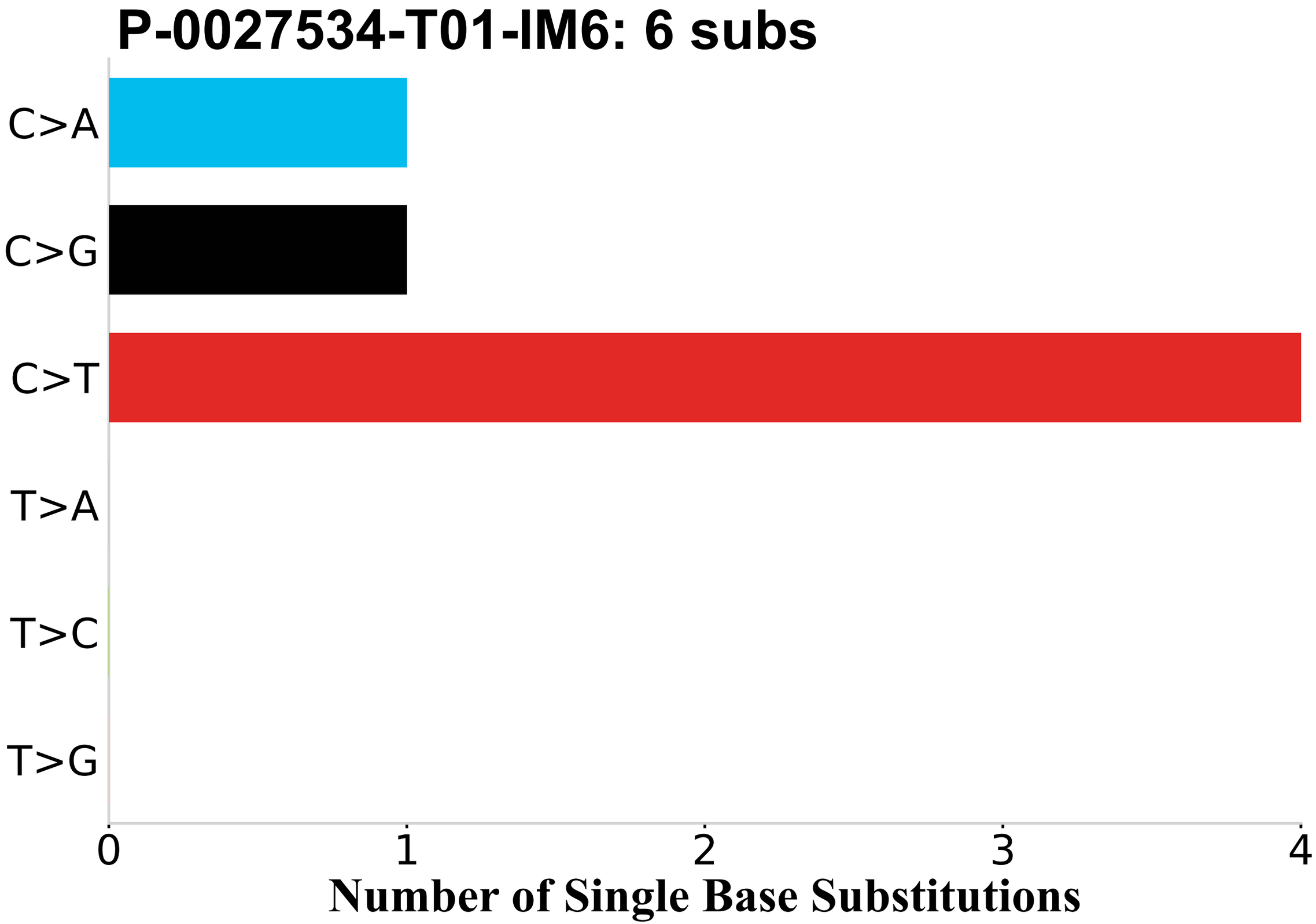

P-0026892-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

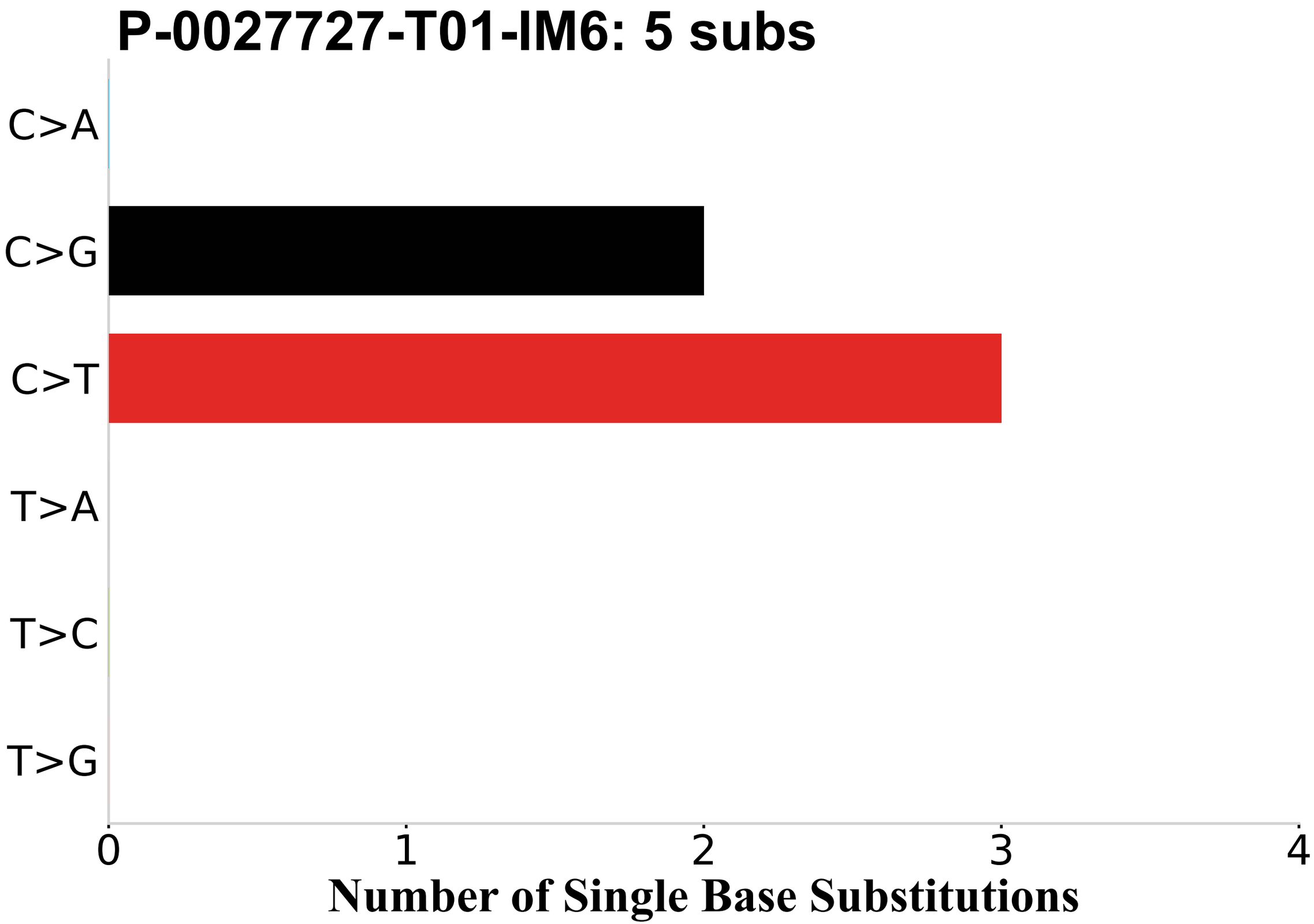

P-0026970-T01-IM6: 30 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

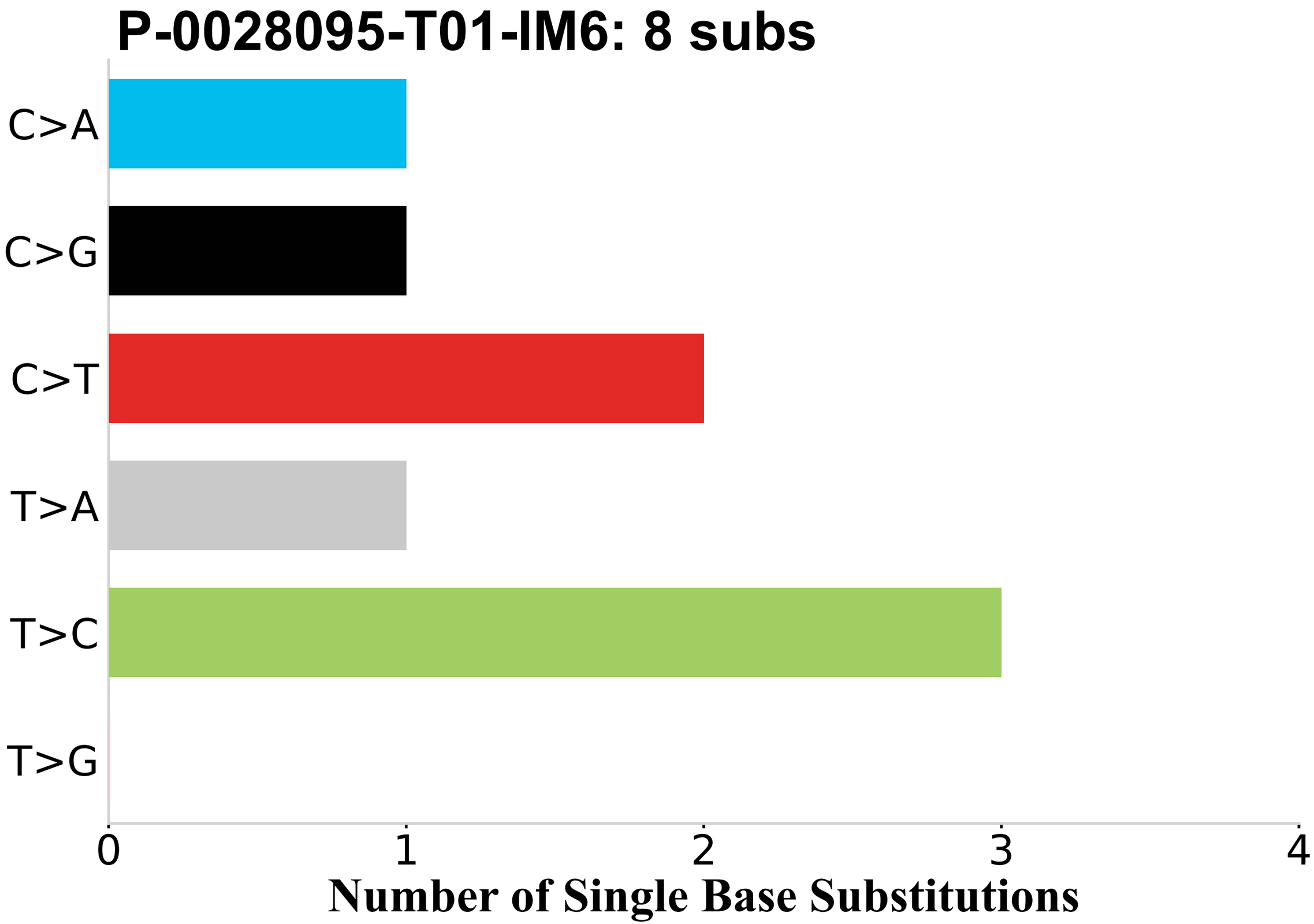

P-0027027-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

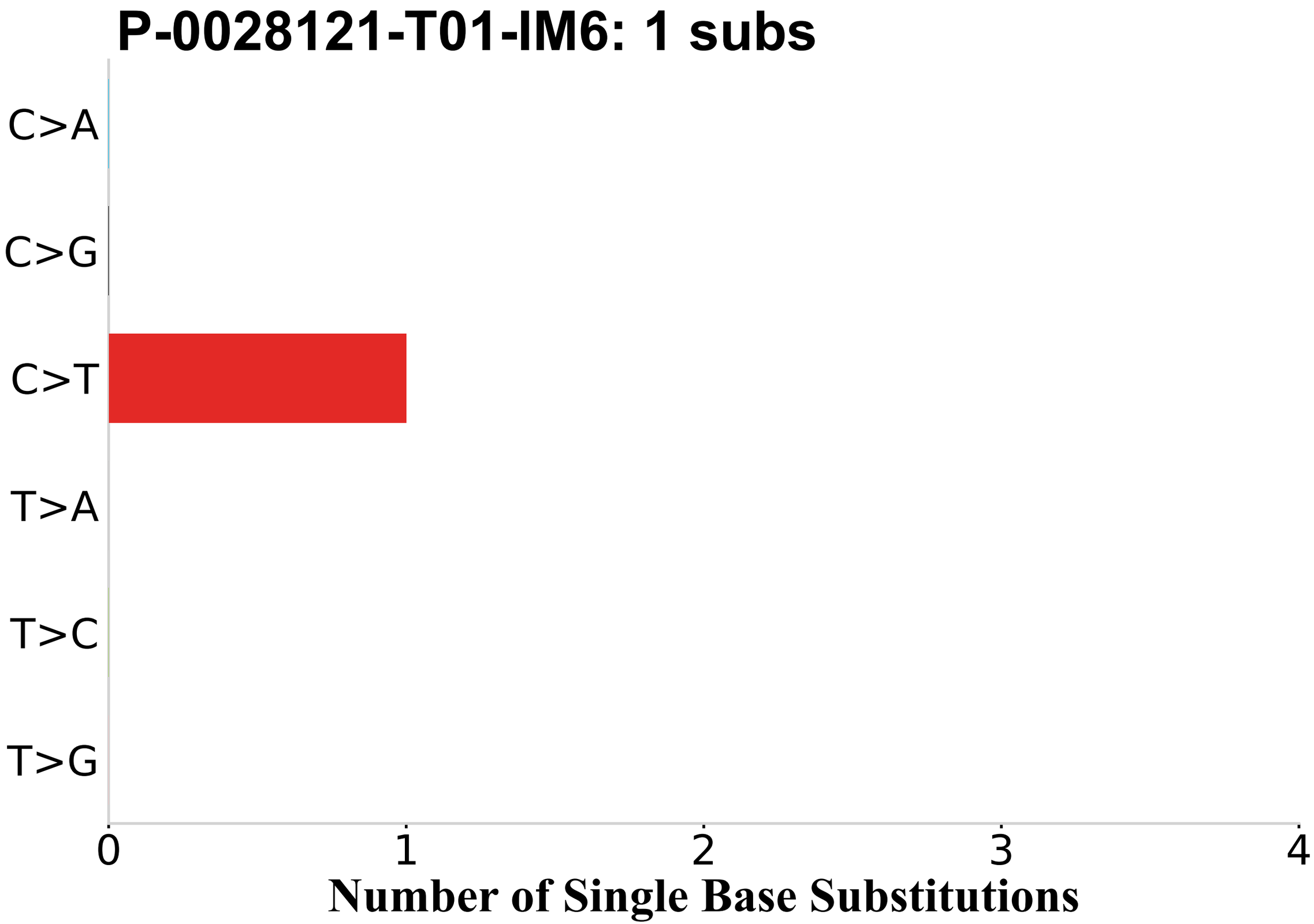

P-0027242-T02-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

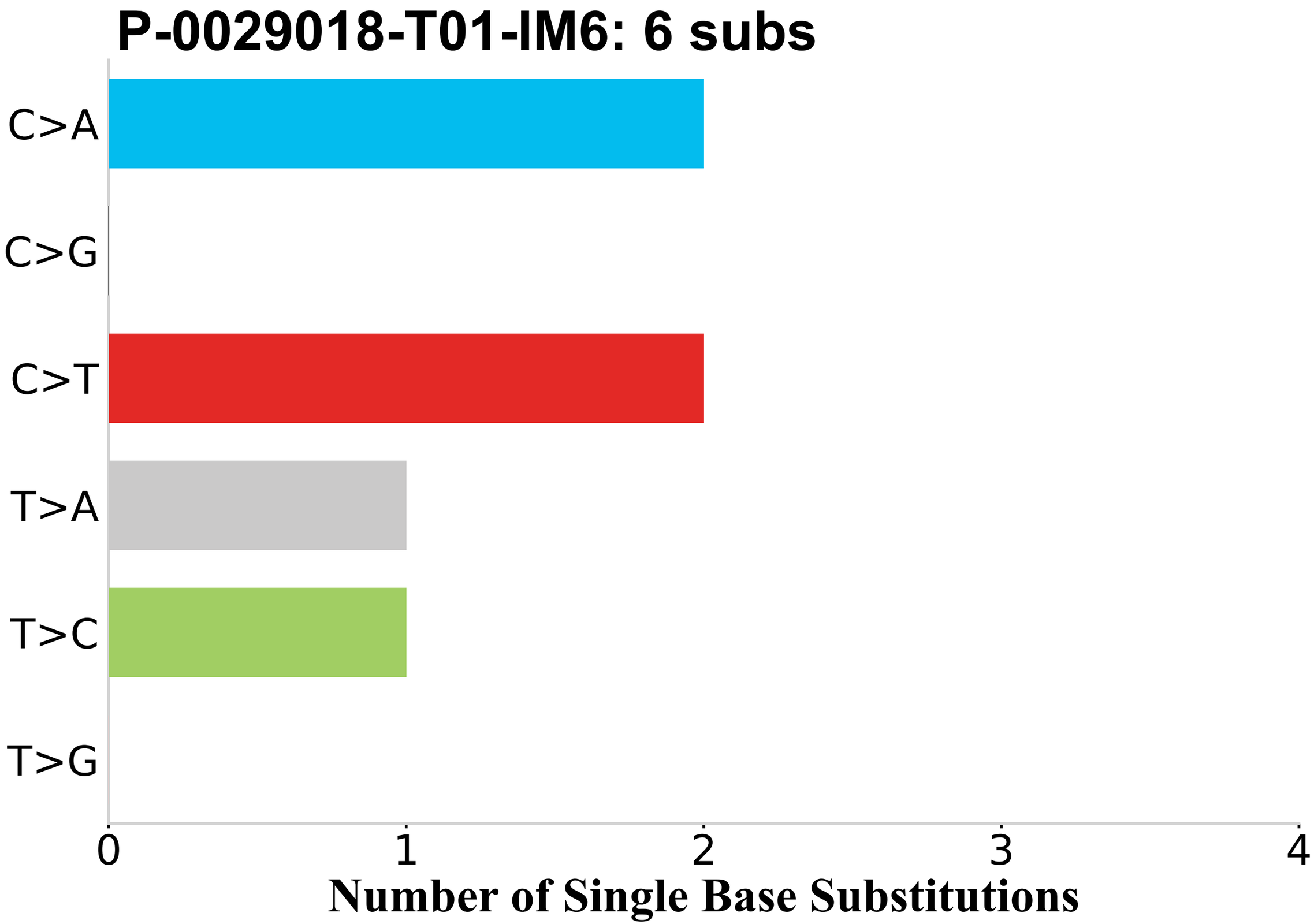

P-0027388-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

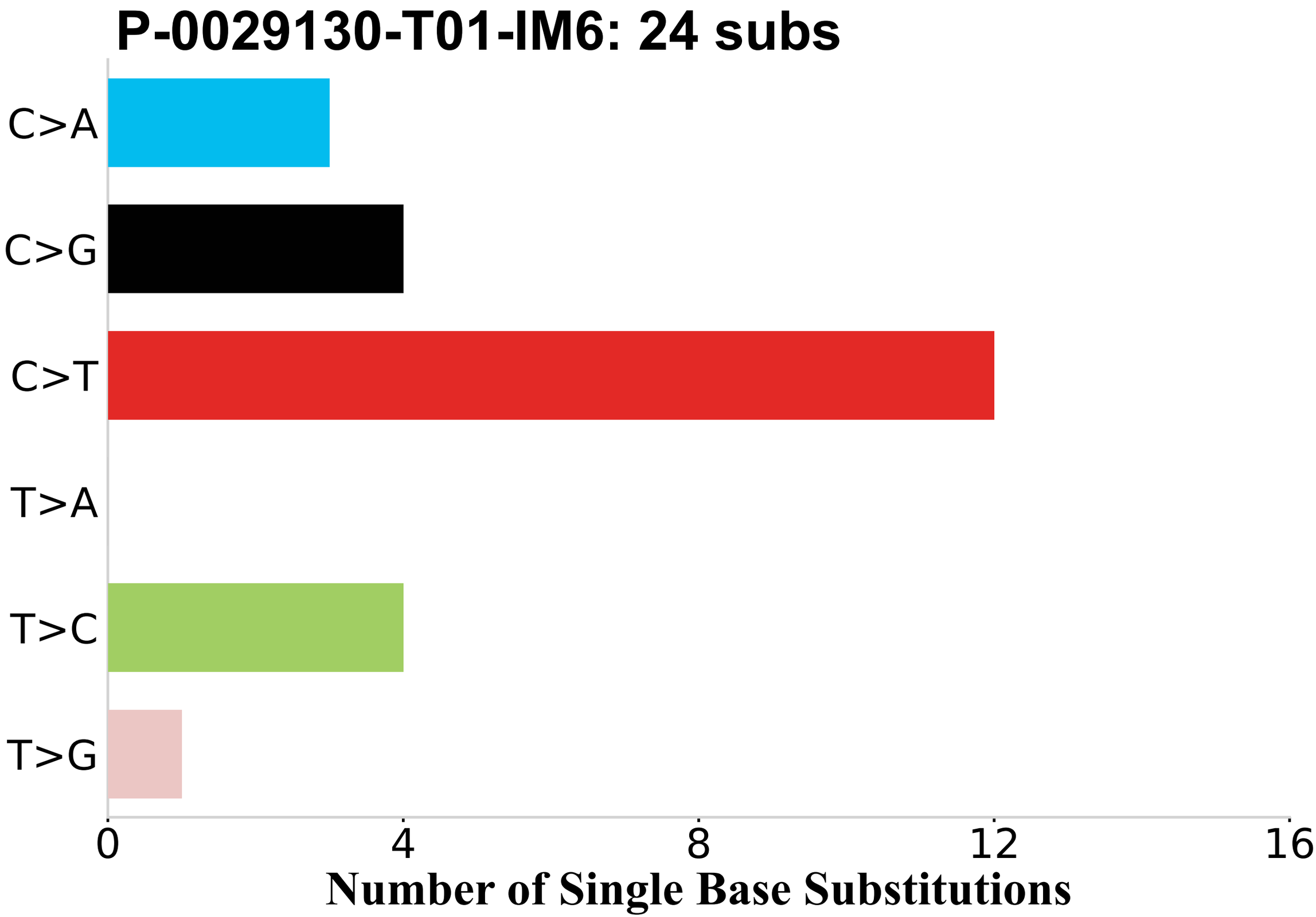

P-0027534-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

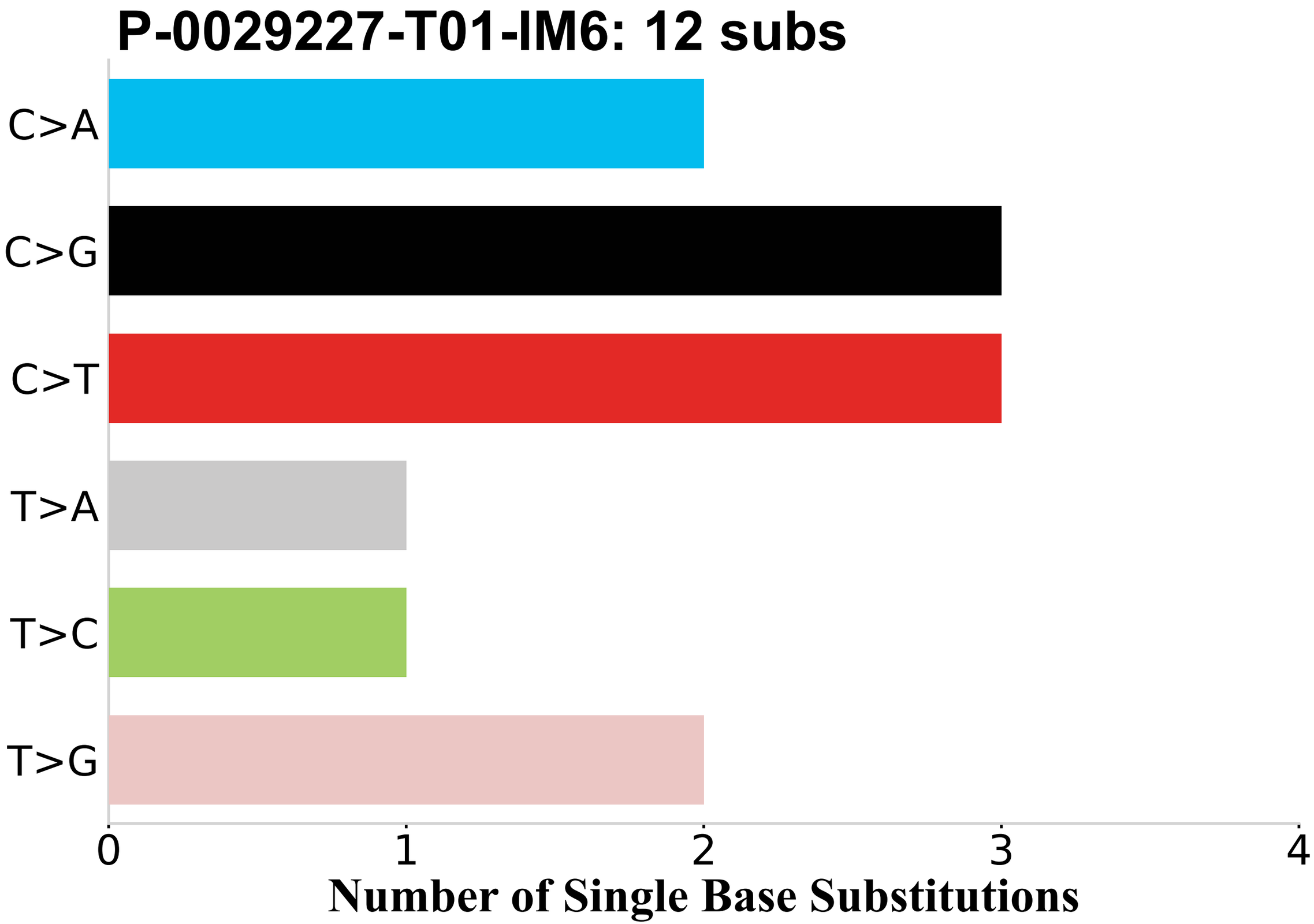

P-0027727-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

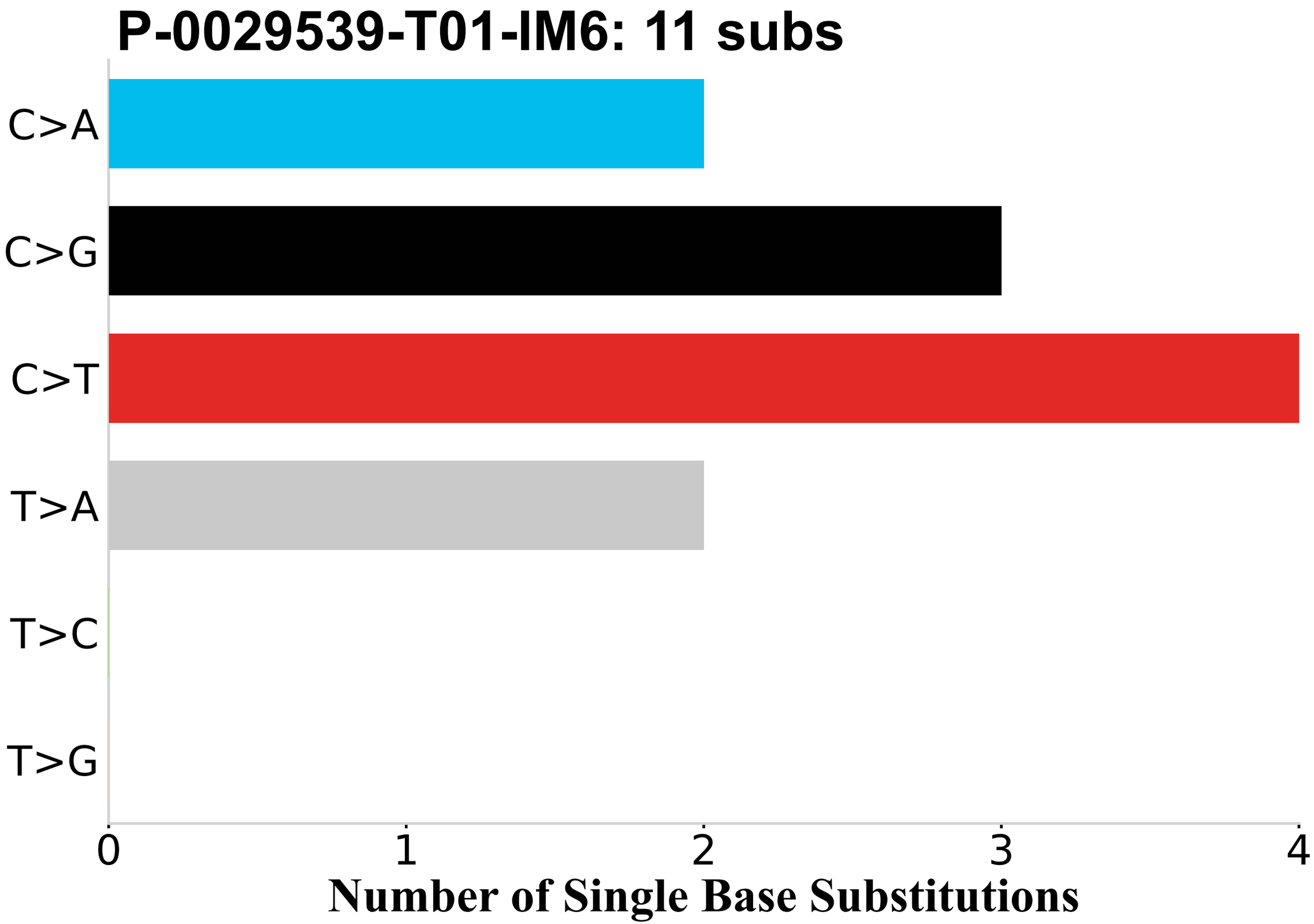

P-0028095-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

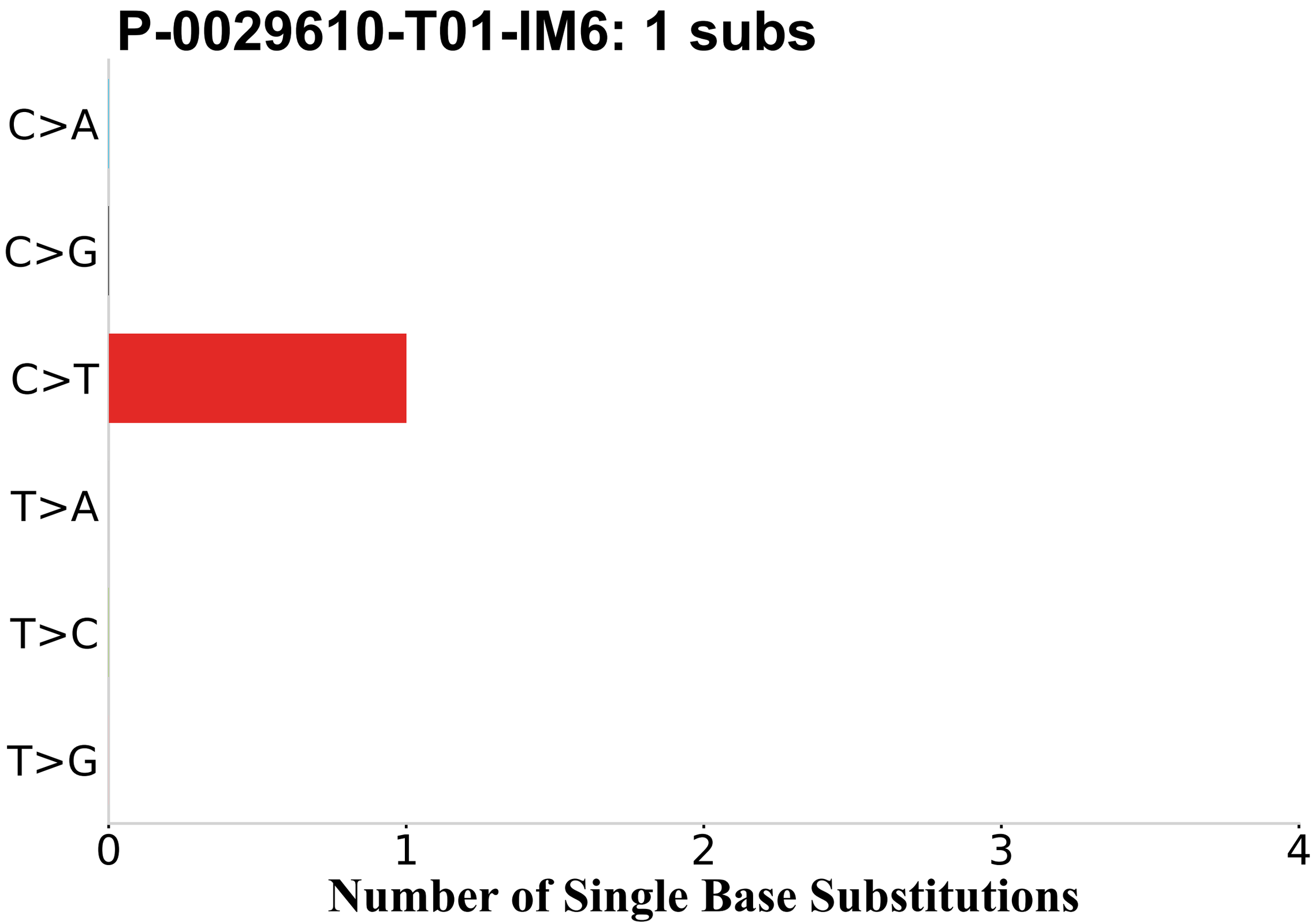

P-0028121-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

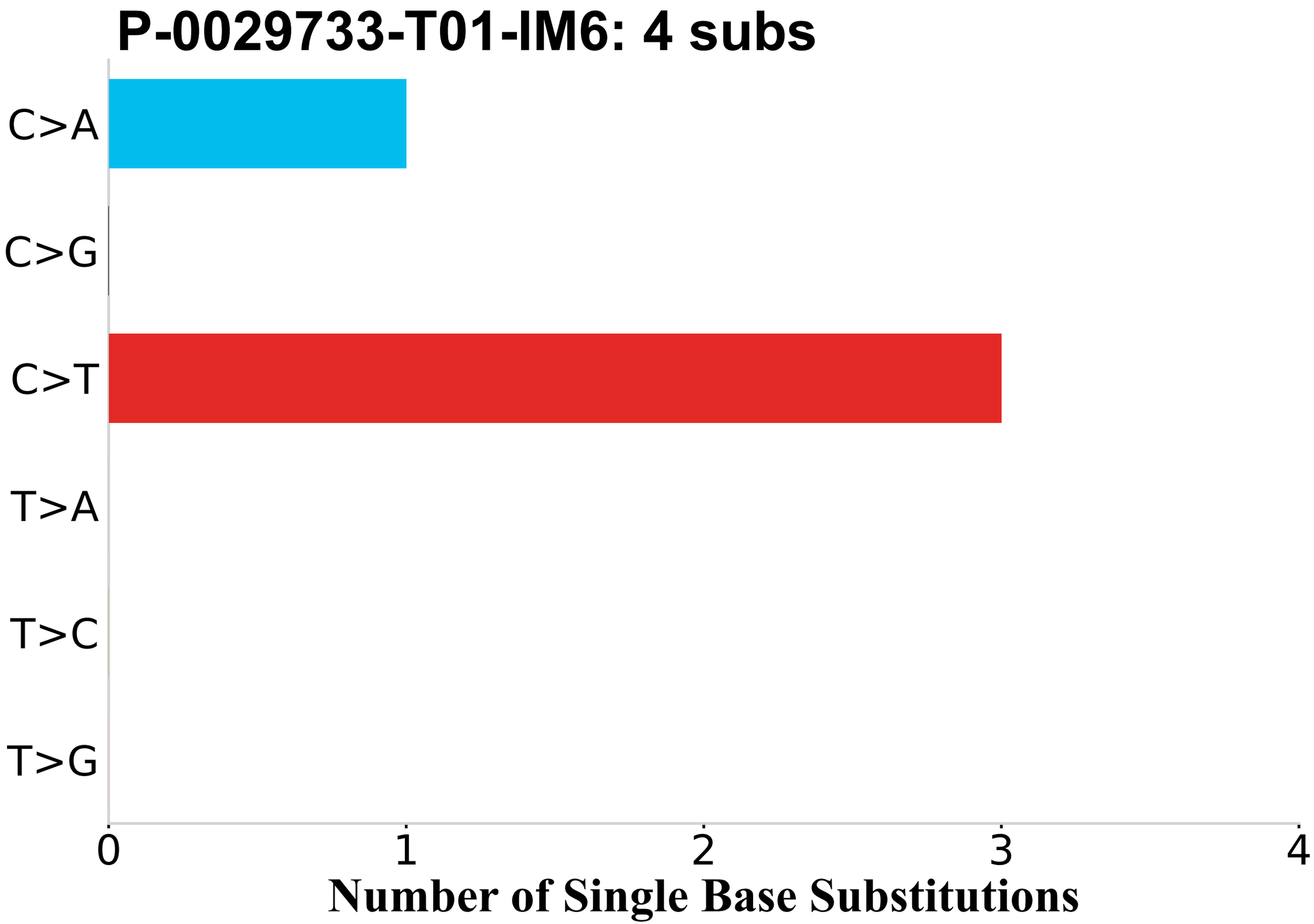

P-0029018-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0029130-T01-IM6: 24 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

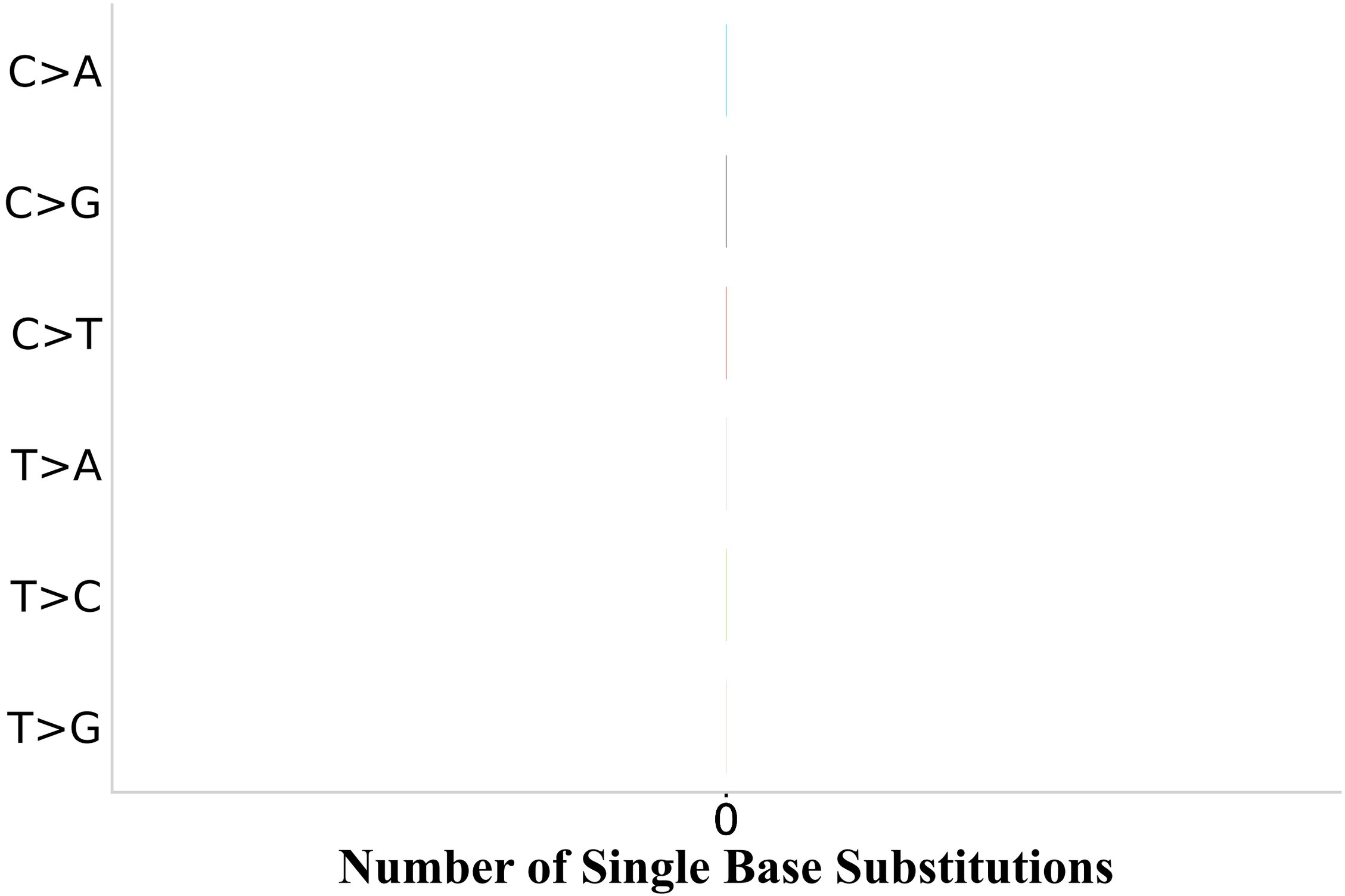

P-0029227-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

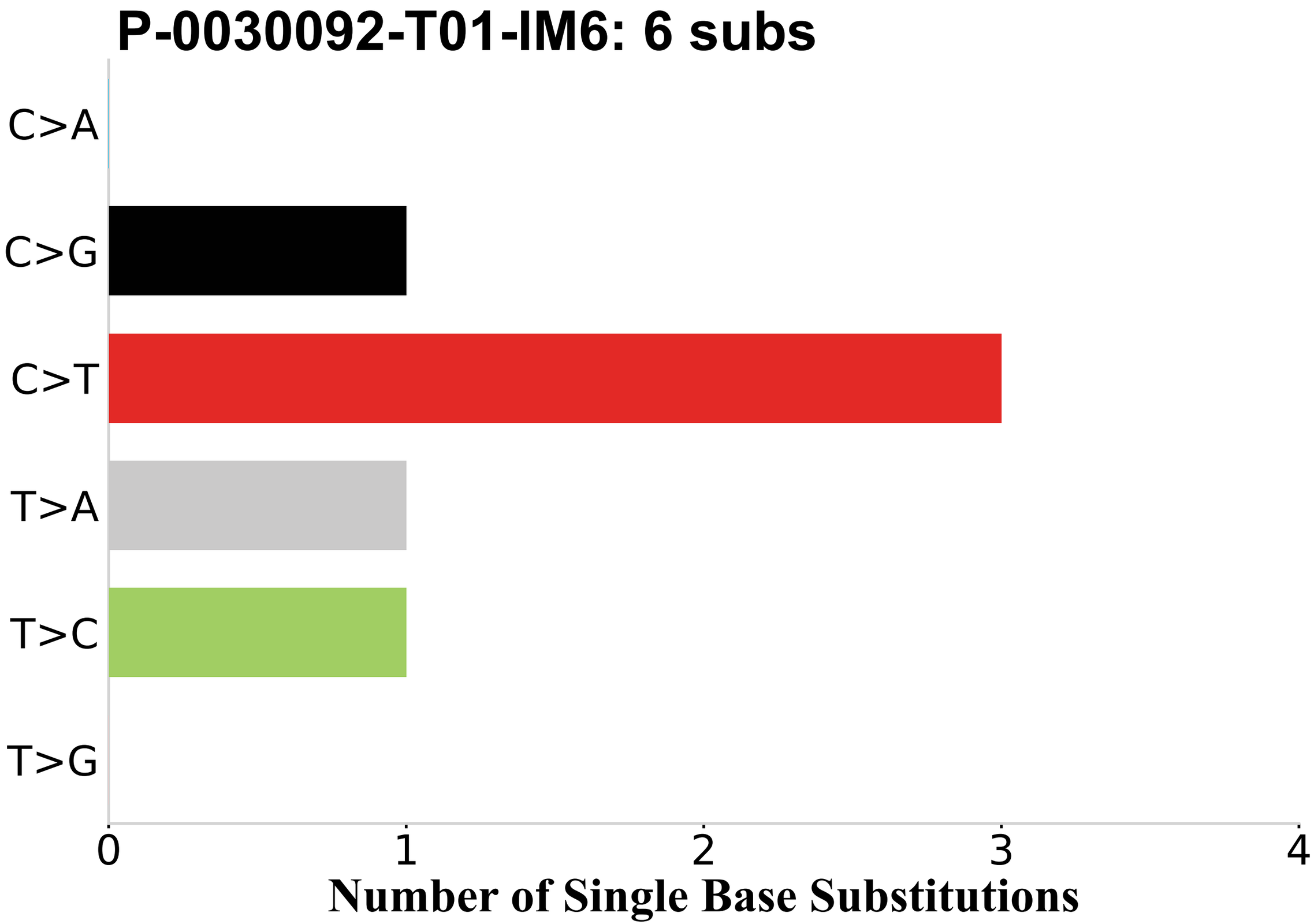

P-0029539-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

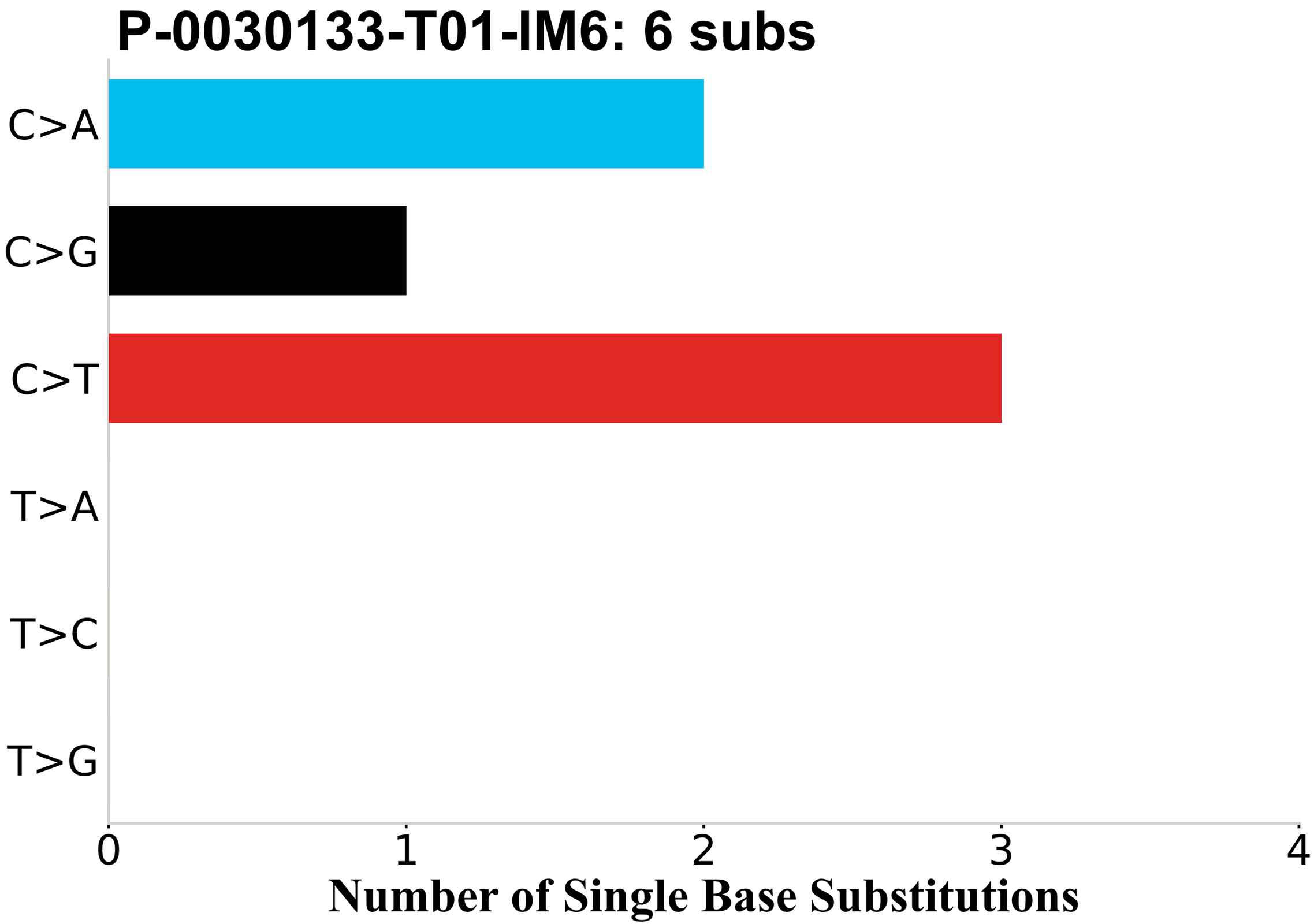

P-0029610-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

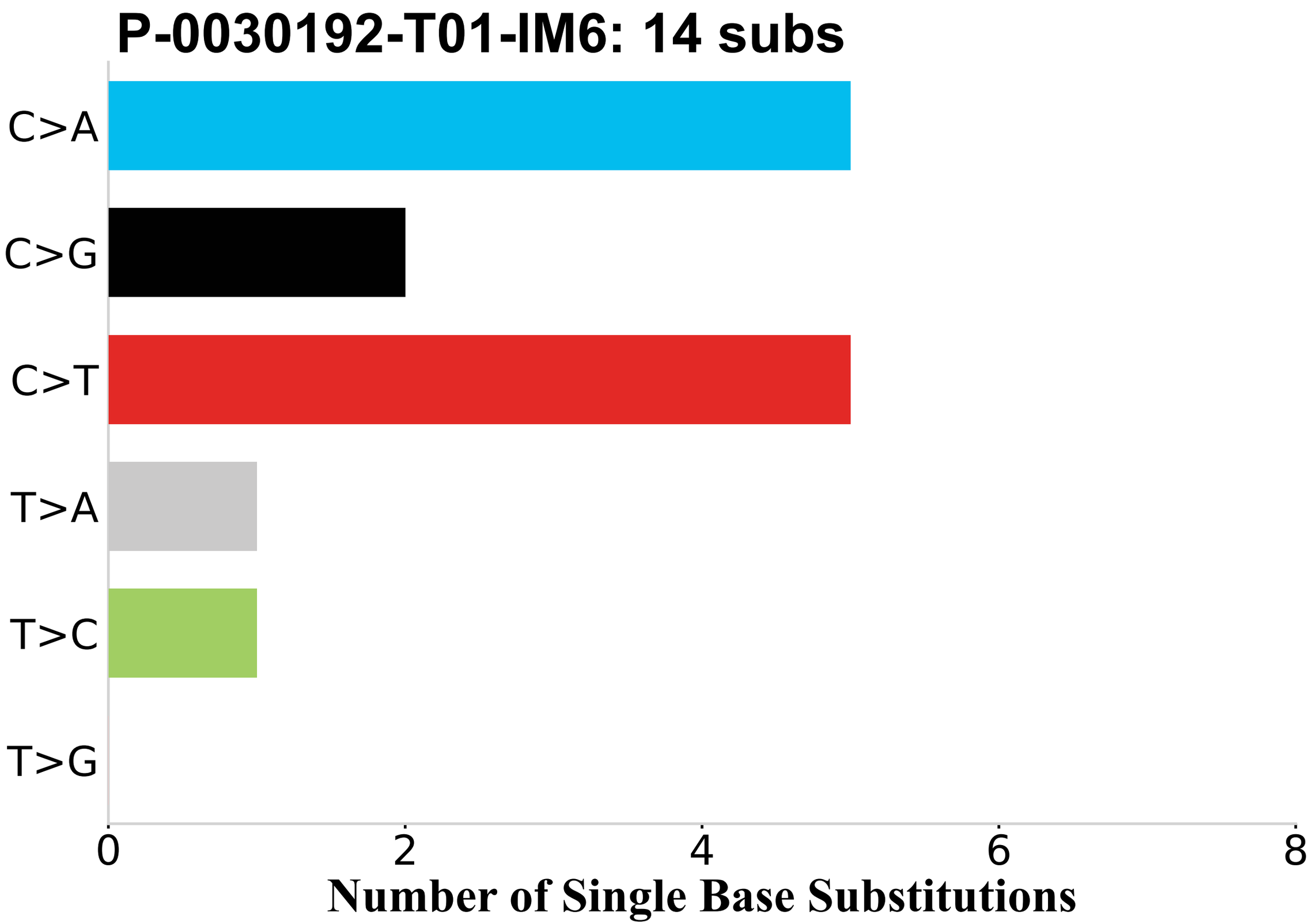

P-0029733-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

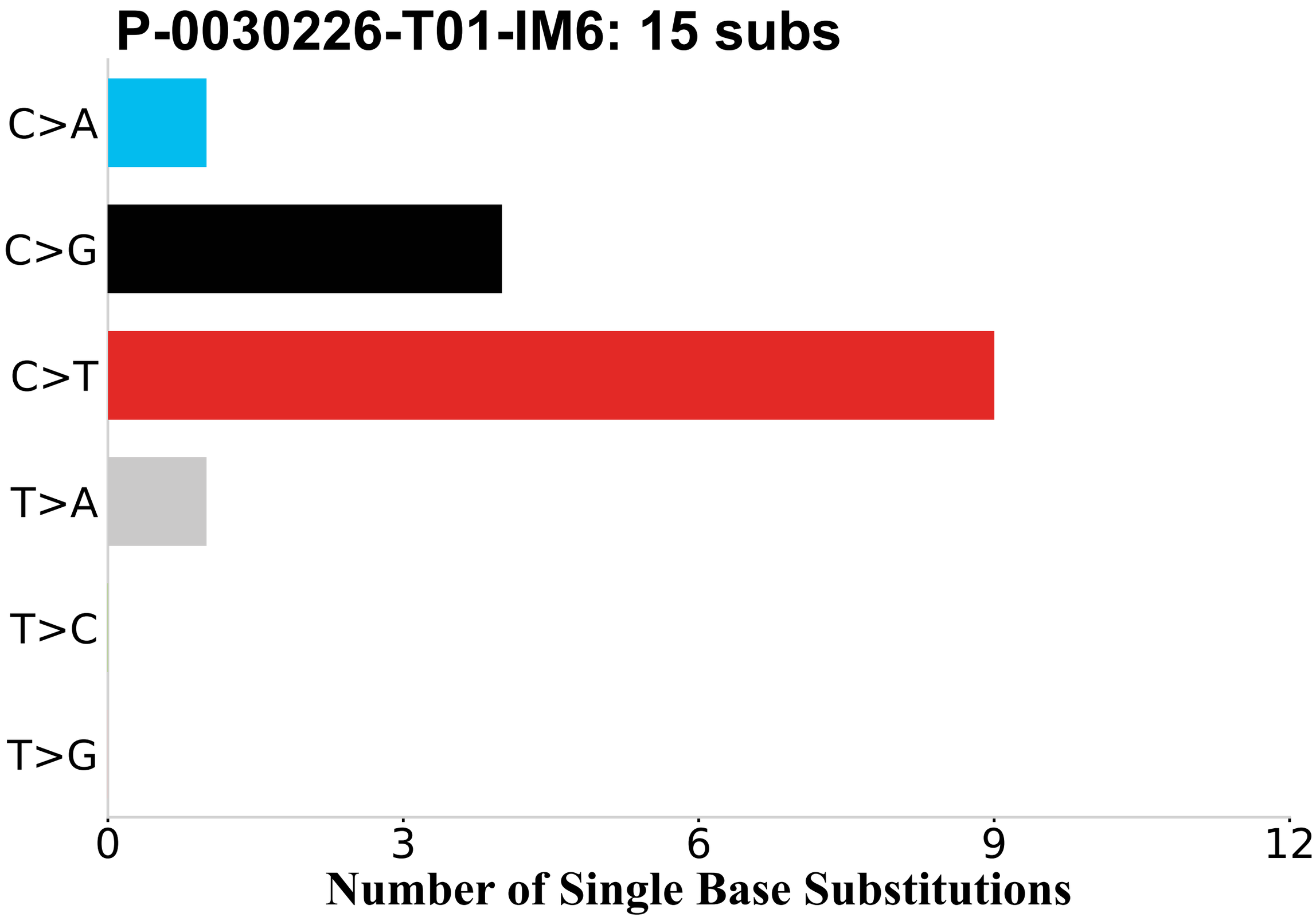
P-0029930-T01-IM6: 0 subs

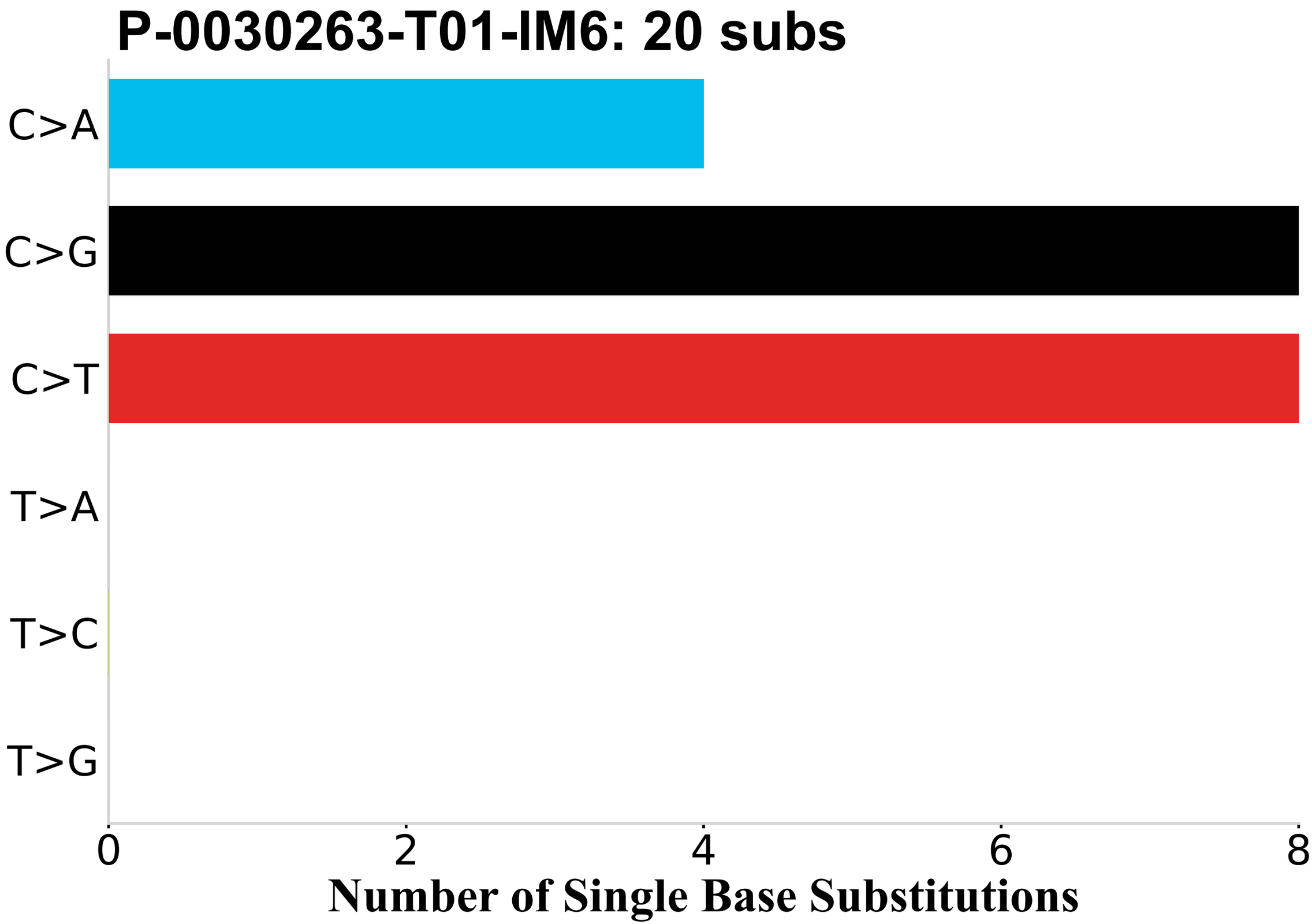


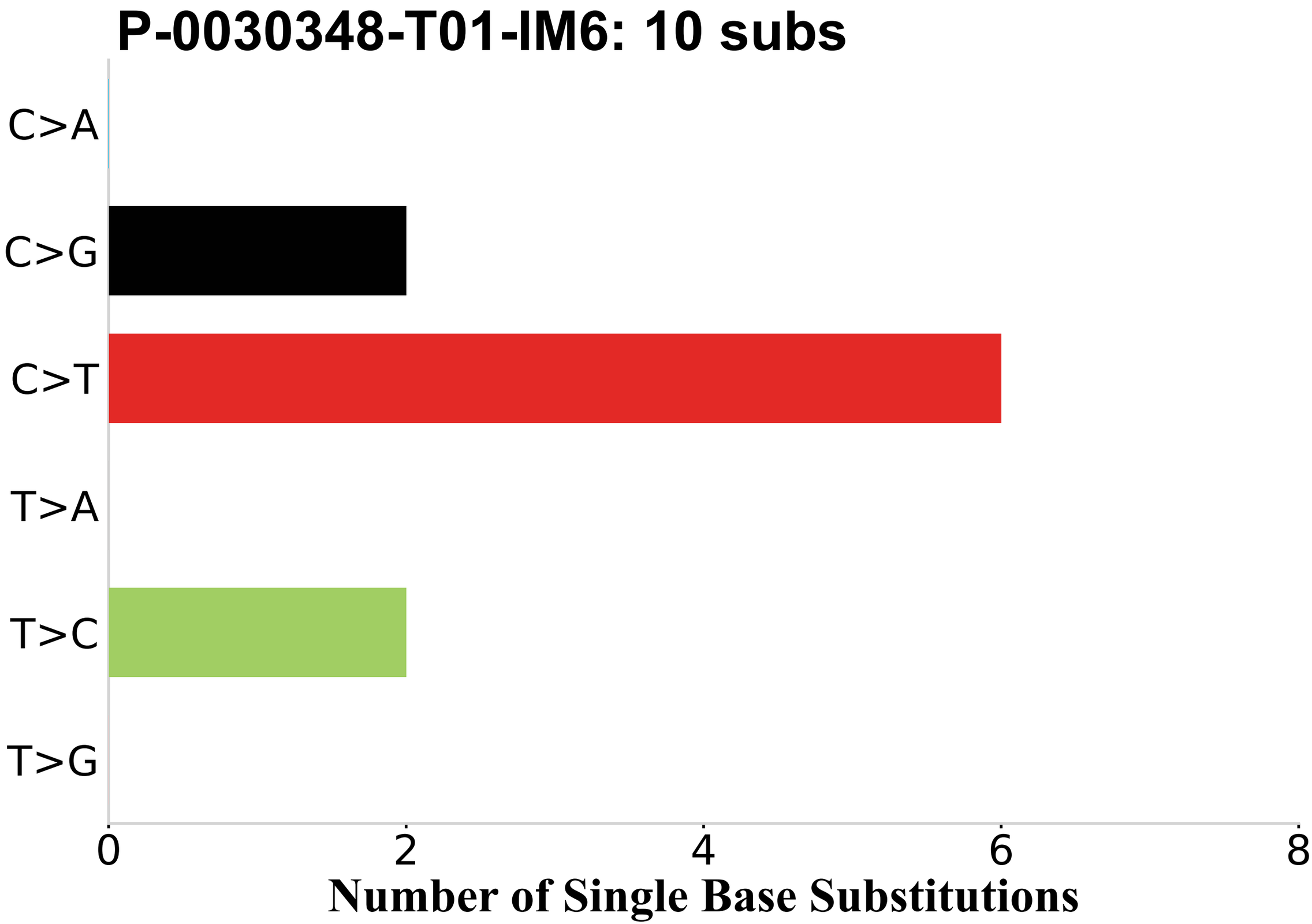

P-0030092-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

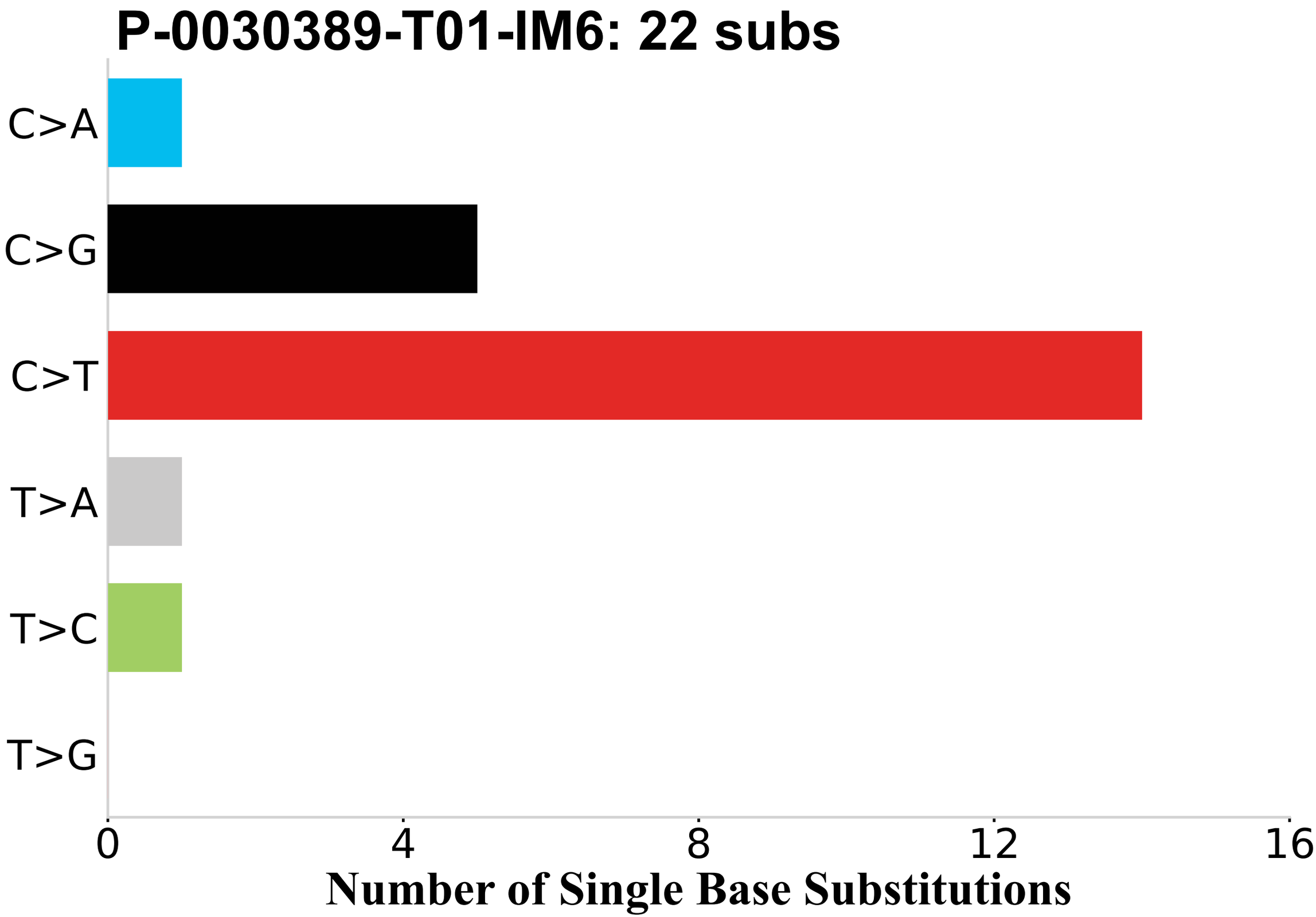

P-0030133-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0030192-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0030226-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0030263-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0030348-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0030389-T01-IM6: 22 subs
C>A
C>G
C>T
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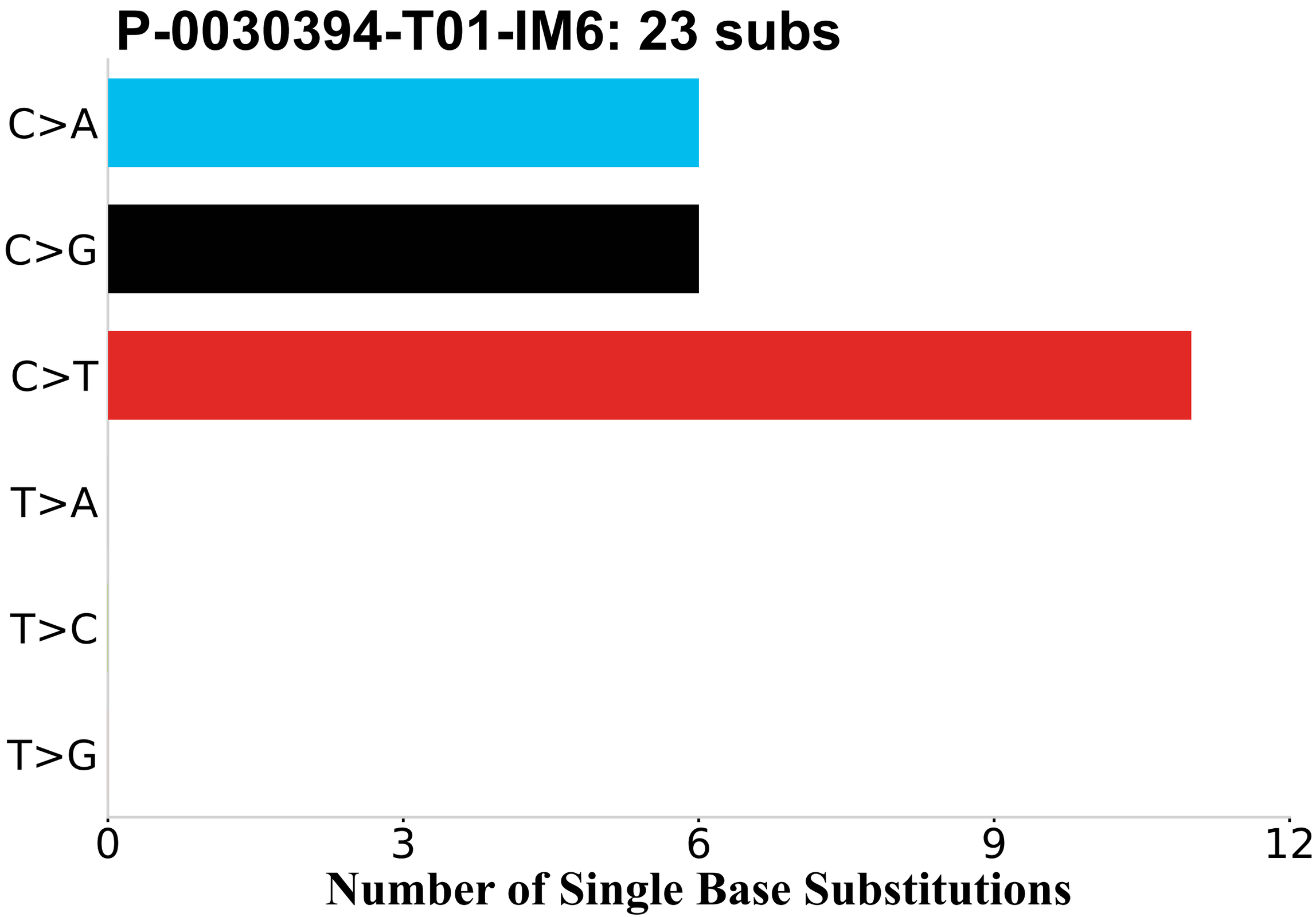
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0030394-T01-IM6: 23 subs
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C>G
C>T
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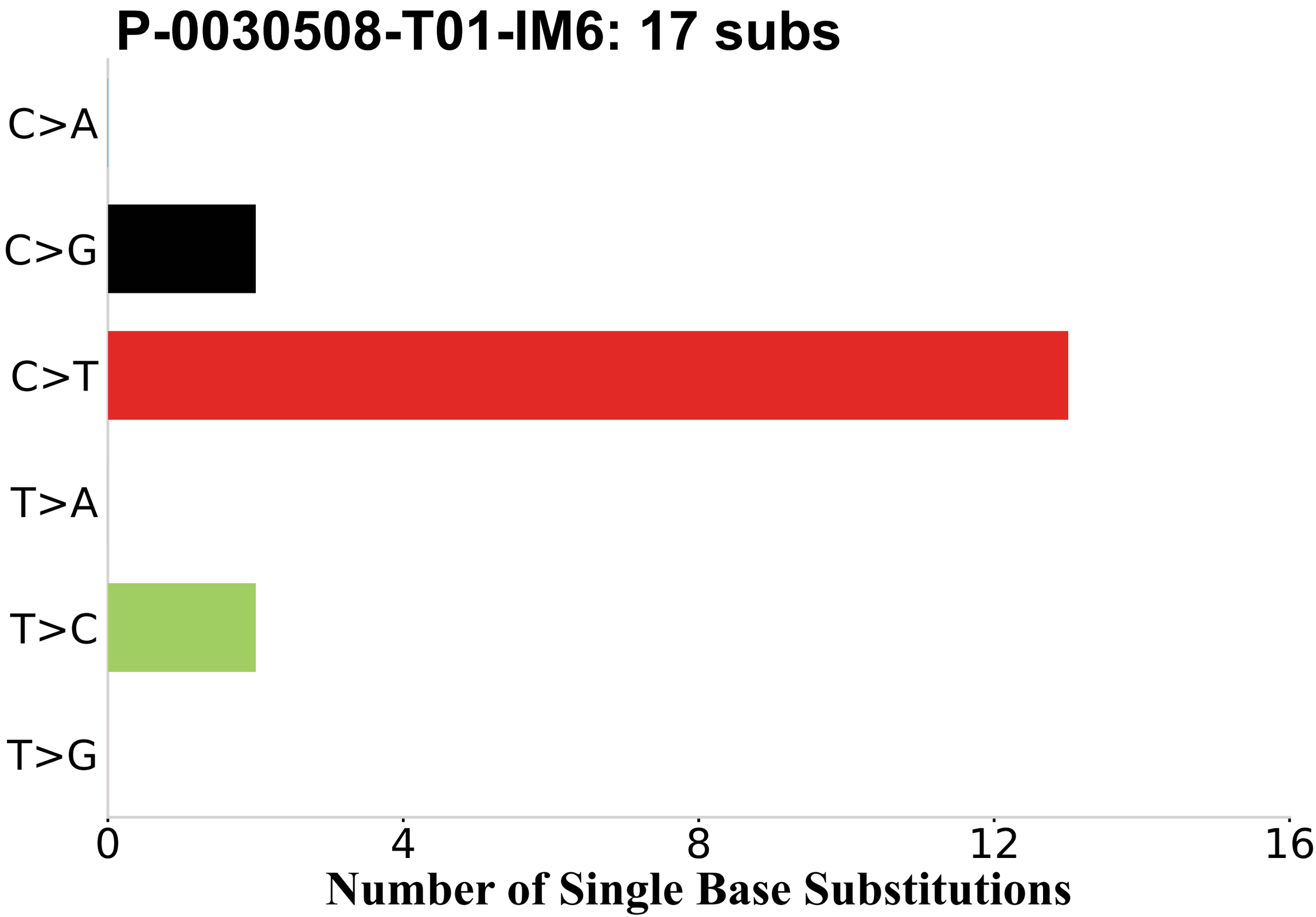
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0030508-T01-IM6: 17 subs
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C>T
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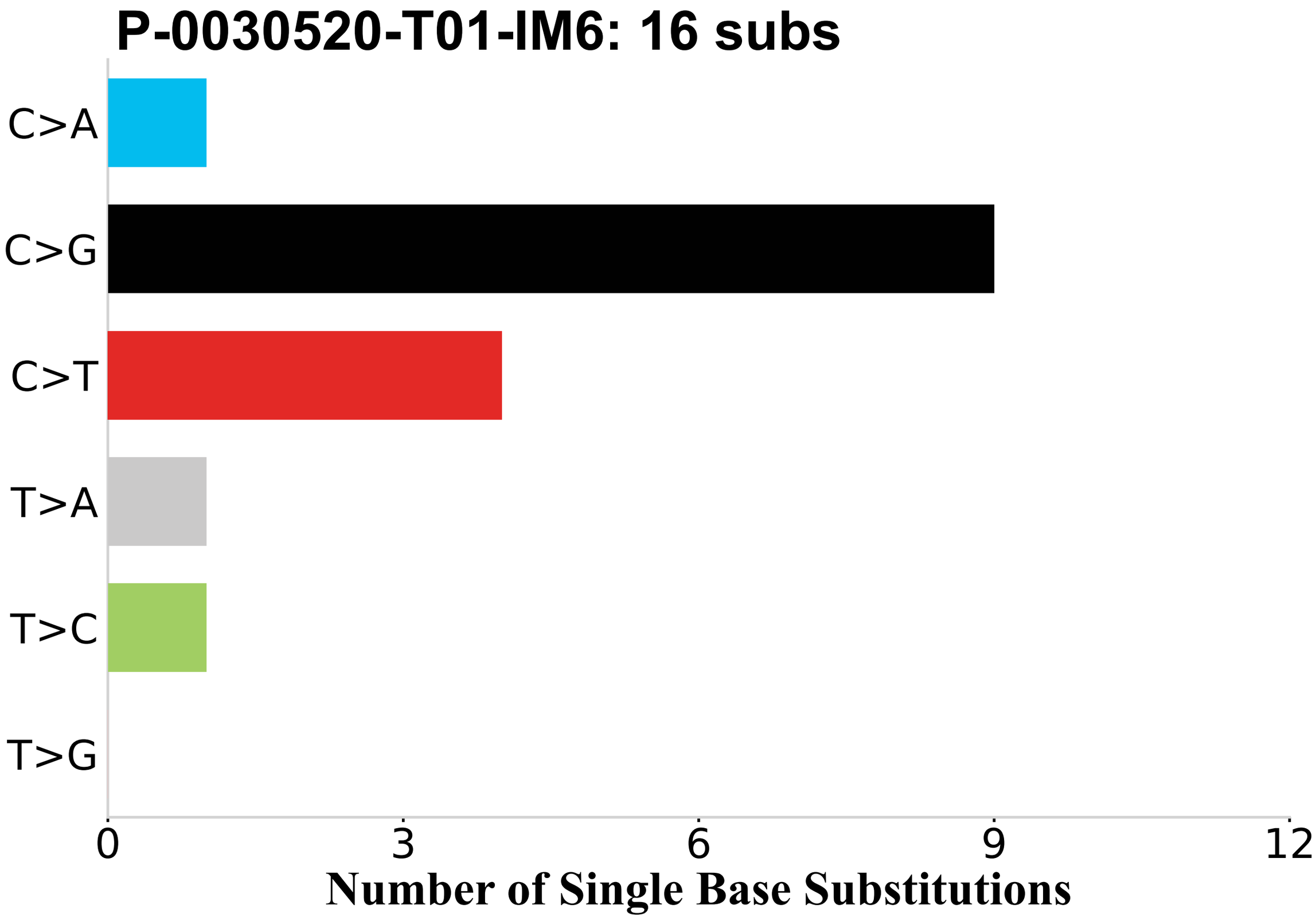
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0030520-T01-IM6: 16 subs
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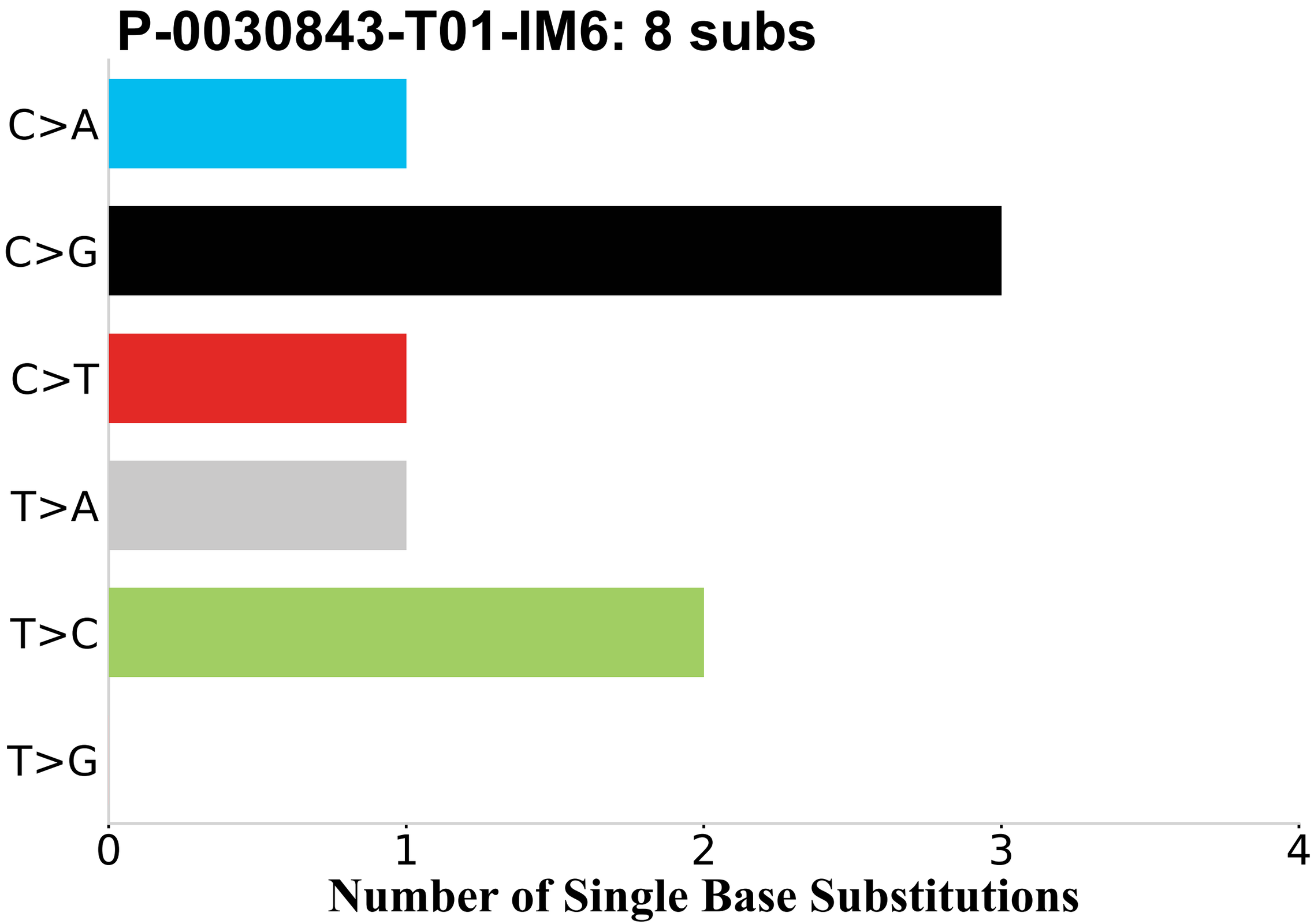
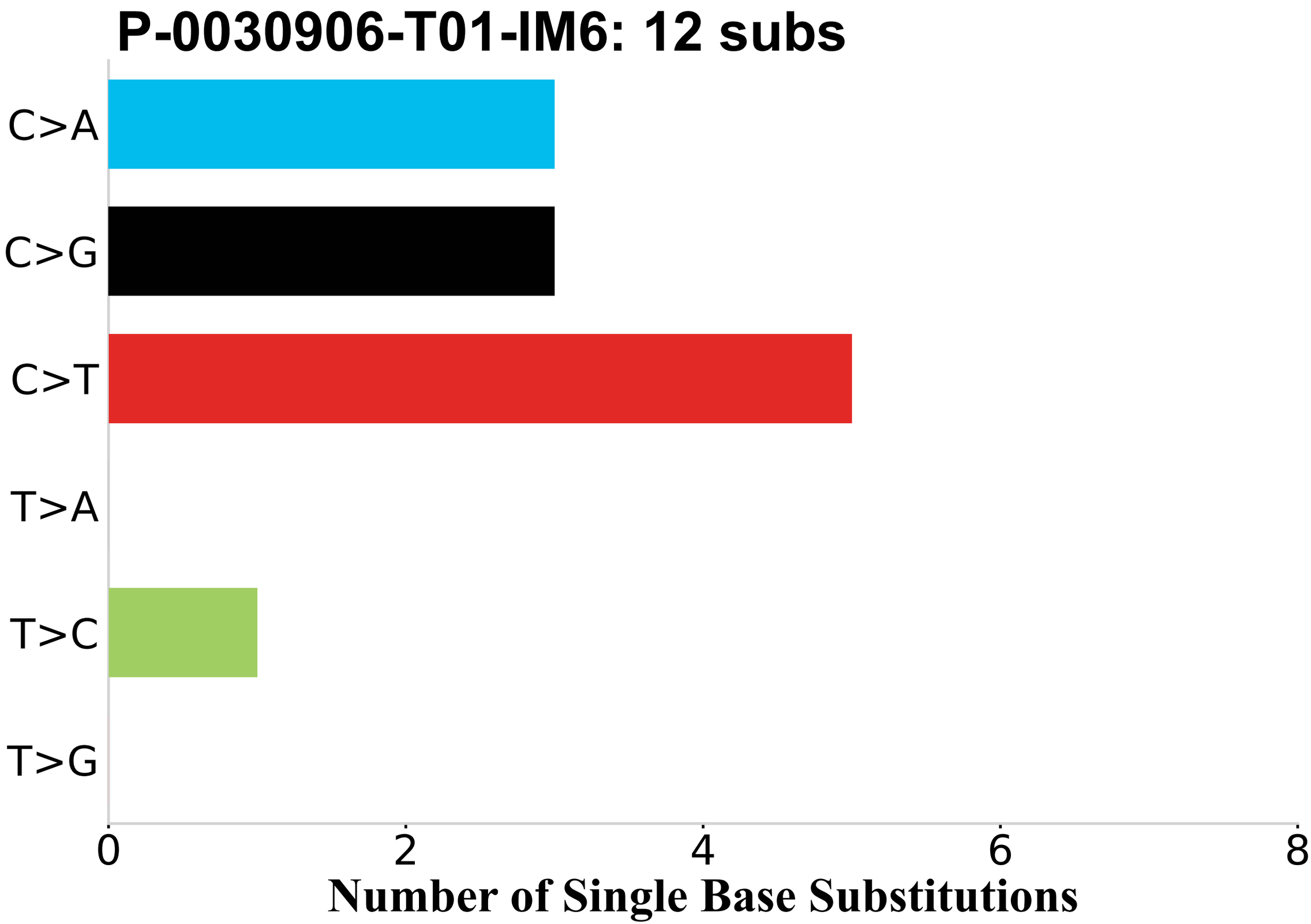
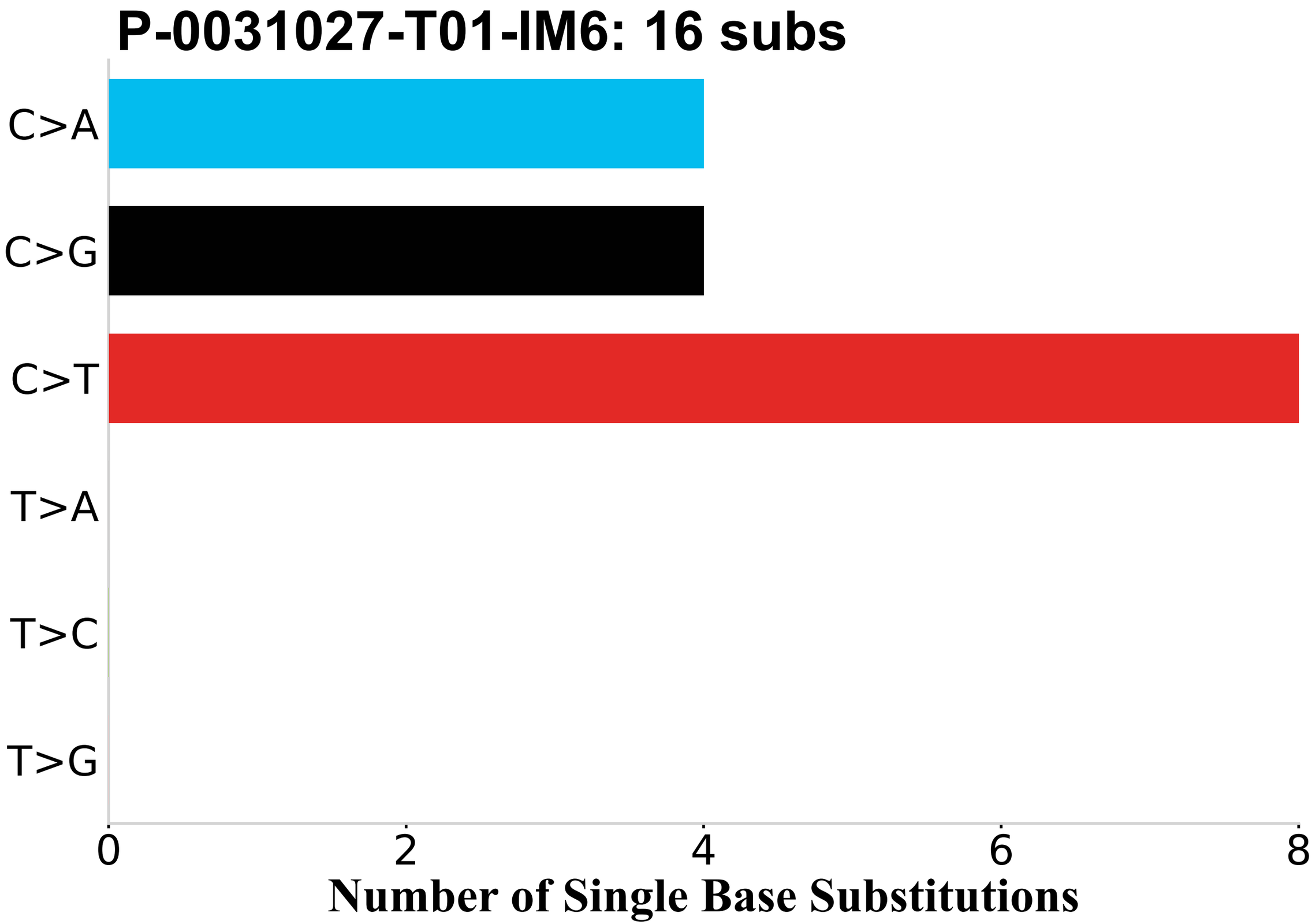
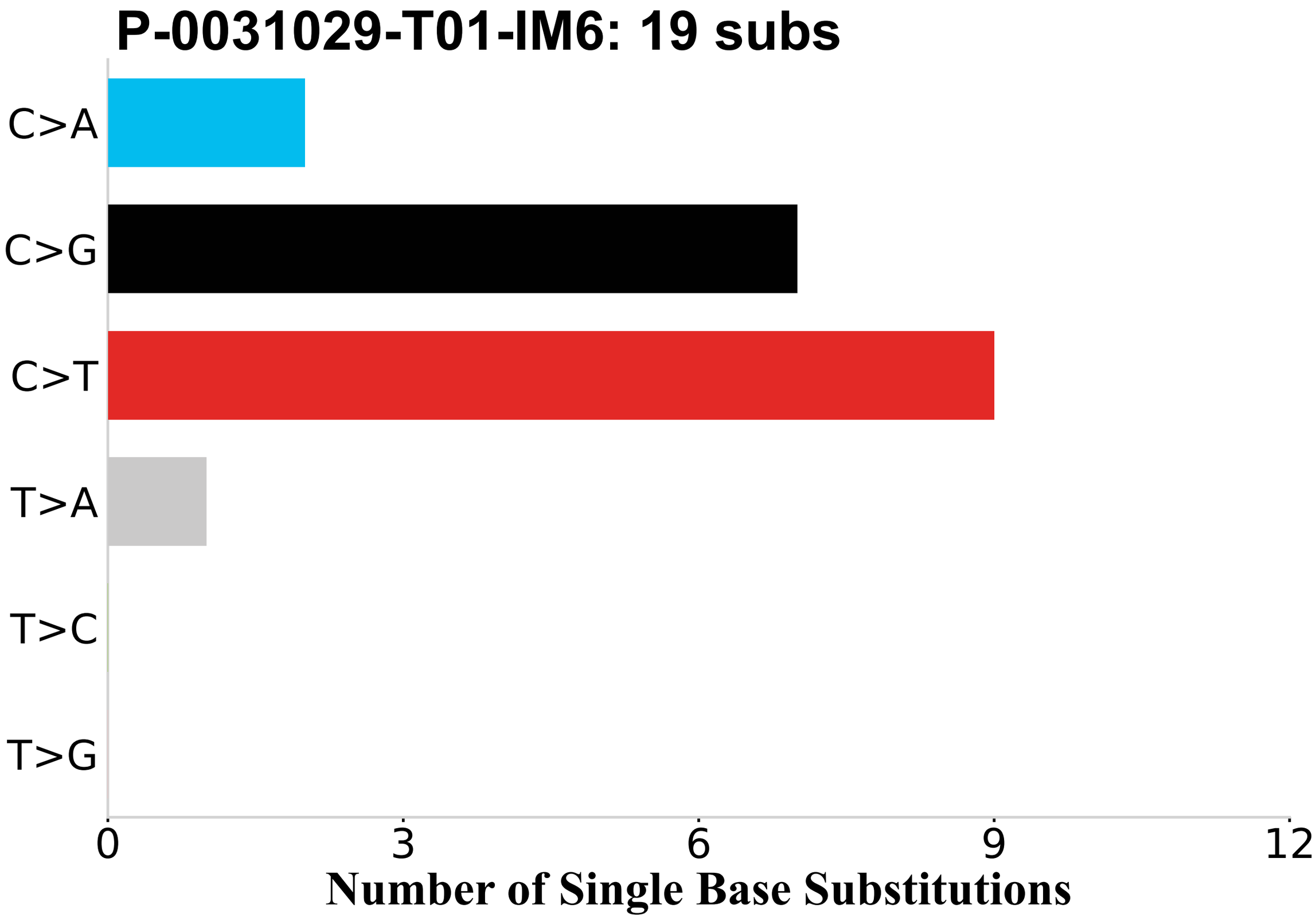
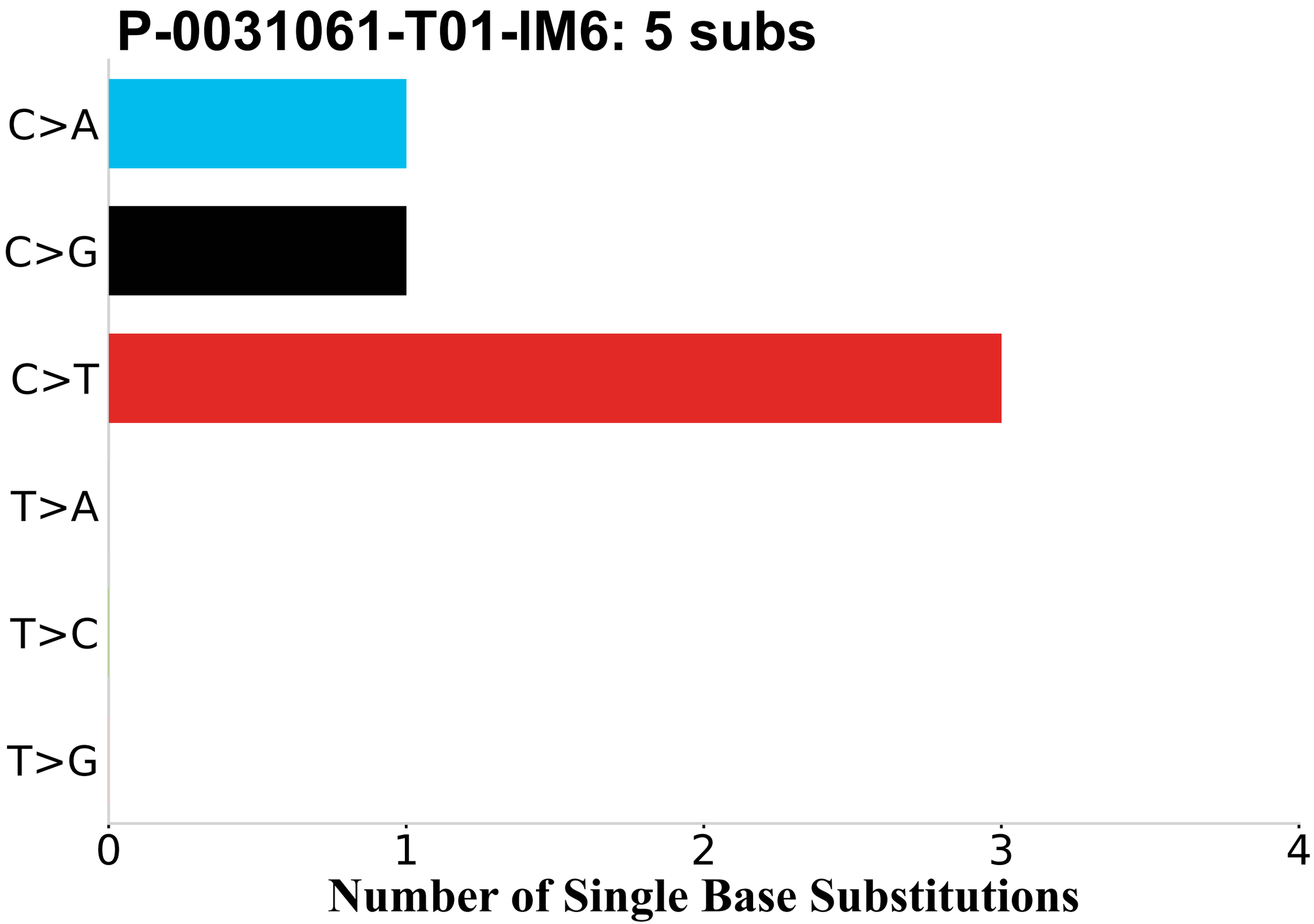
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

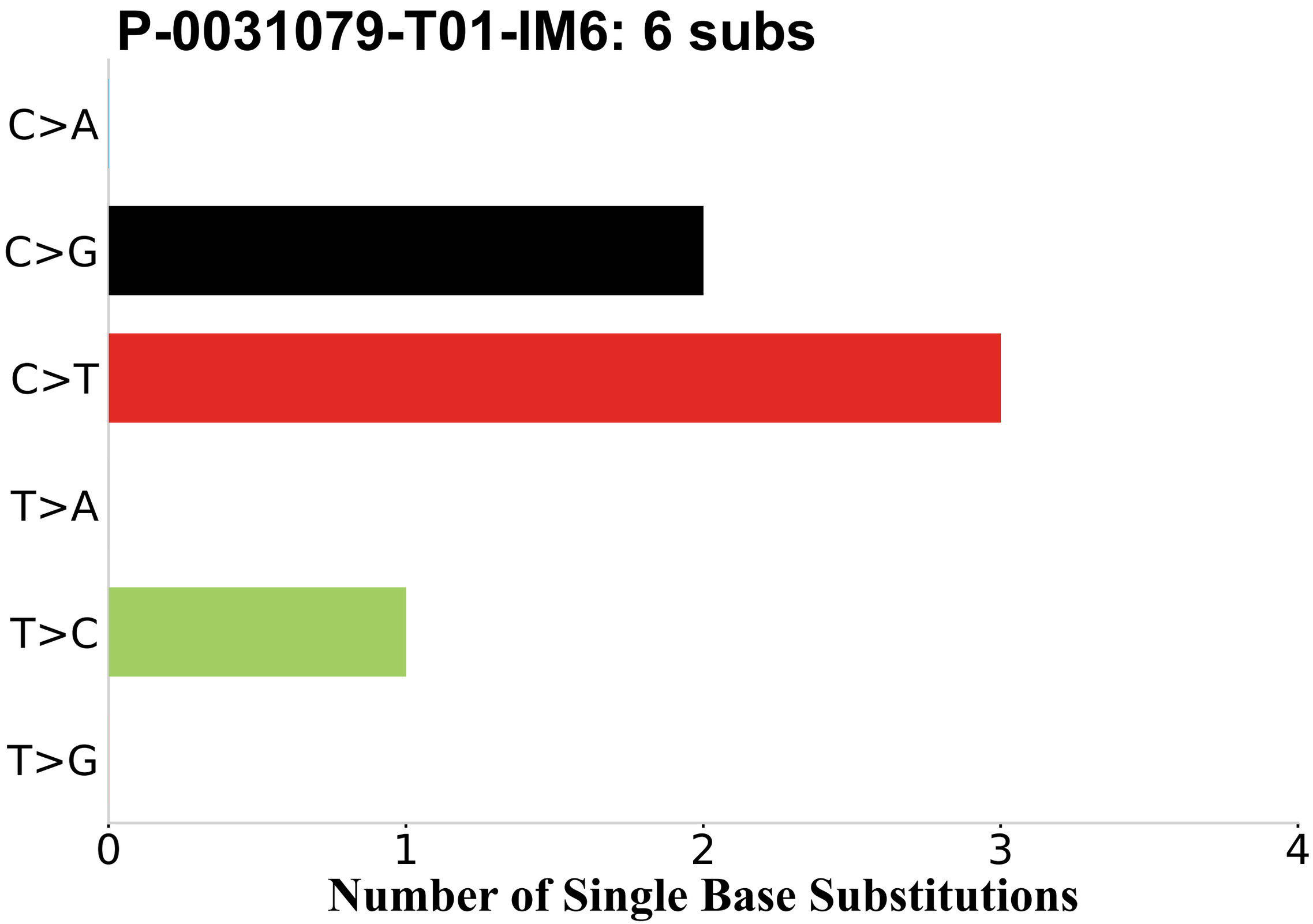

P-0030843-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

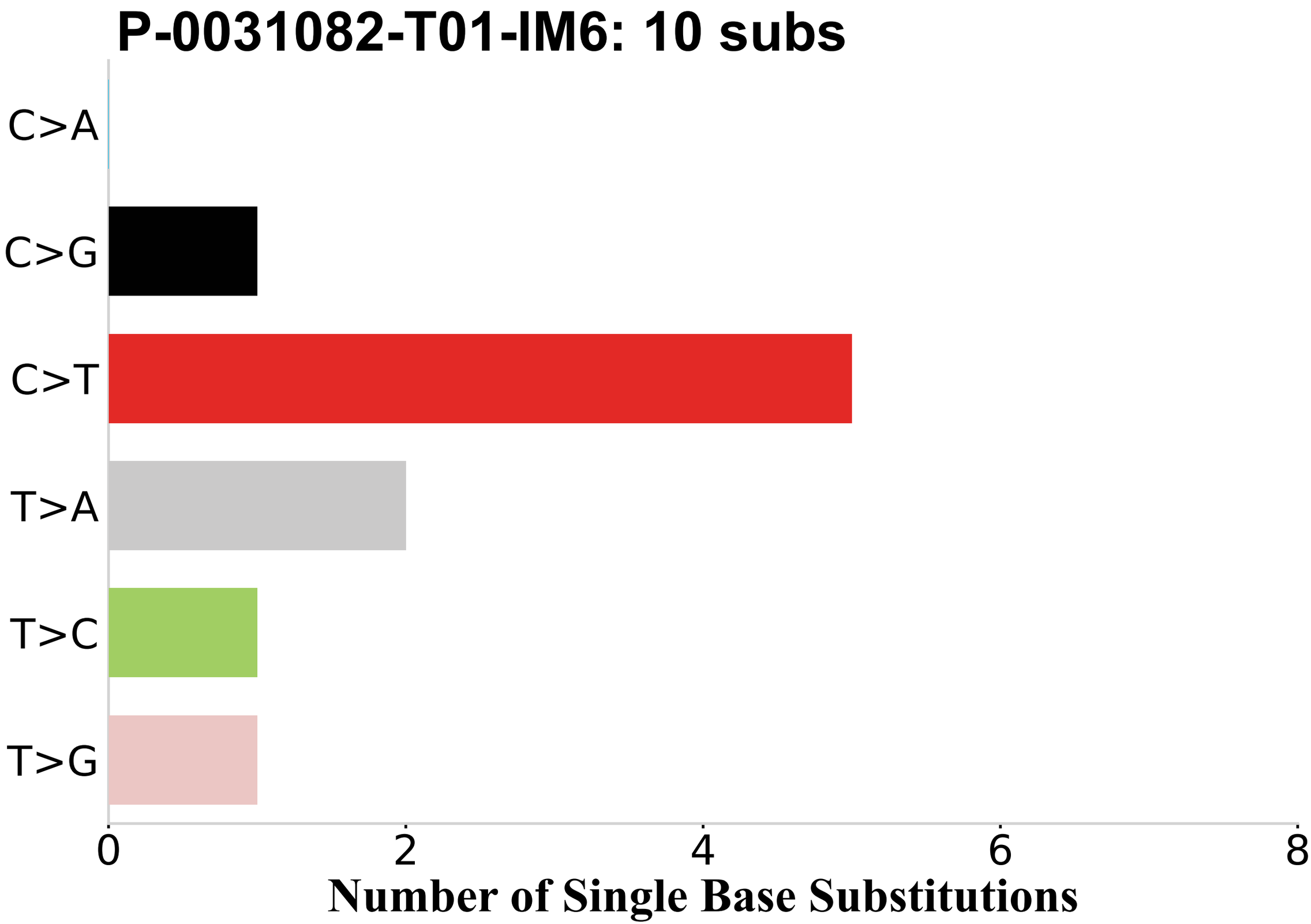

P-0030906-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

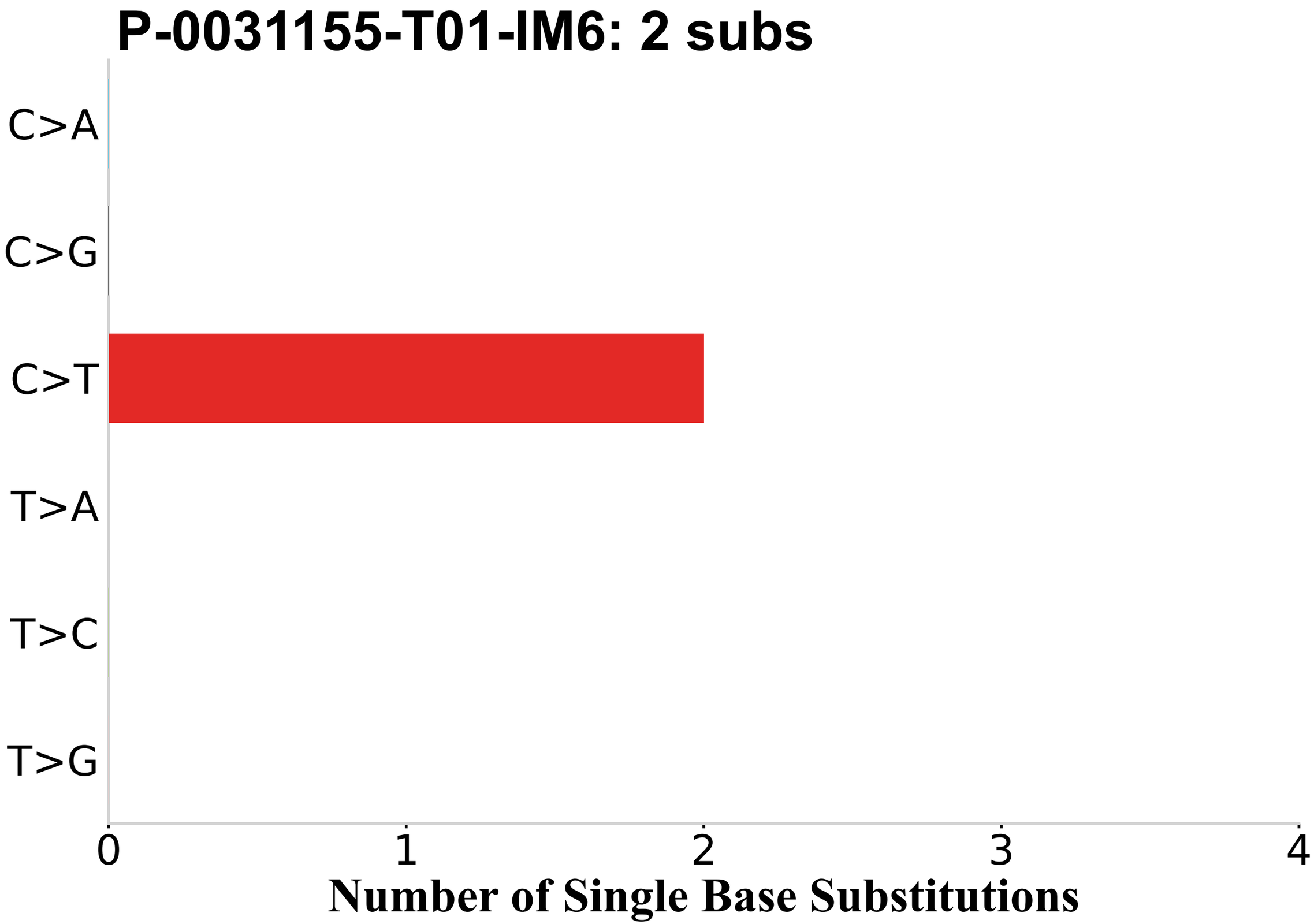

P-0031027-T01-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

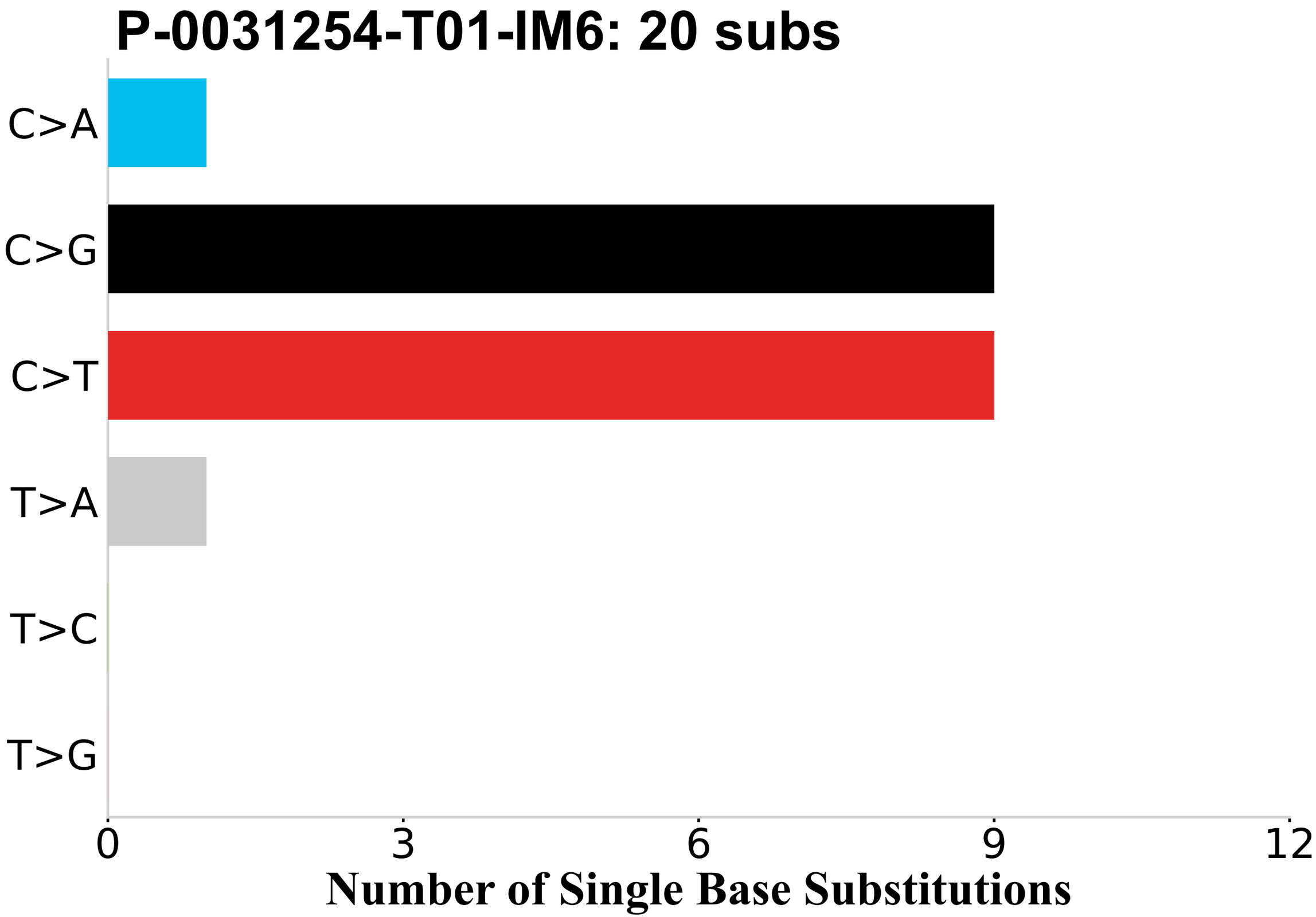

P-0031029-T01-IM6: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

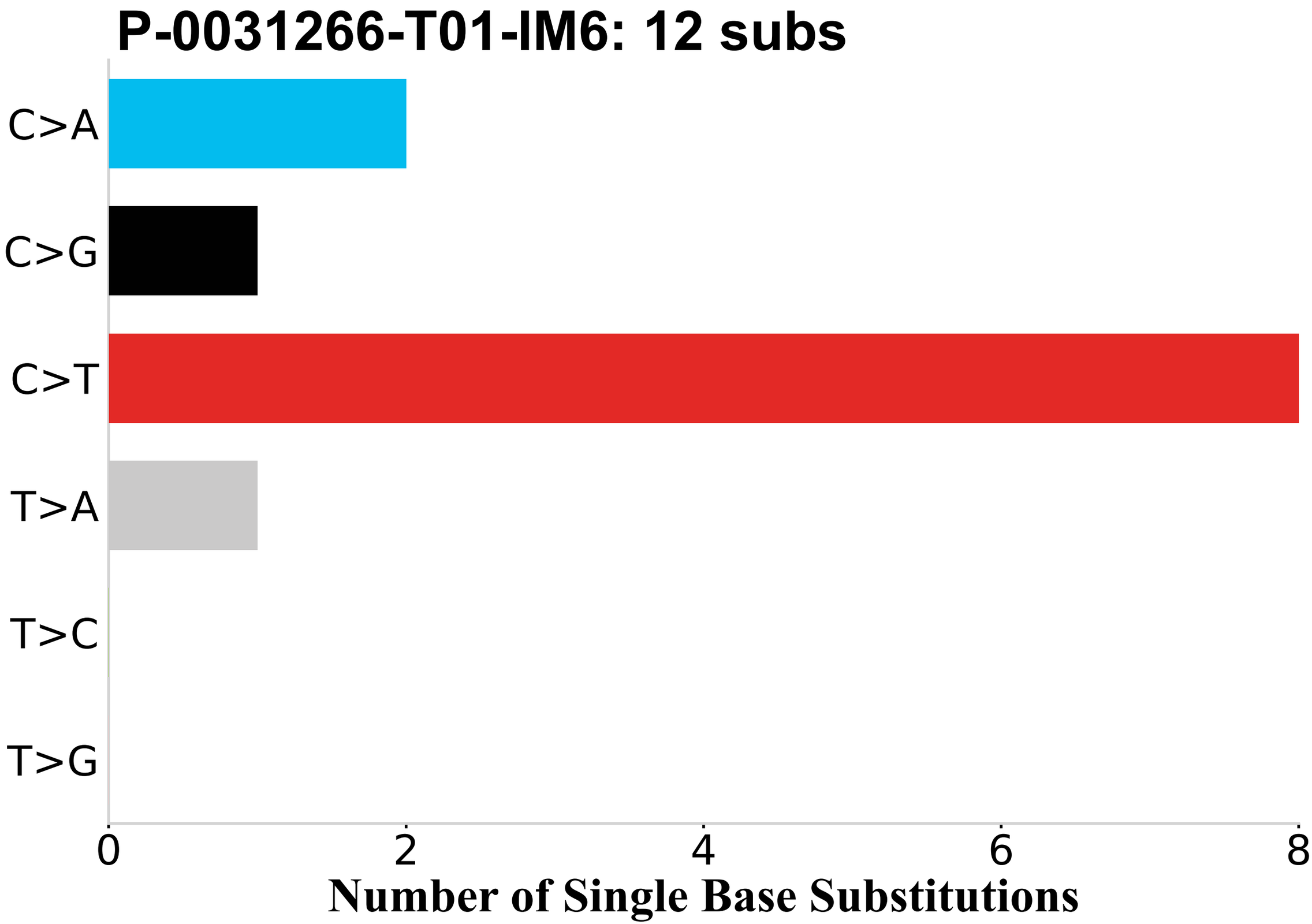

P-0031061-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

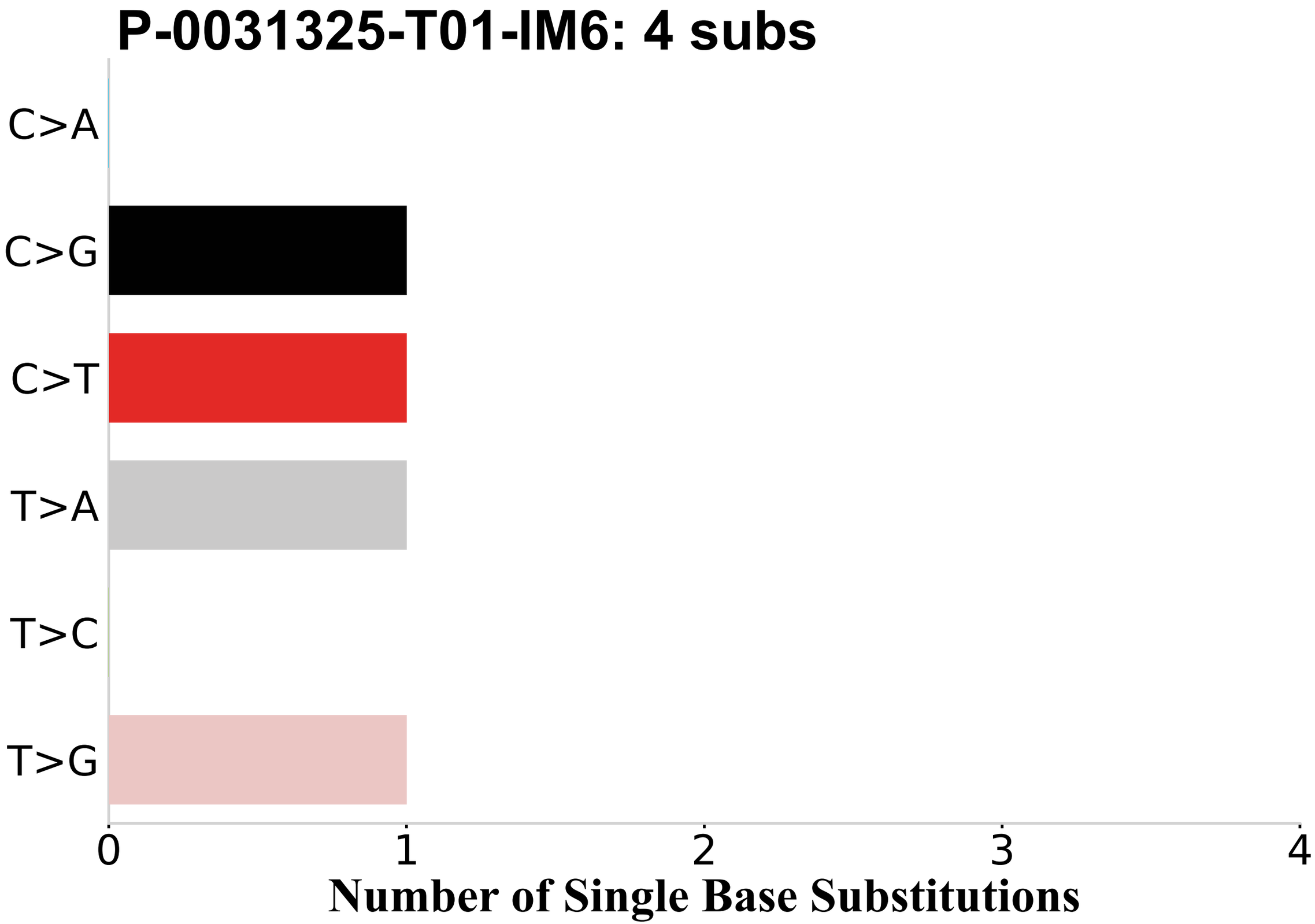

P-0031079-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

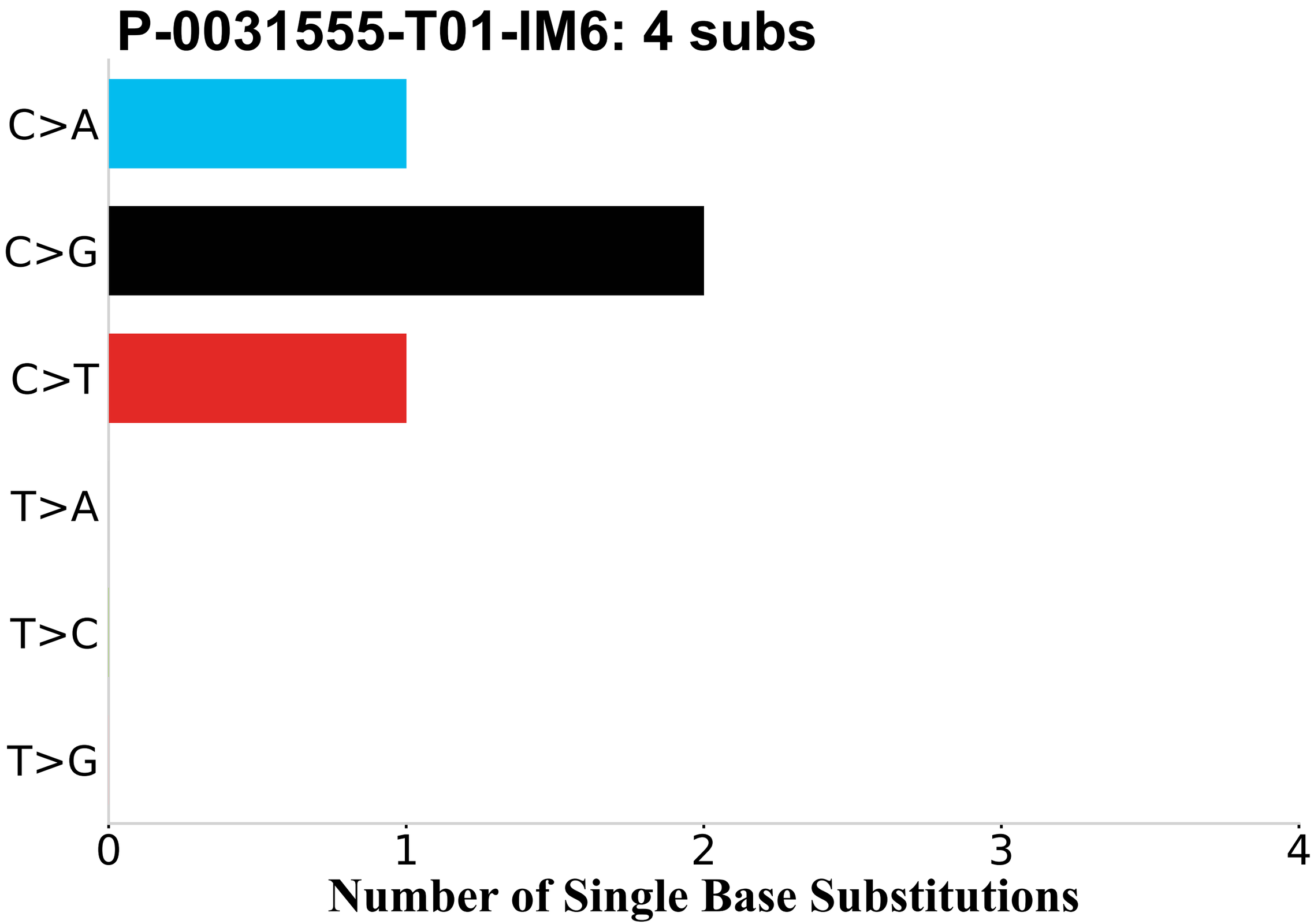

P-0031082-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

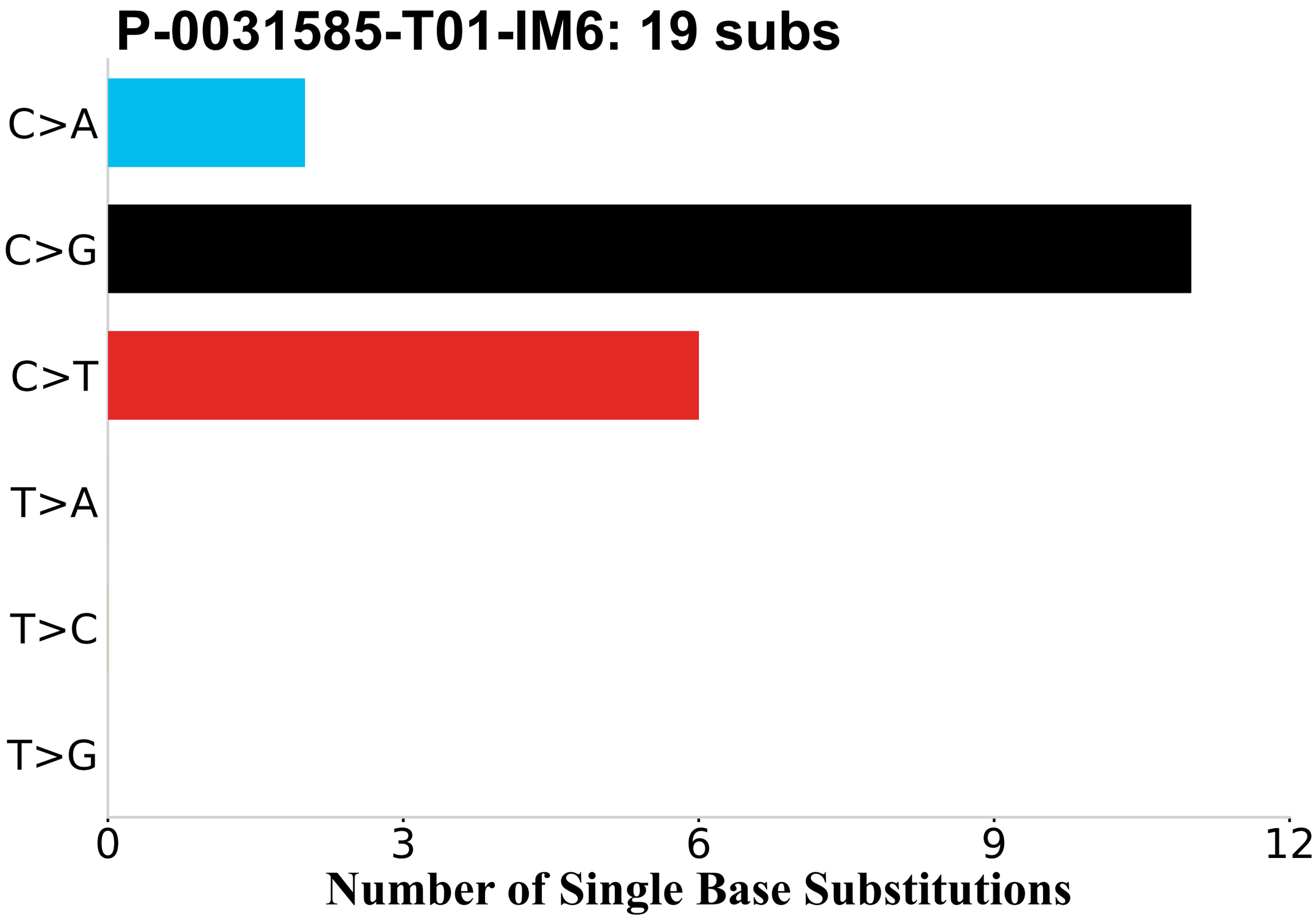

P-0031155-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

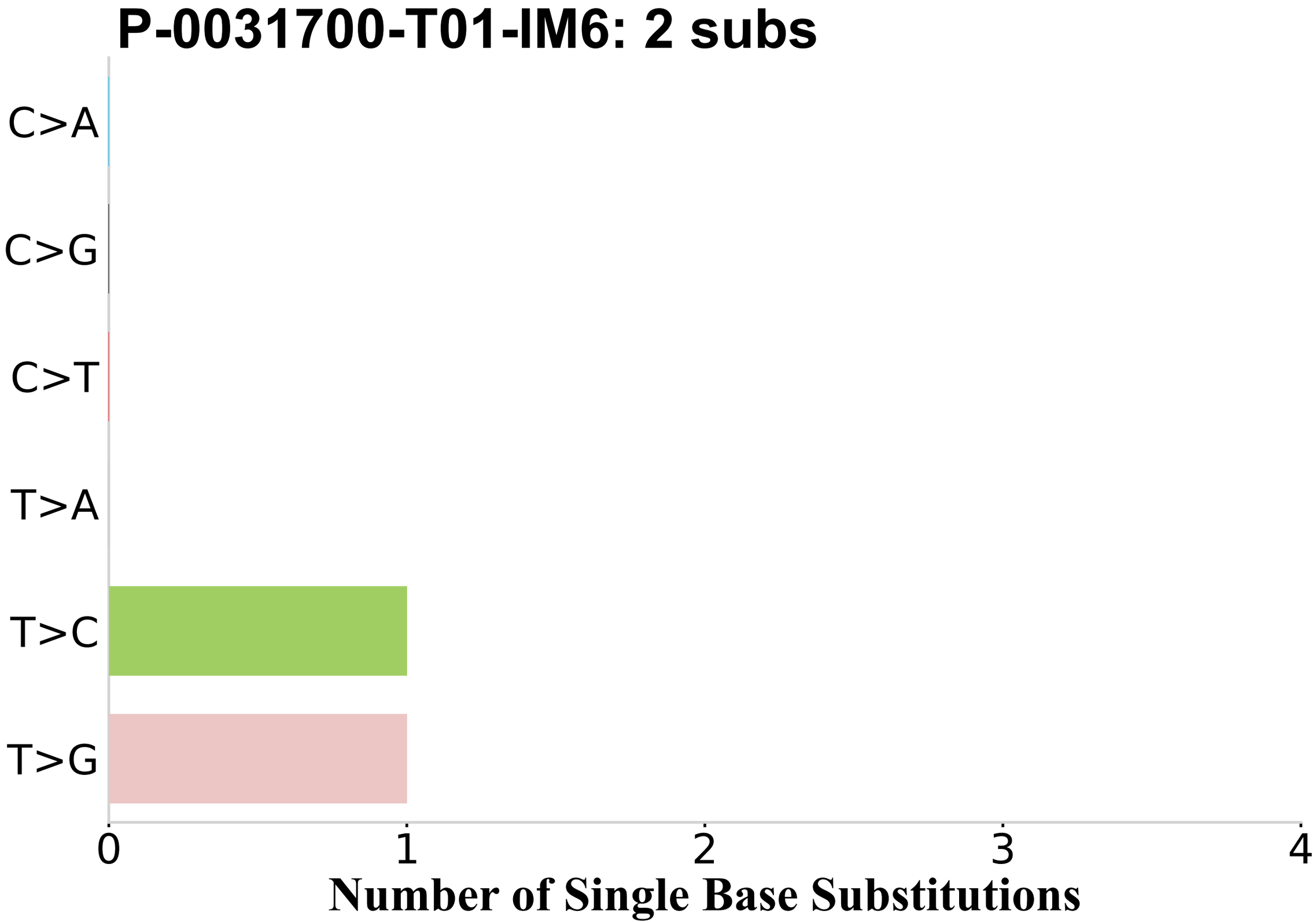

P-0031254-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

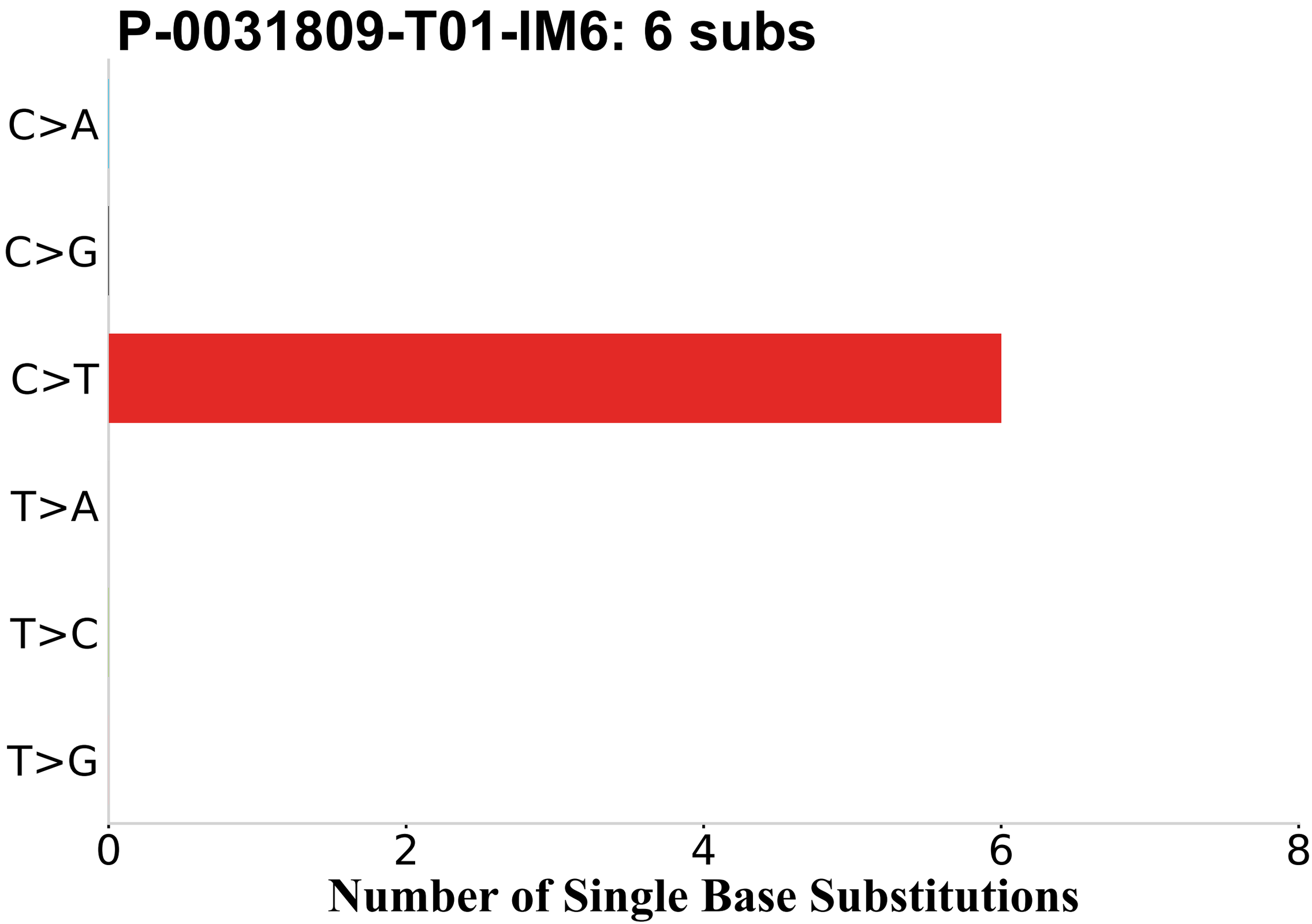

P-0031266-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

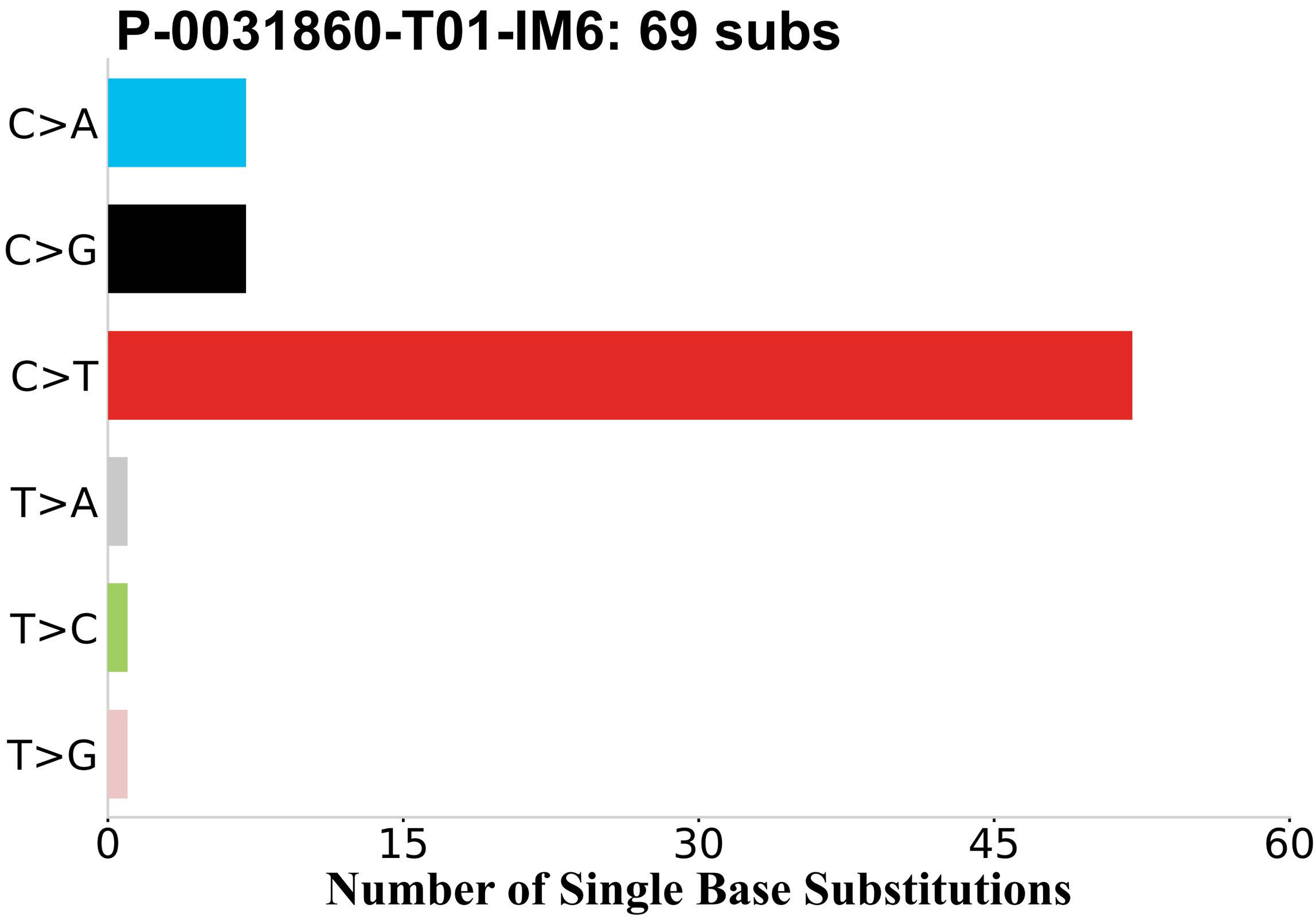

P-0031325-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

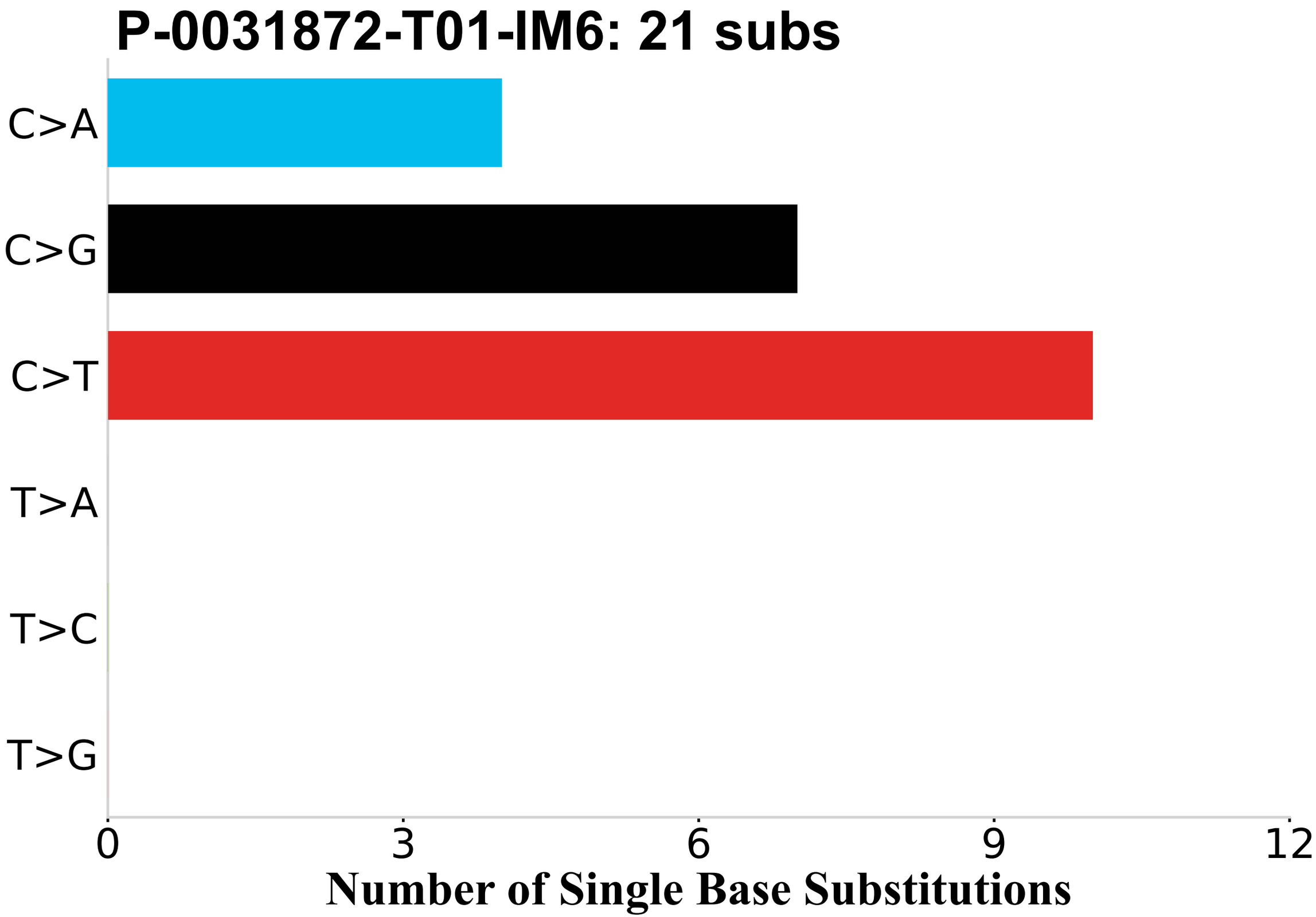

P-0031555-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

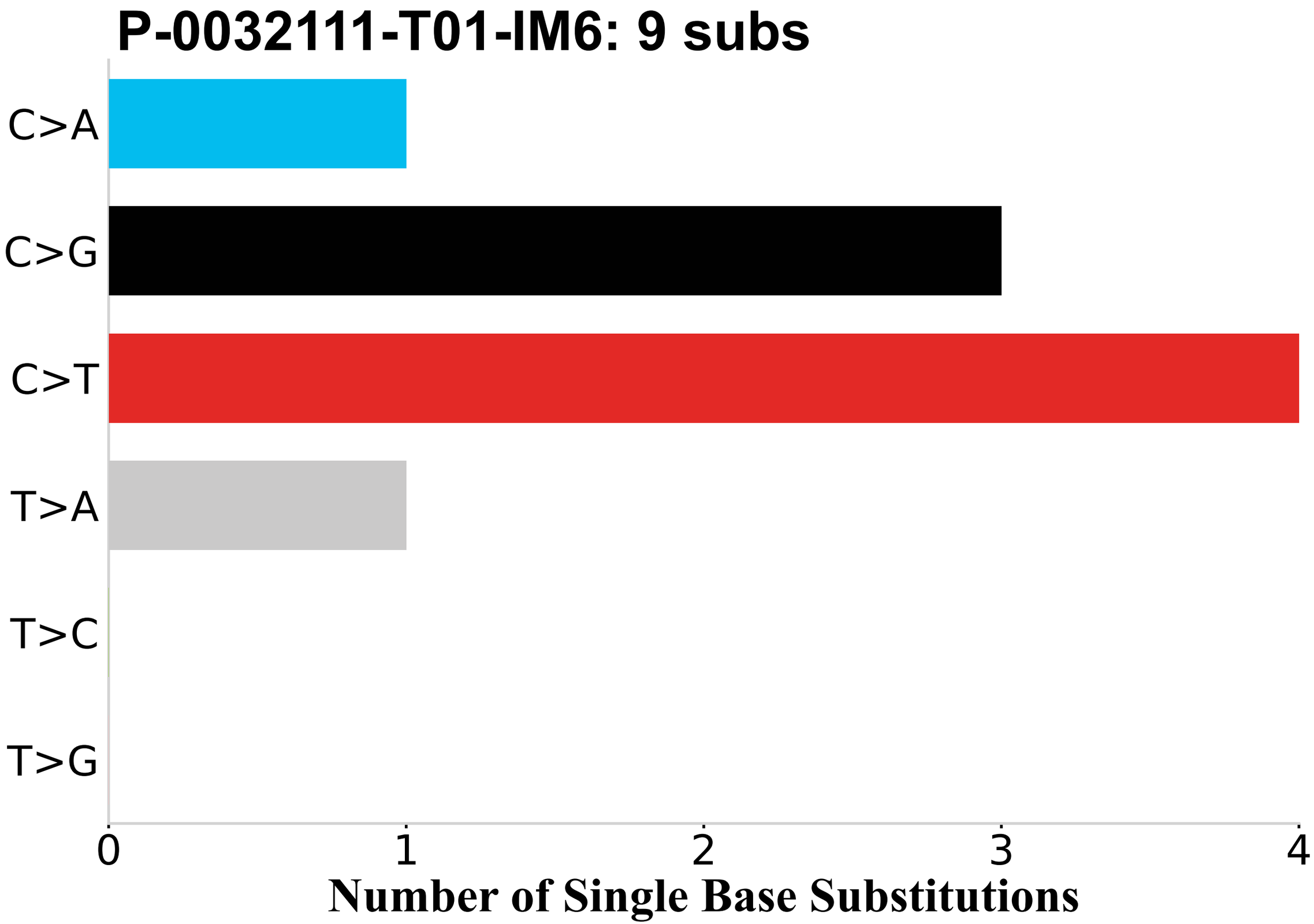

P-0031585-T01-IM6: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

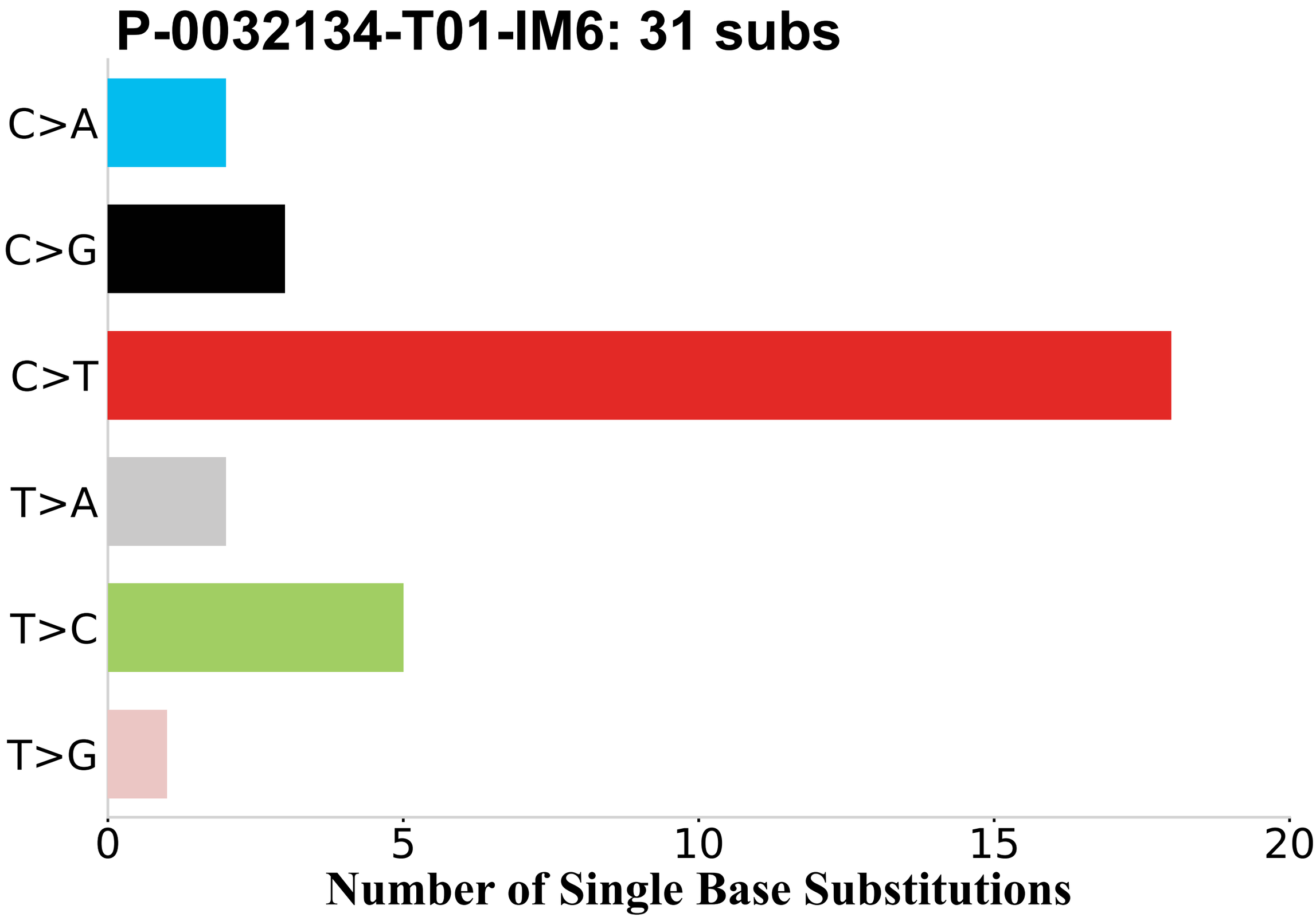

P-0031700-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

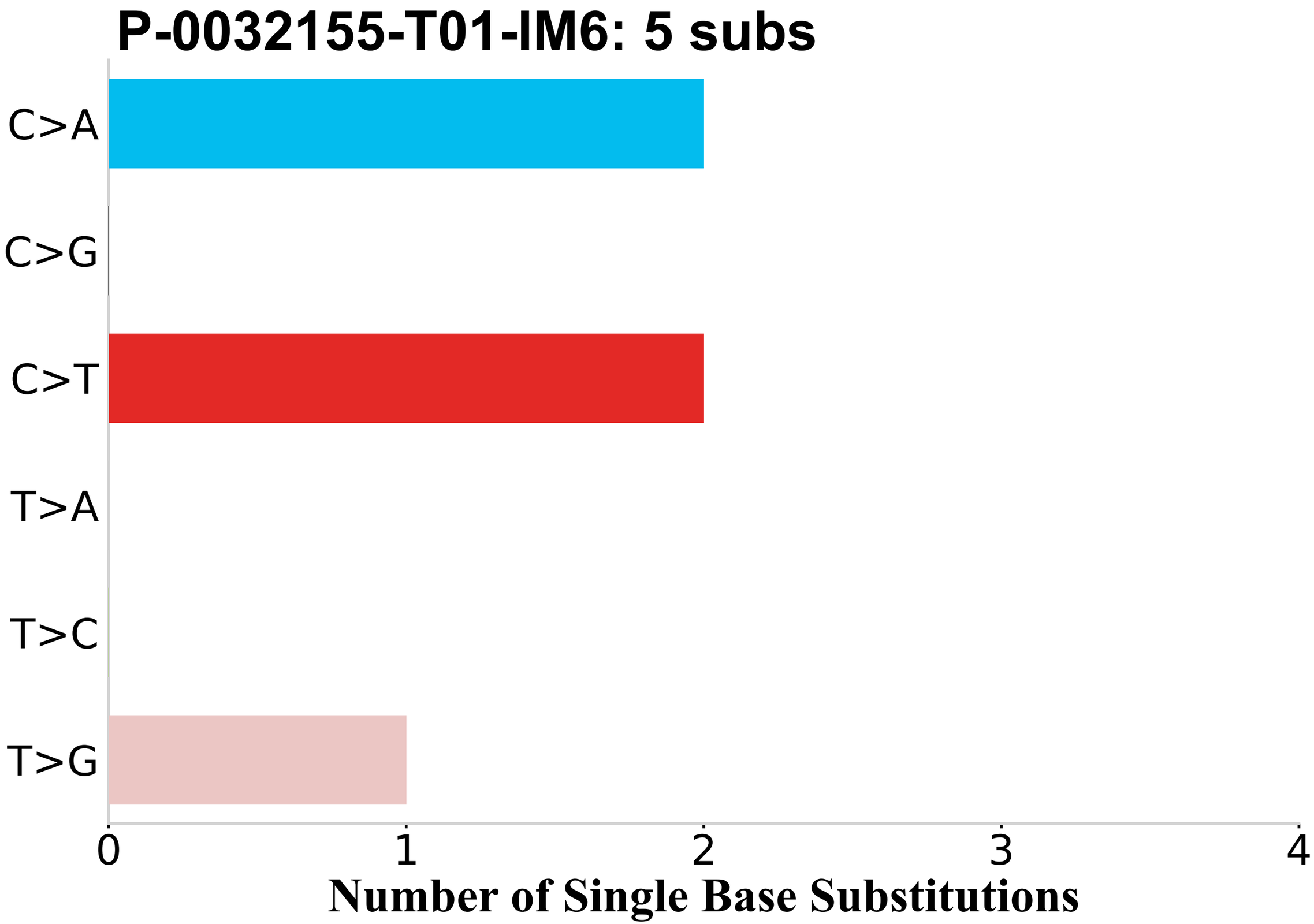

P-0031809-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

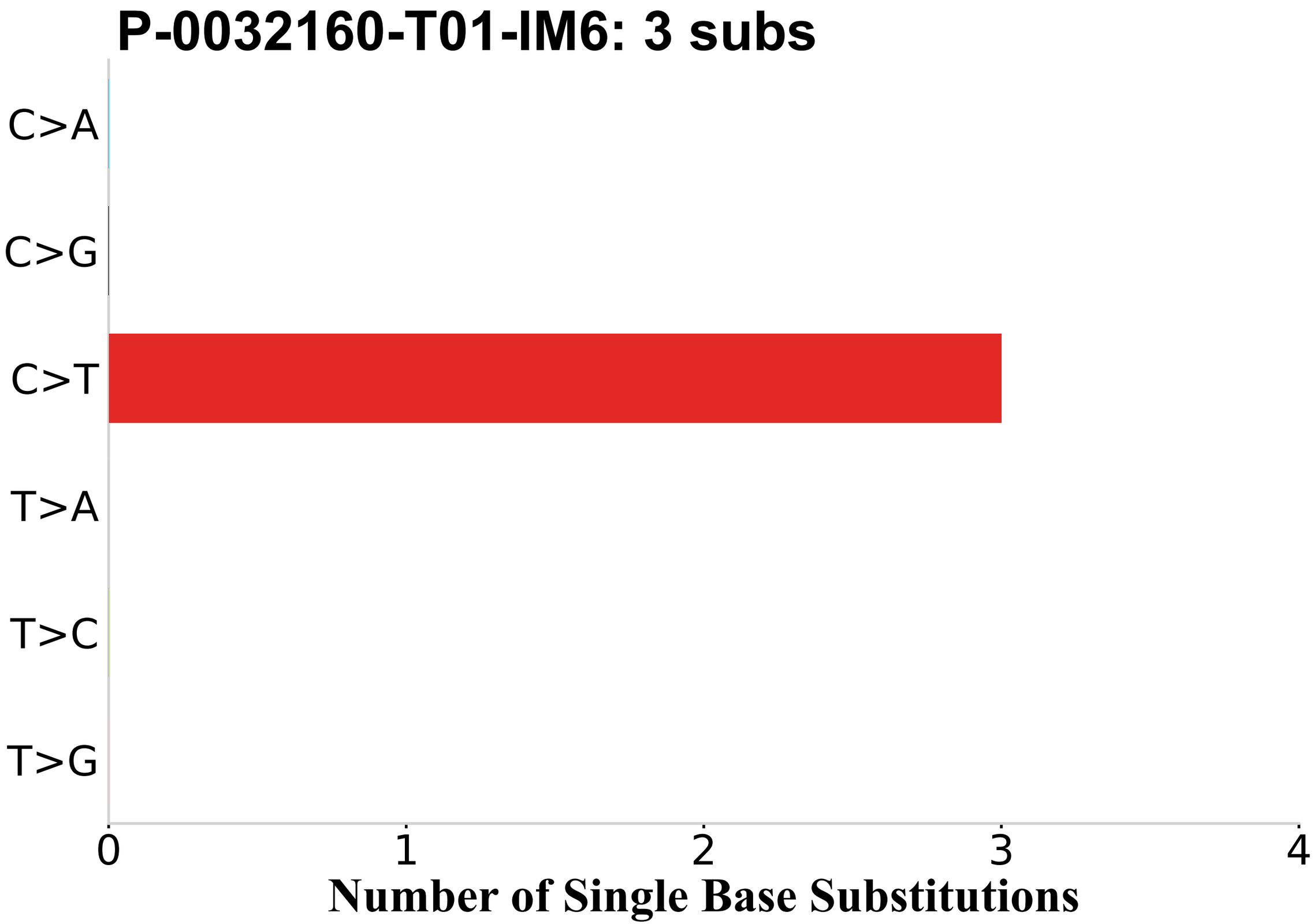

P-0031860-T01-IM6: 69 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
15
30
45
60
Number of Single Base Substitutions

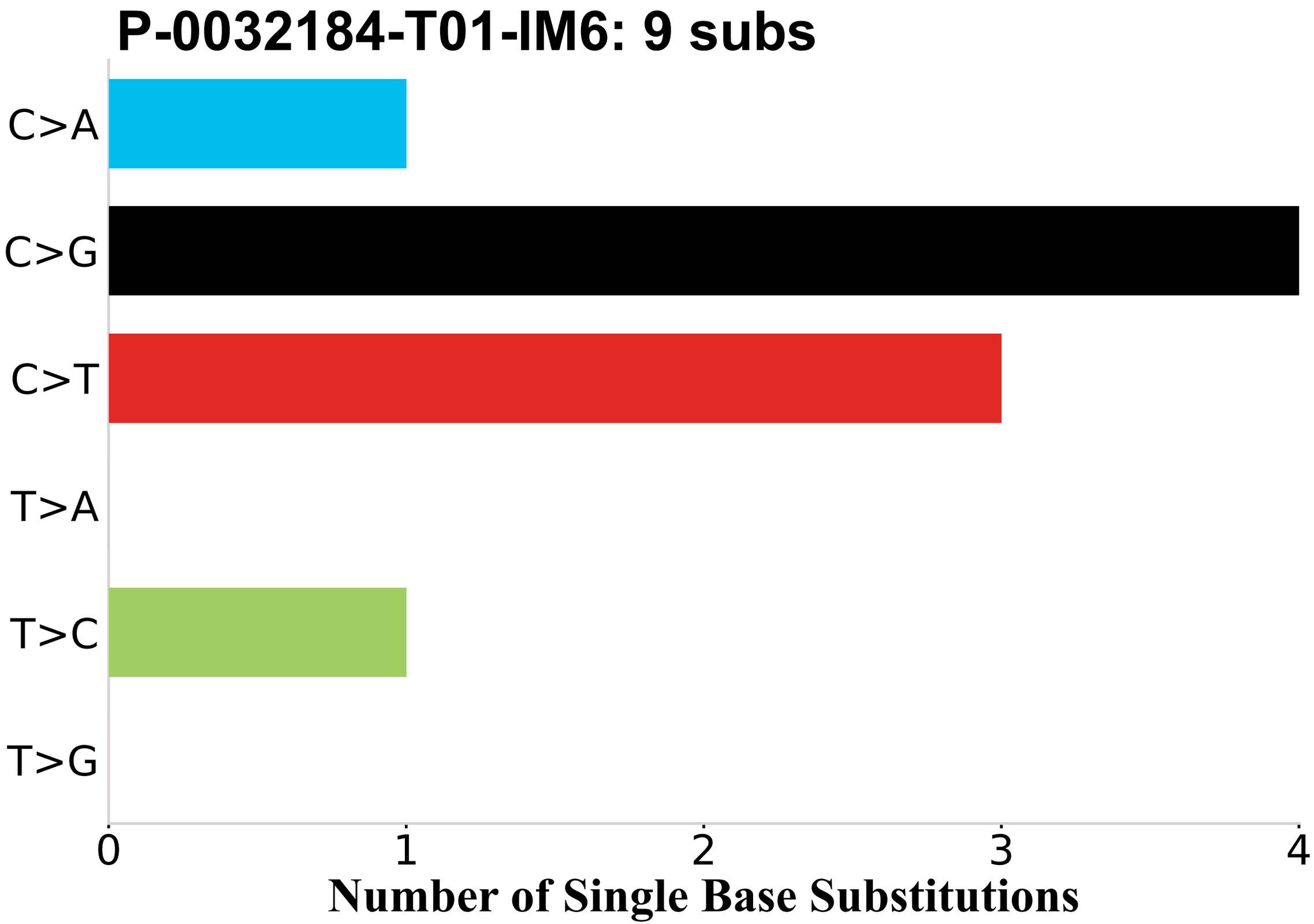

P-0031872-T01-IM6: 21 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

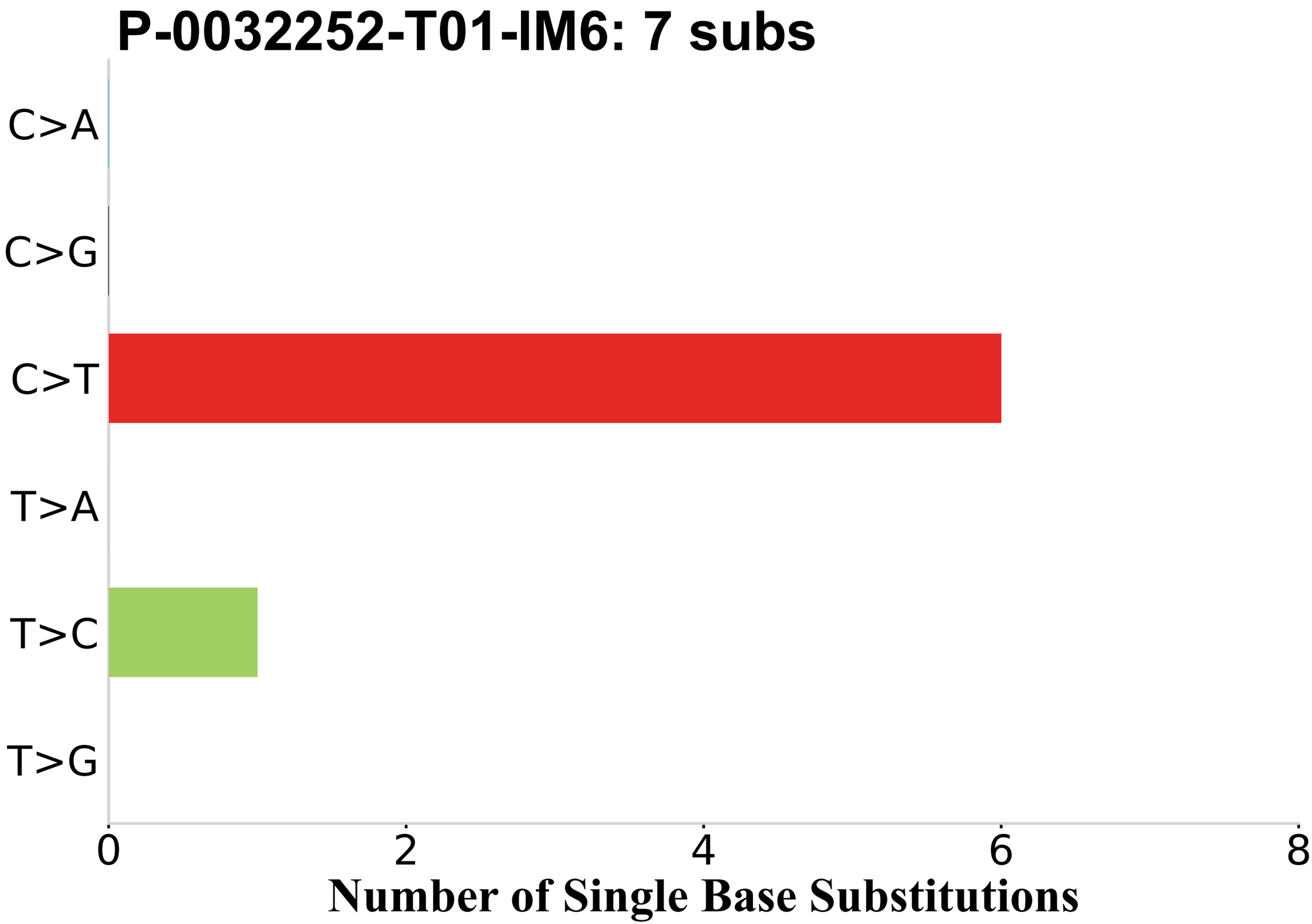

P-0032111-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

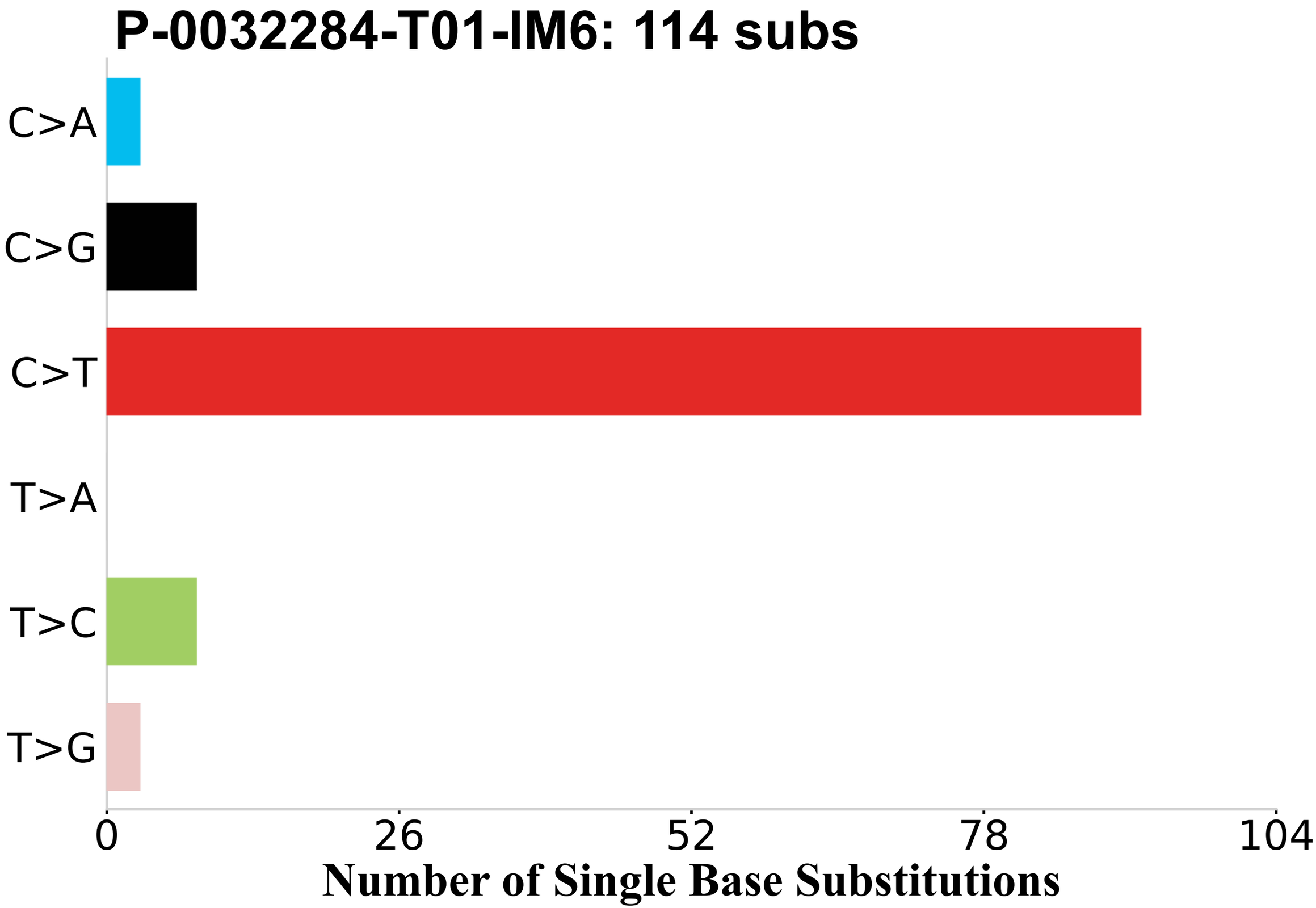

P-0032134-T01-IM6: 31 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

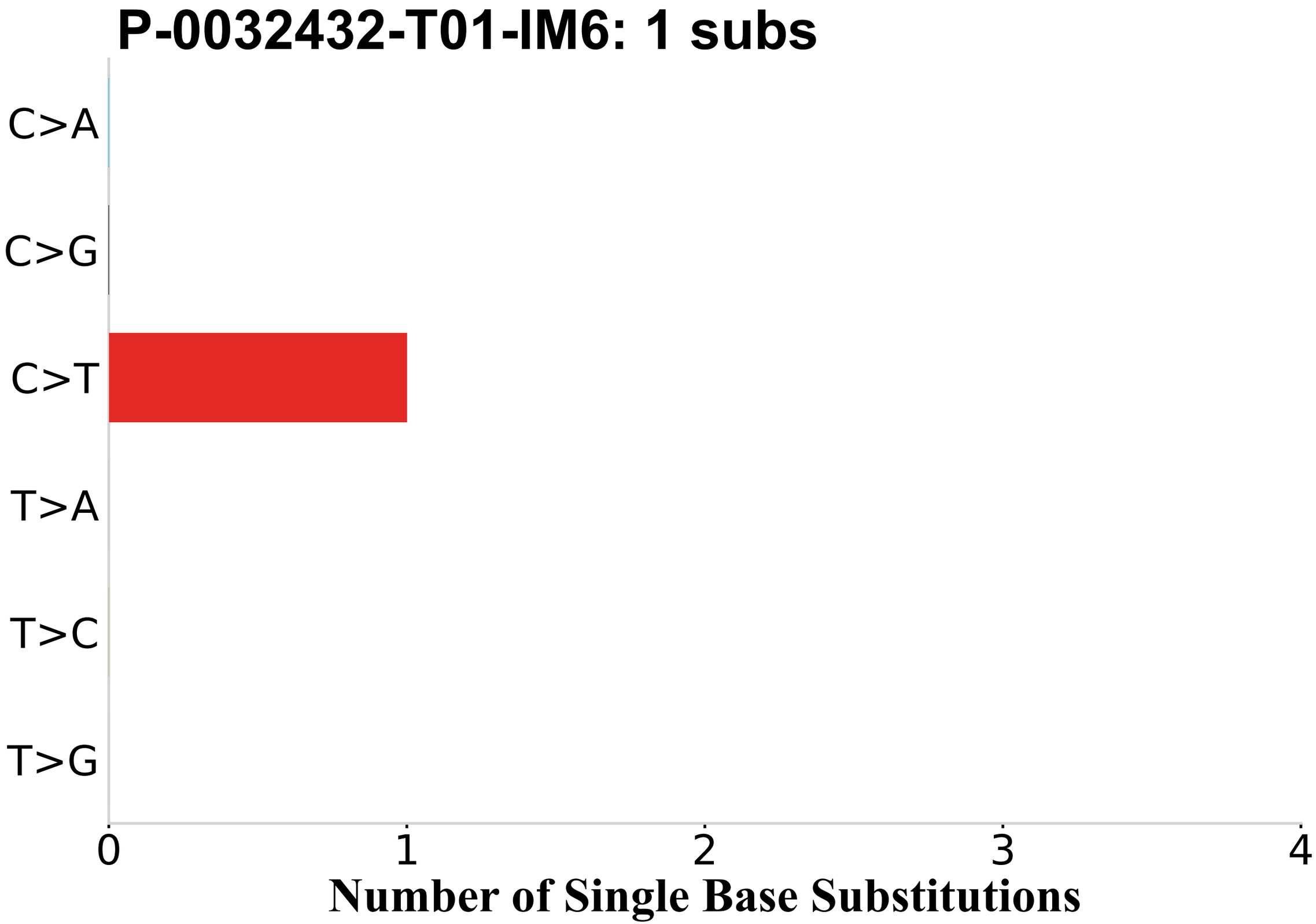

P-0032155-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

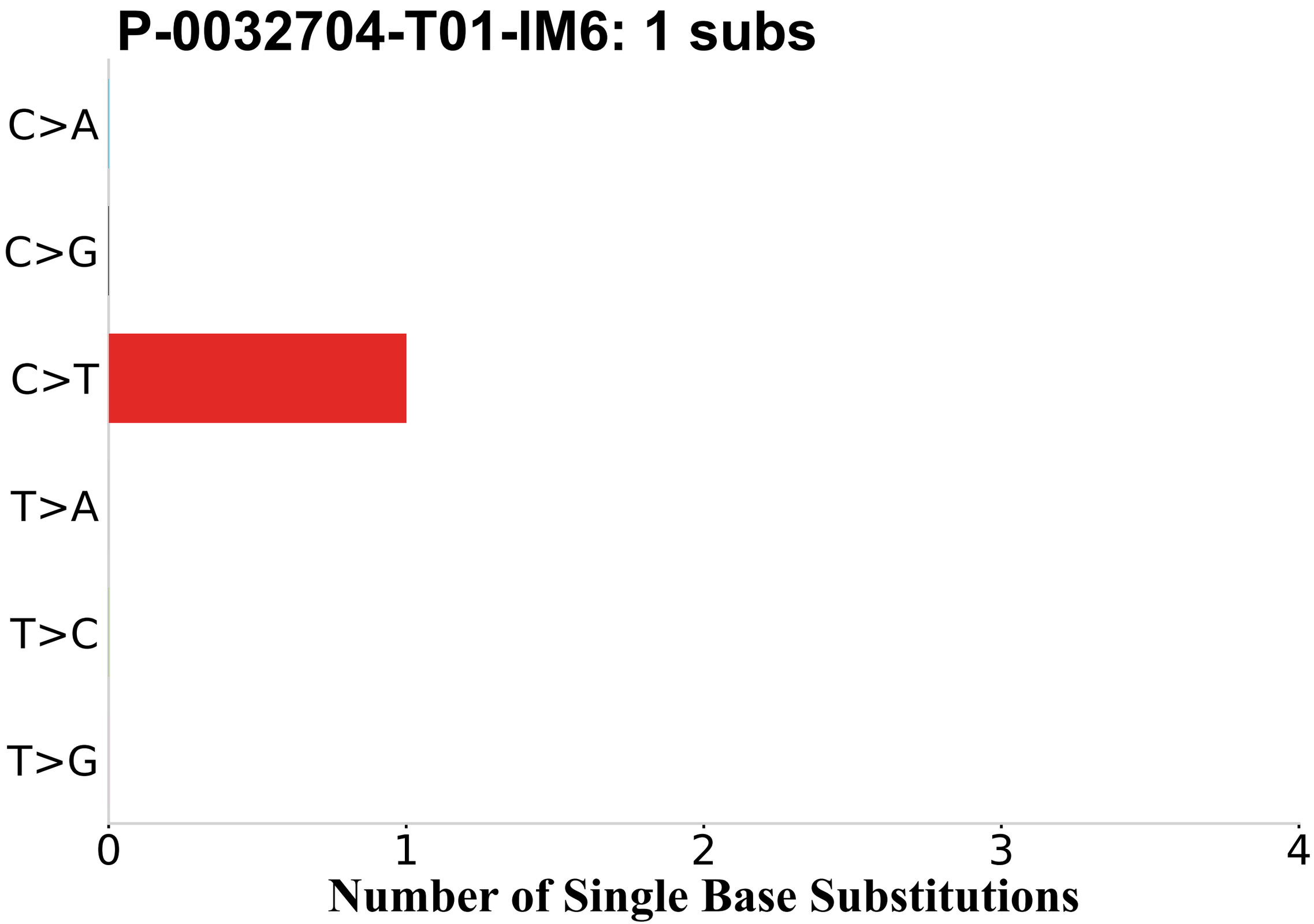

P-0032160-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

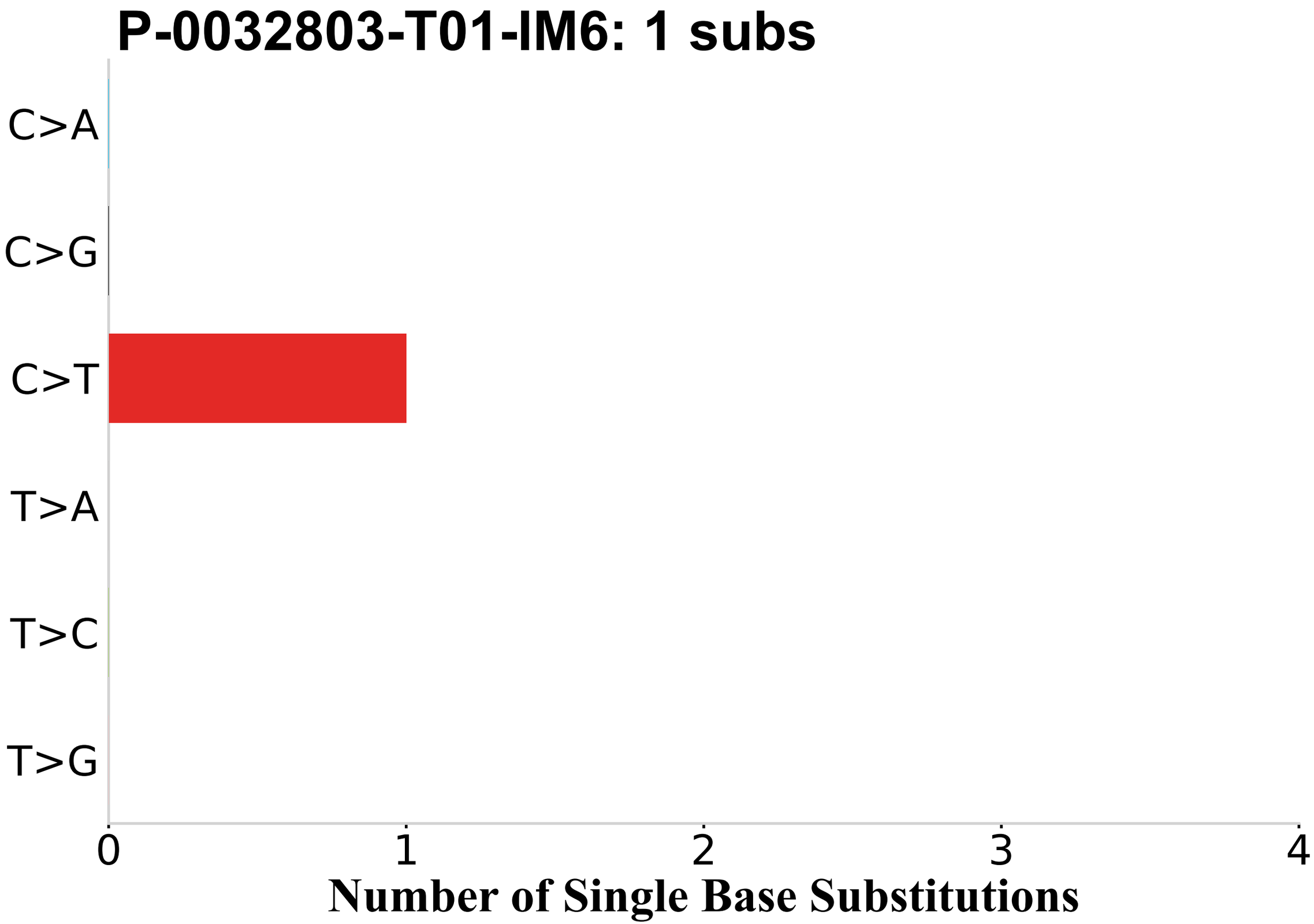

P-0032184-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

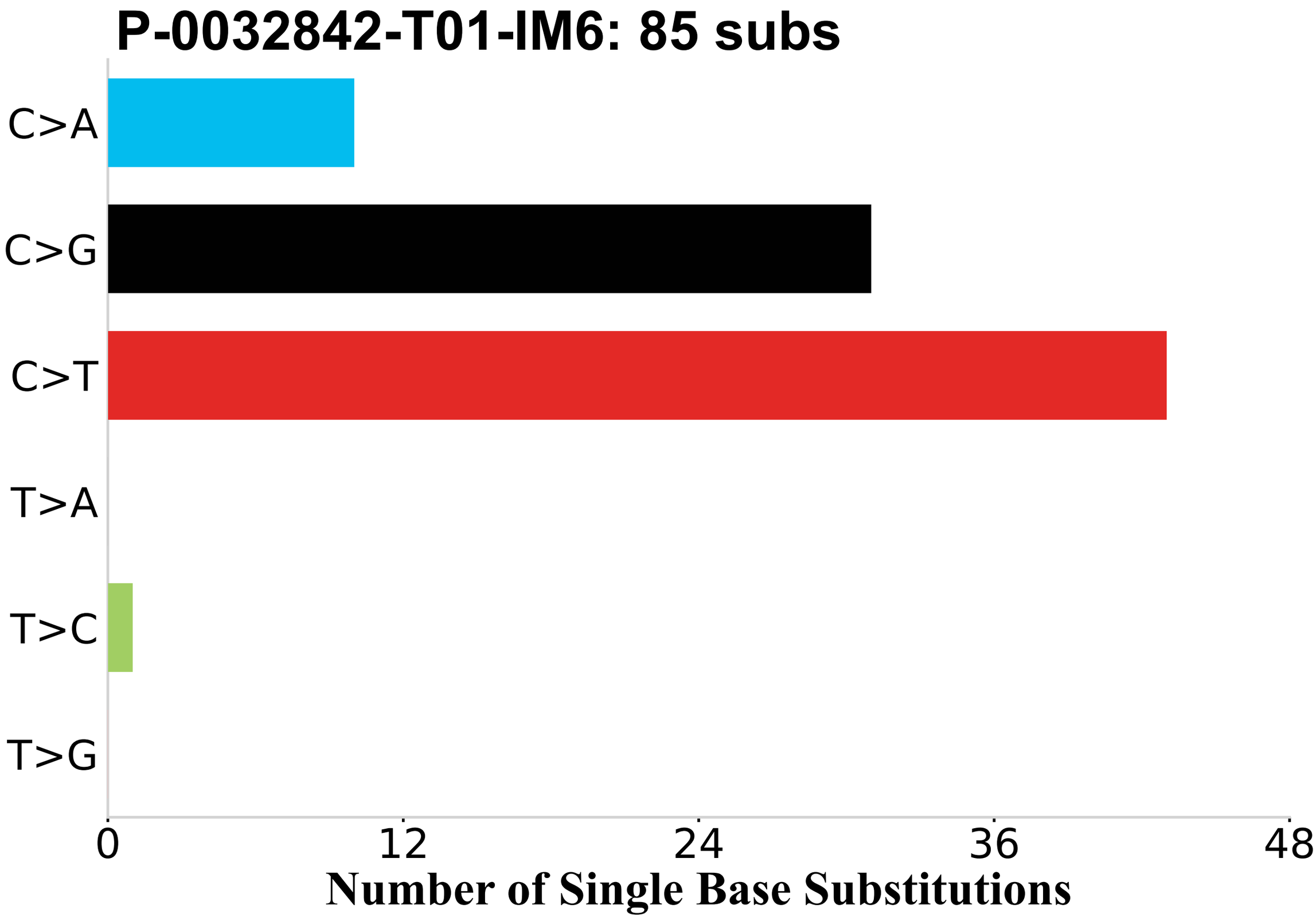

P-0032252-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

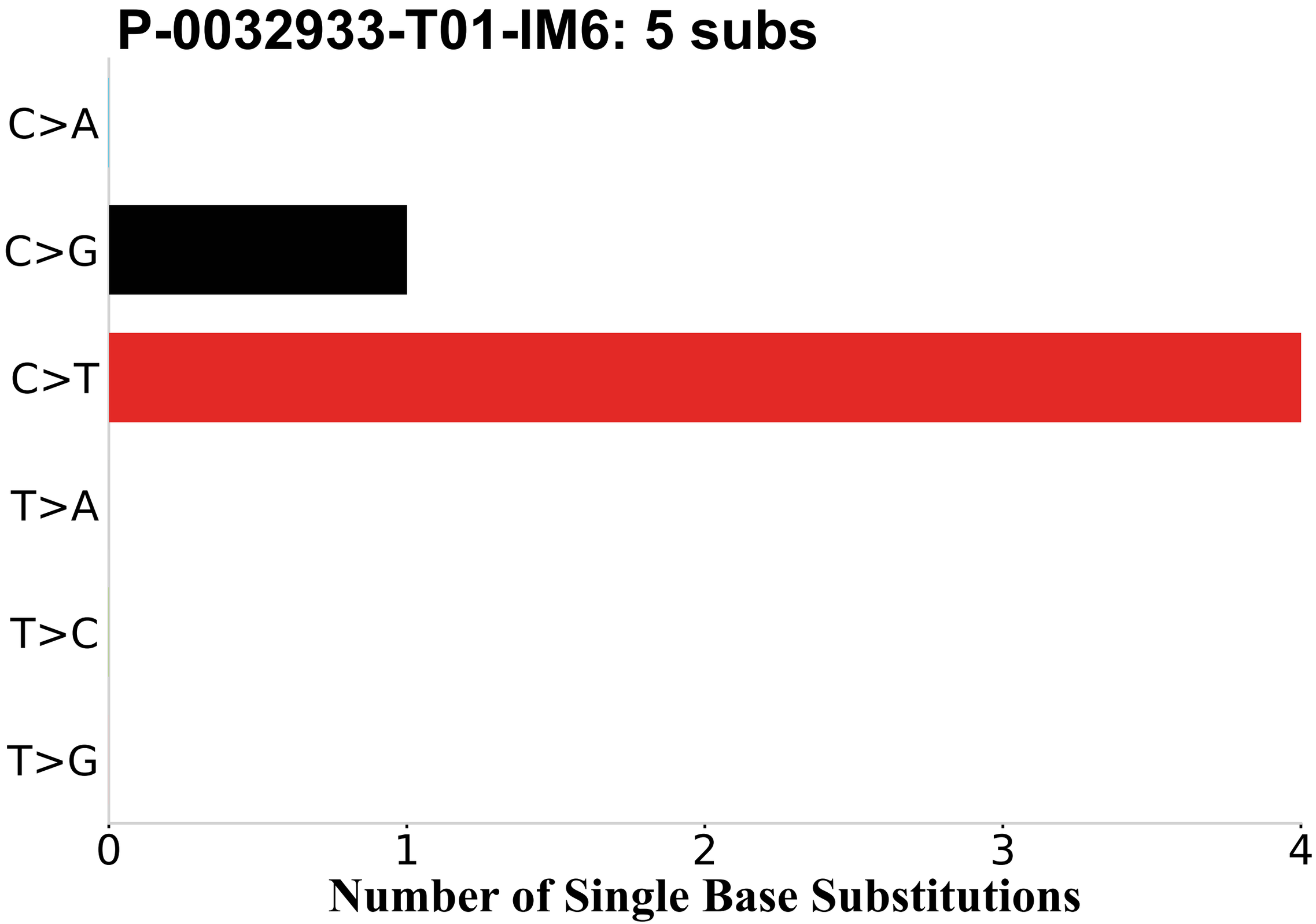

P-0032284-T01-IM6: 114 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
26
52
78
104
Number of Single Base Substitutions

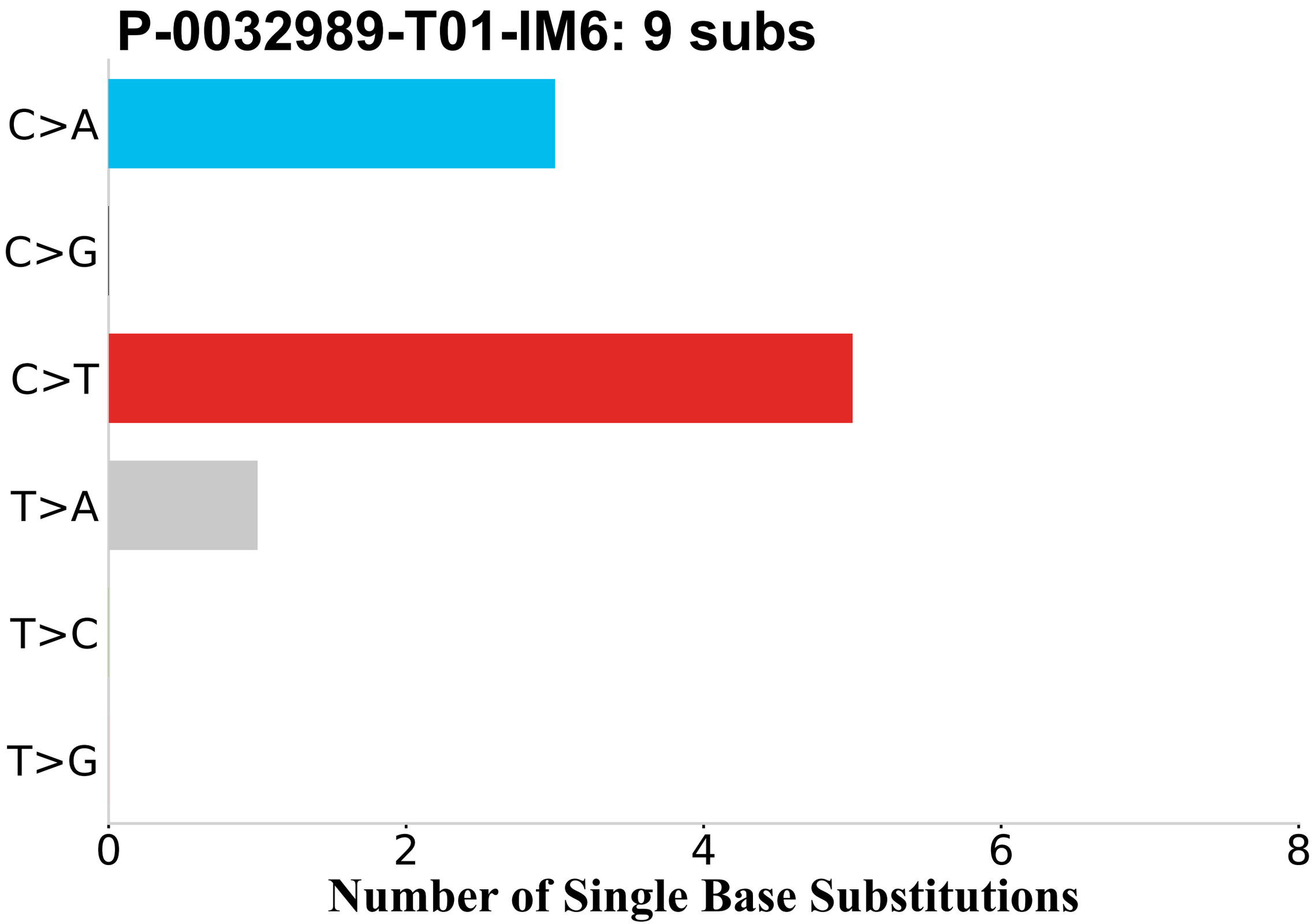

P-0032432-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

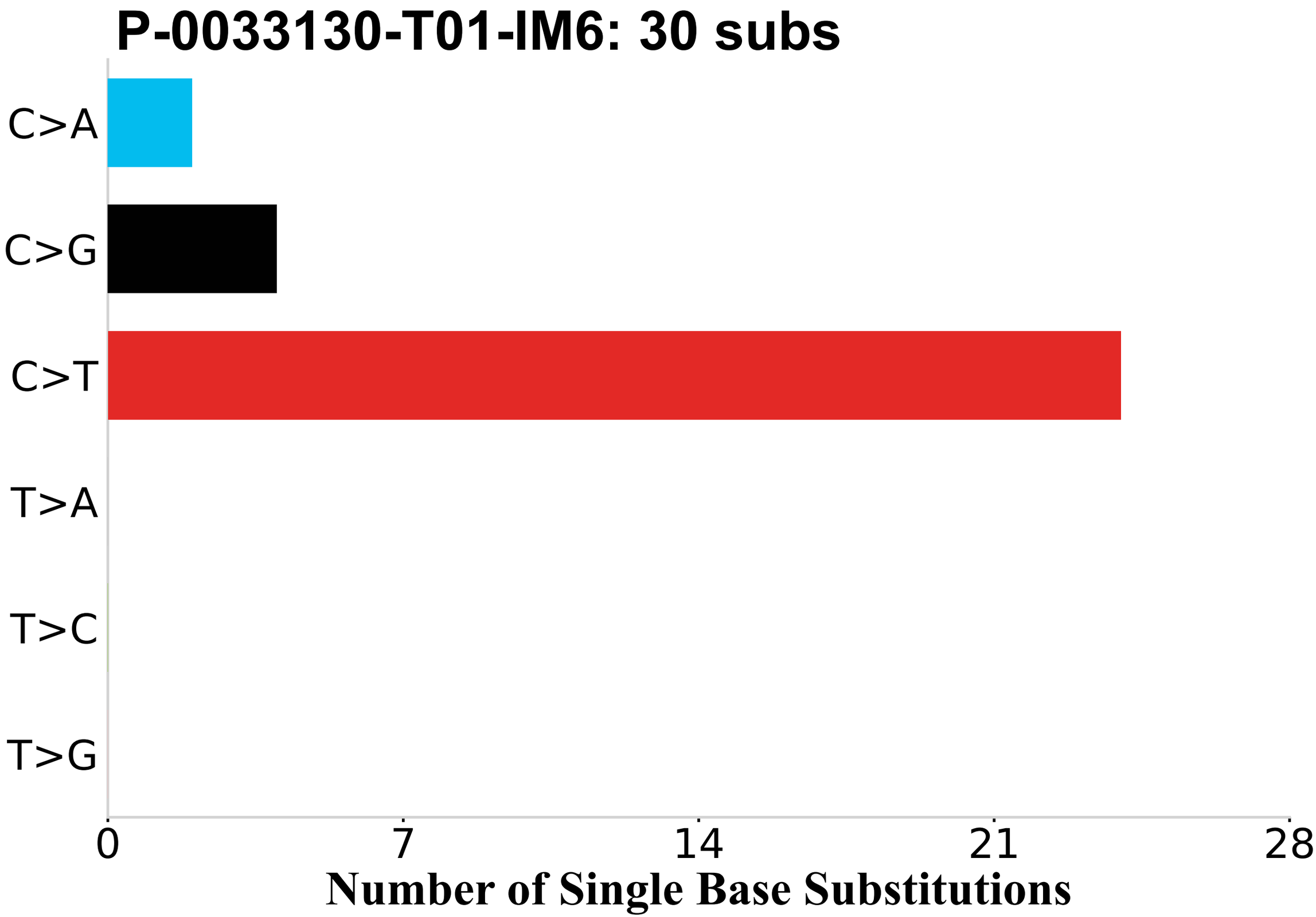

P-0032704-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

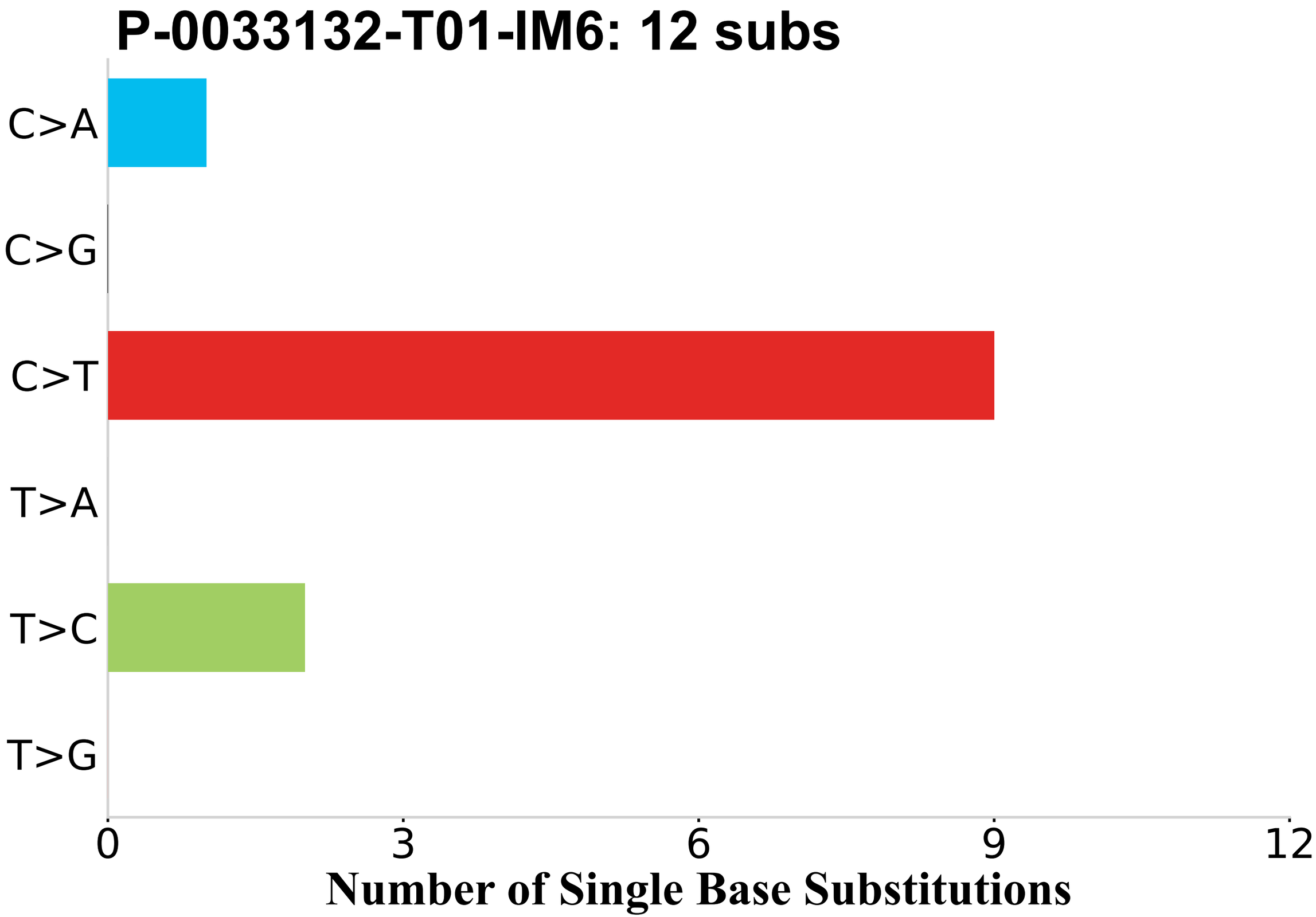

P-0032803-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

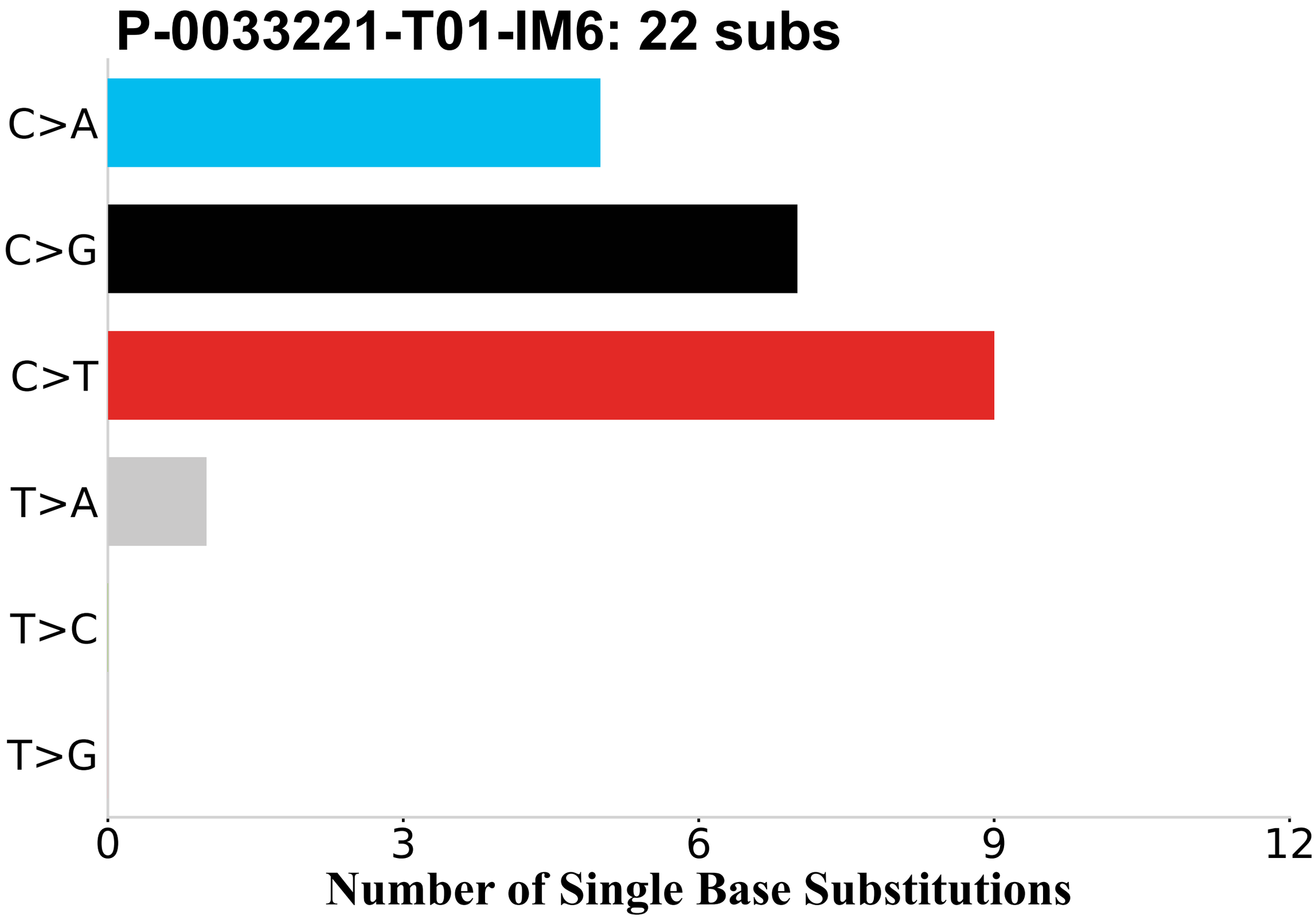

P-0032842-T01-IM6: 85 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
12
24
36
48
Number of Single Base Substitutions

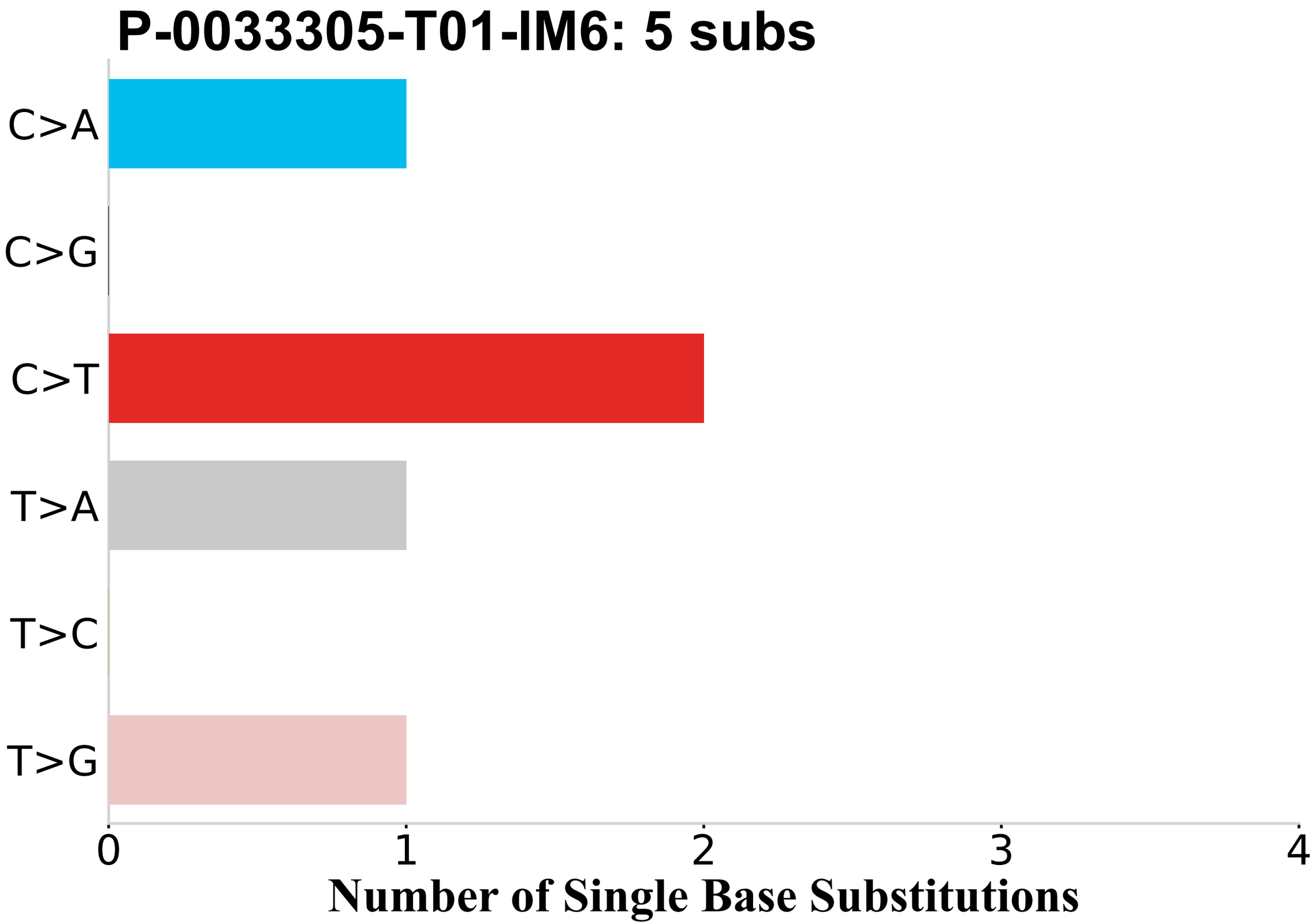

P-0032933-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

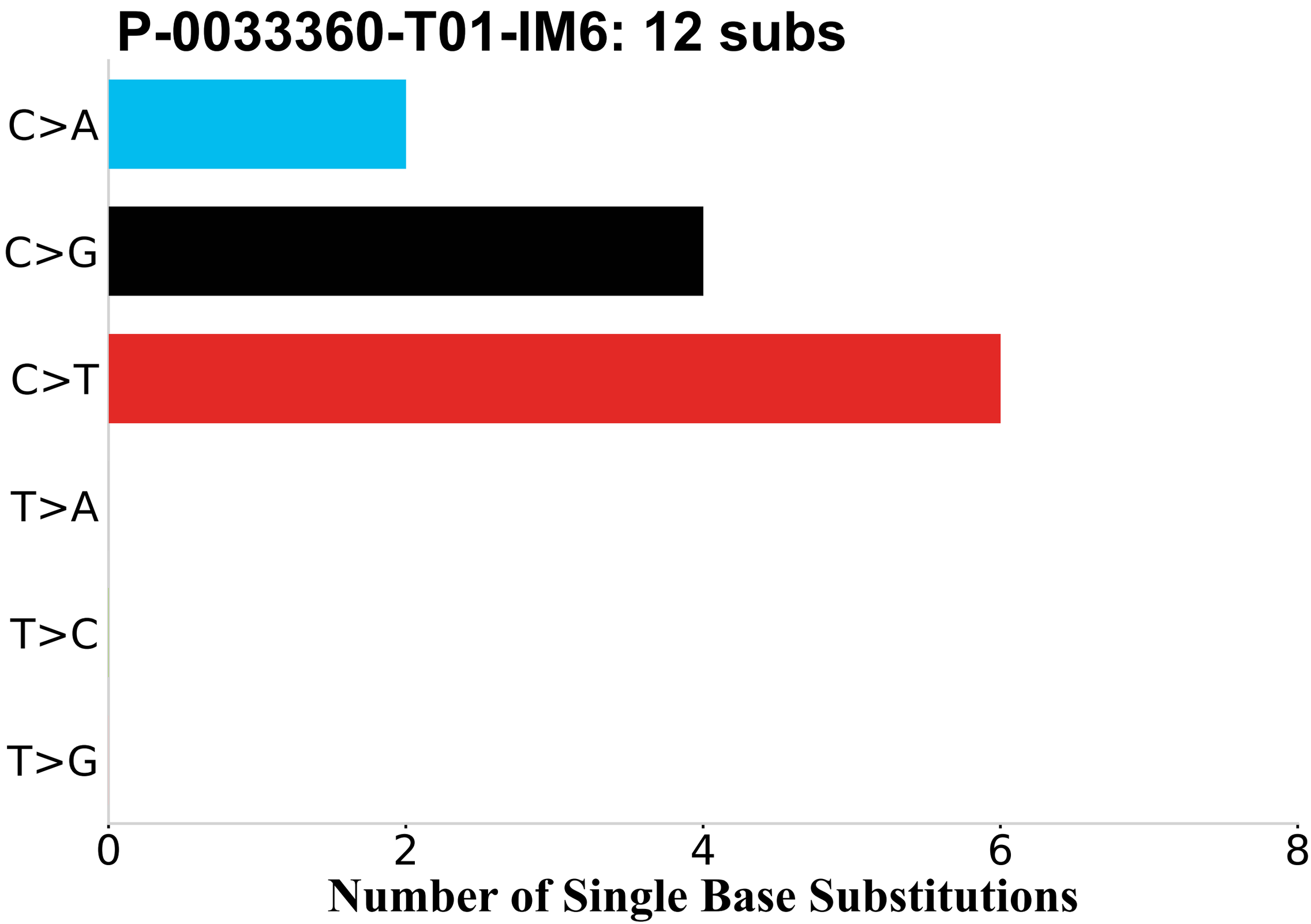

P-0032989-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0033130-T01-IM6: 30 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0033132-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0033221-T01-IM6: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0033305-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0033360-T01-IM6: 12 subs
C>A
C>G
C>T
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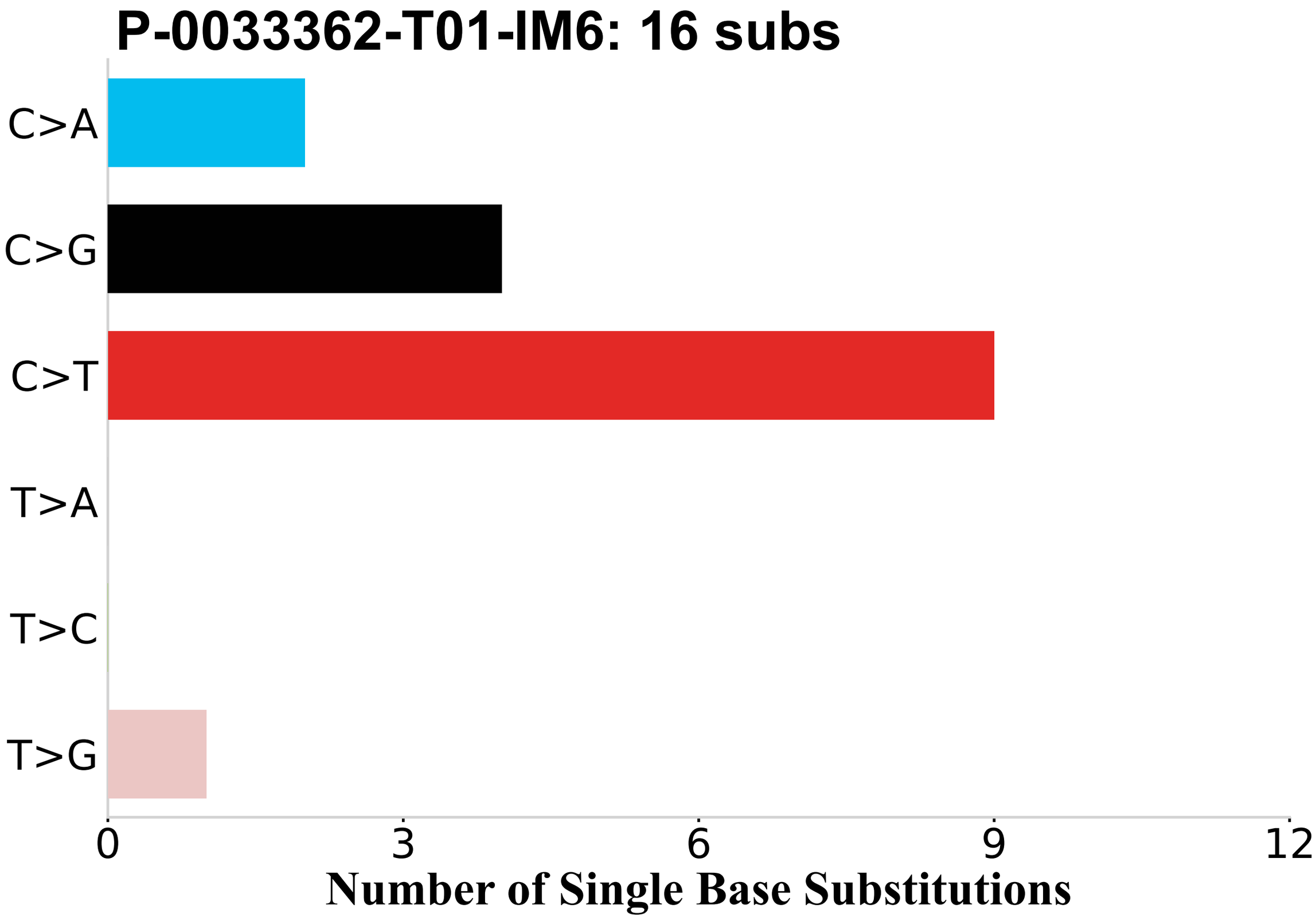
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0033362-T01-IM6: 16 subs
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C>G
C>T
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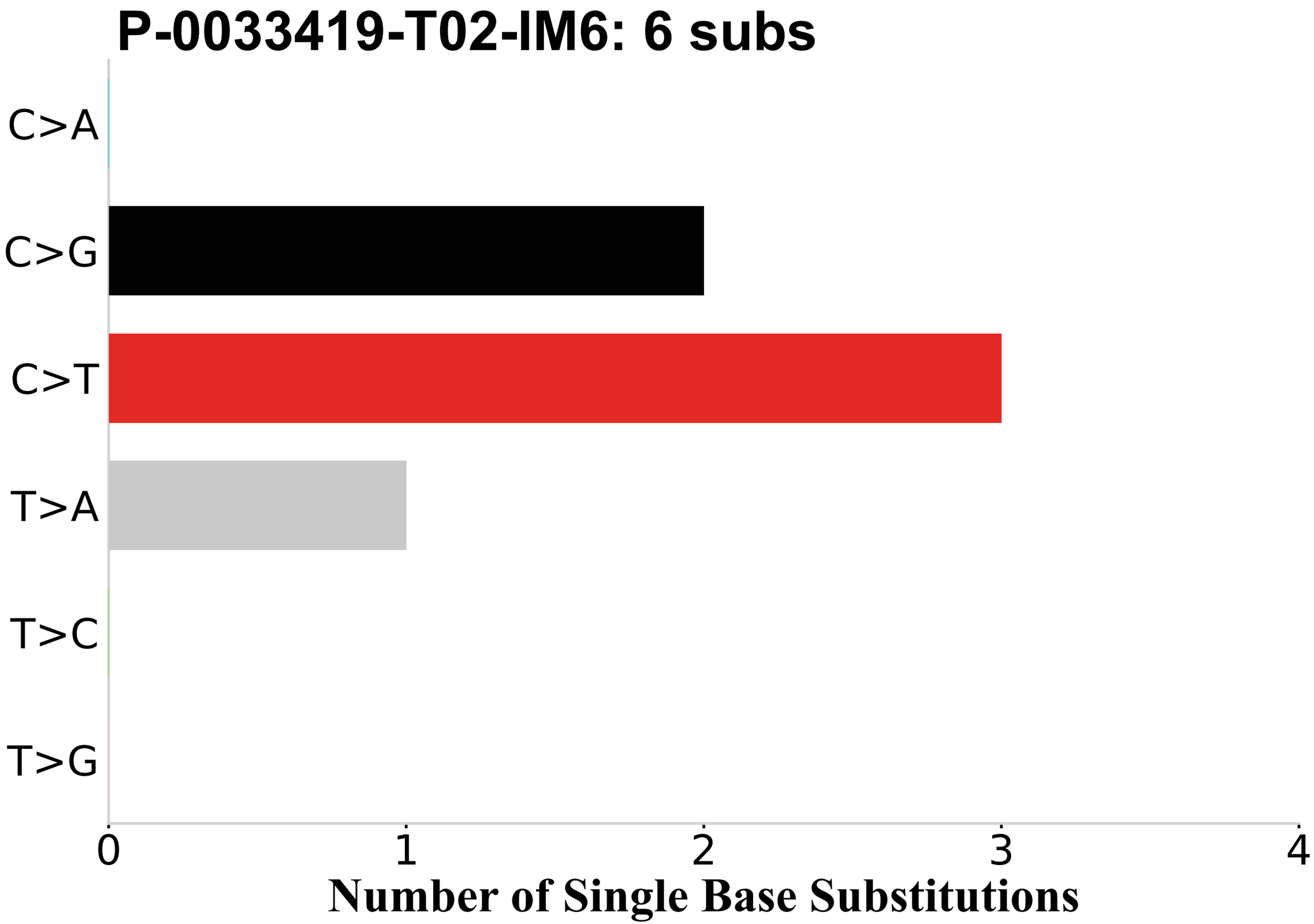
3
6
9
12
Number of Single Base Substitutions


P-0033419-T02-IM6: 6 subs
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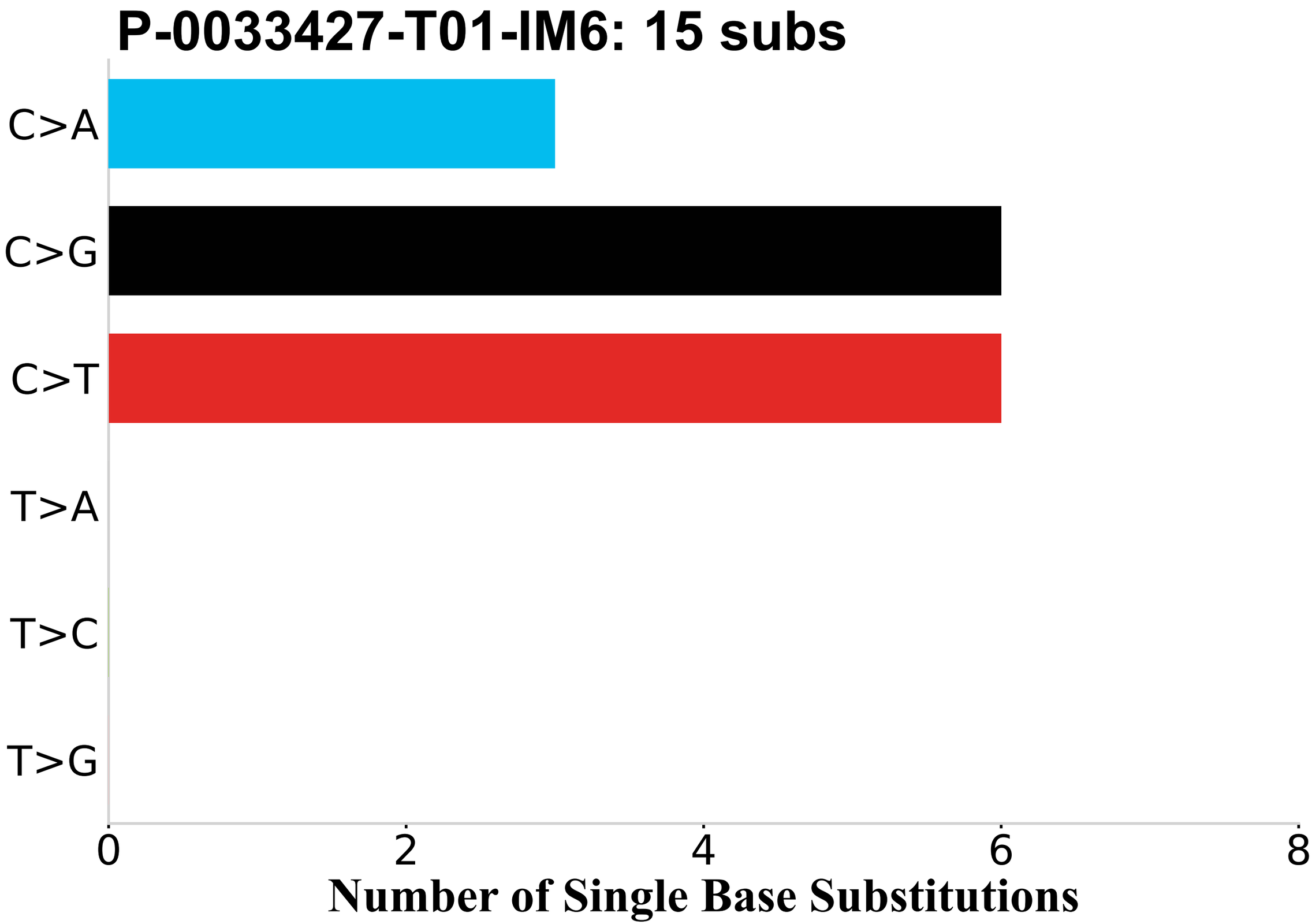
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0033427-T01-IM6: 15 subs
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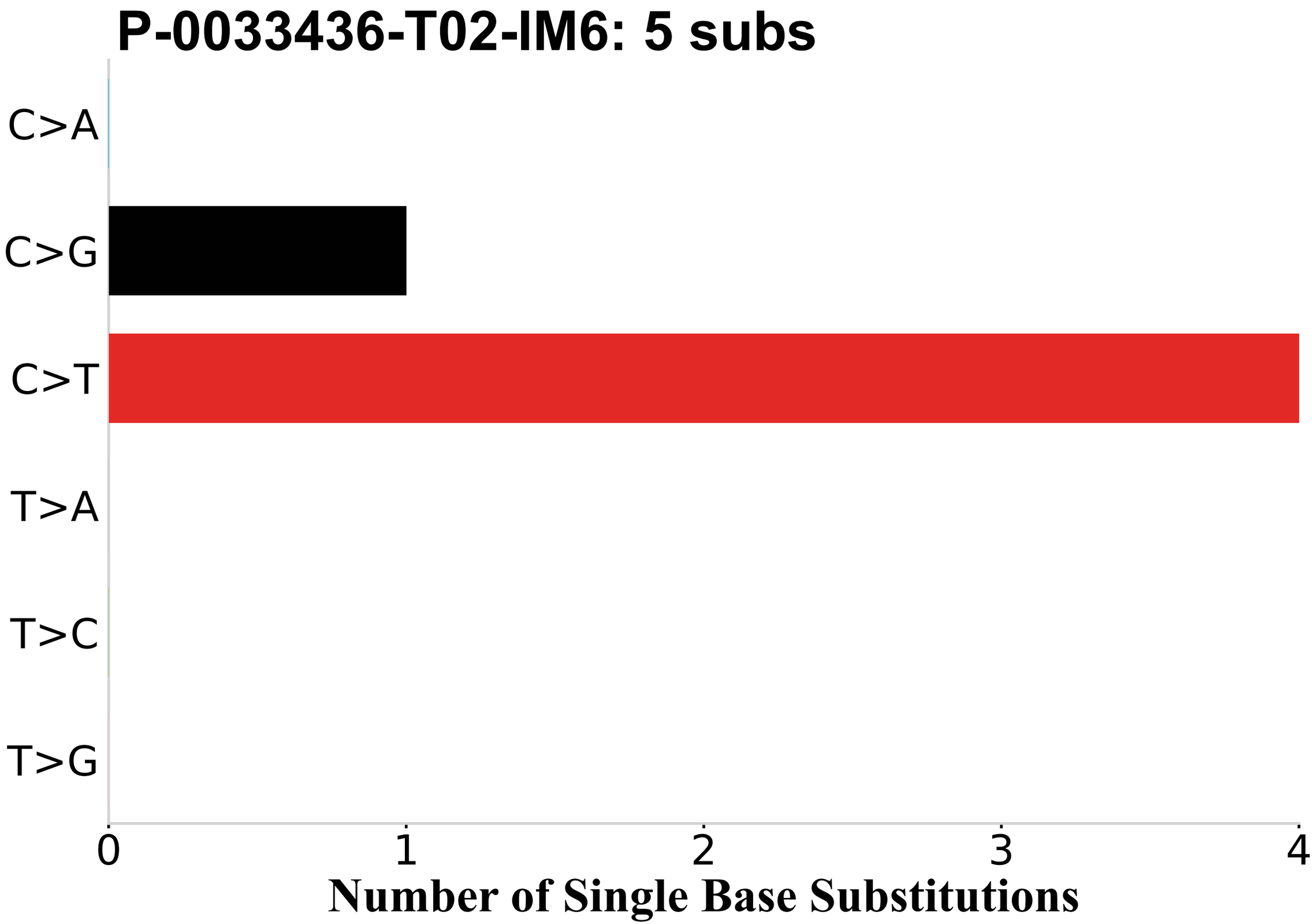
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0033436-T02-IM6: 5 subs
C>A
C>G
C>T
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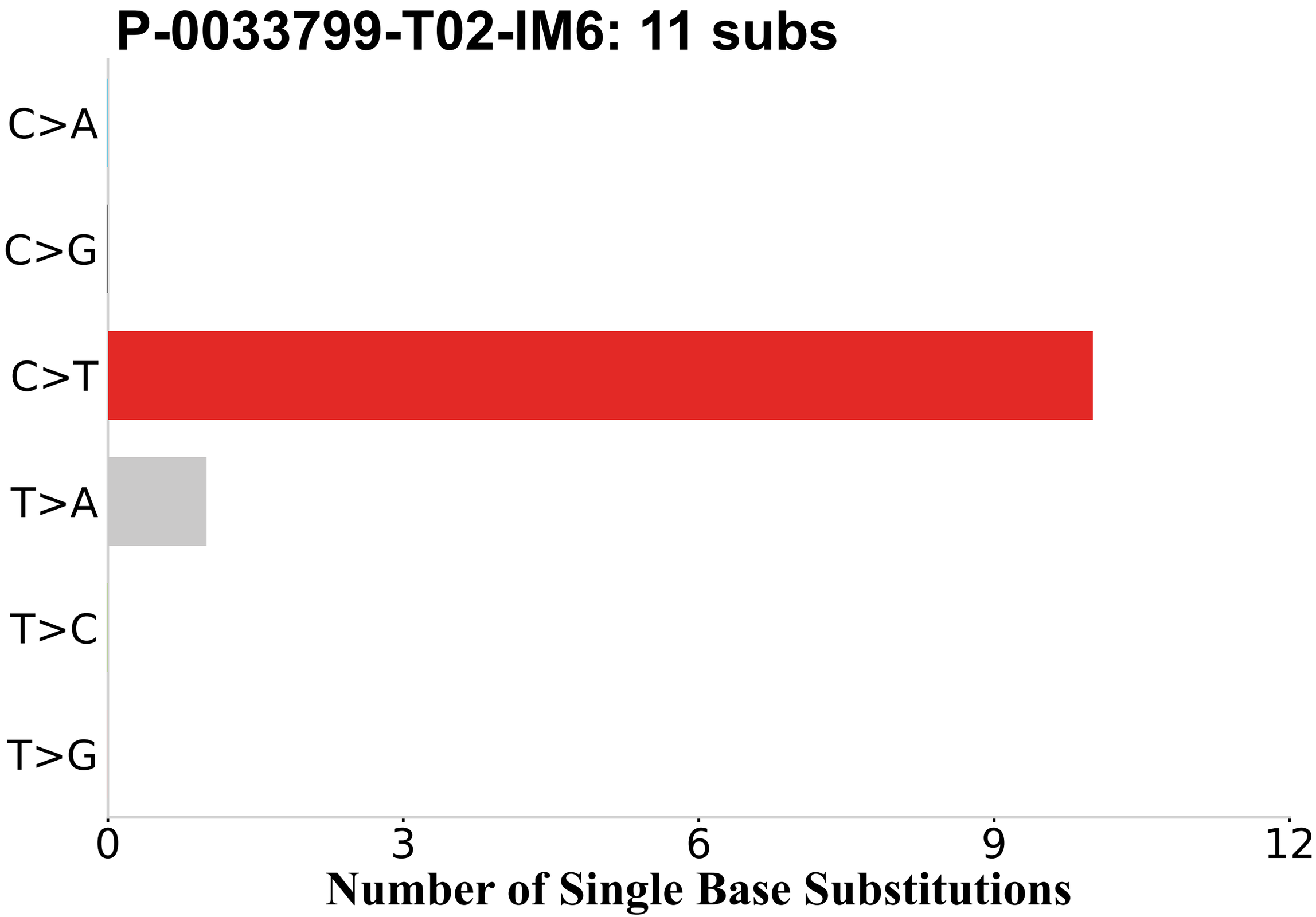
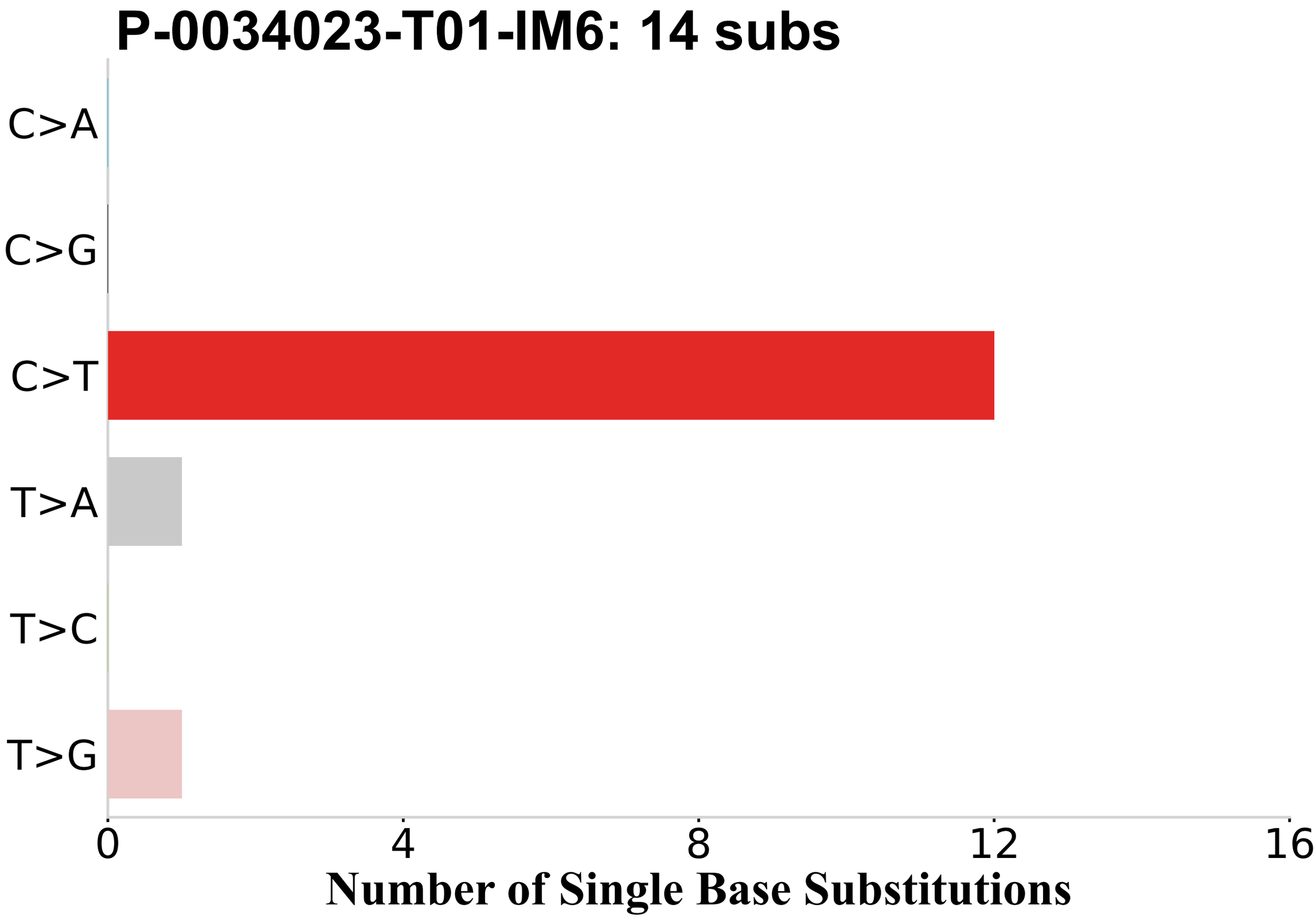
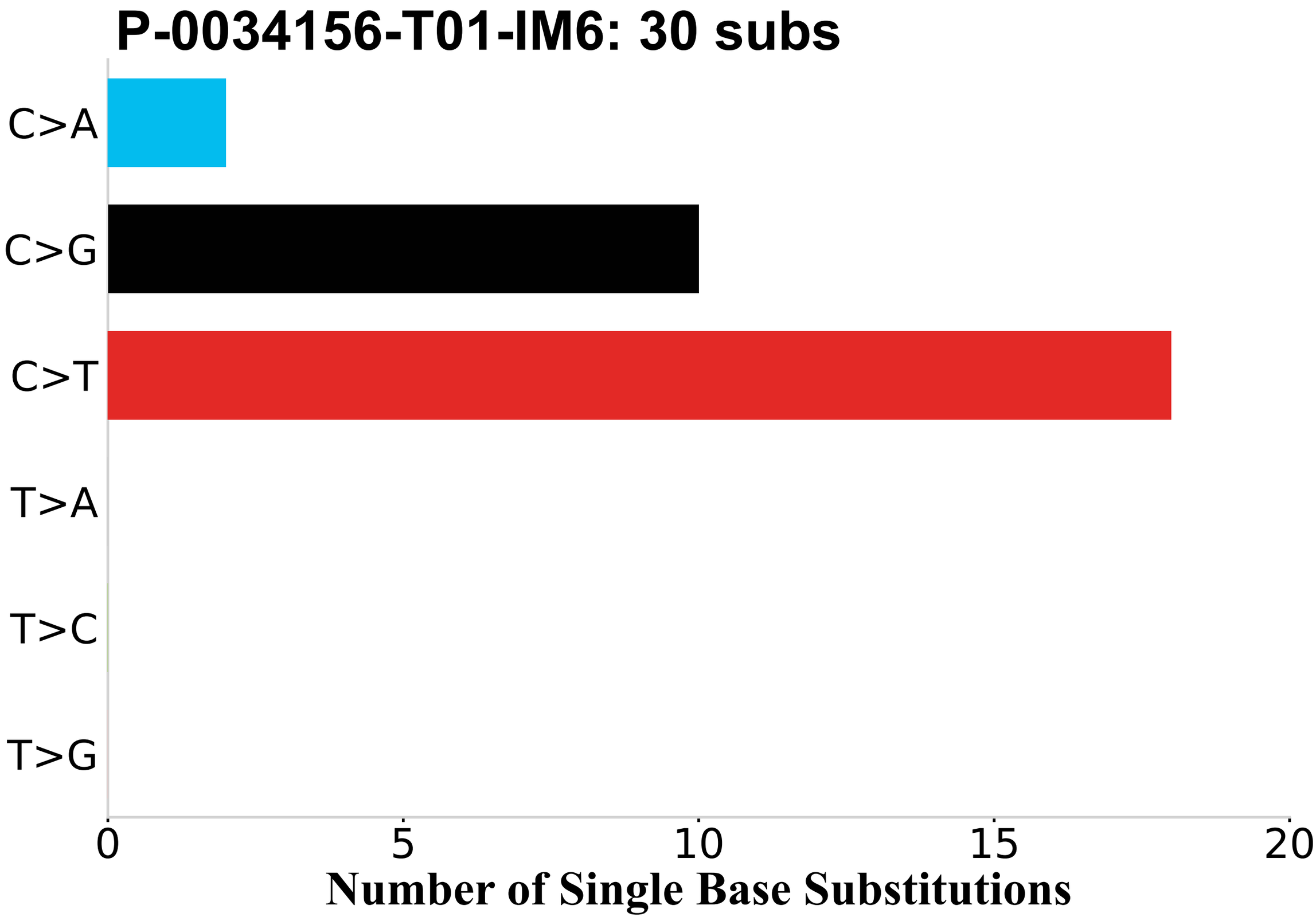
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0033799-T02-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

P-0033925-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0034023-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0034156-T01-IM6: 30 subs
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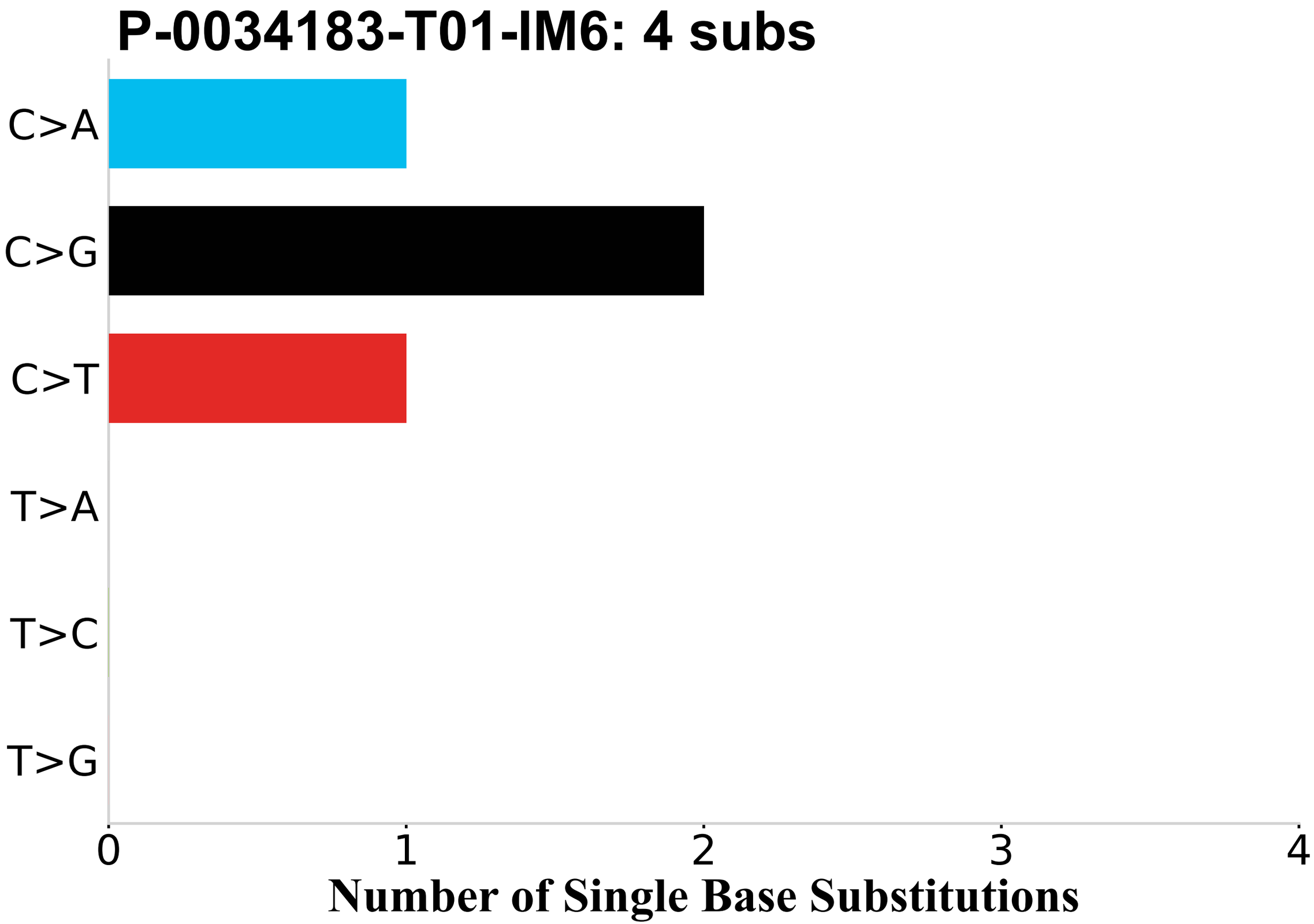
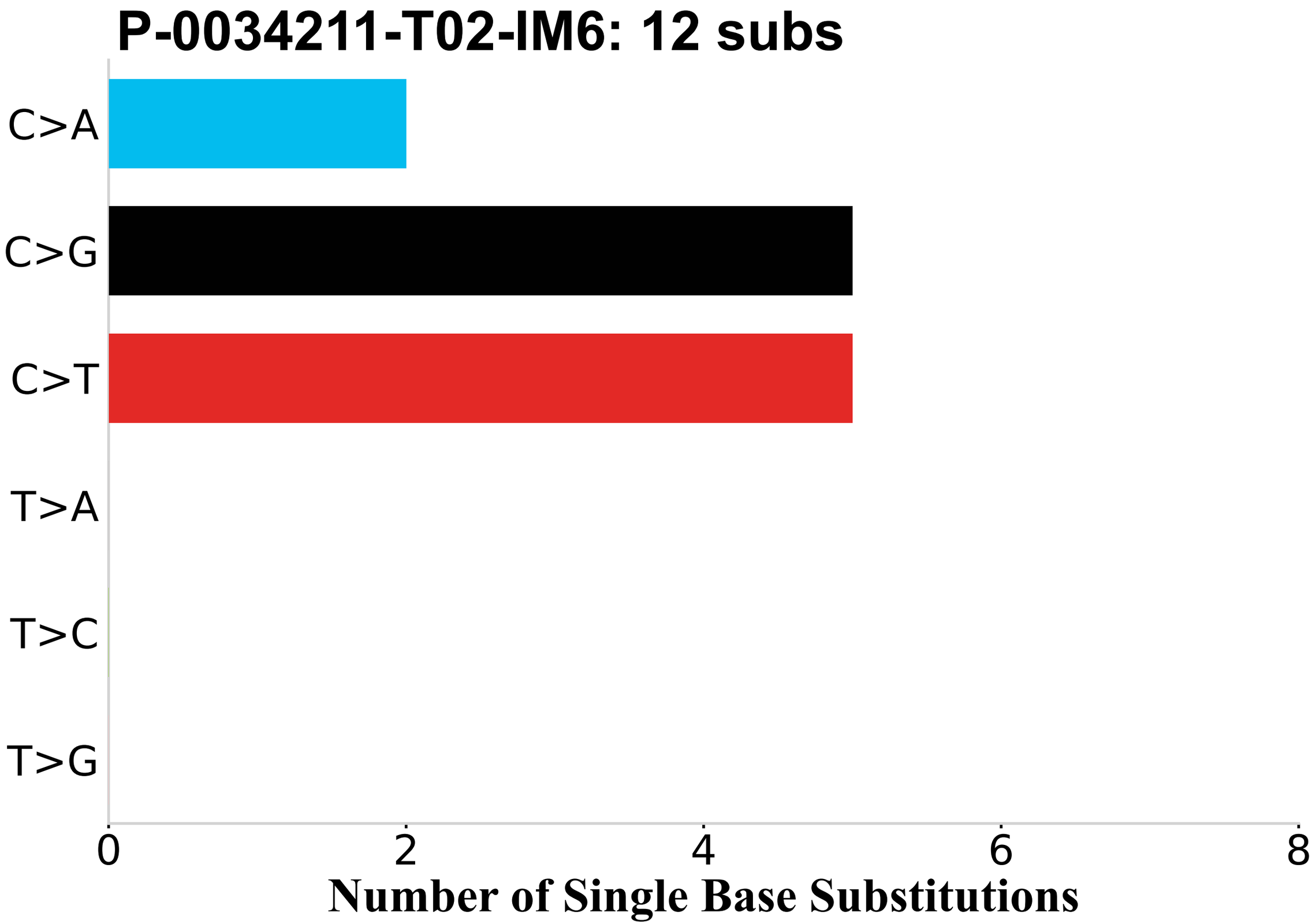
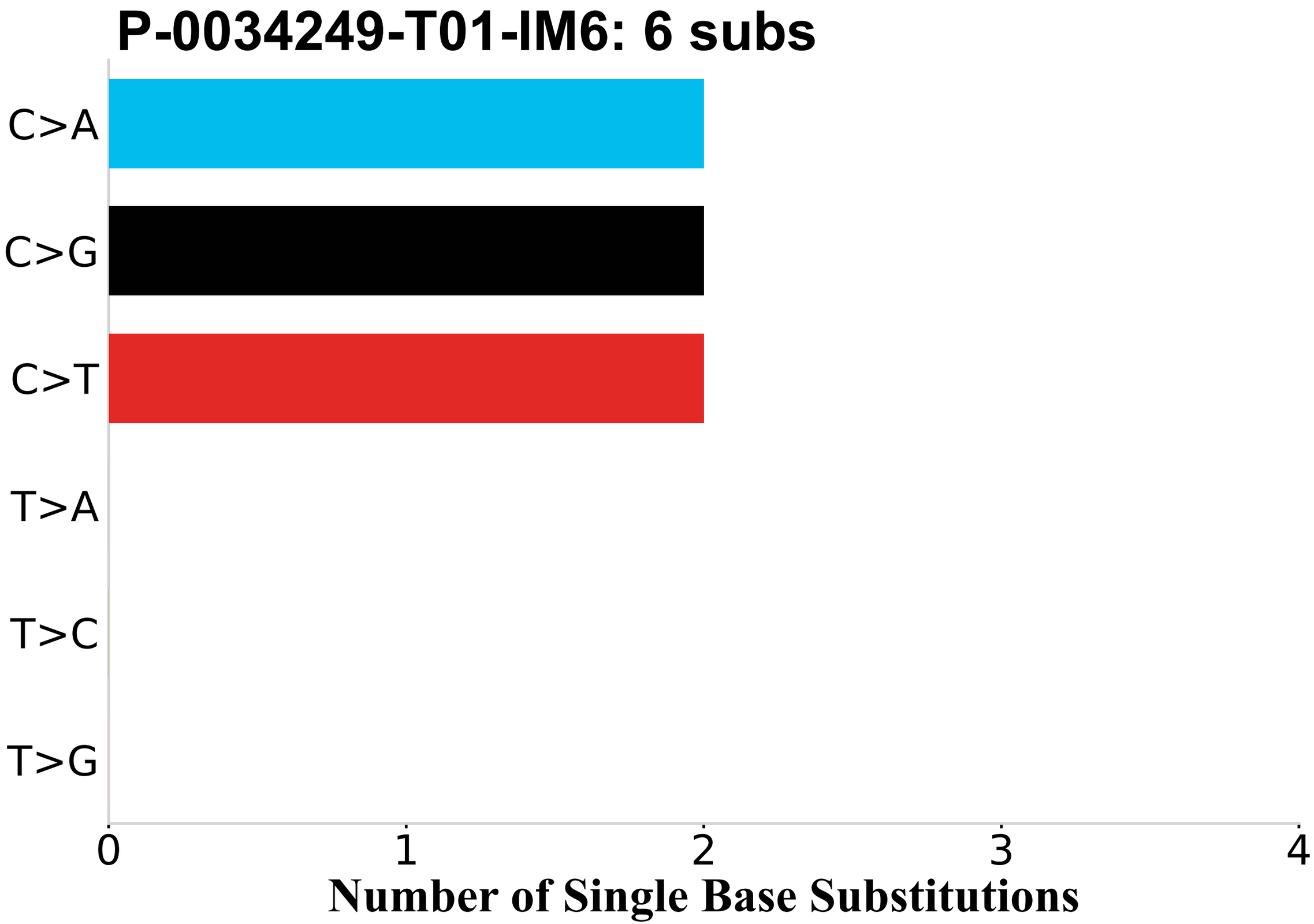
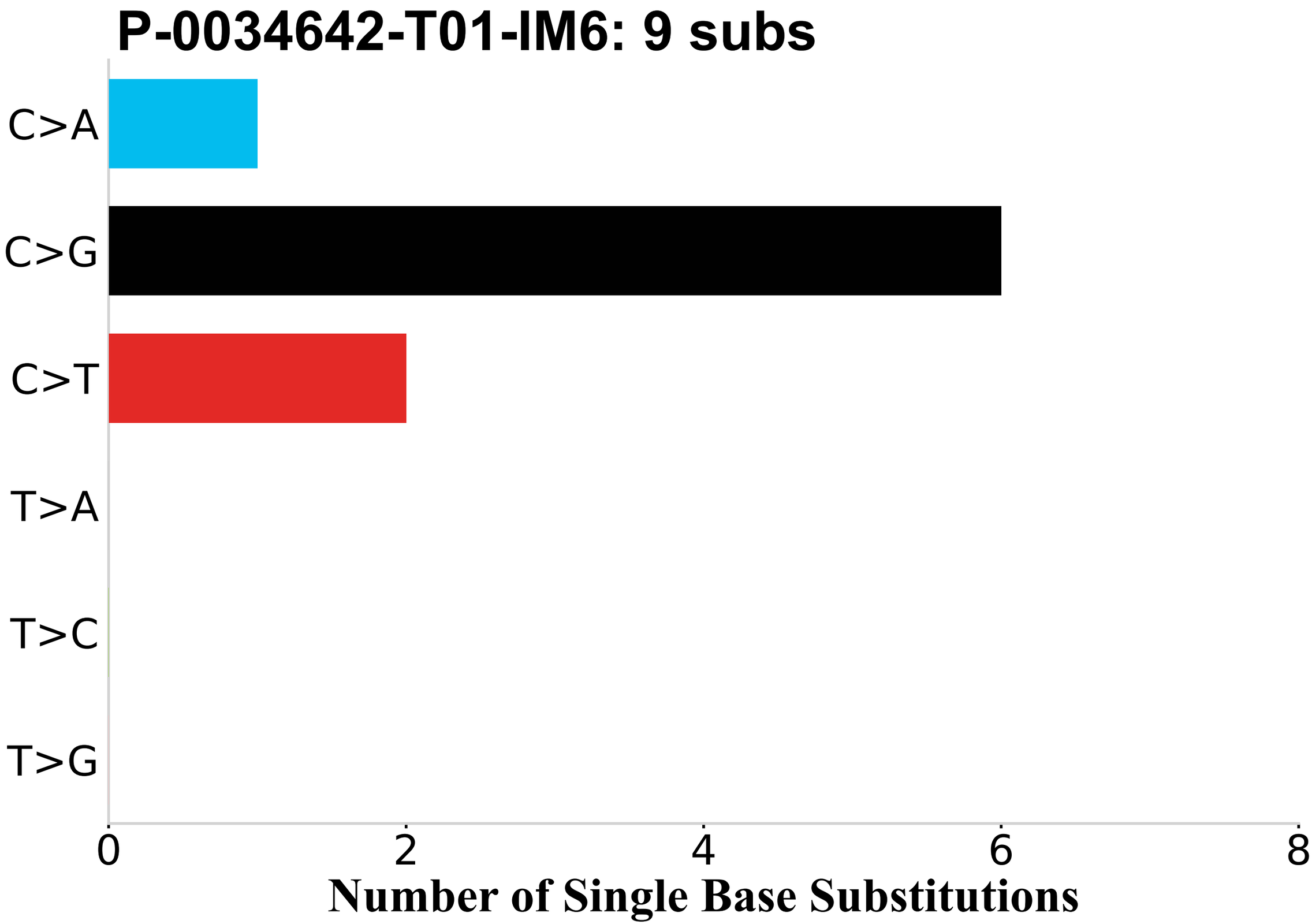
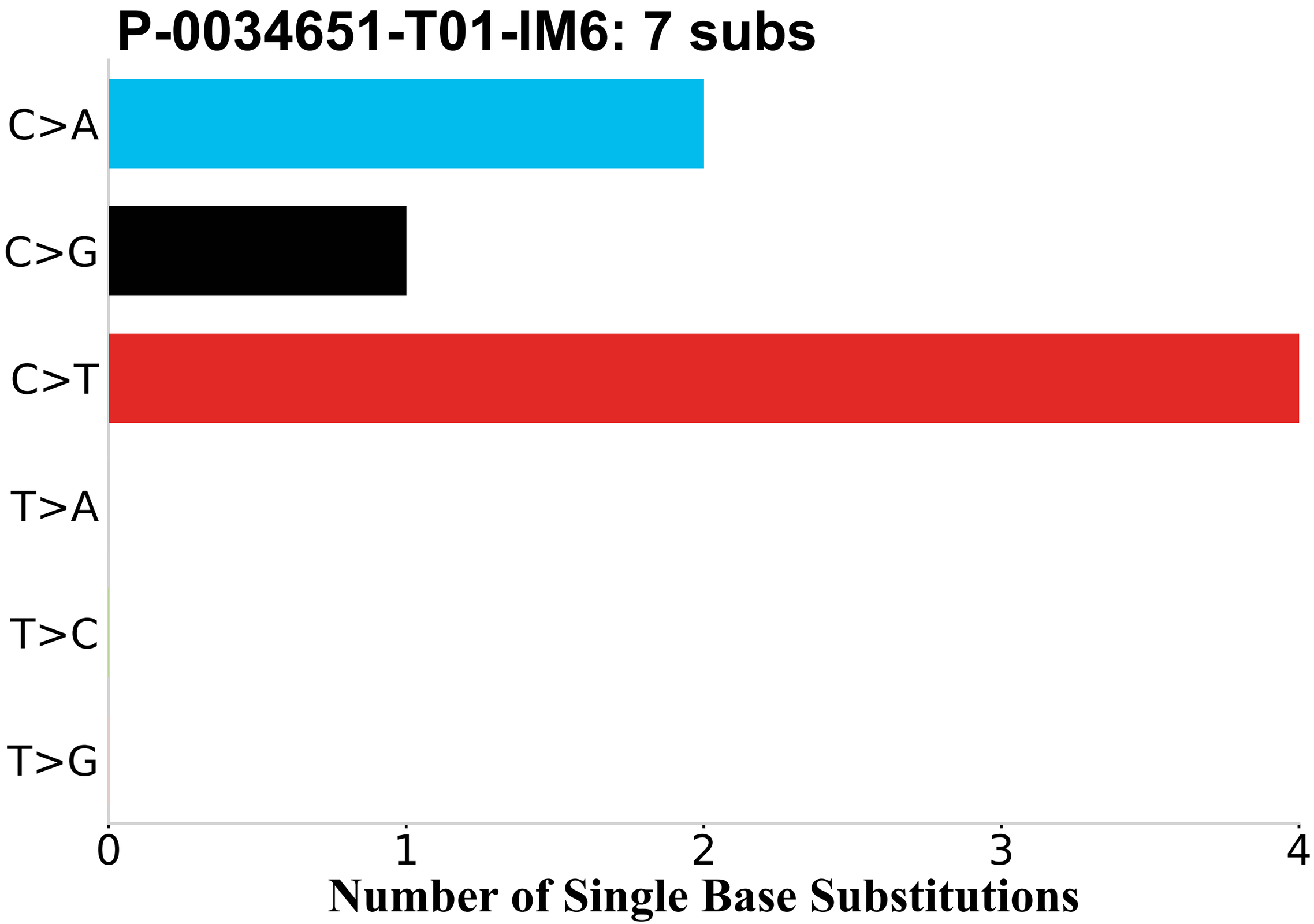
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

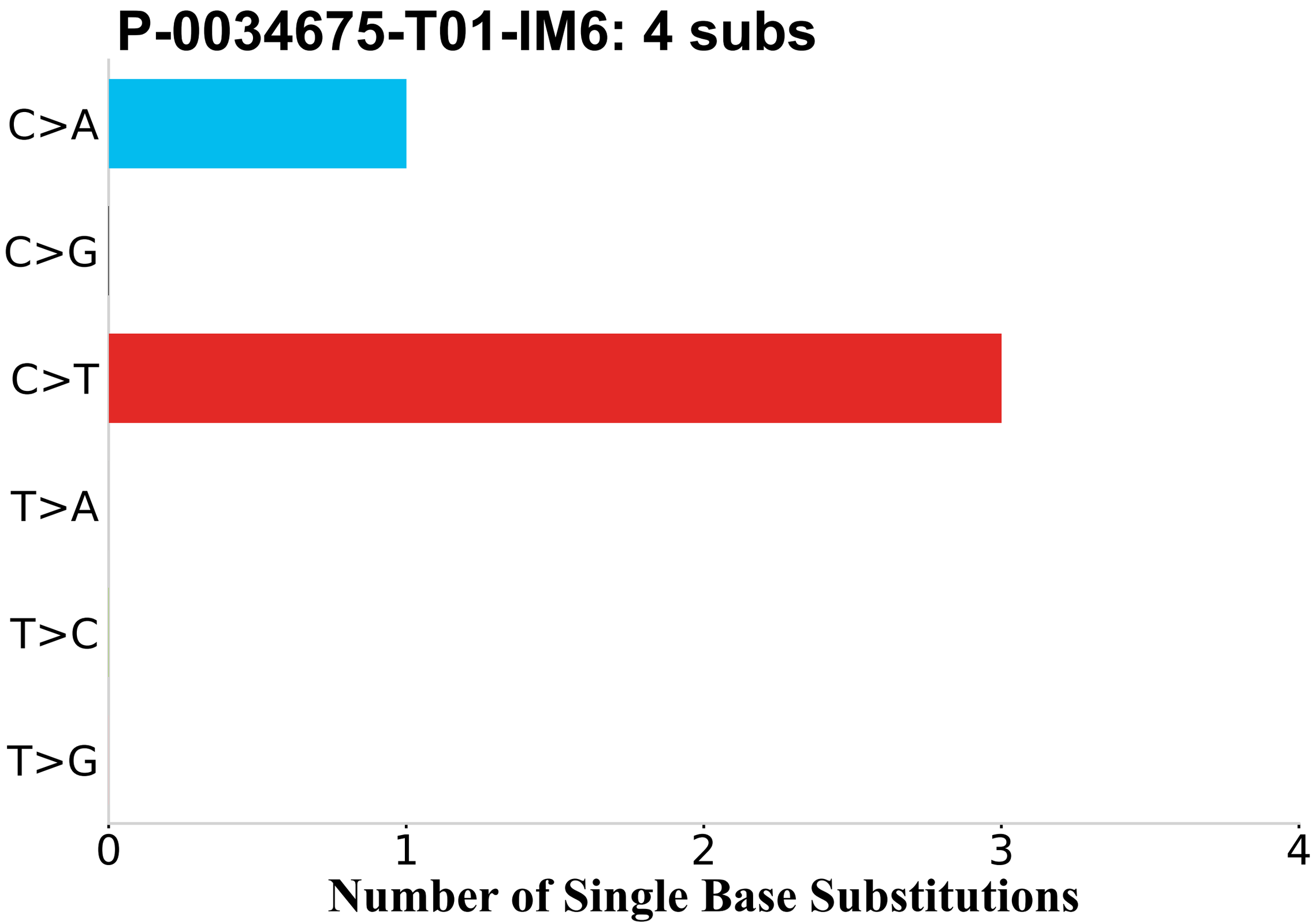

P-0034183-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

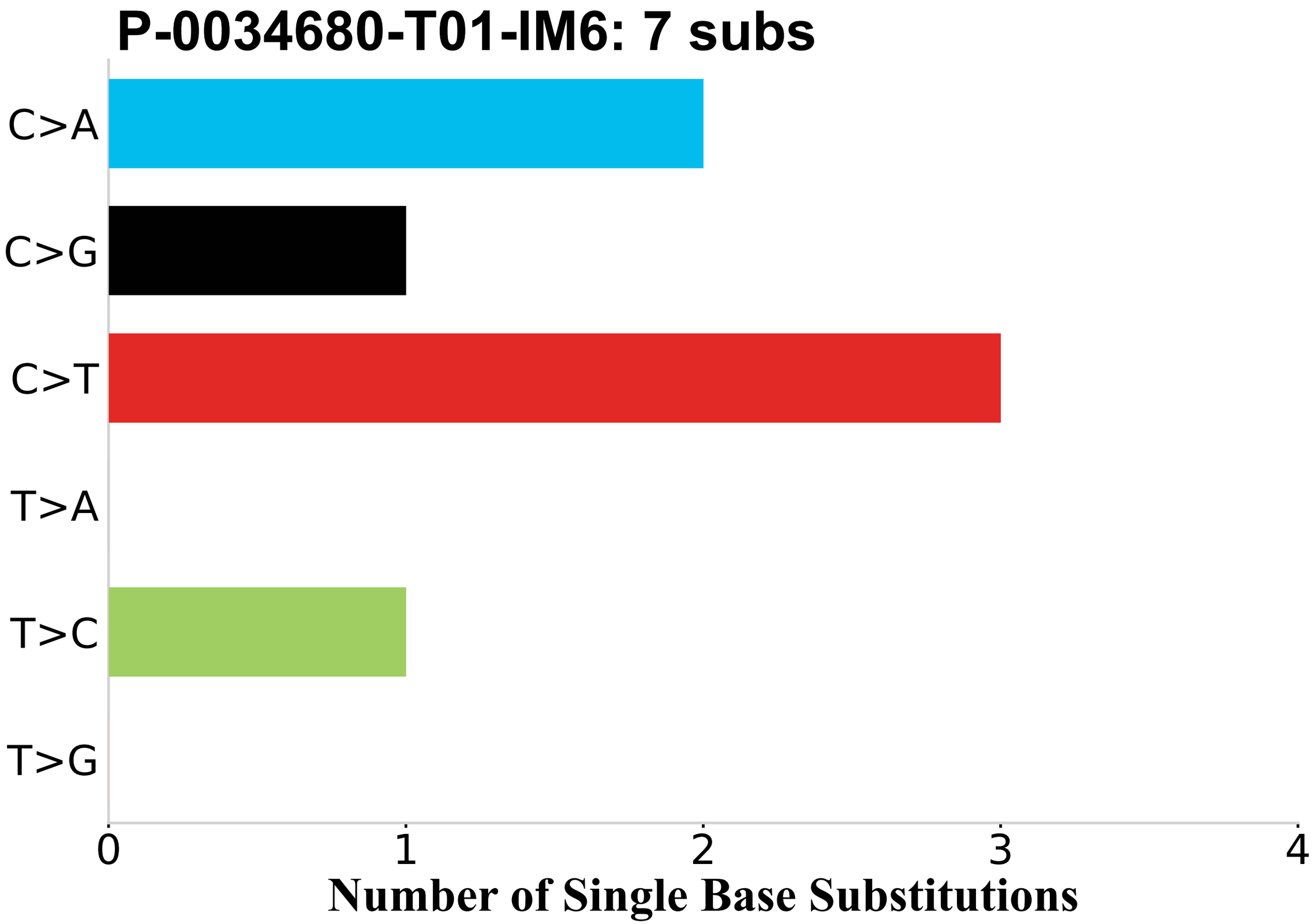

P-0034211-T02-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

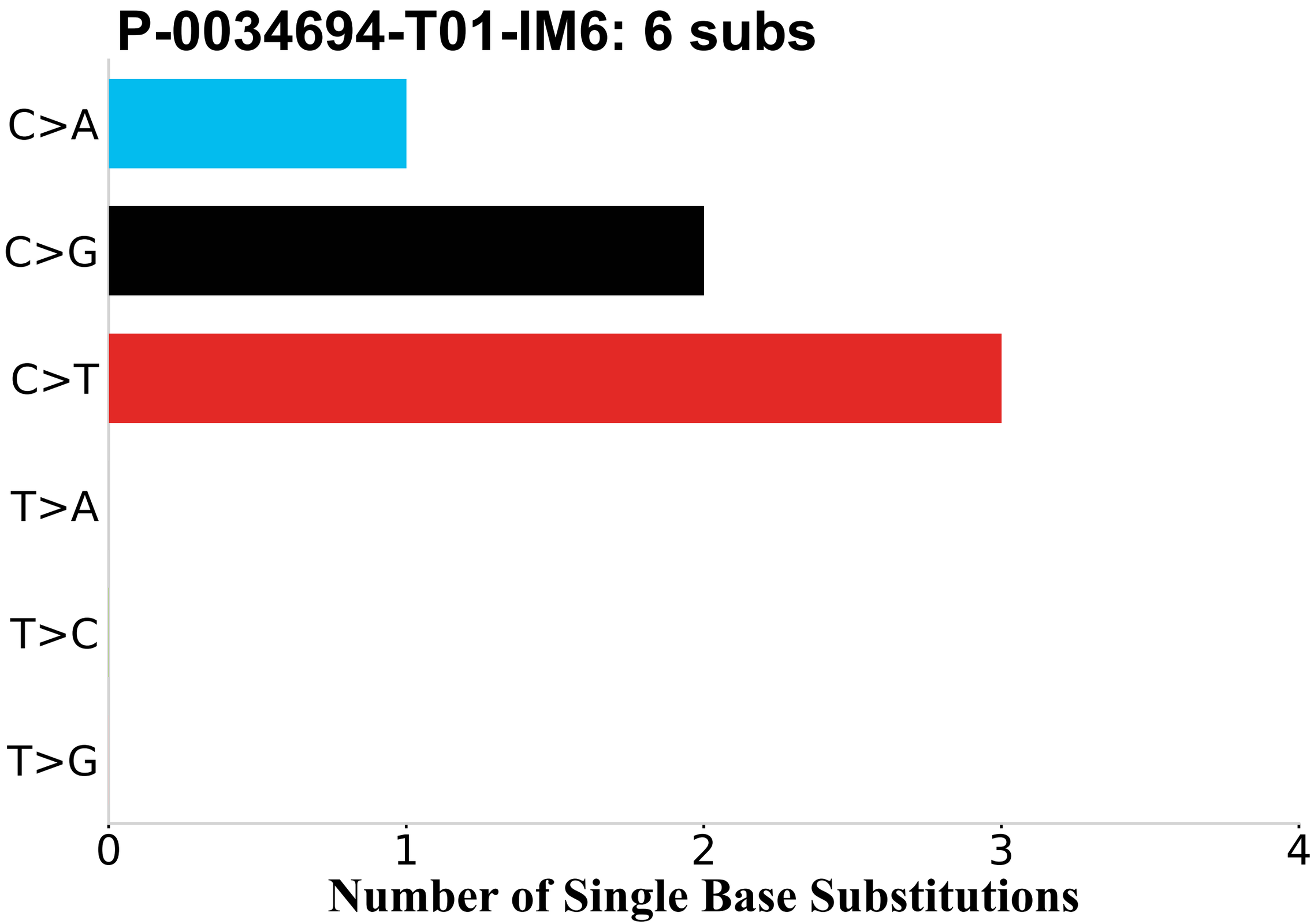

P-0034249-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

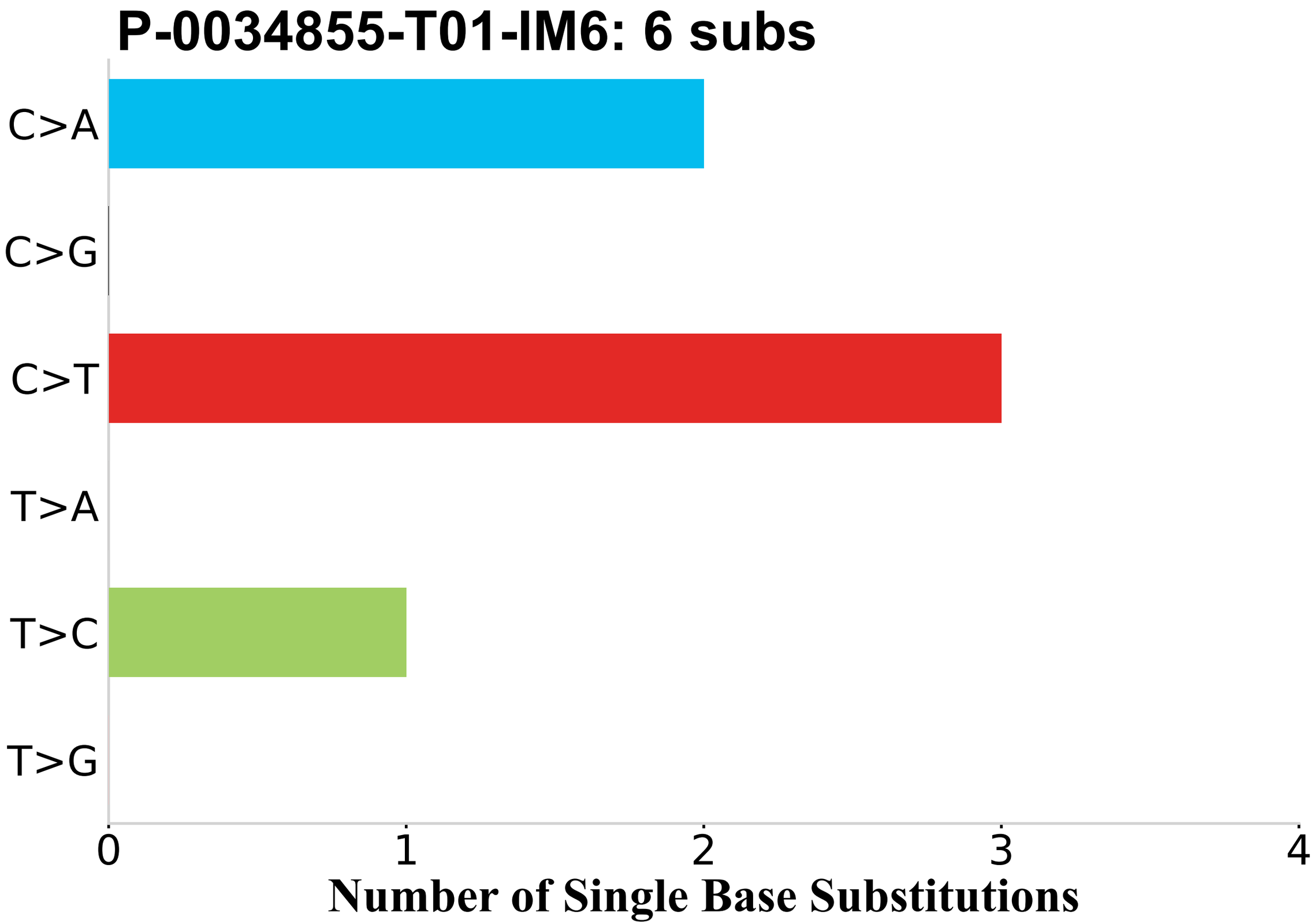

P-0034642-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

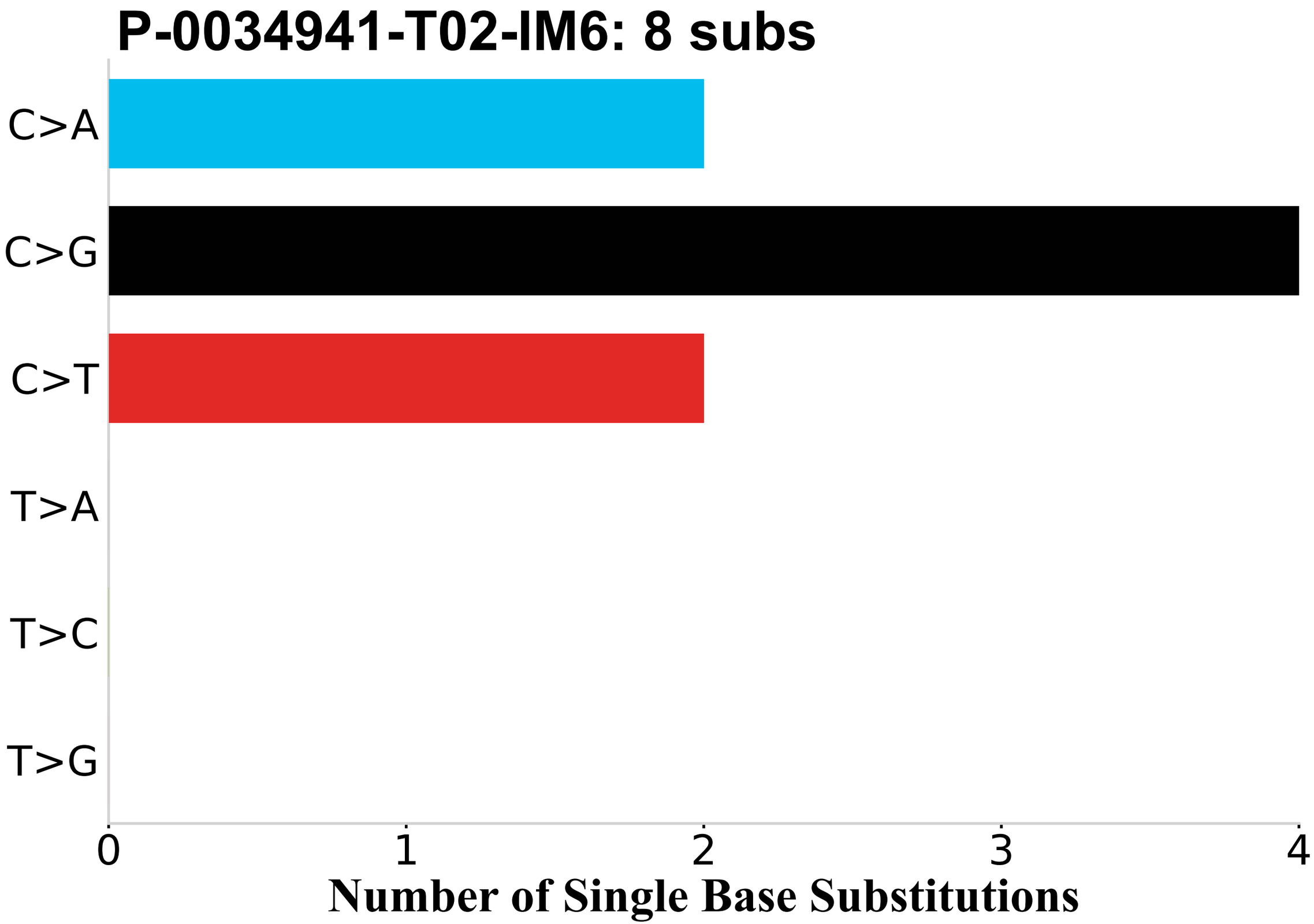

P-0034651-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

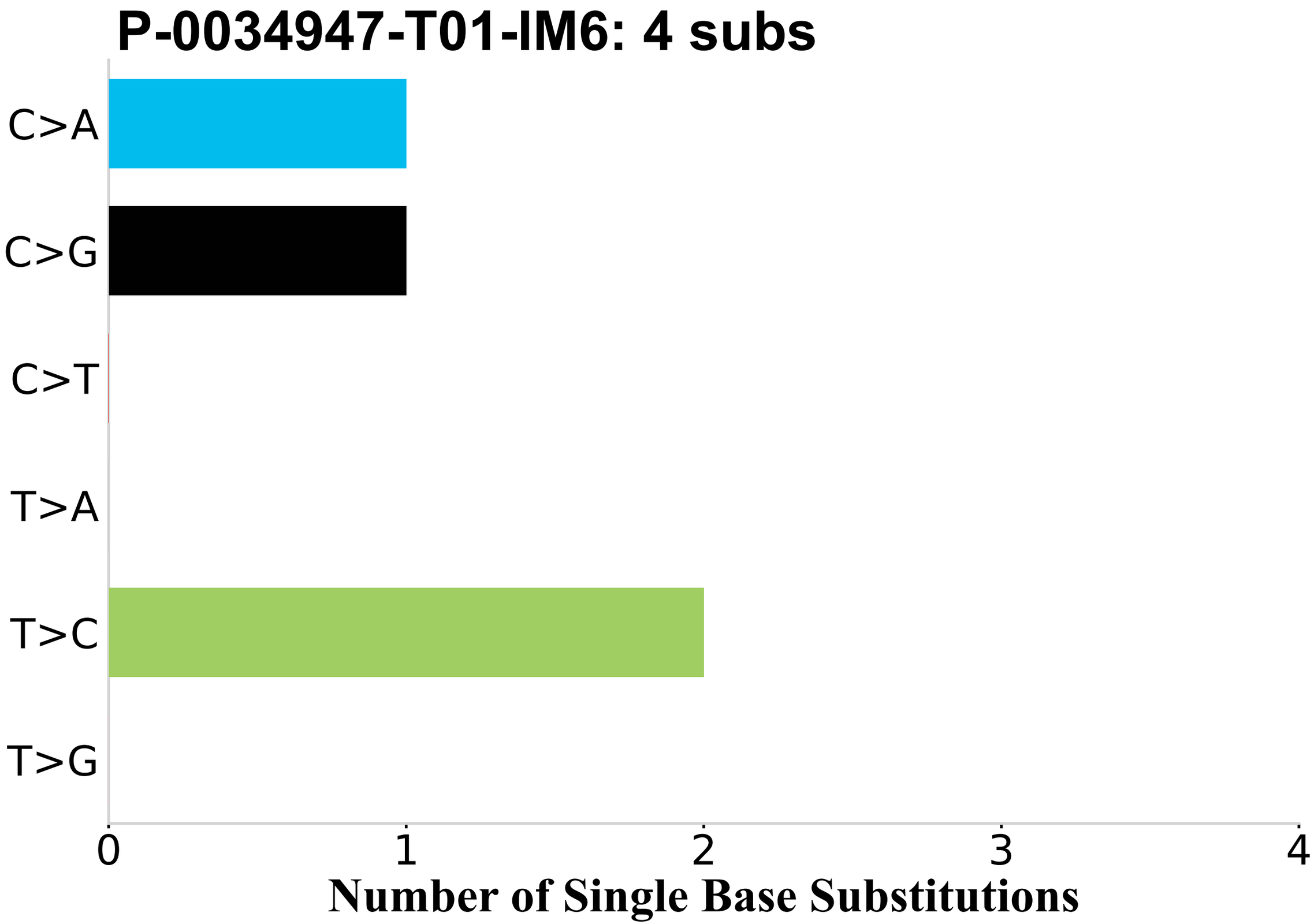

P-0034675-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

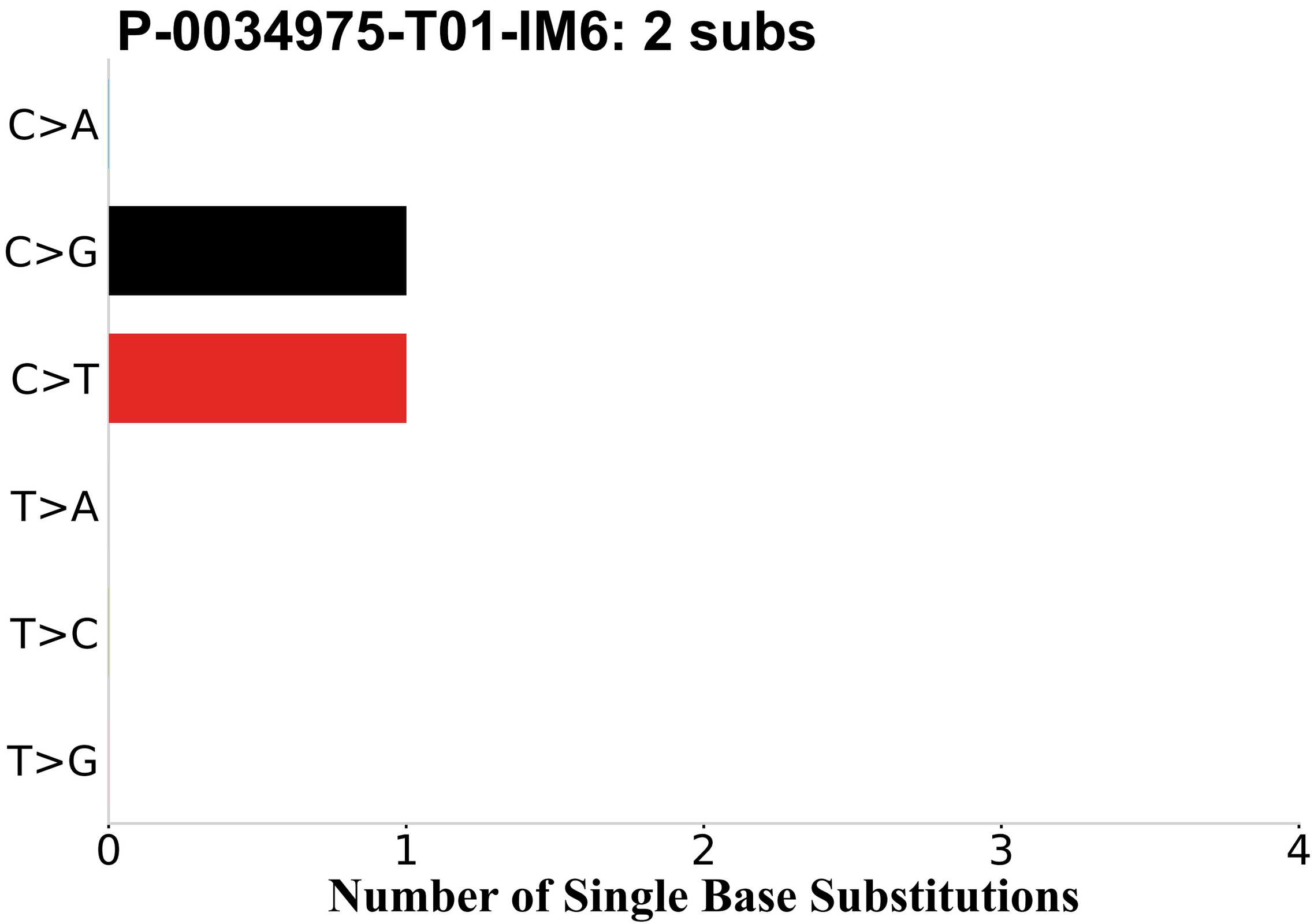

P-0034680-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

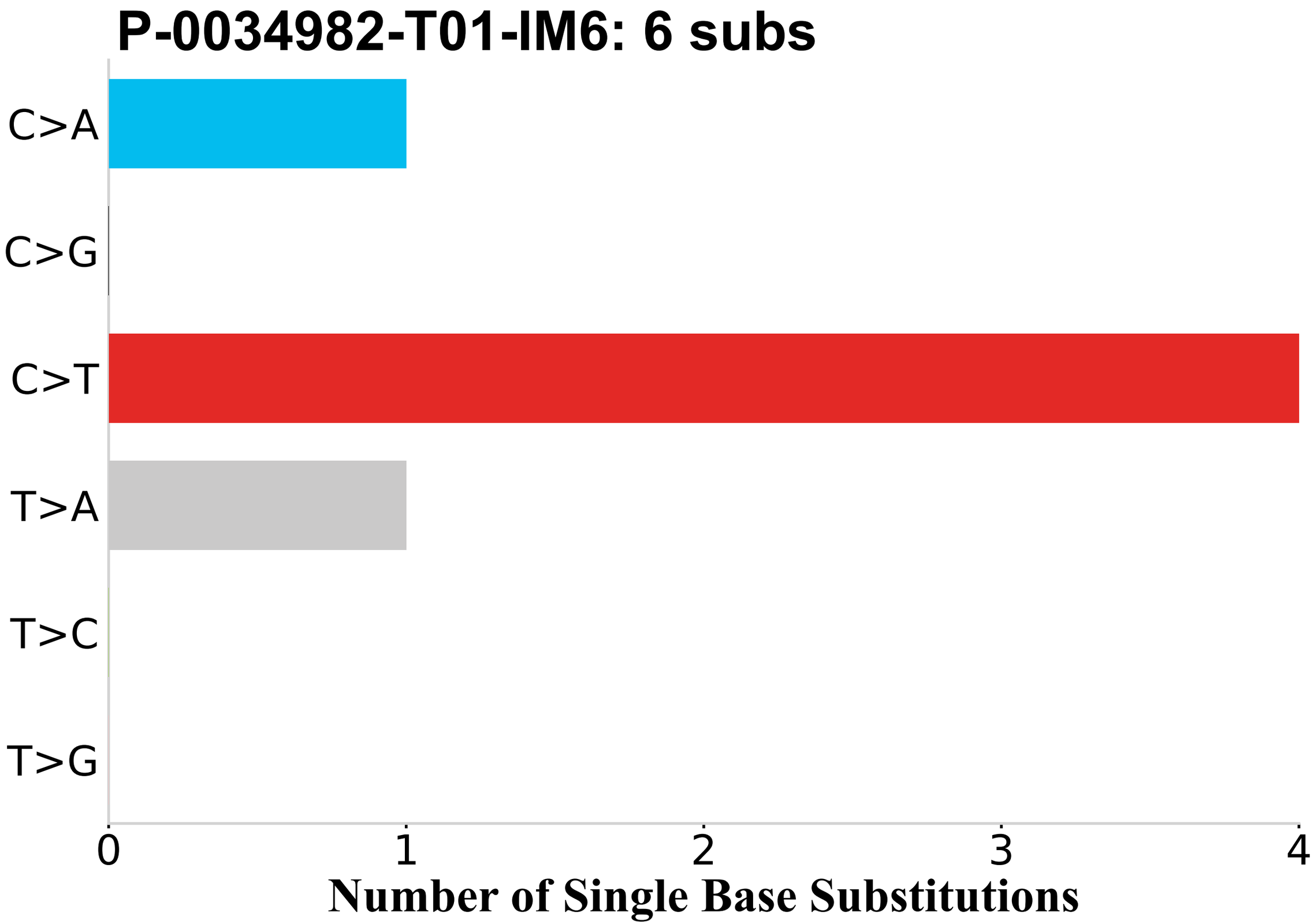

P-0034694-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

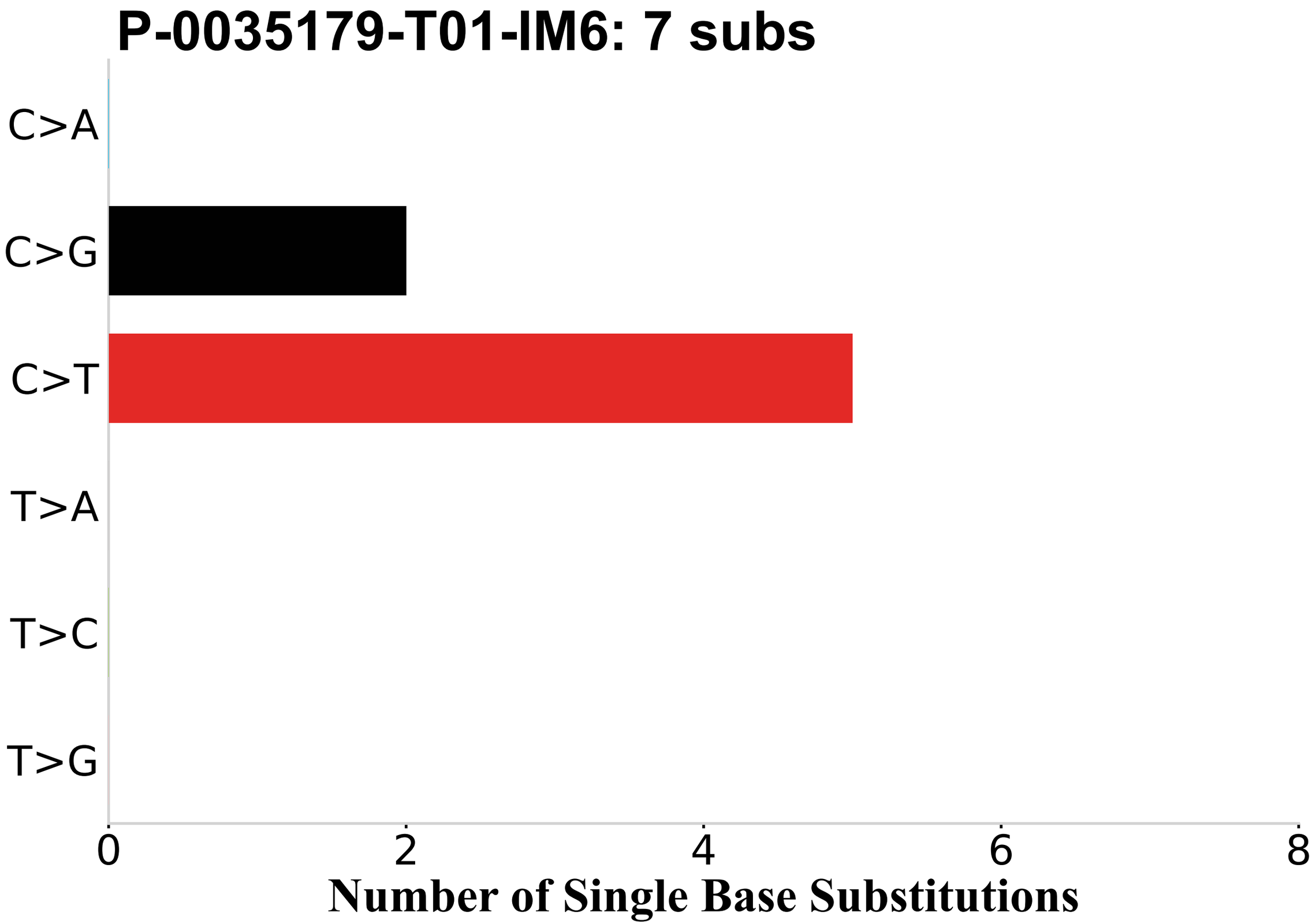

P-0034855-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

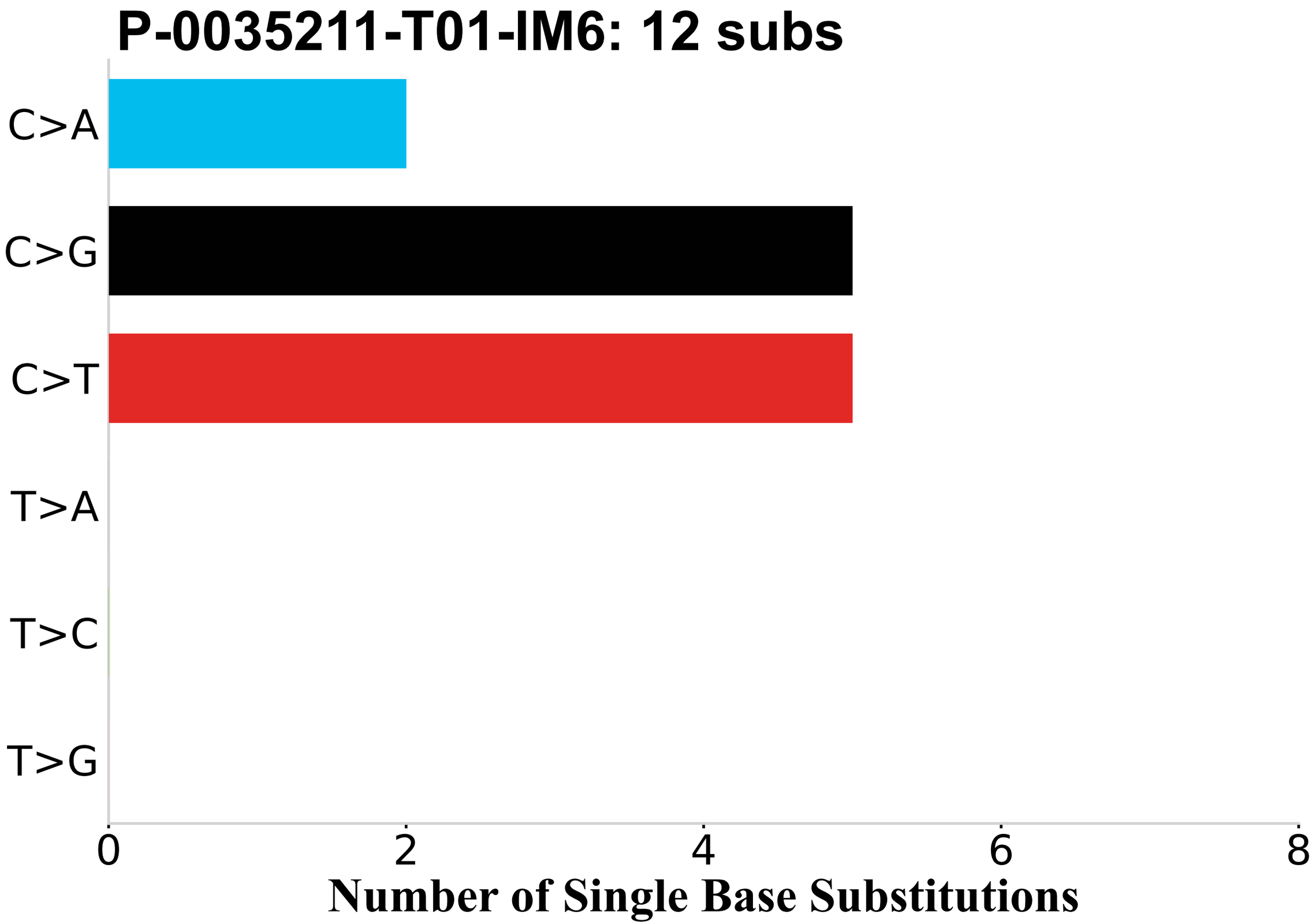

P-0034941-T02-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0034947-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

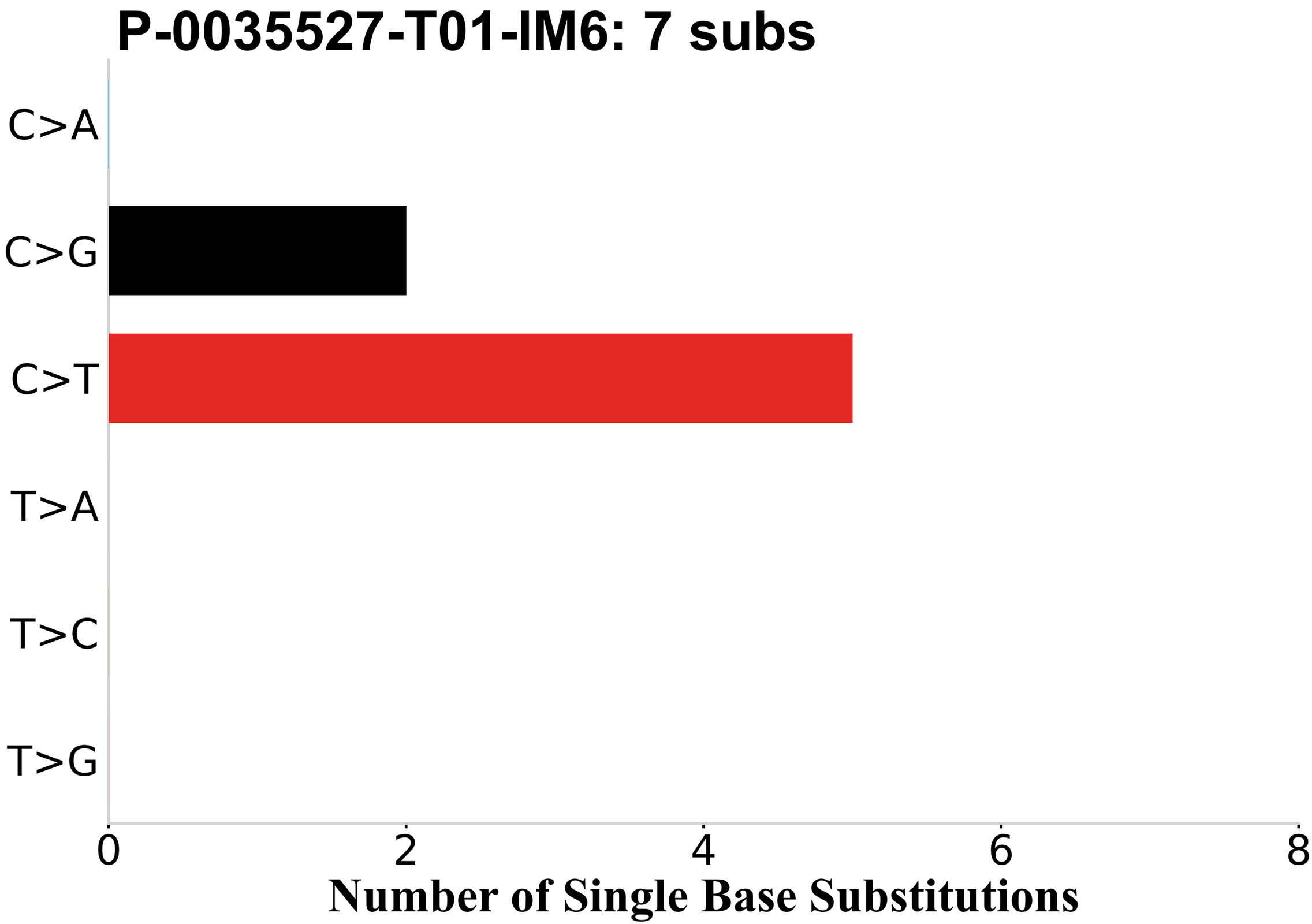

P-0034975-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

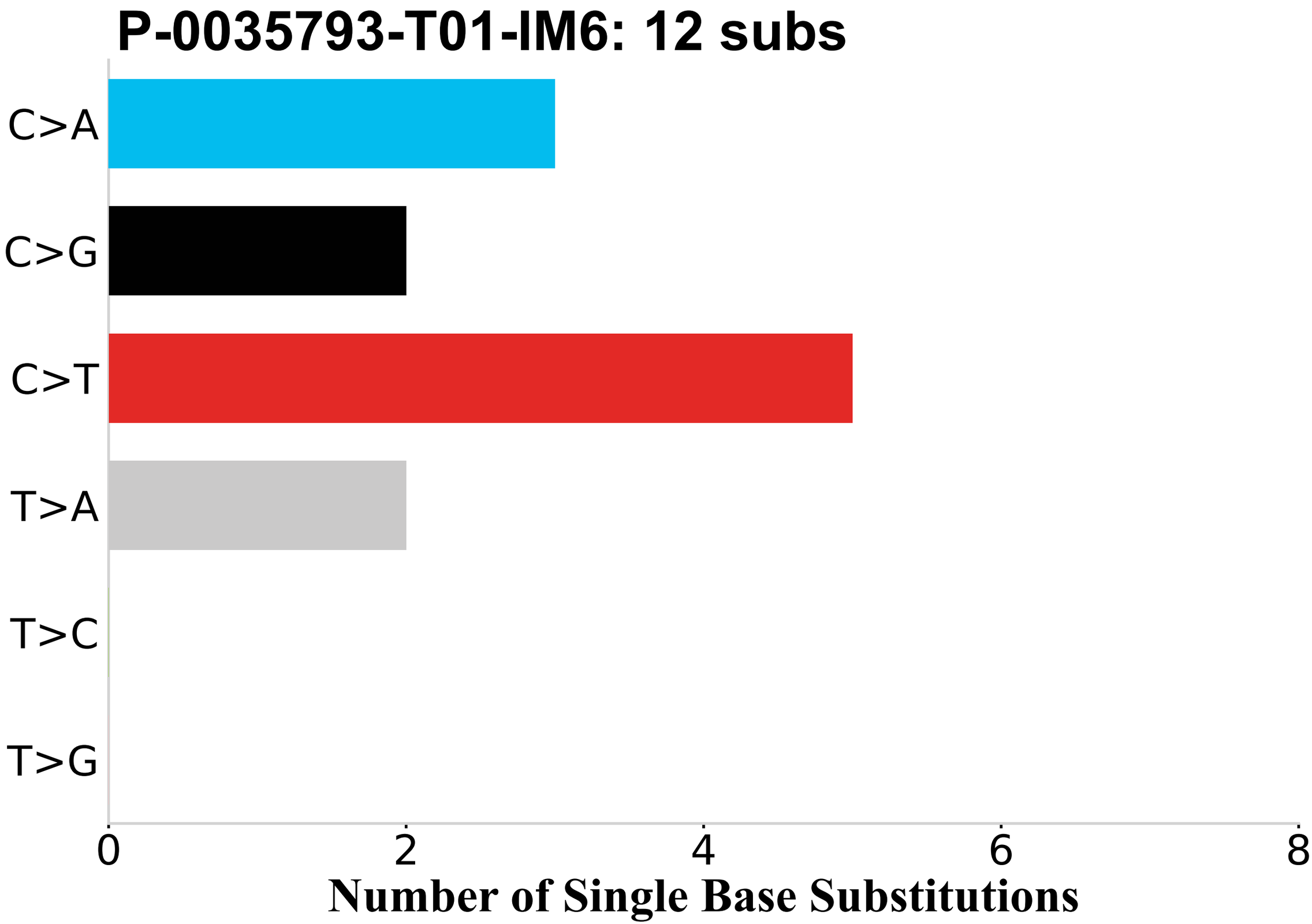

P-0034982-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

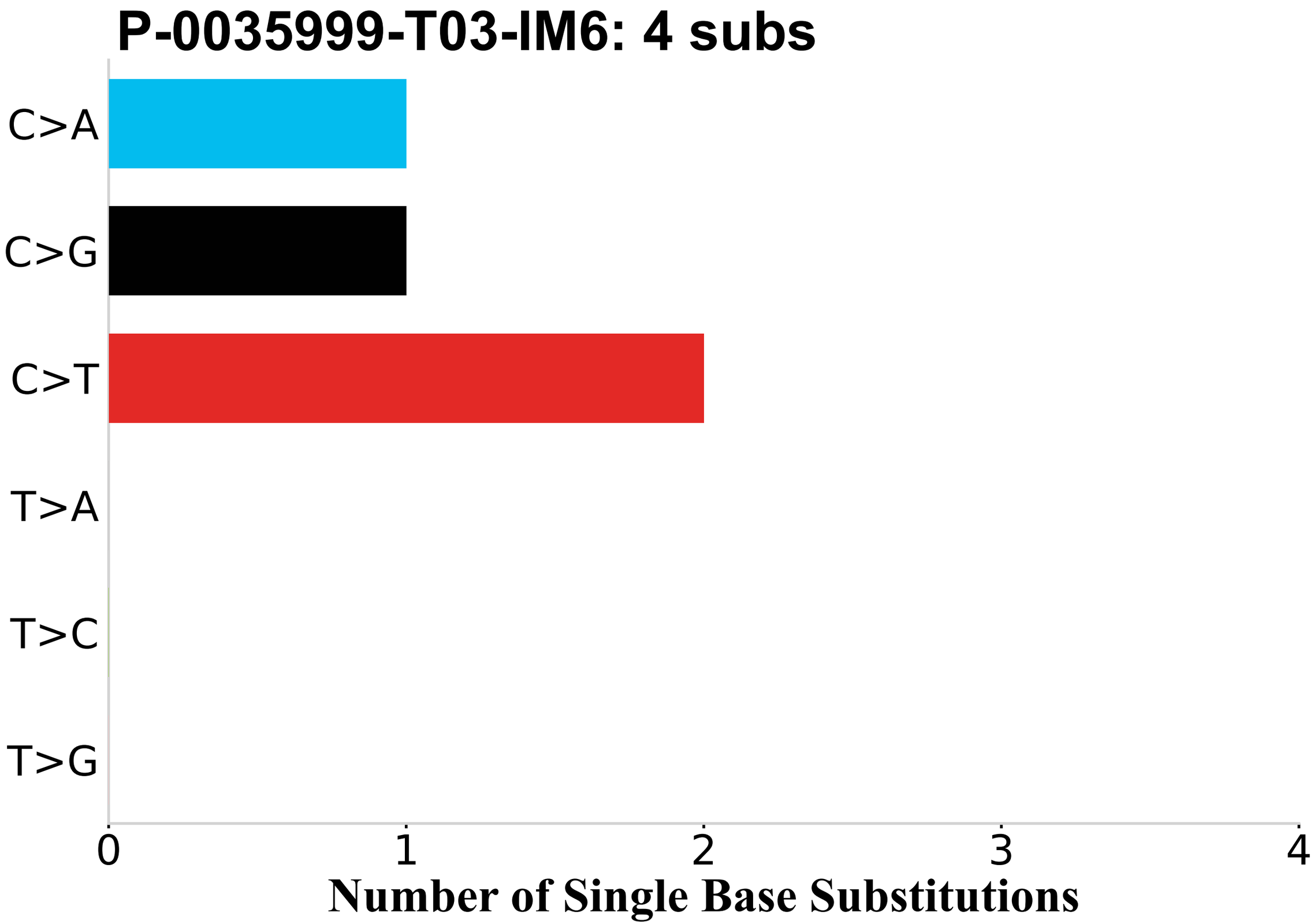

P-0035179-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0035211-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

P-0035497-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0035527-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0035793-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0035999-T03-IM6: 4 subs
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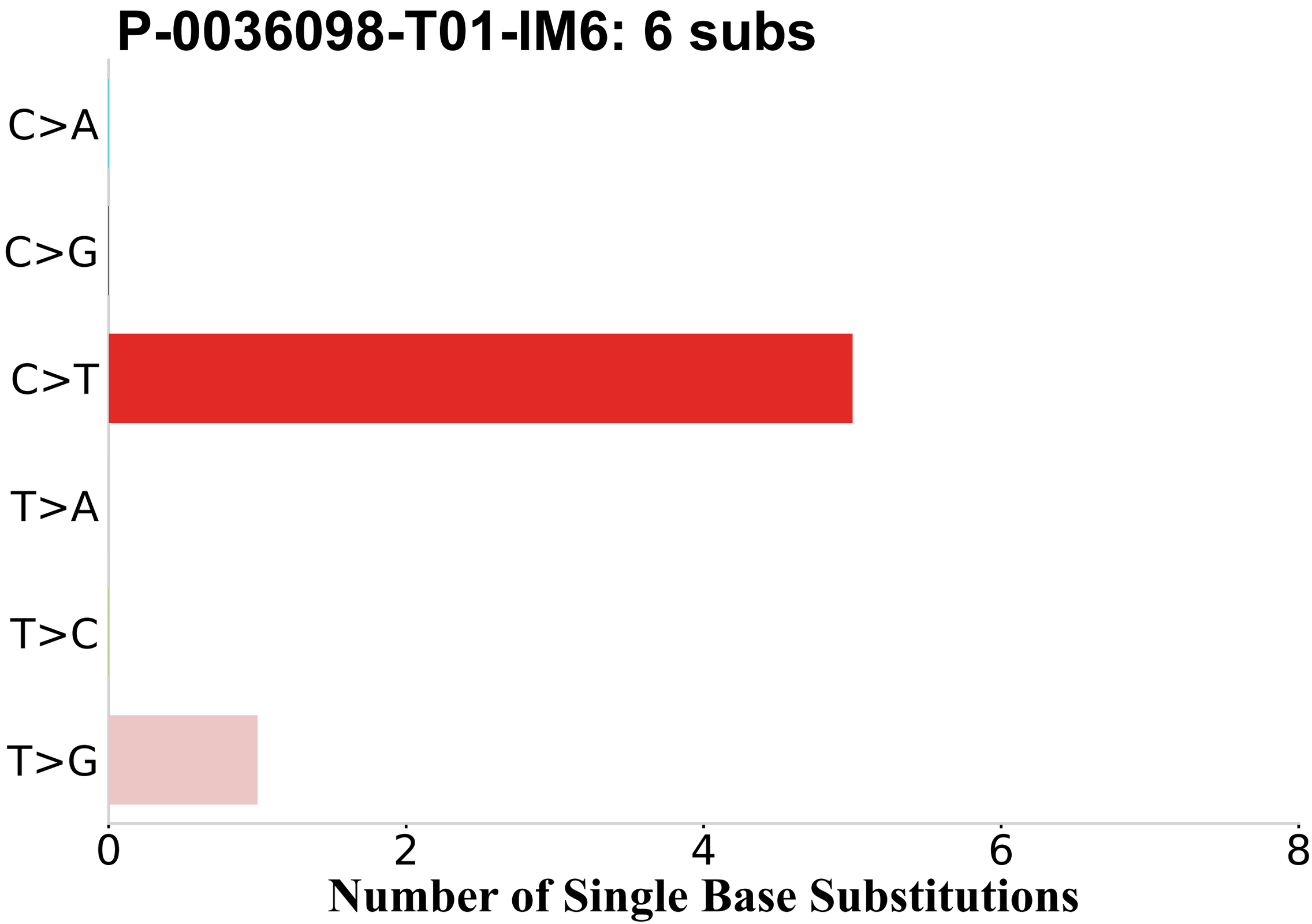
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0036098-T01-IM6: 6 subs
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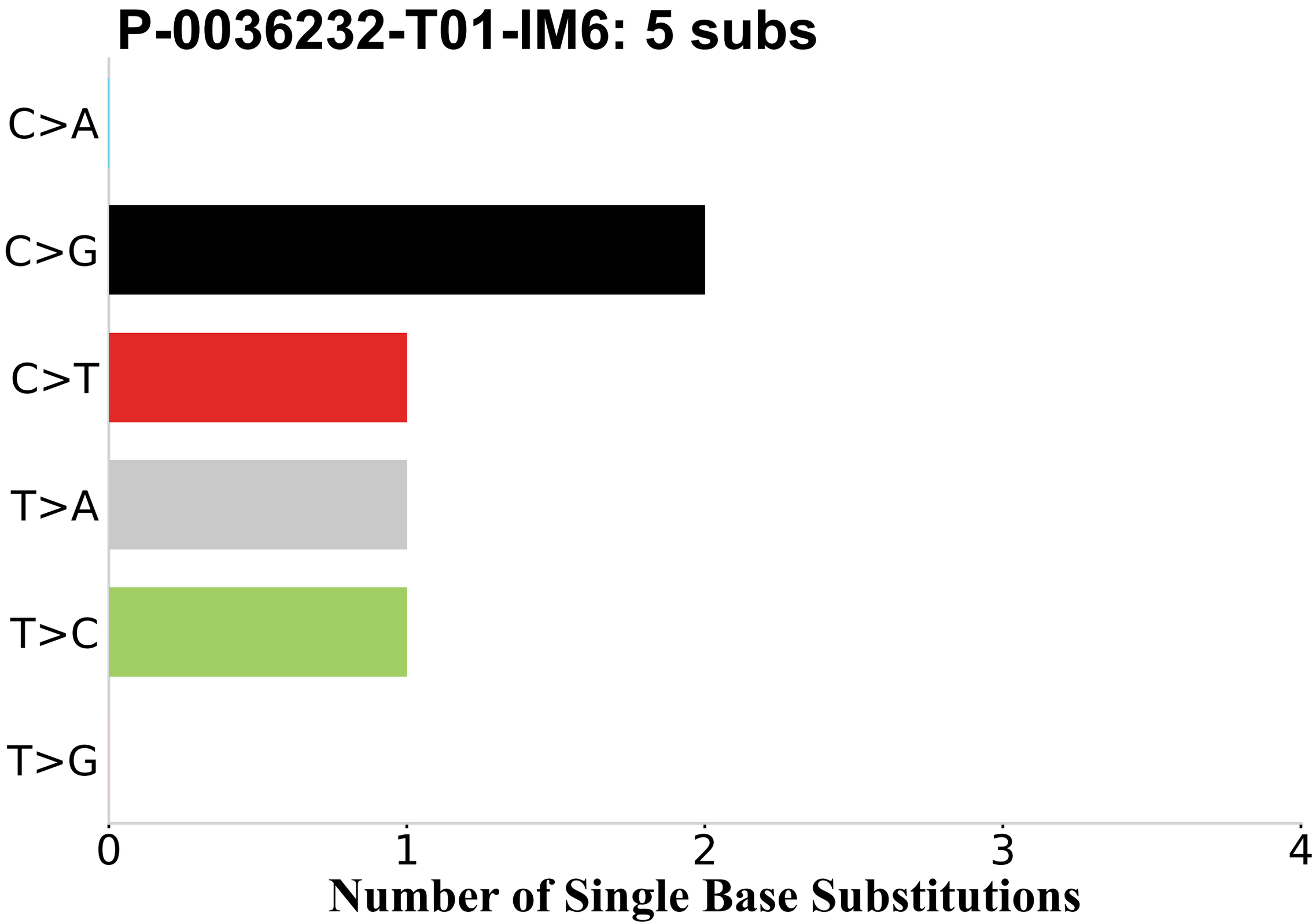
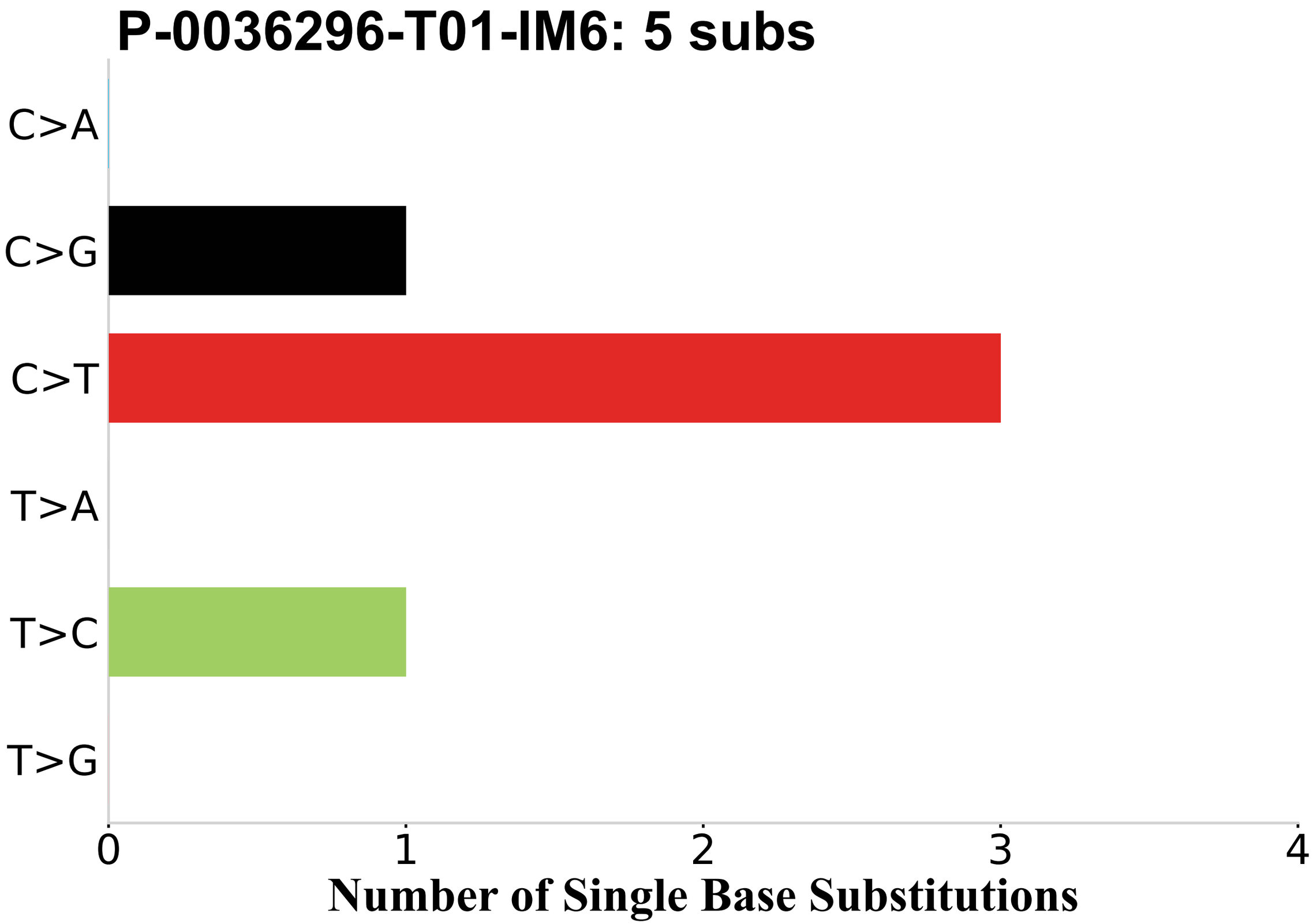
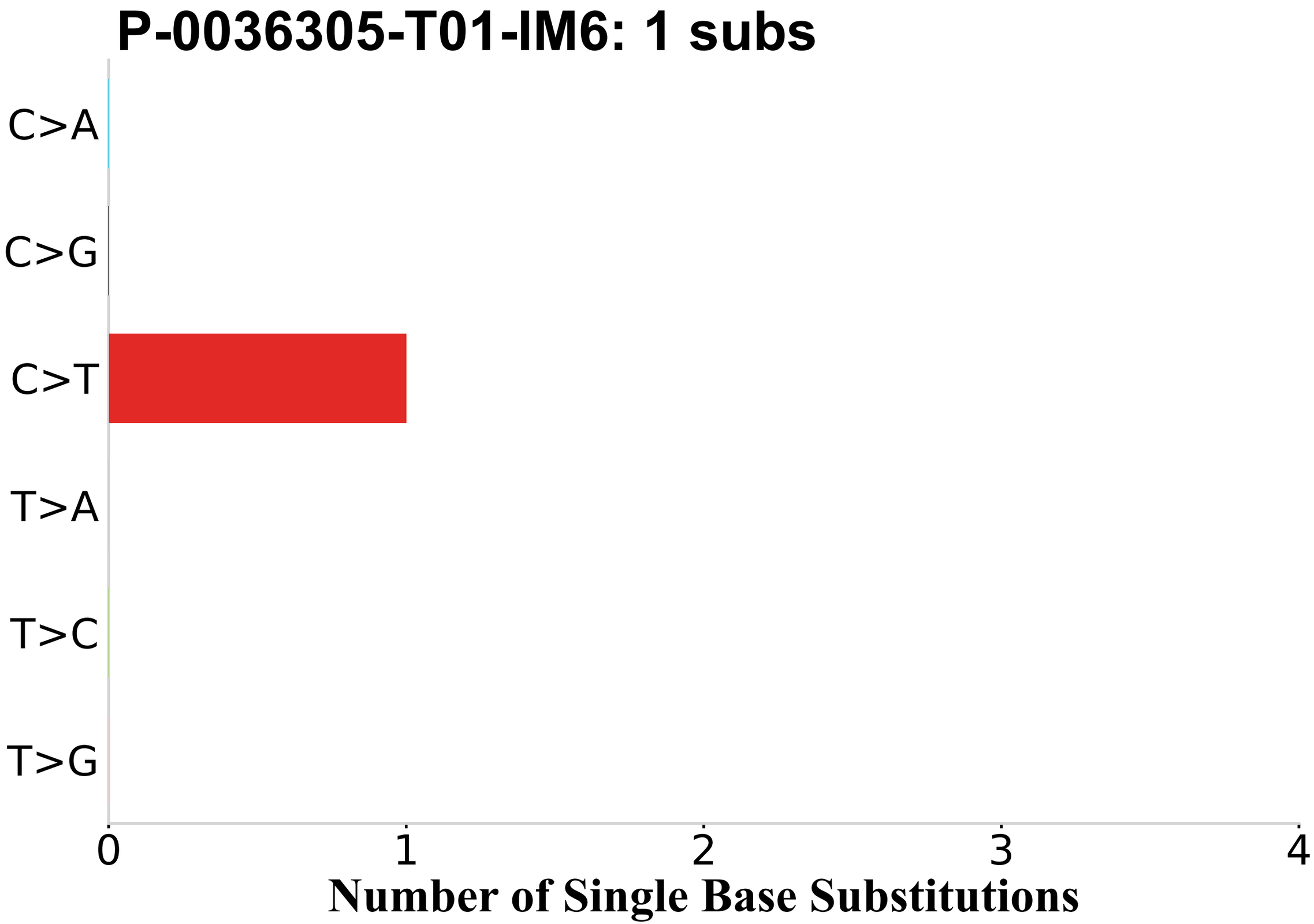
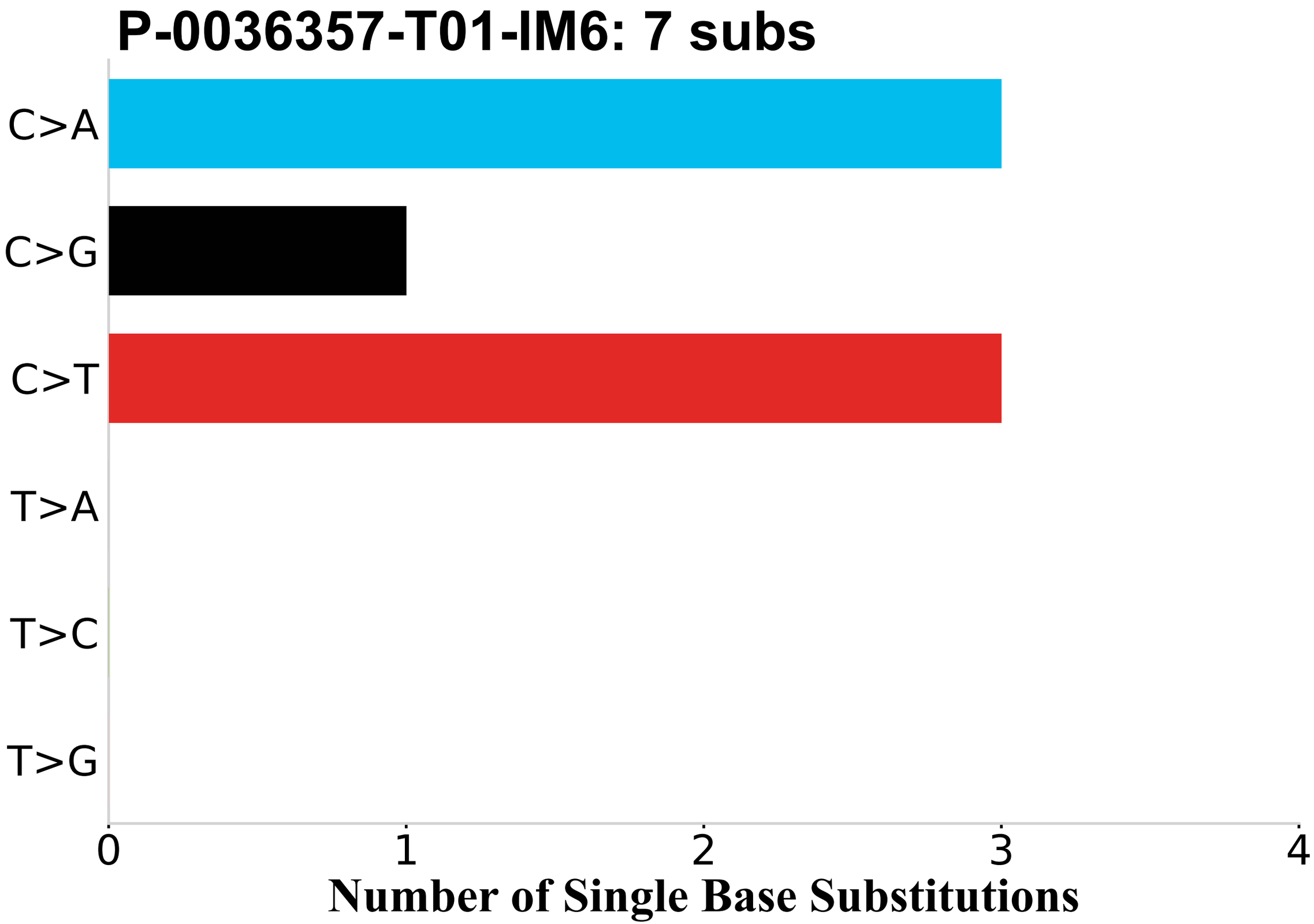
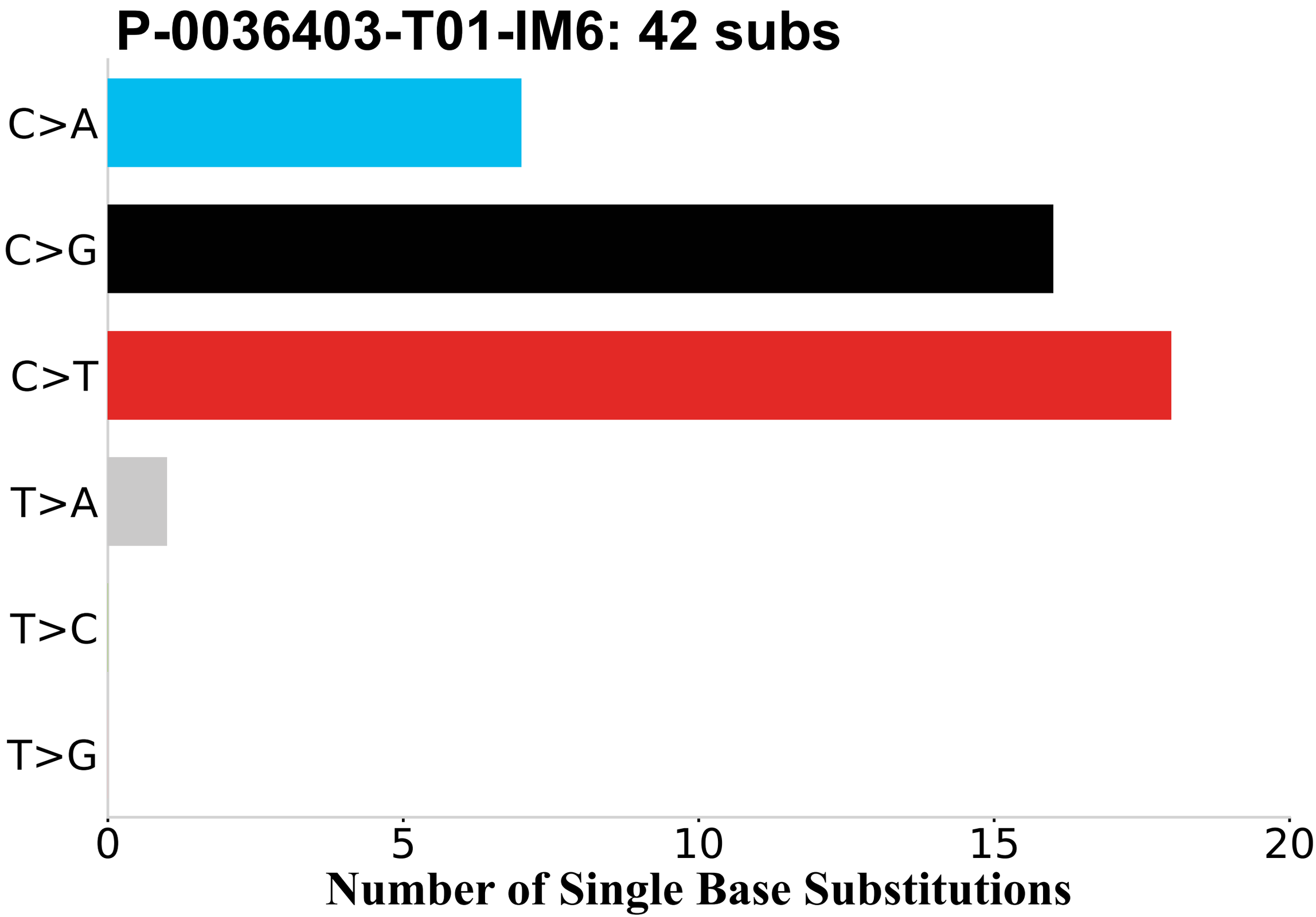
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

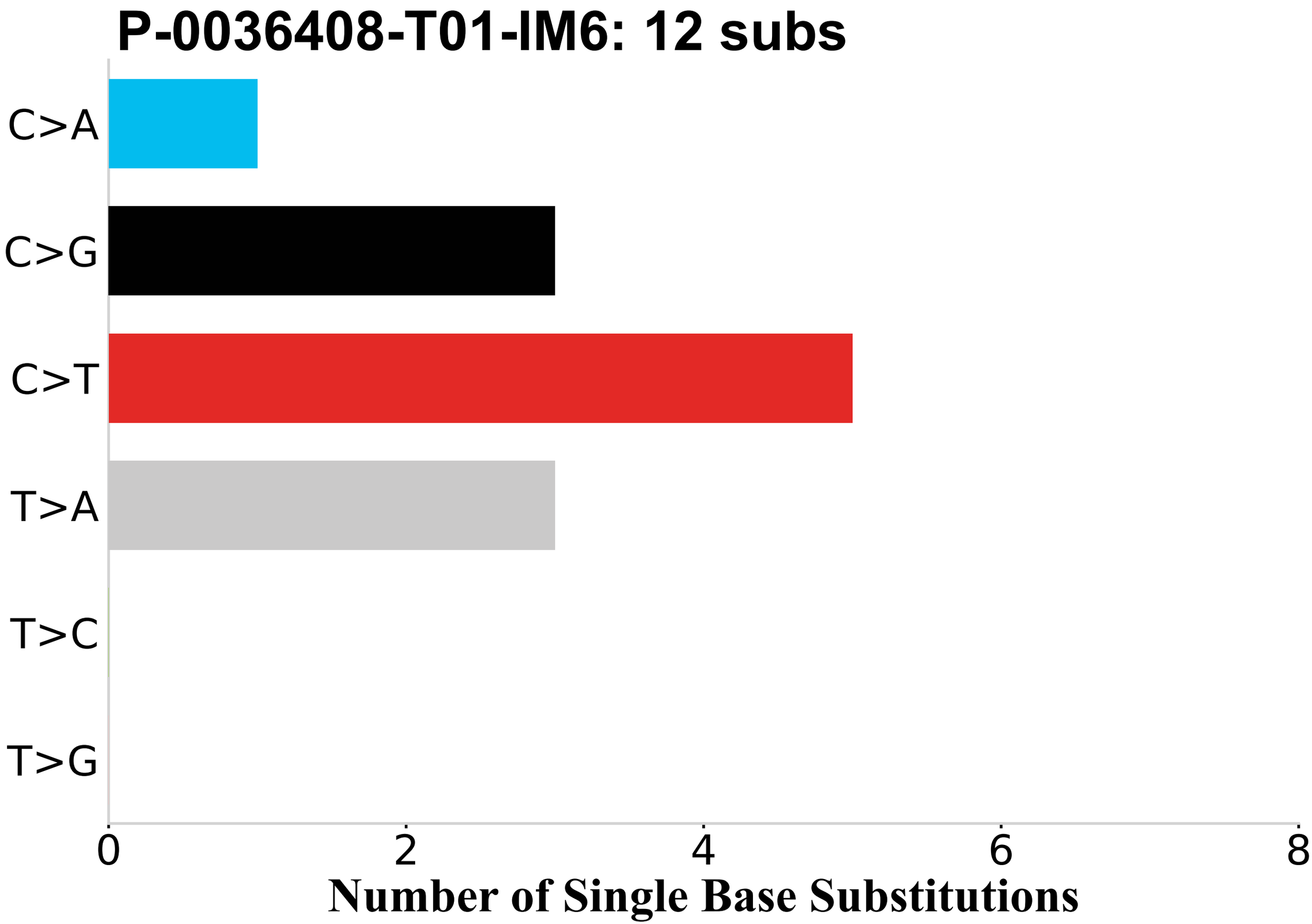

P-0036232-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

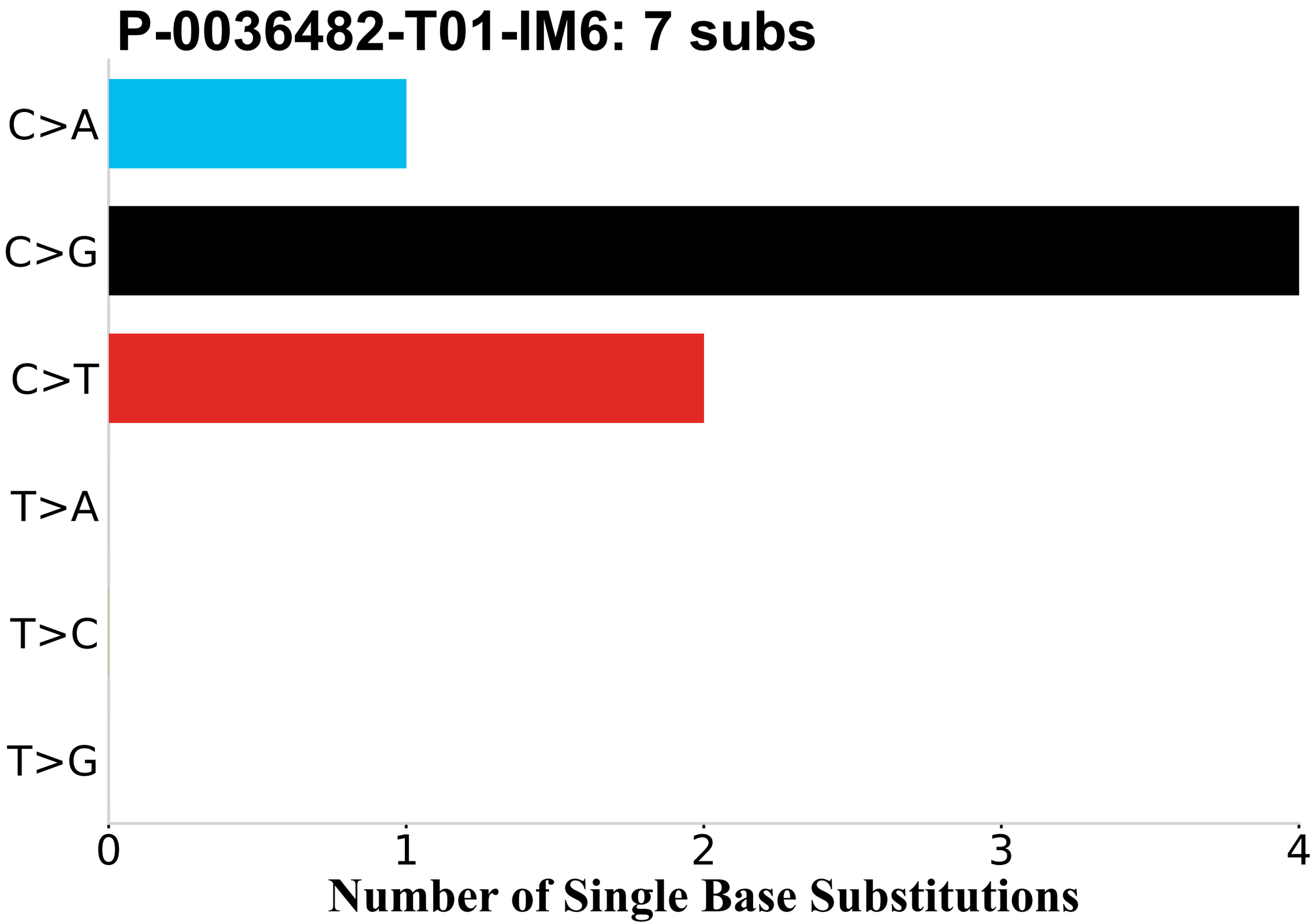

P-0036296-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

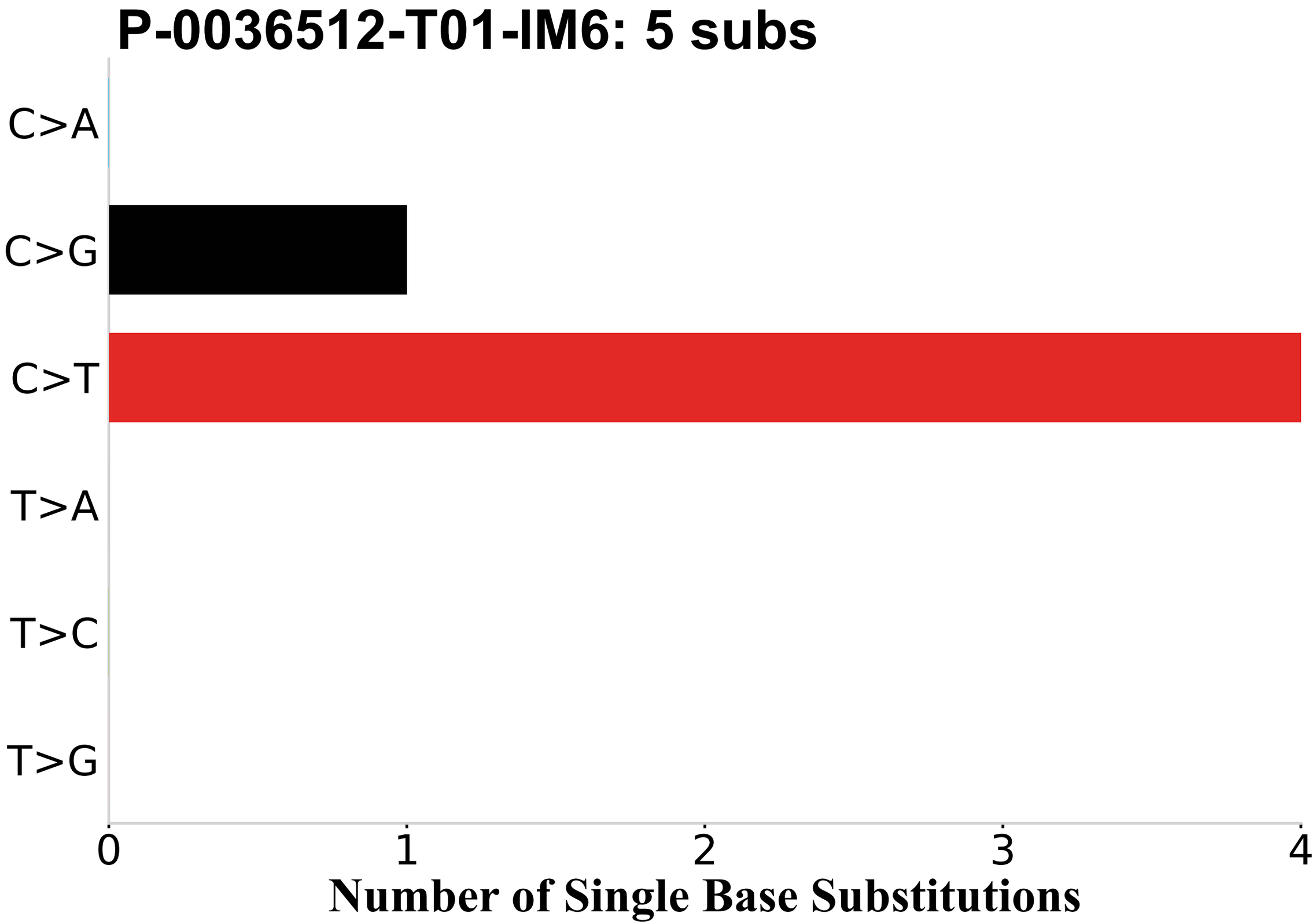

P-0036305-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

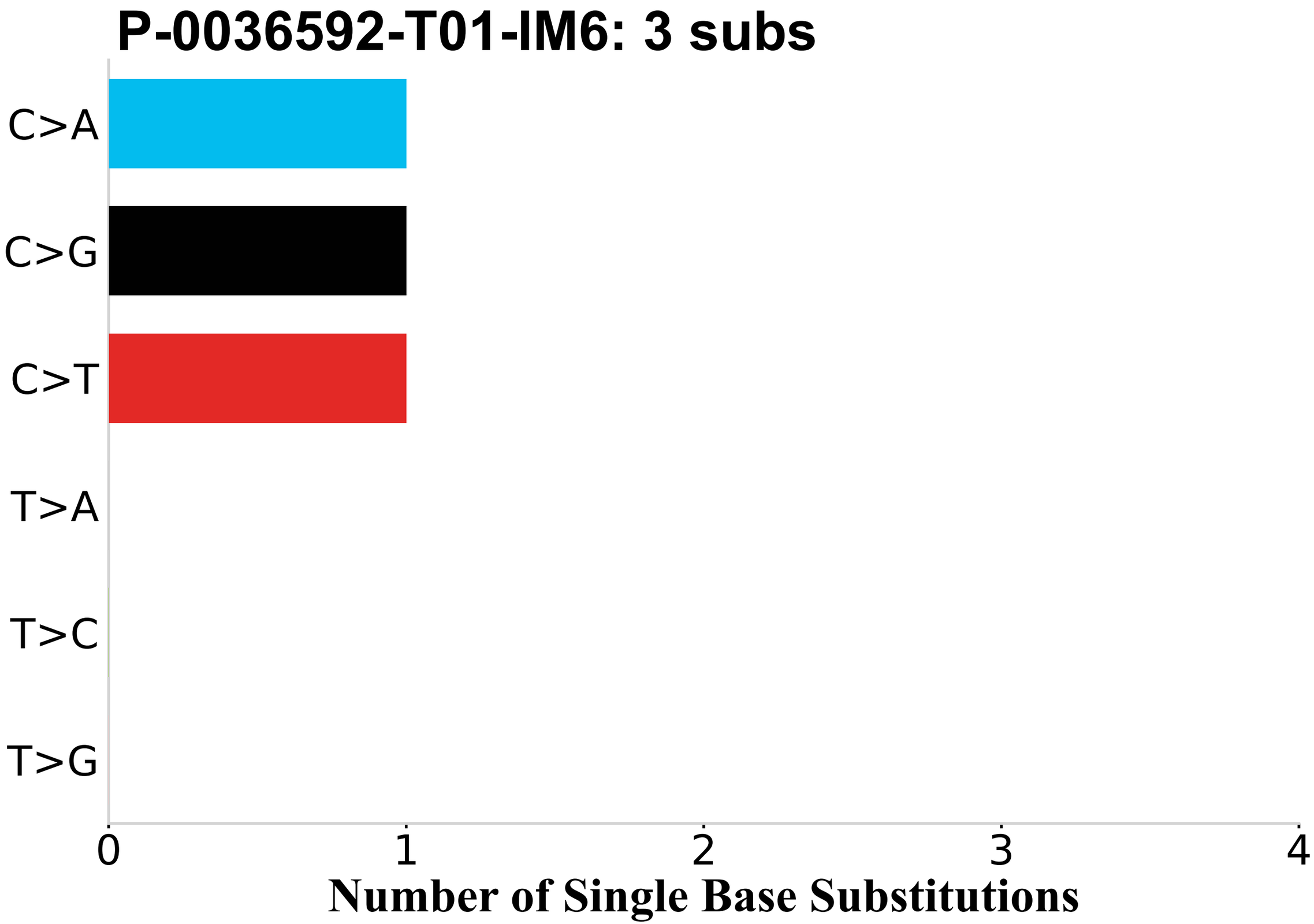

P-0036357-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

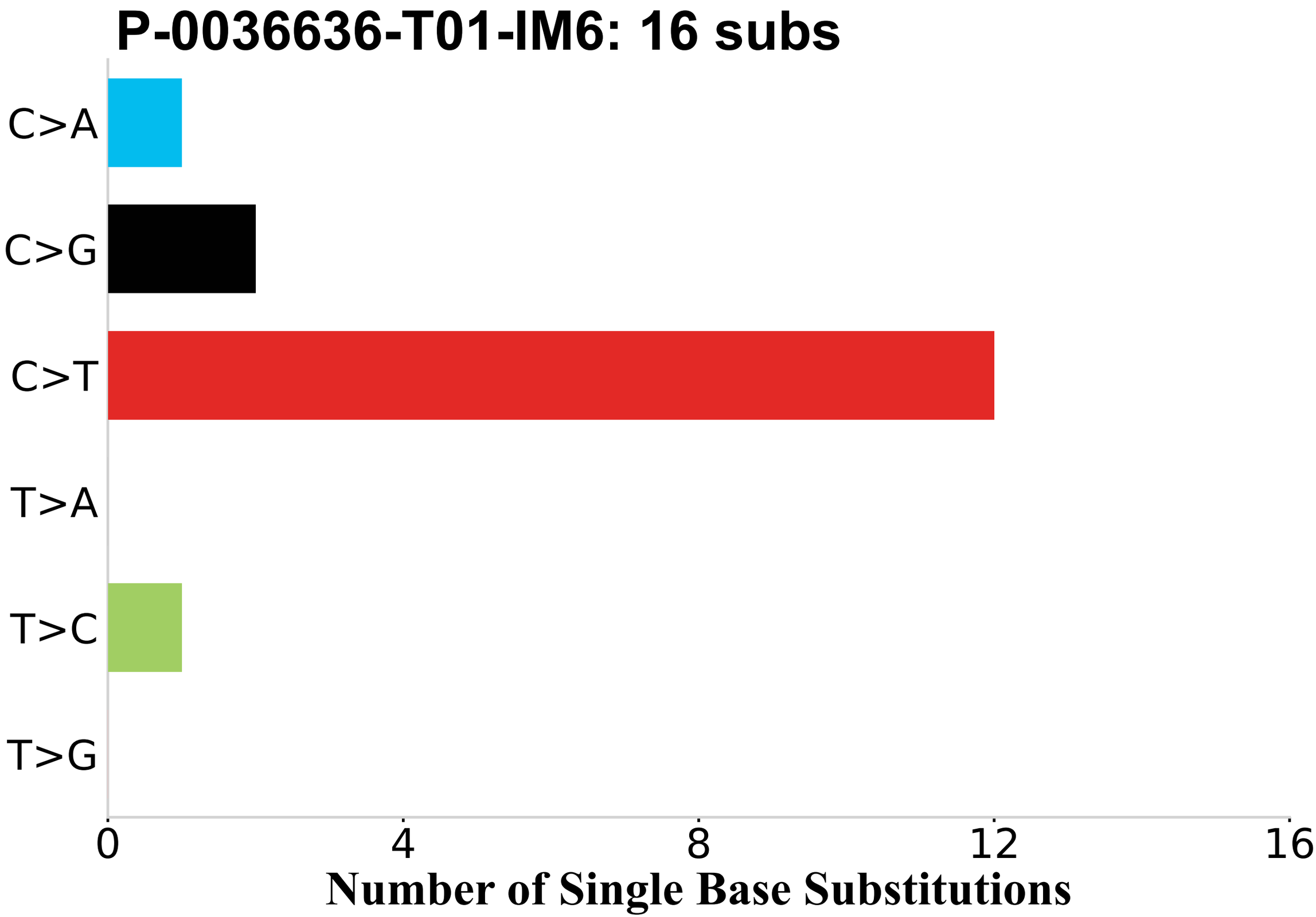

P-0036403-T01-IM6: 42 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

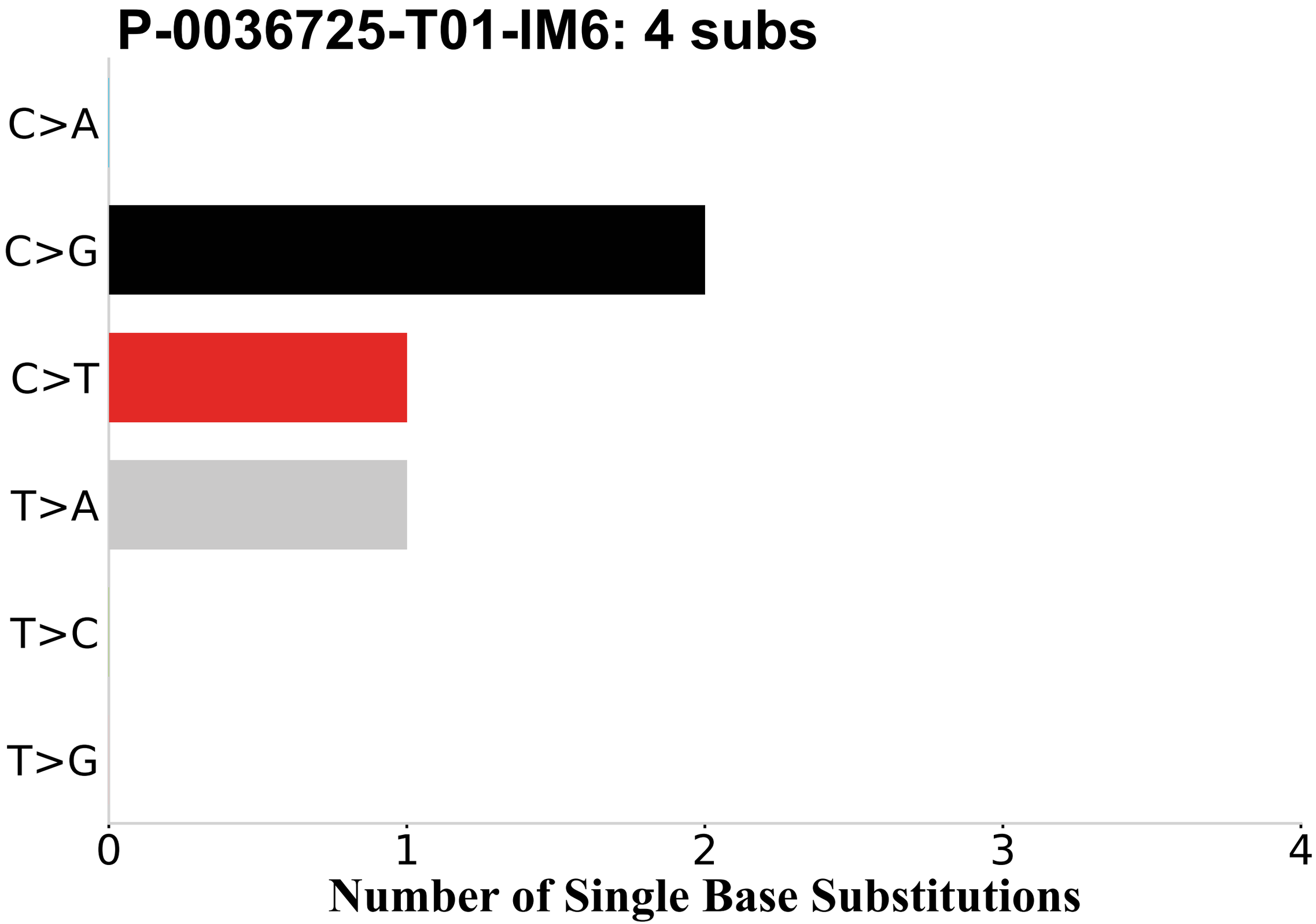

P-0036408-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0036482-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0036512-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0036592-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0036636-T01-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0036725-T01-IM6: 4 subs
C>A
C>G
C>T
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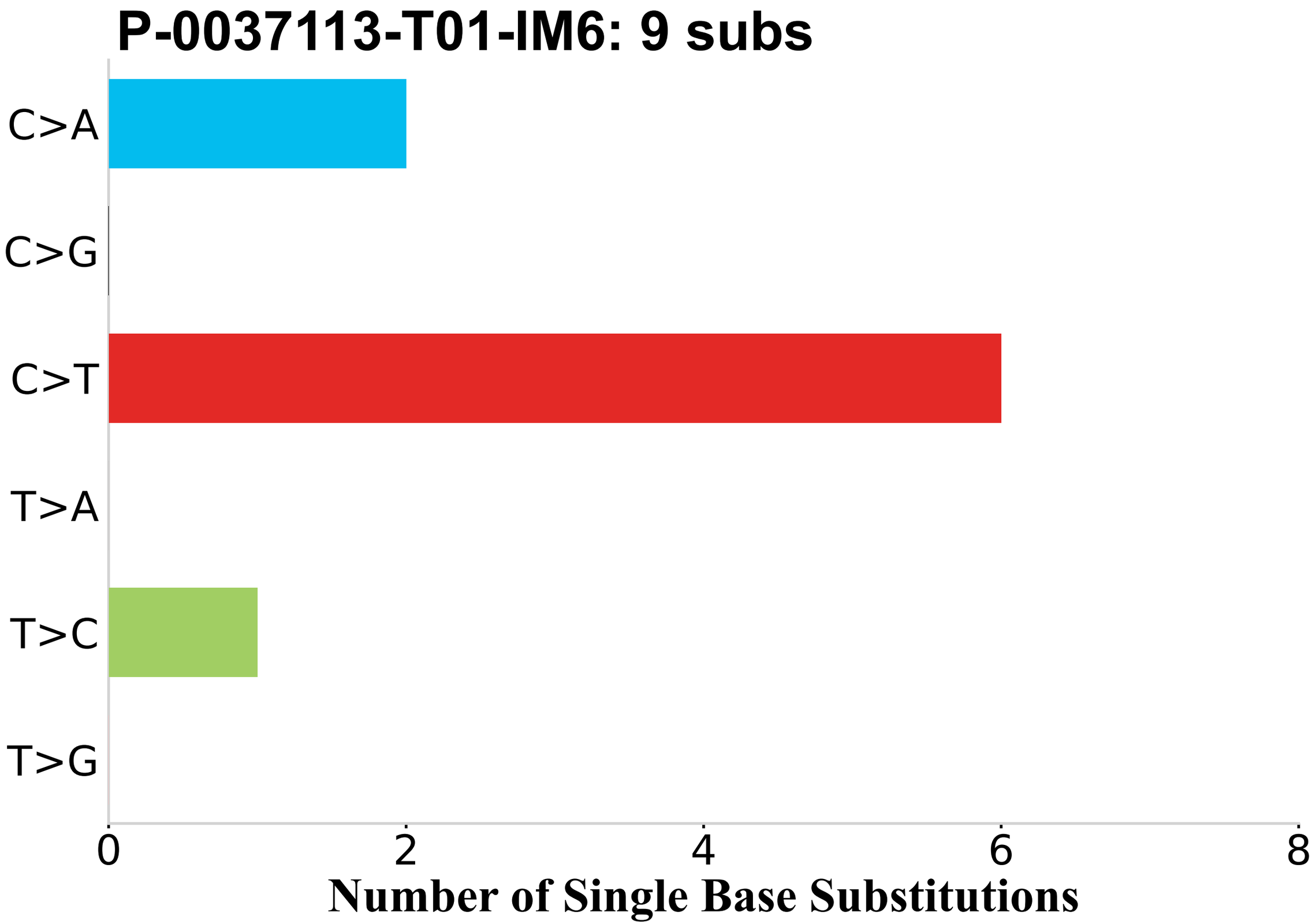
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0037113-T01-IM6: 9 subs
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C>G
C>T
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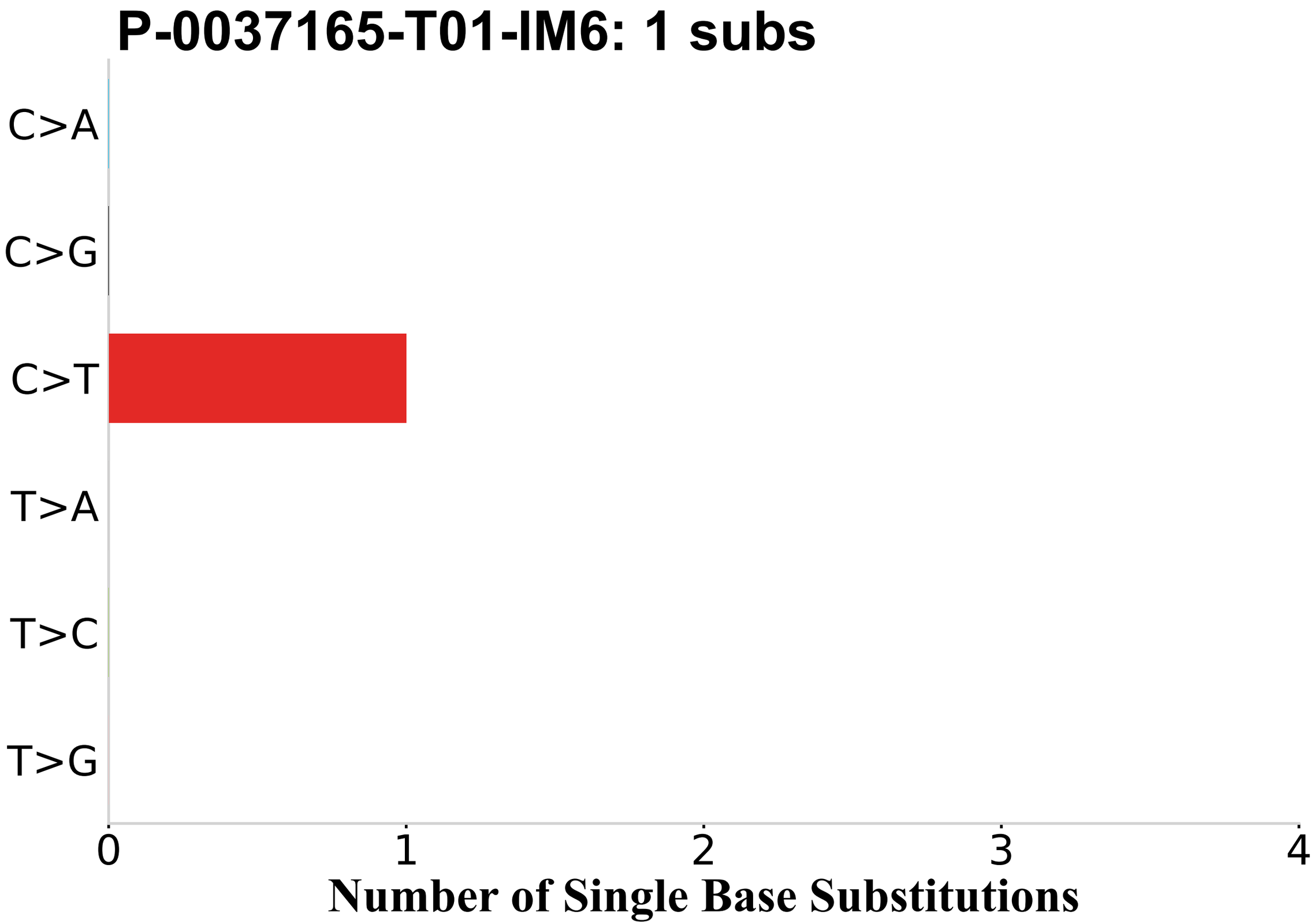
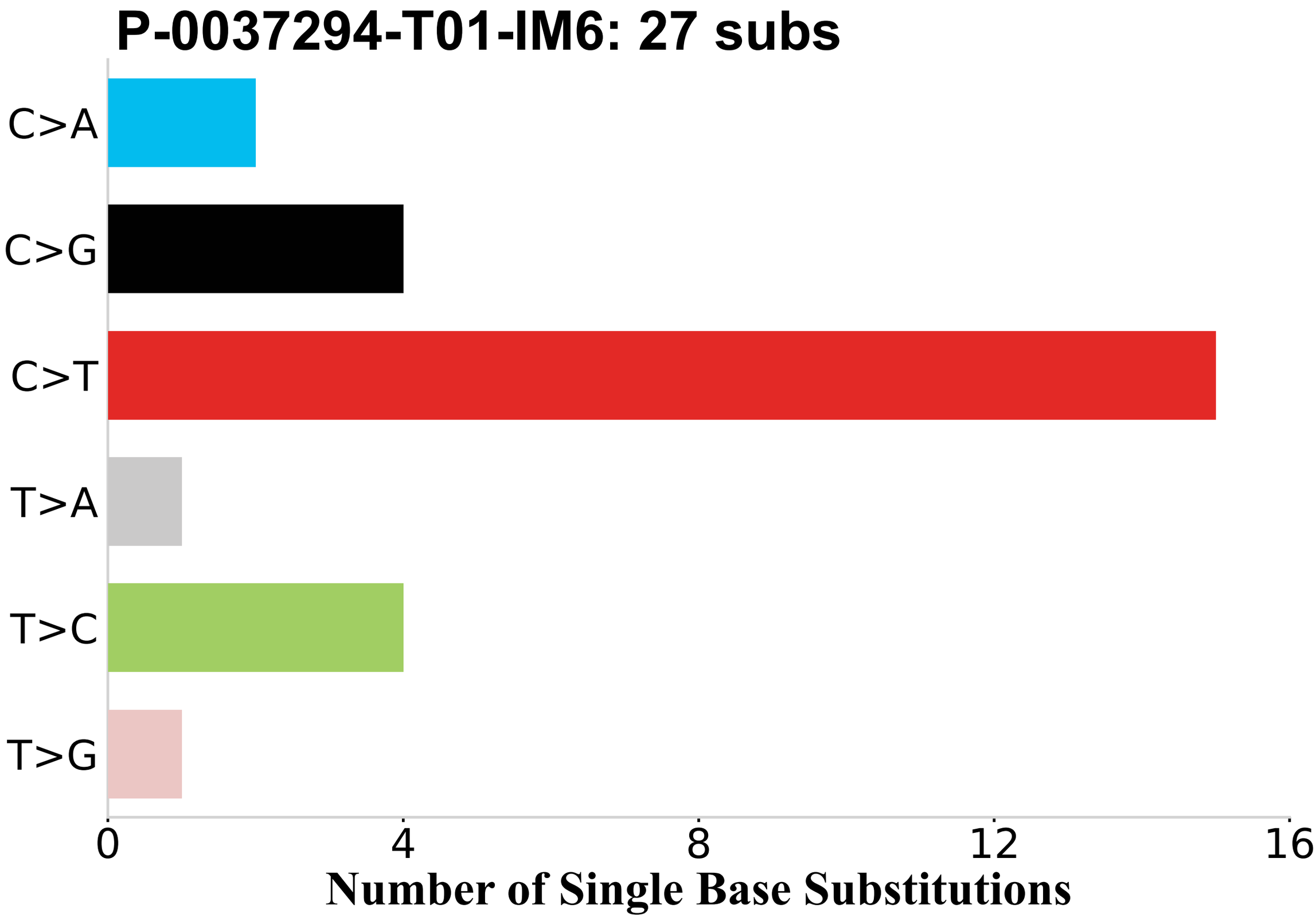
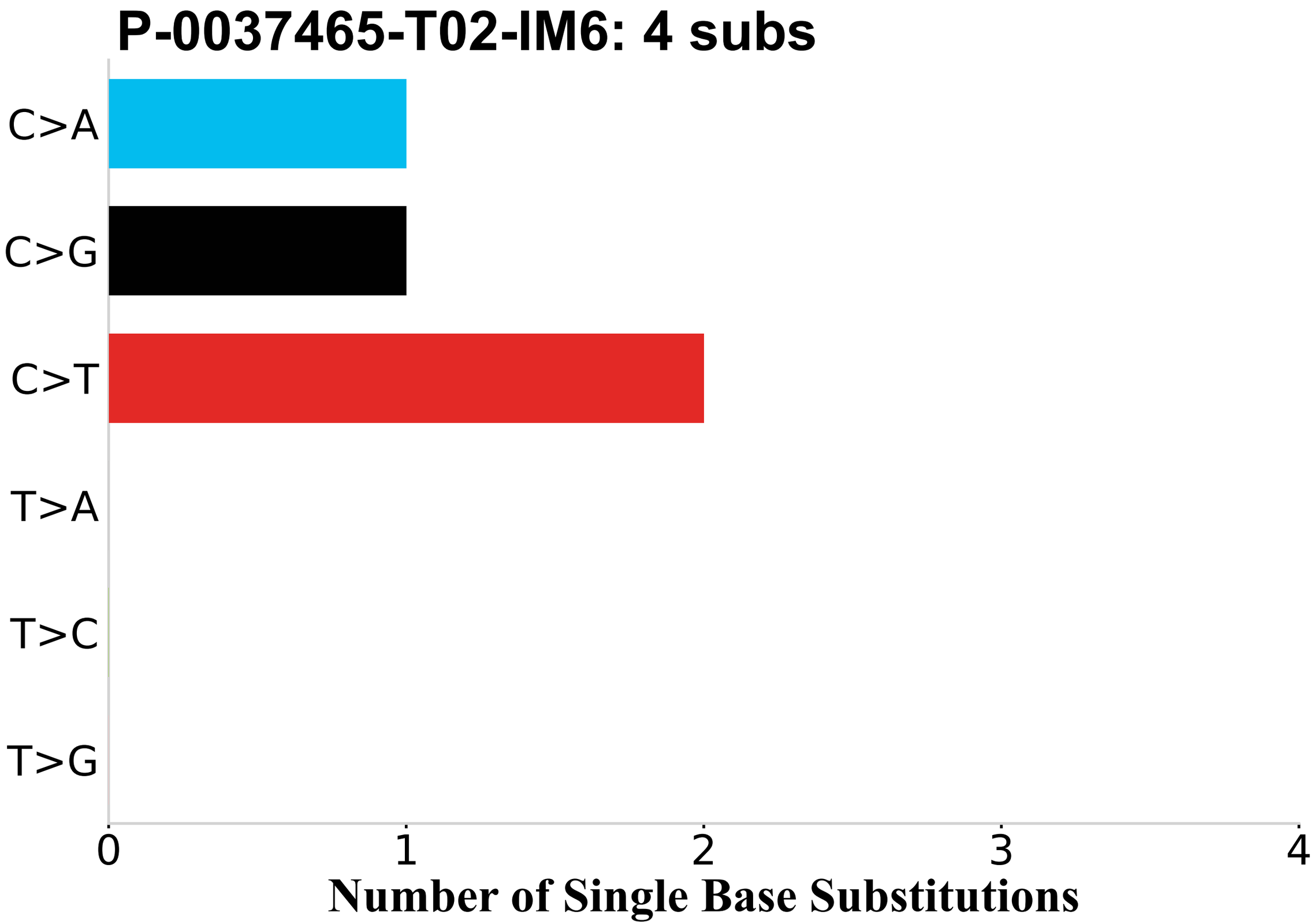
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

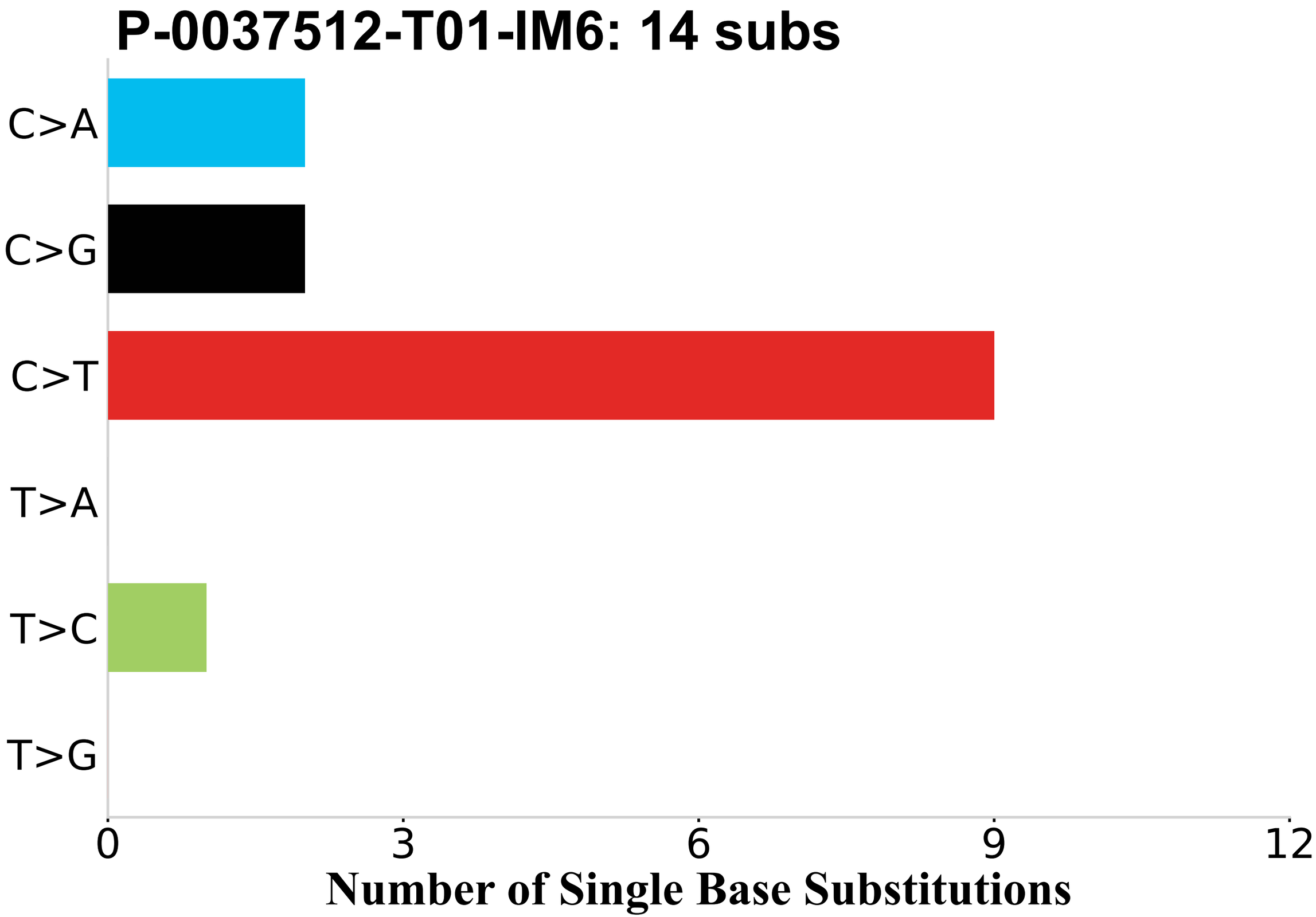

P-0037165-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

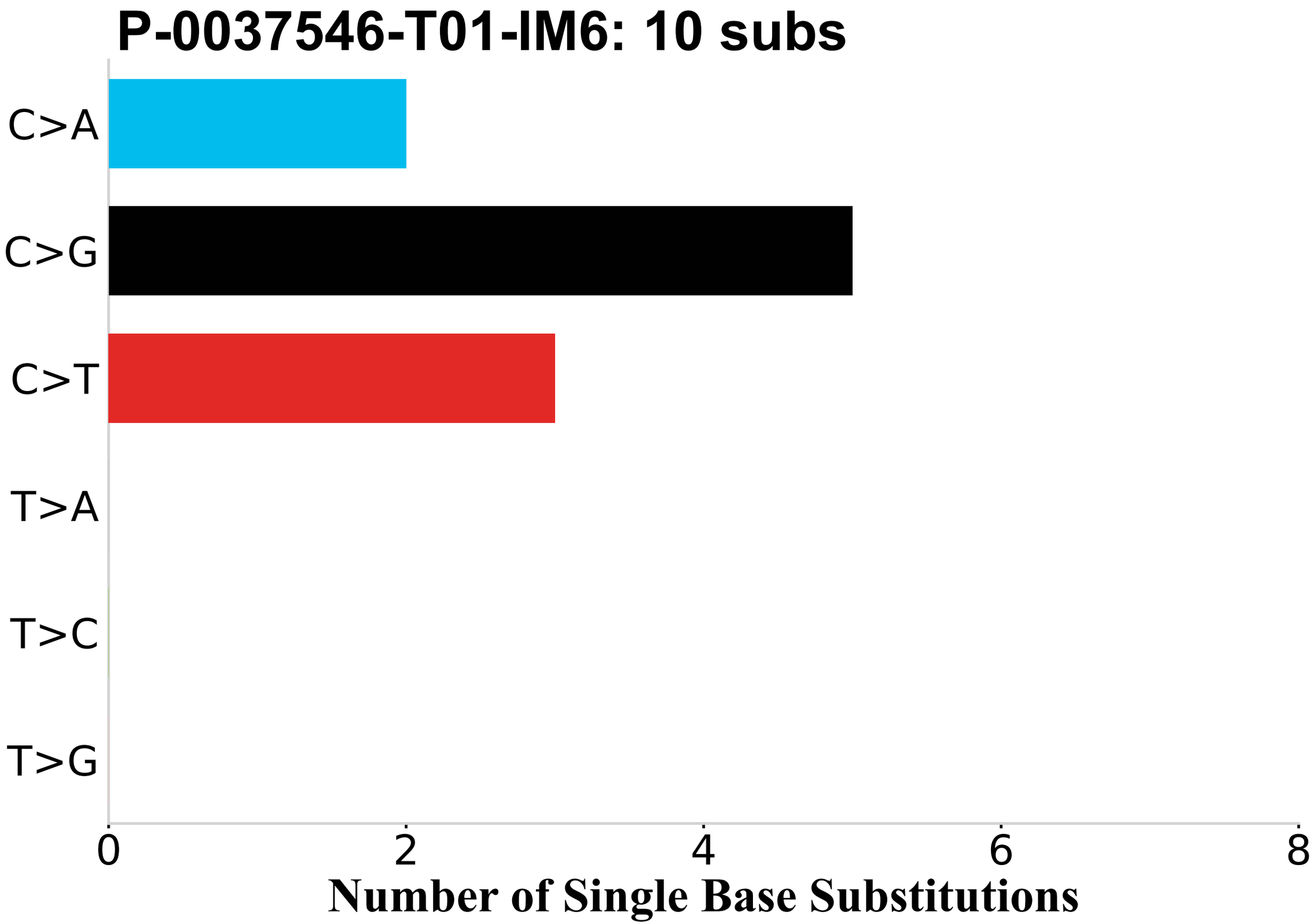
P-0037268-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

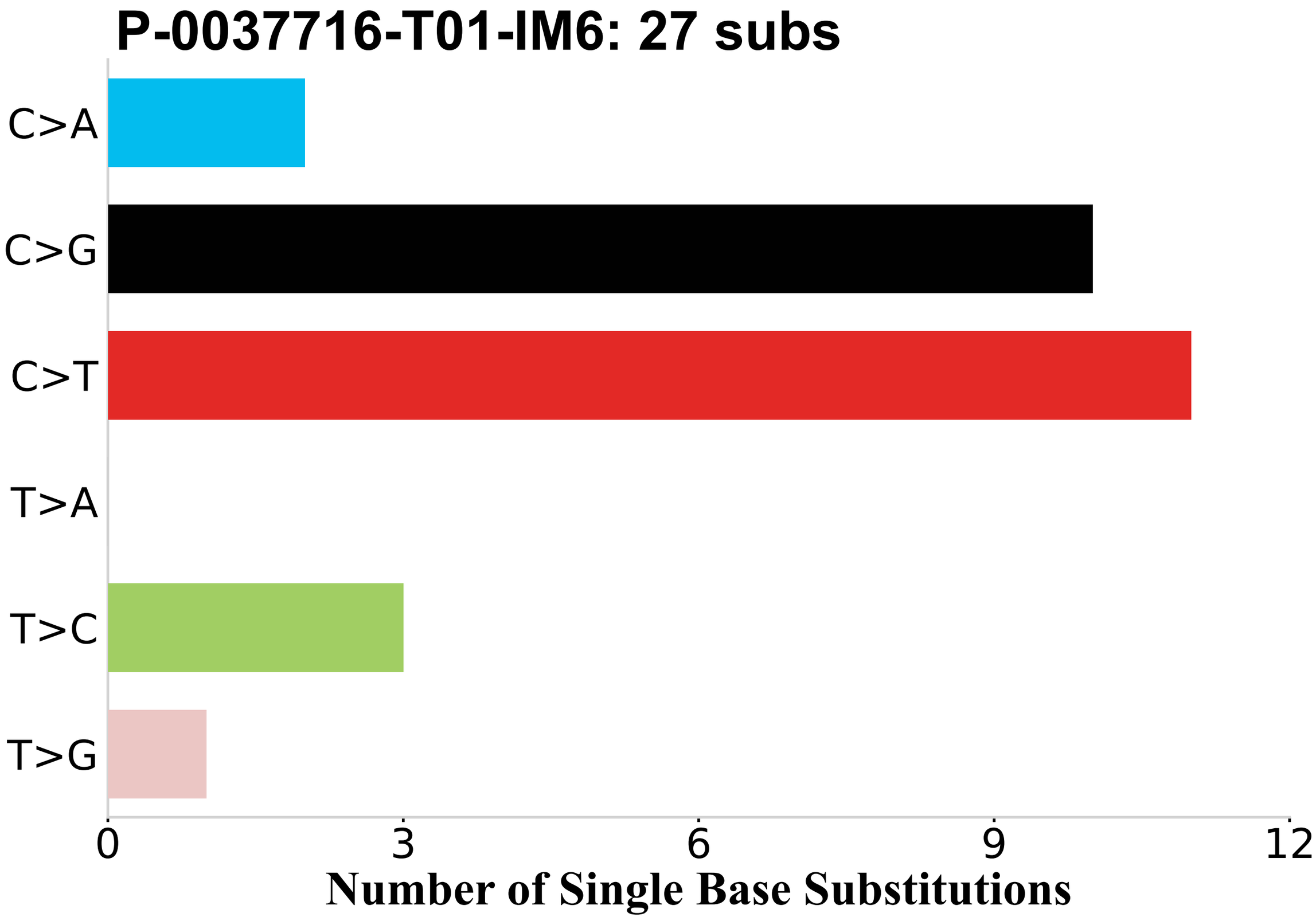

P-0037294-T01-IM6: 27 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

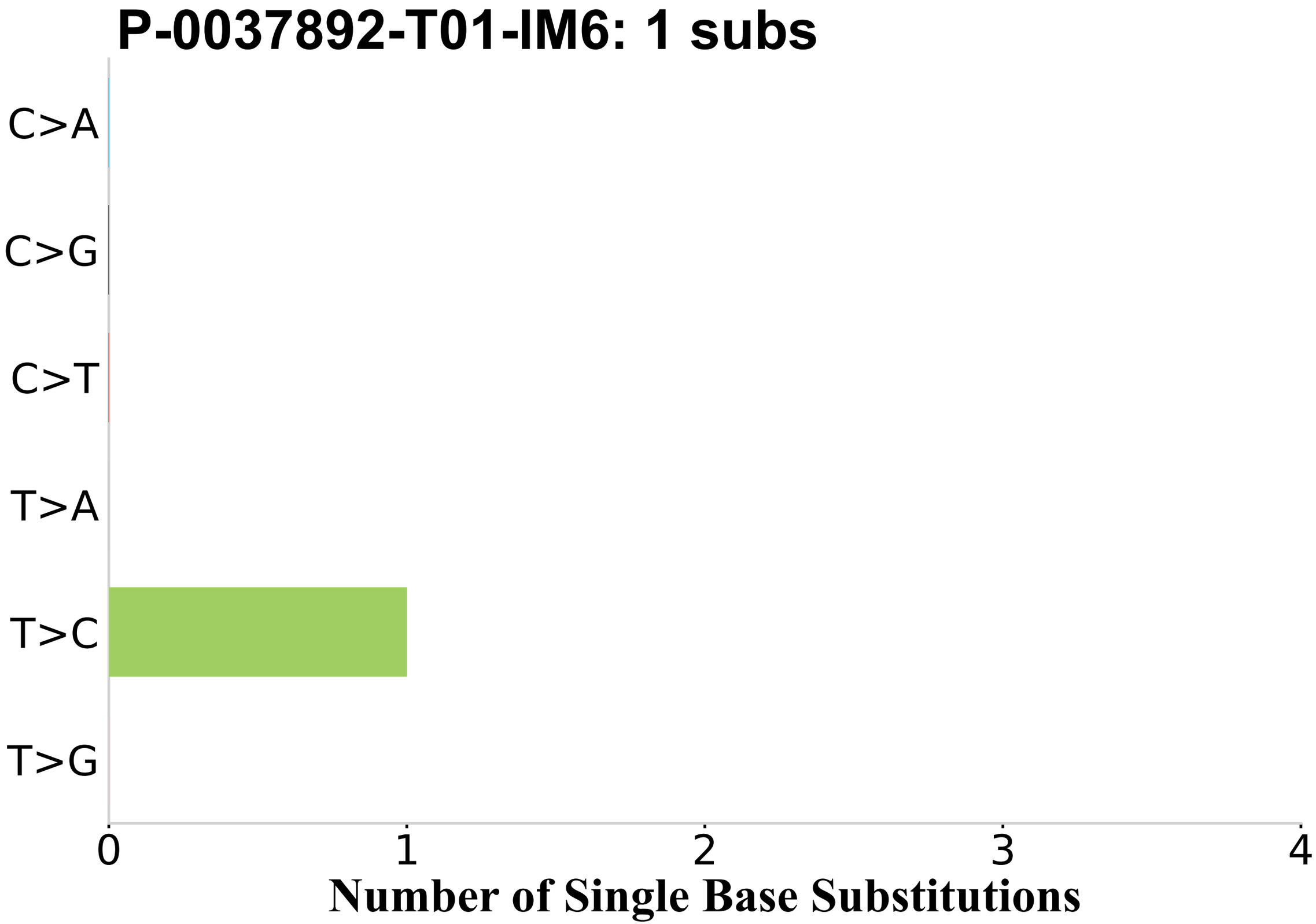
P-0037307-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

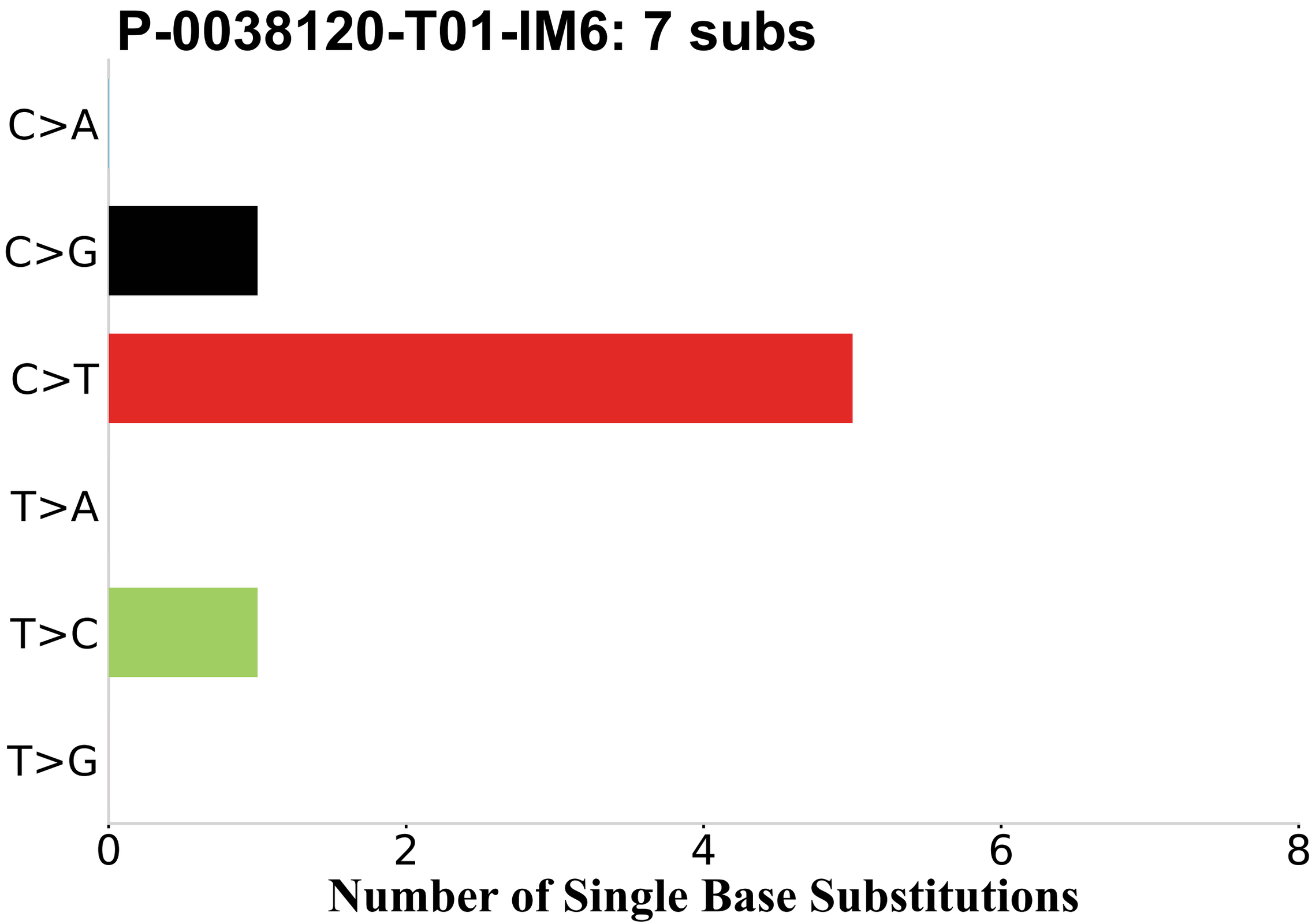

P-0037465-T02-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

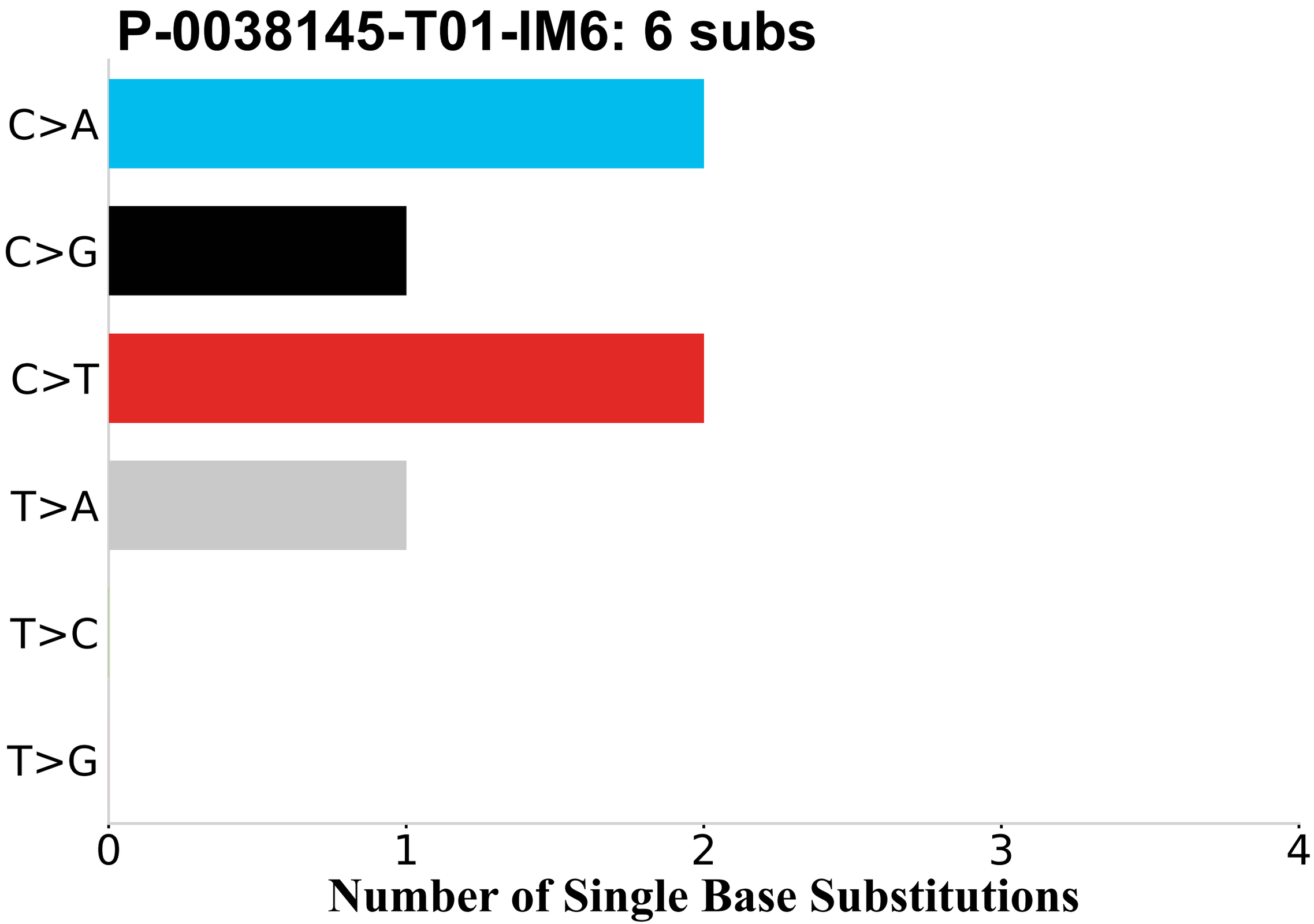

P-0037512-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0037546-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0037716-T01-IM6: 27 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0037892-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0038120-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038145-T01-IM6: 6 subs
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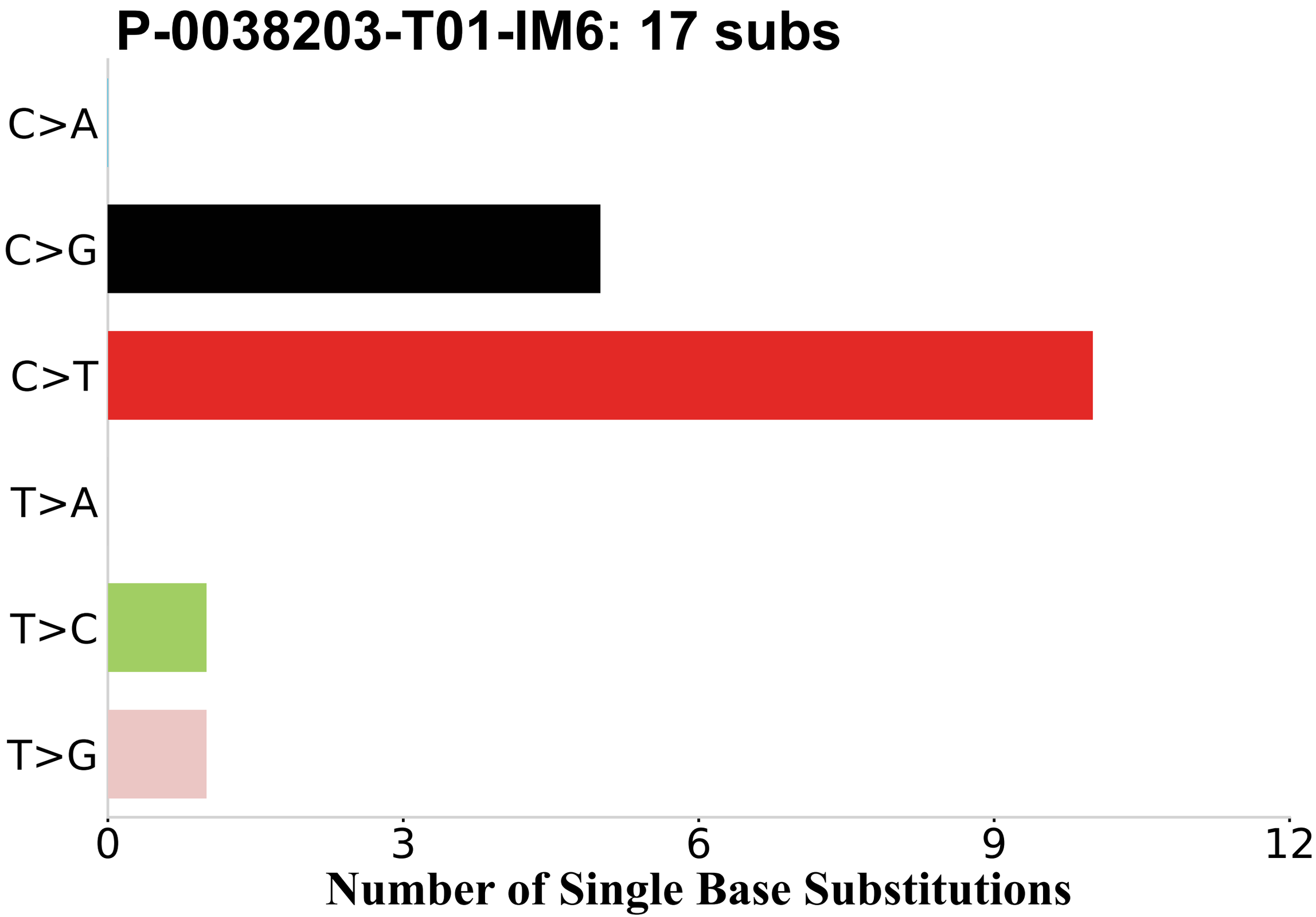
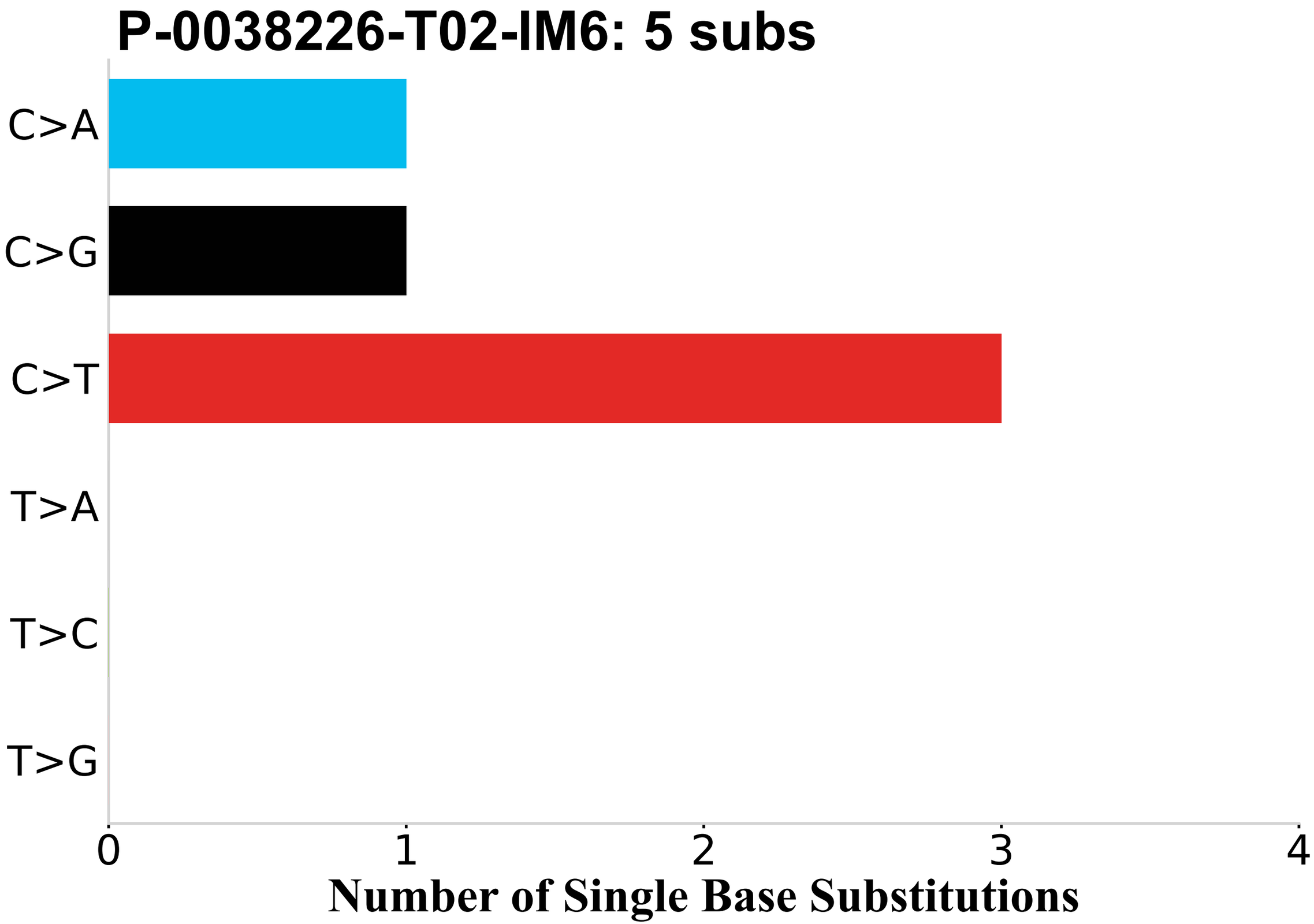
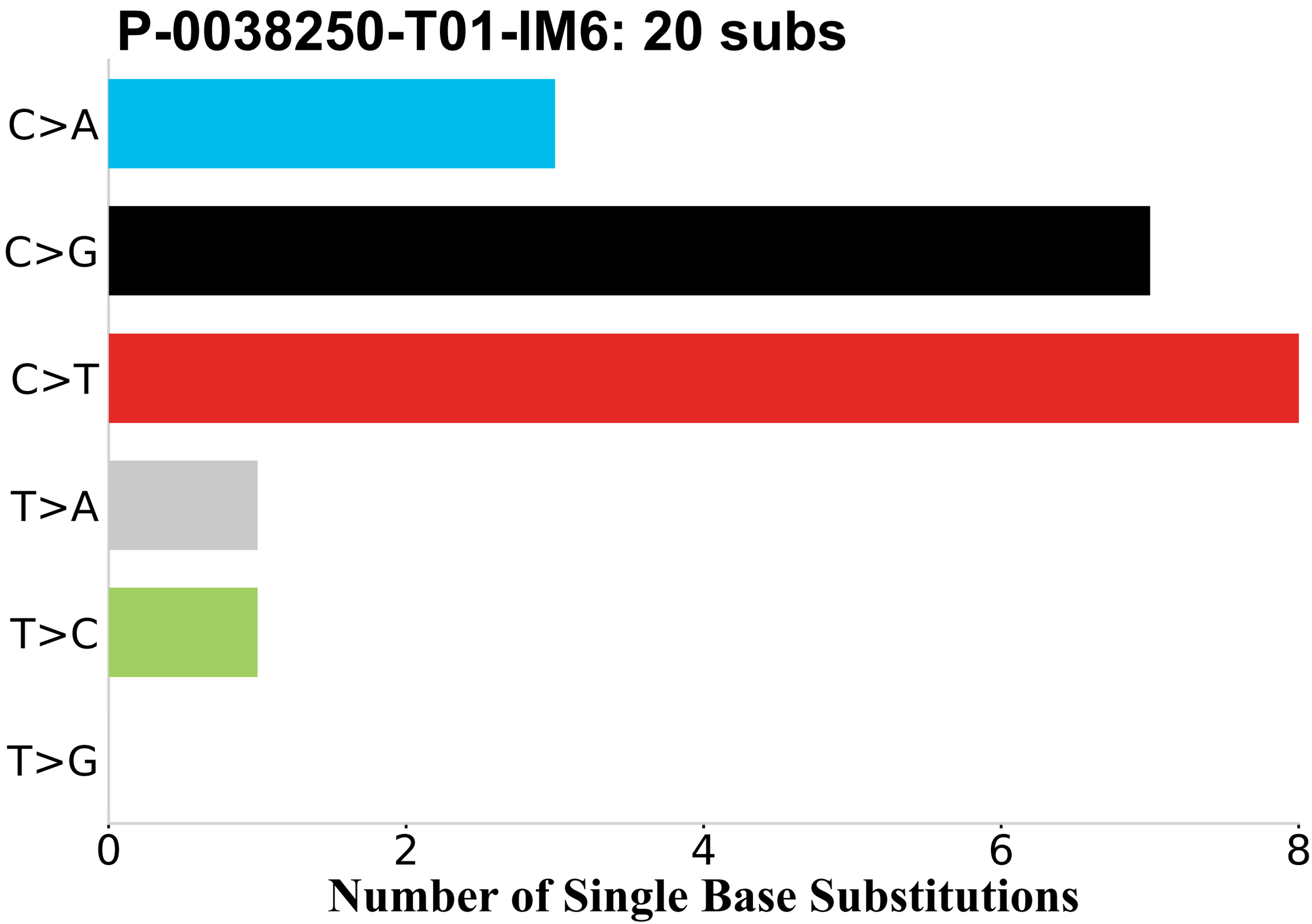
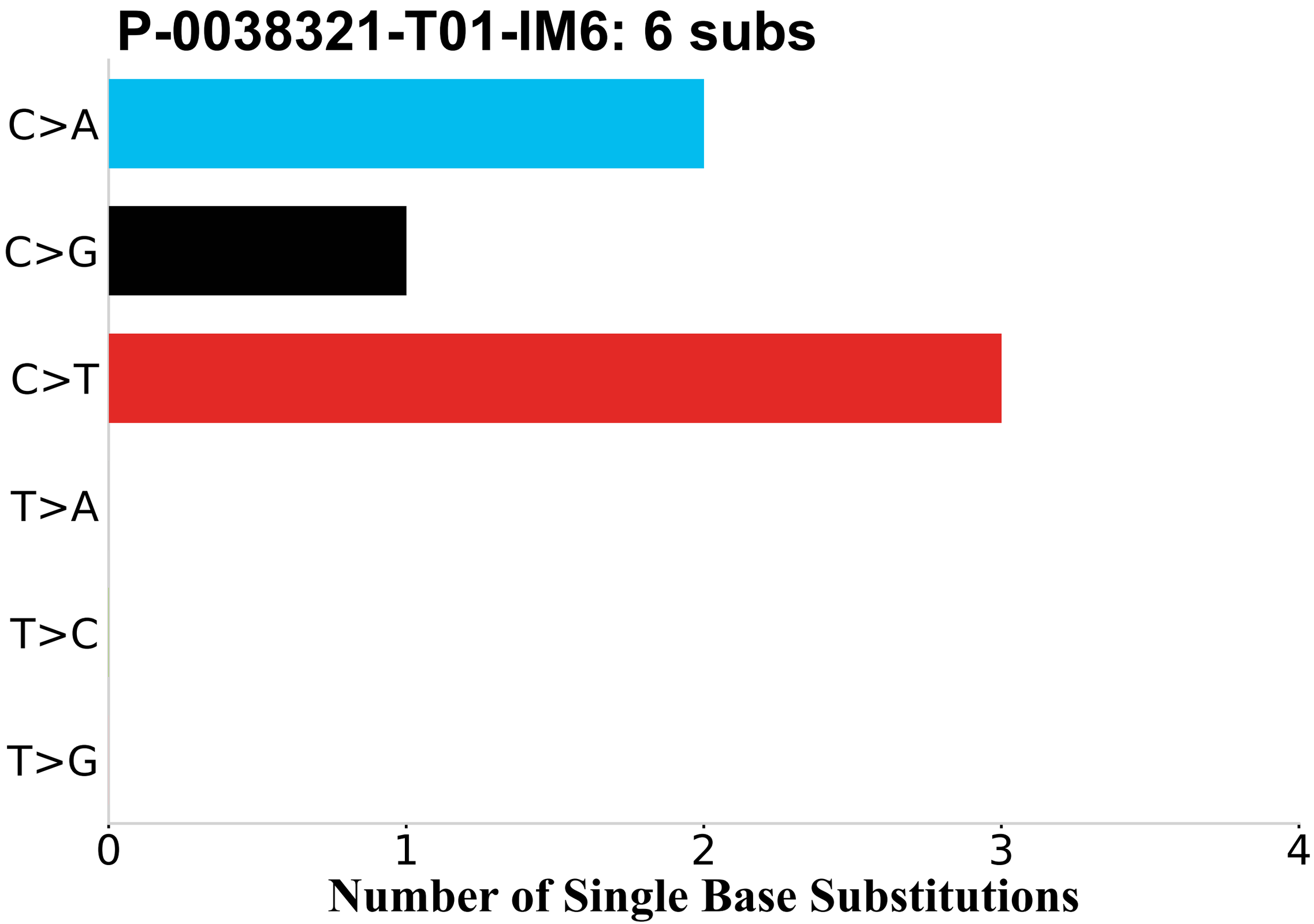
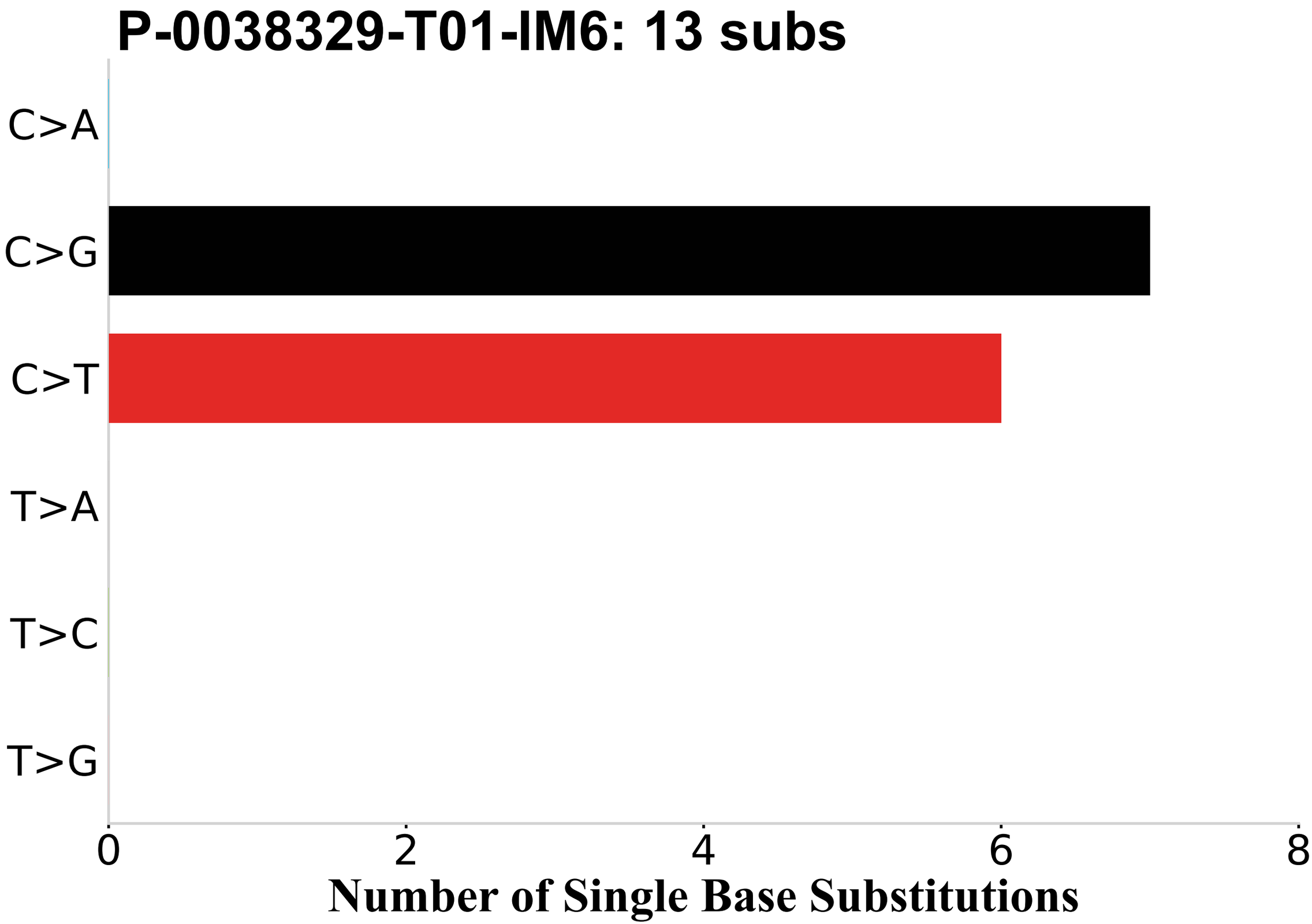
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

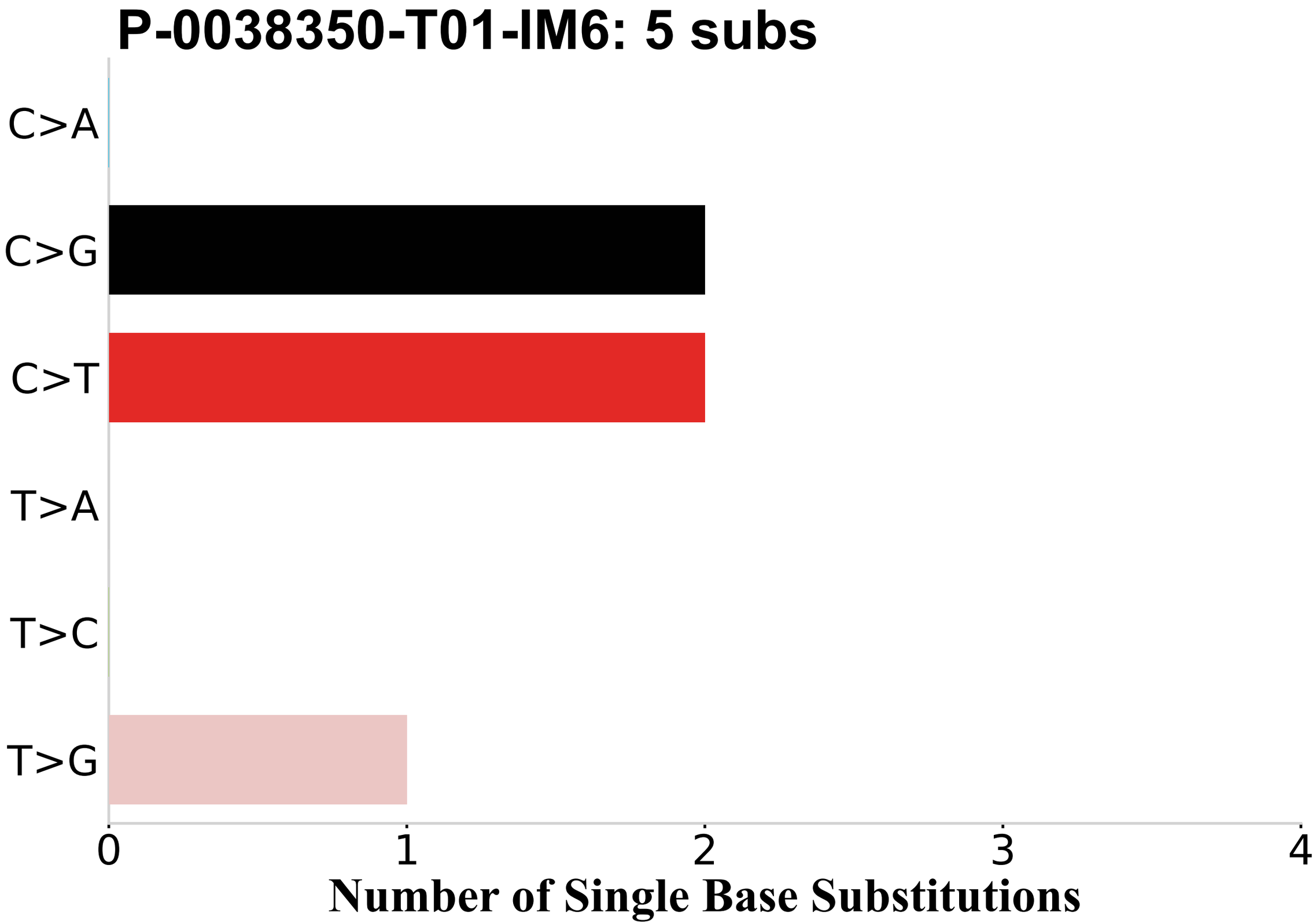

P-0038203-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

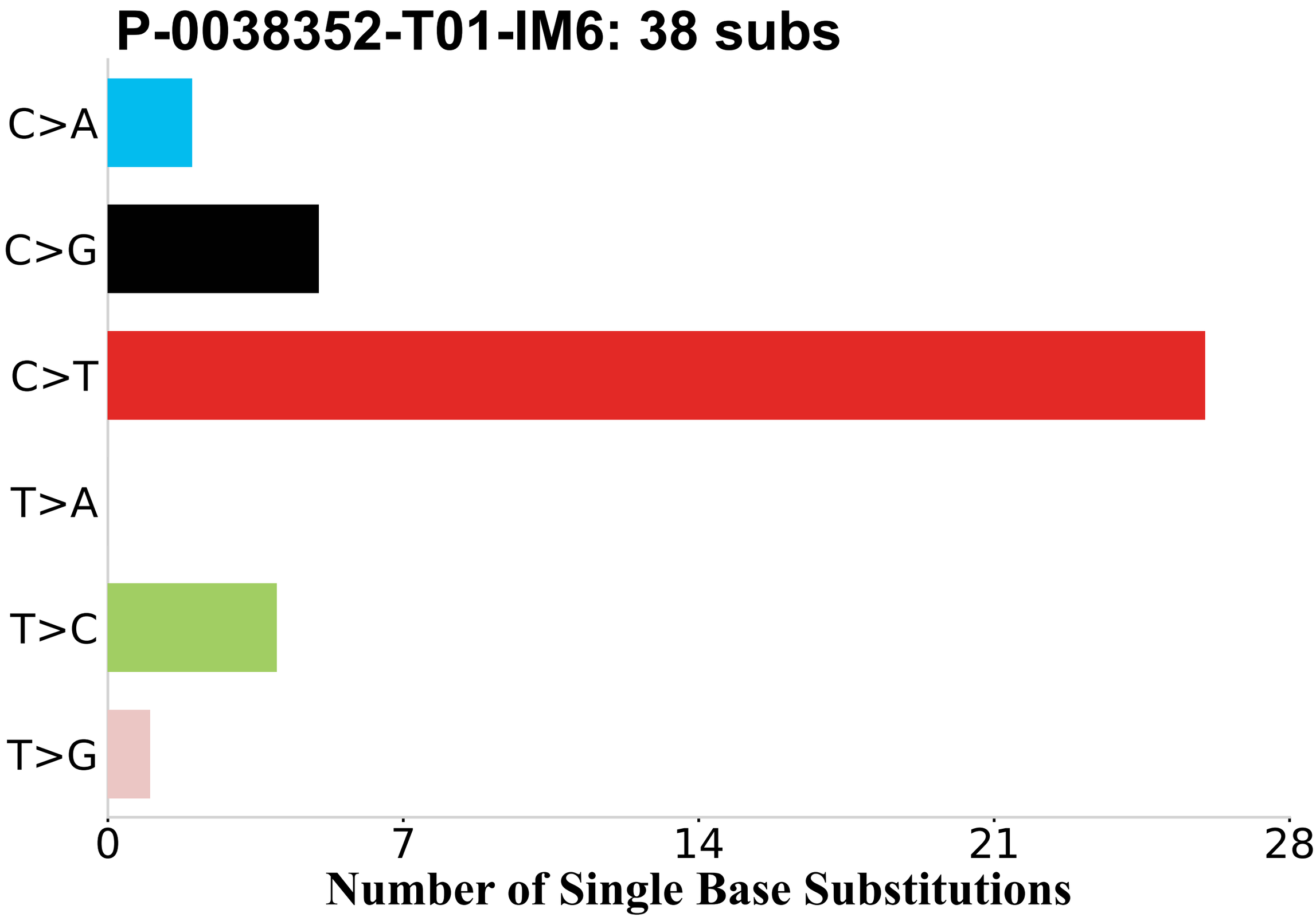

P-0038226-T02-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

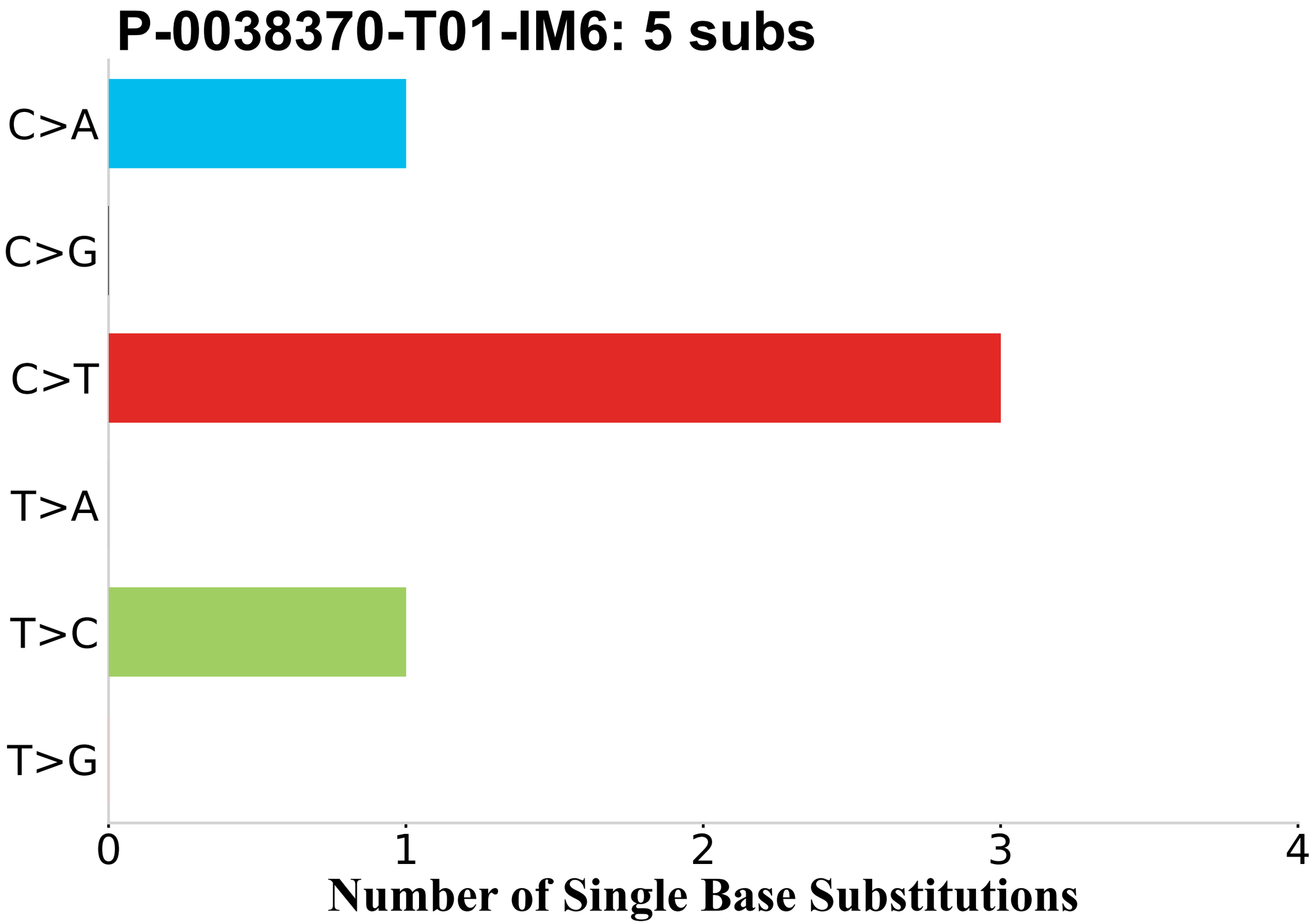

P-0038250-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

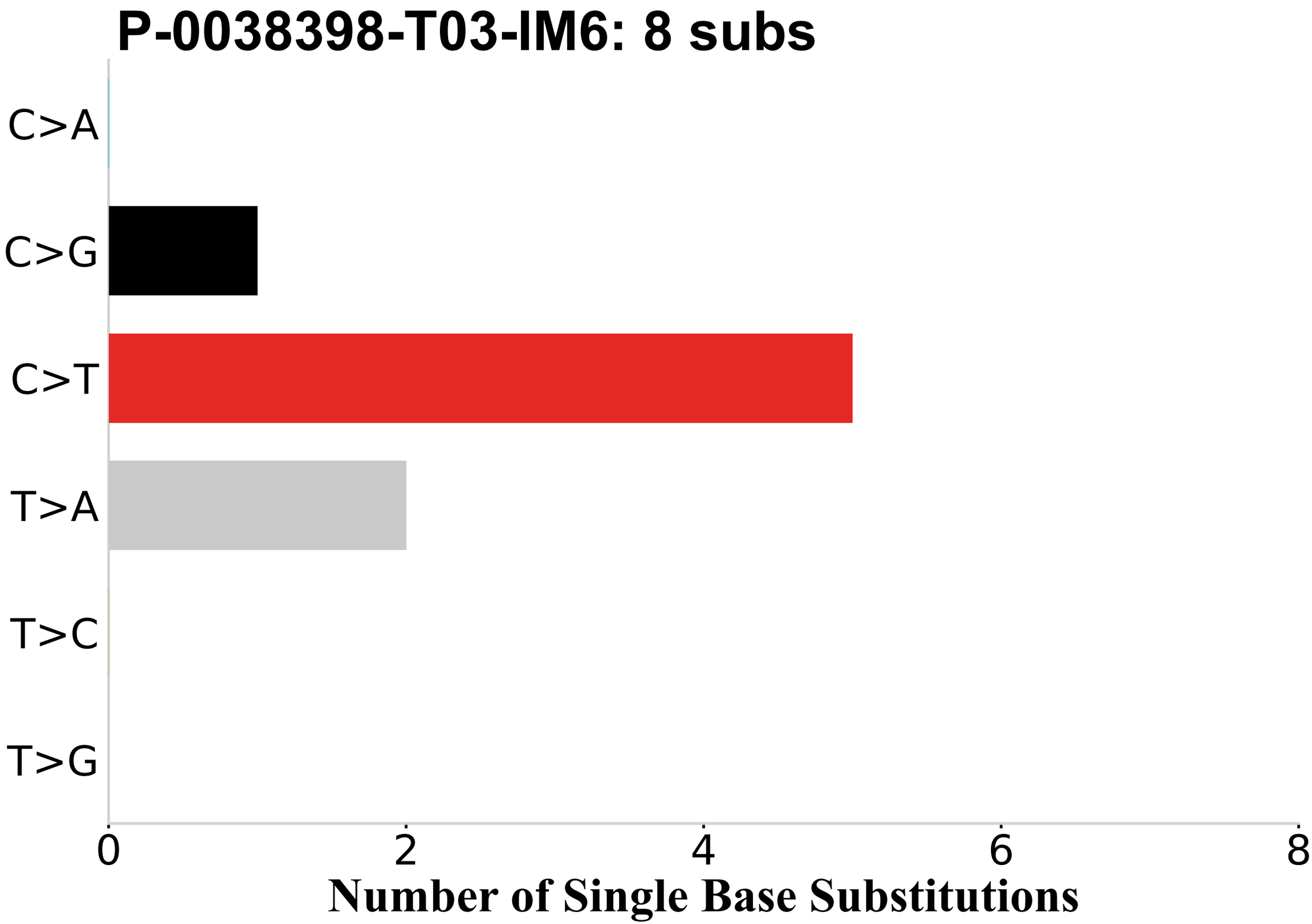

P-0038321-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

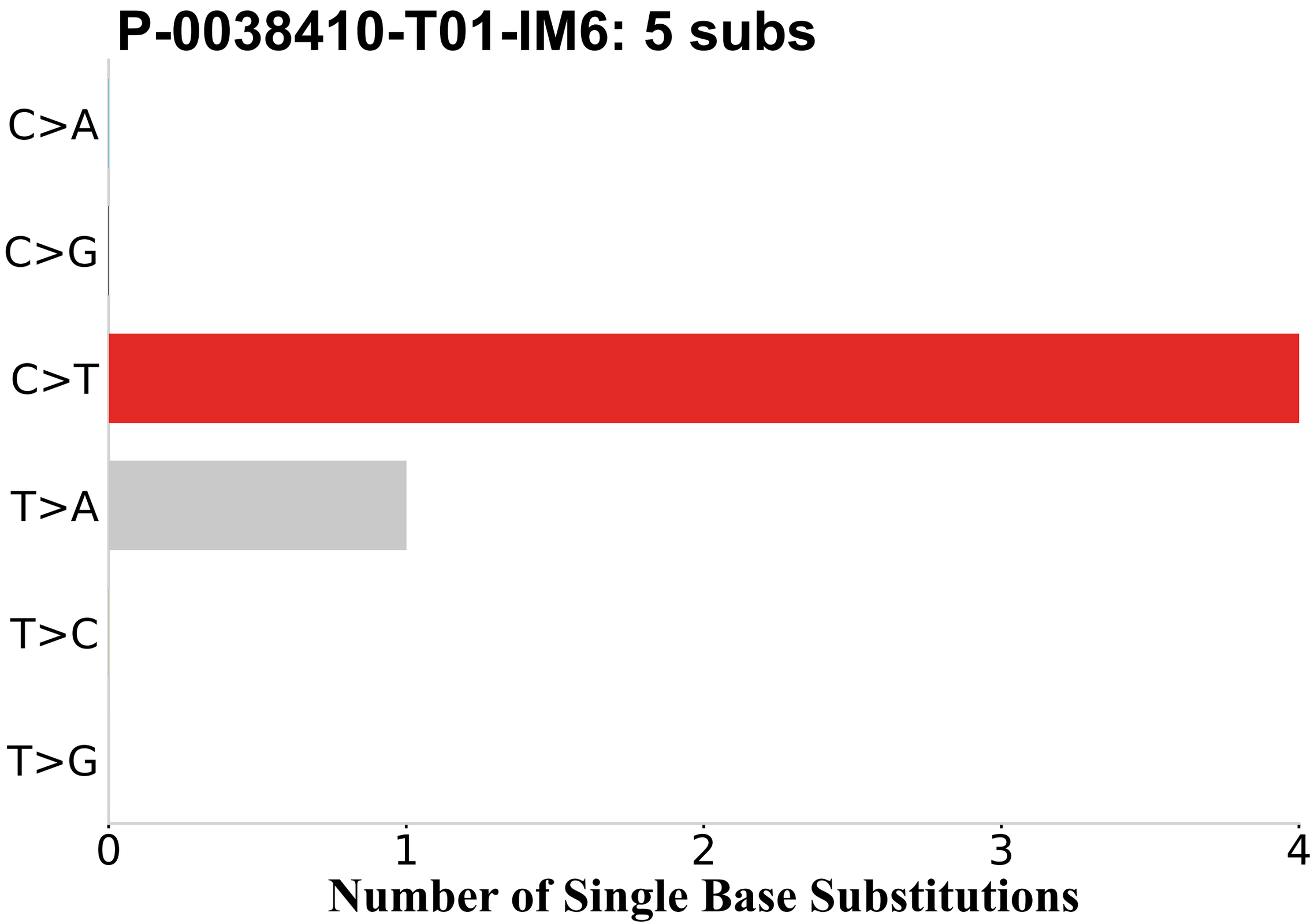

P-0038329-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

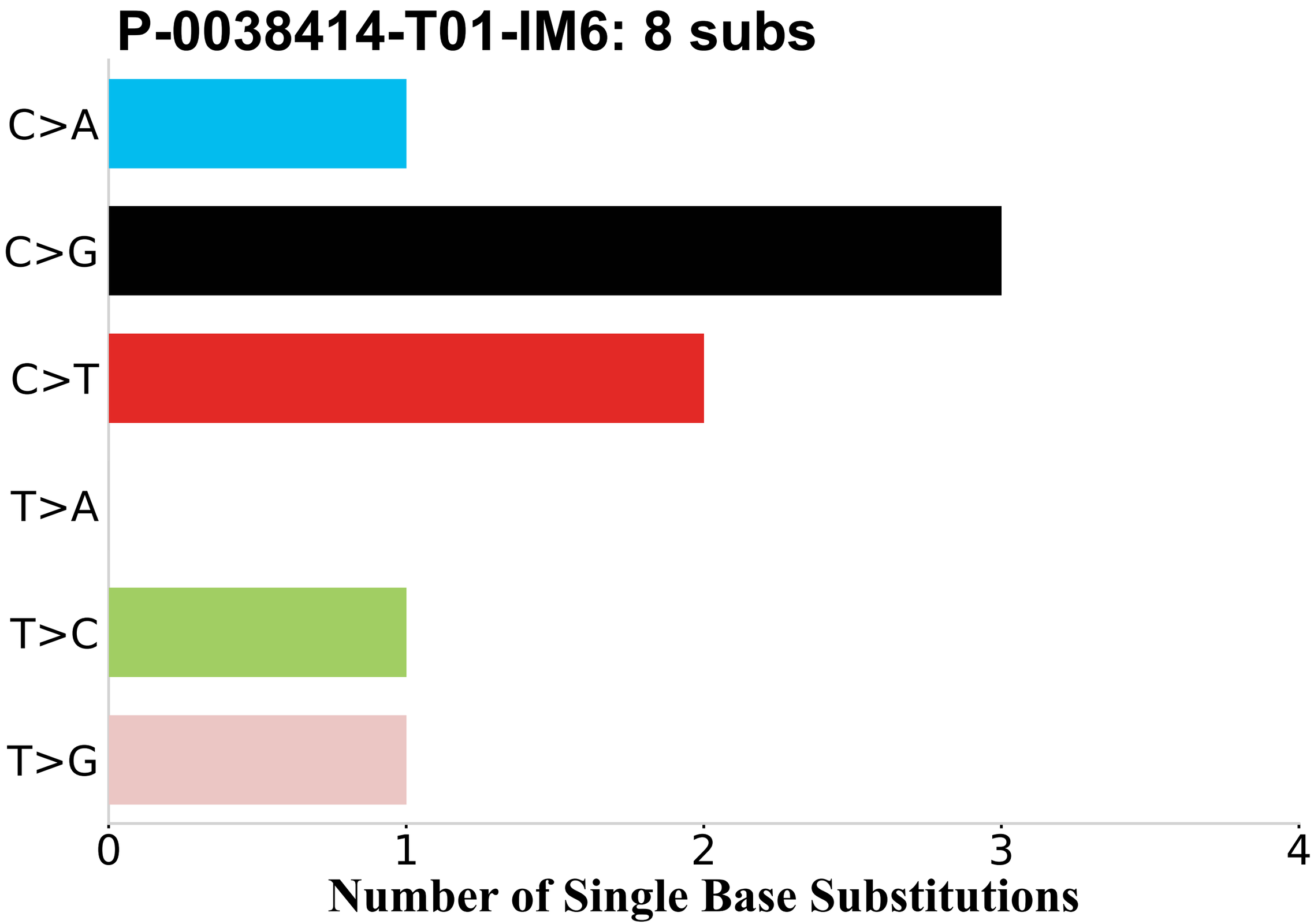

P-0038350-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

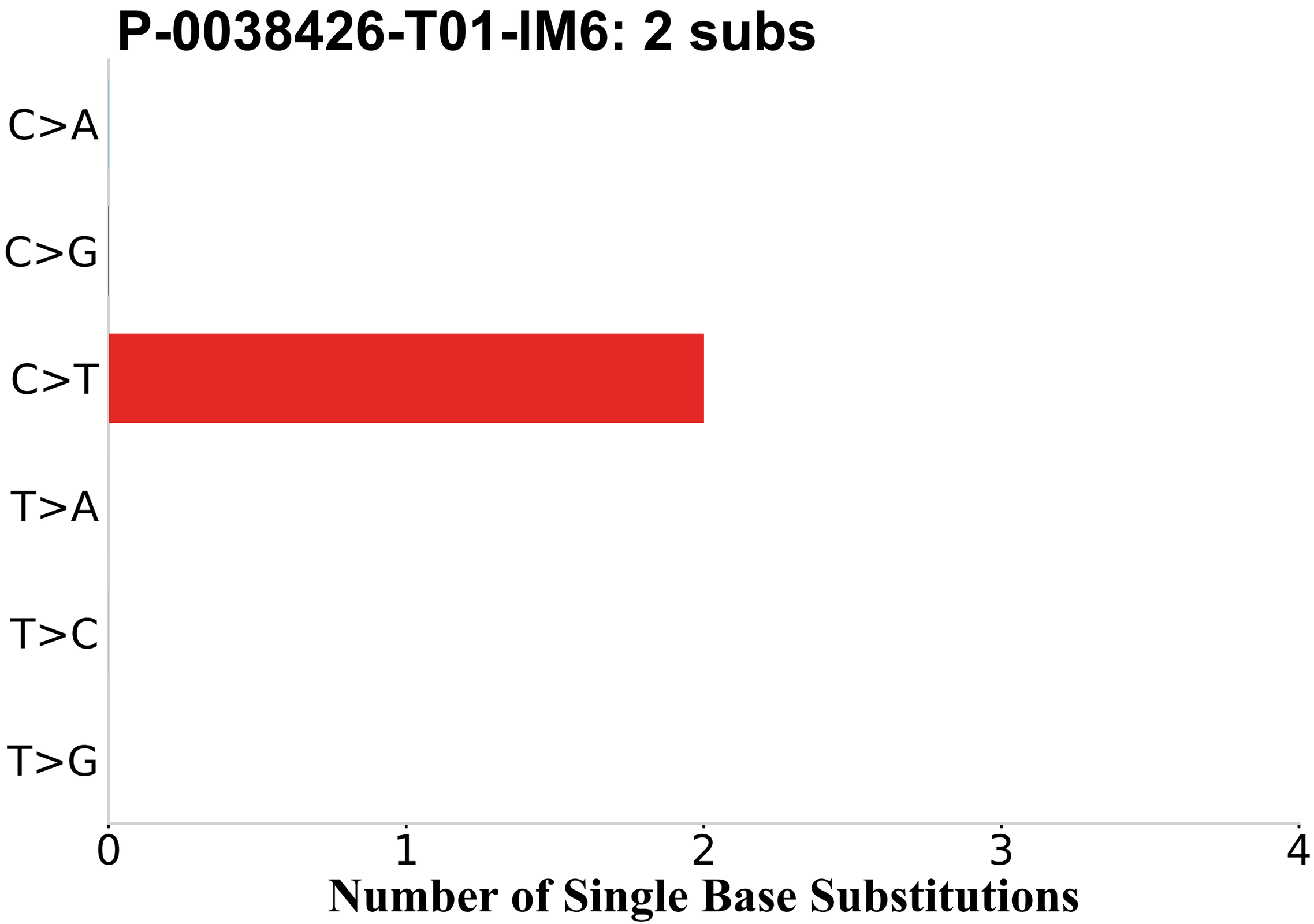

P-0038352-T01-IM6: 38 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions

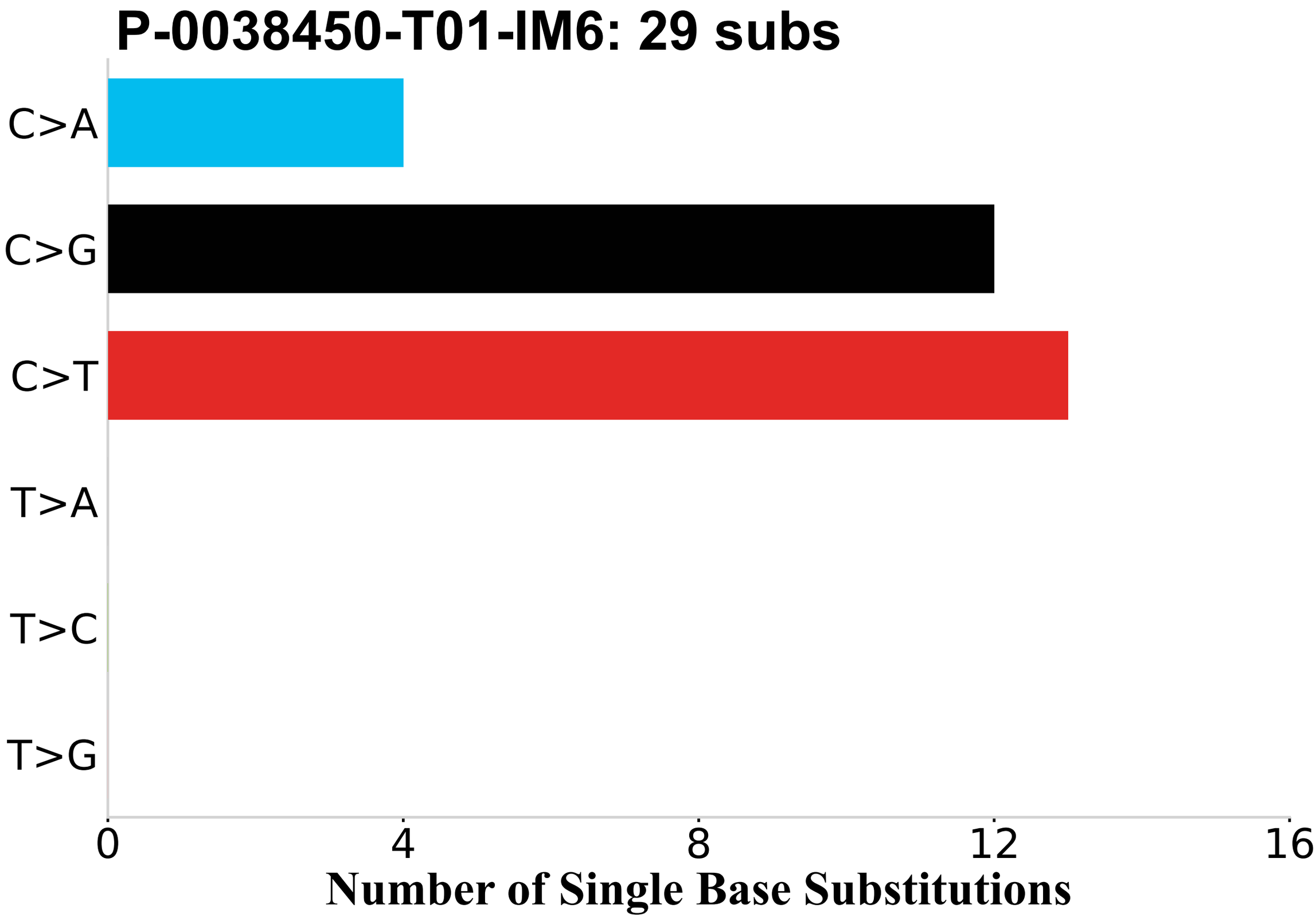

P-0038370-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

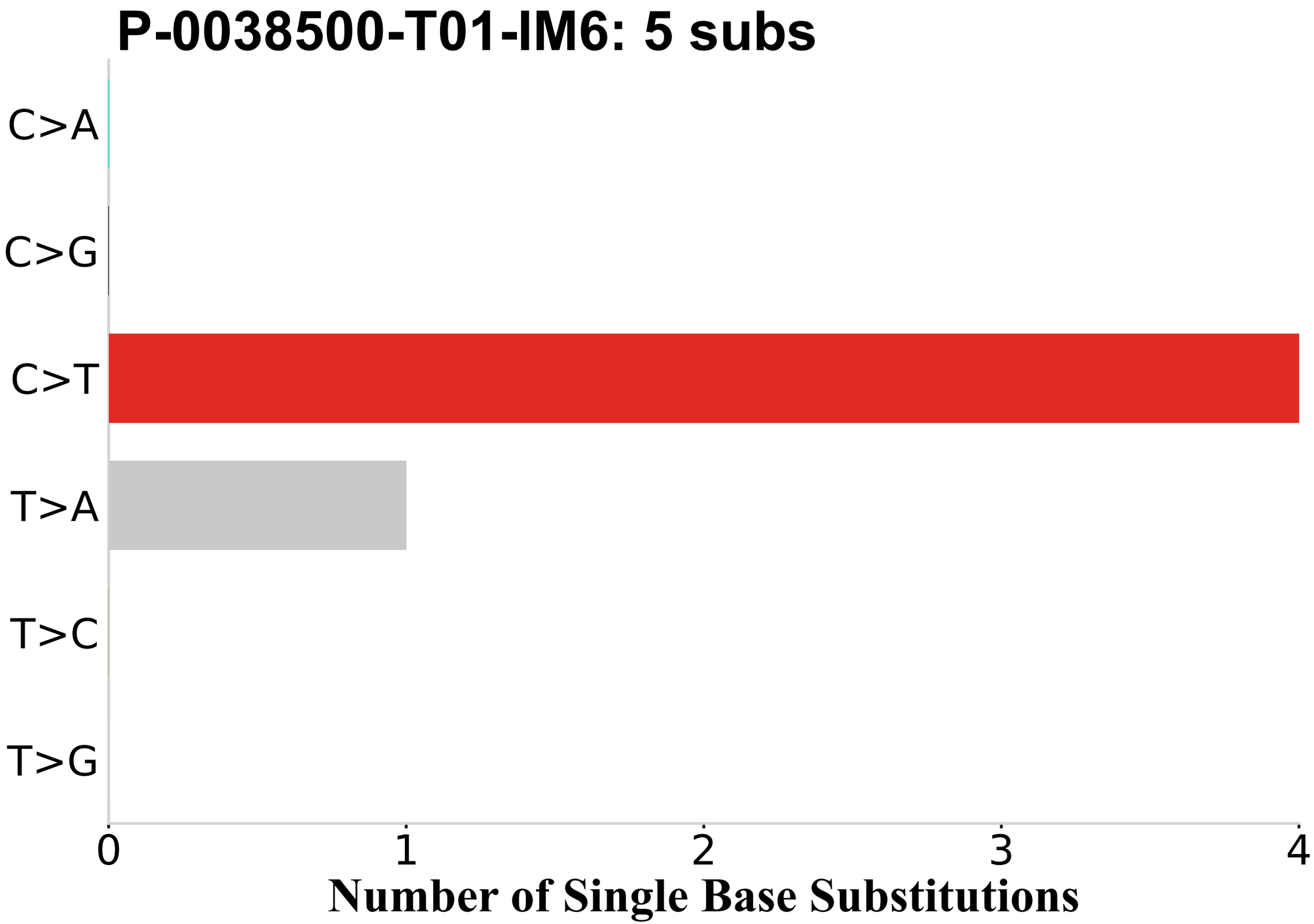

P-0038398-T03-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

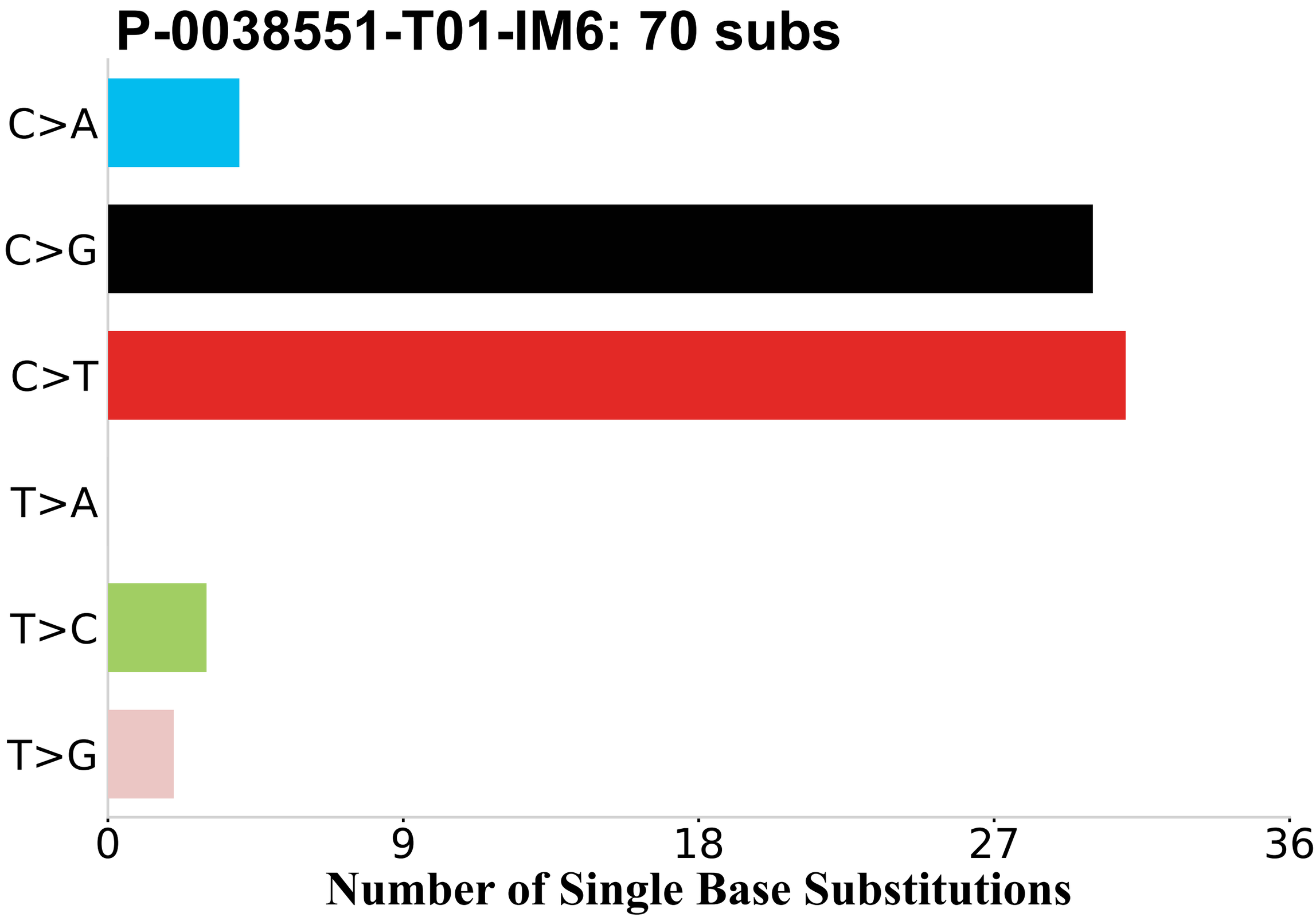

P-0038410-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

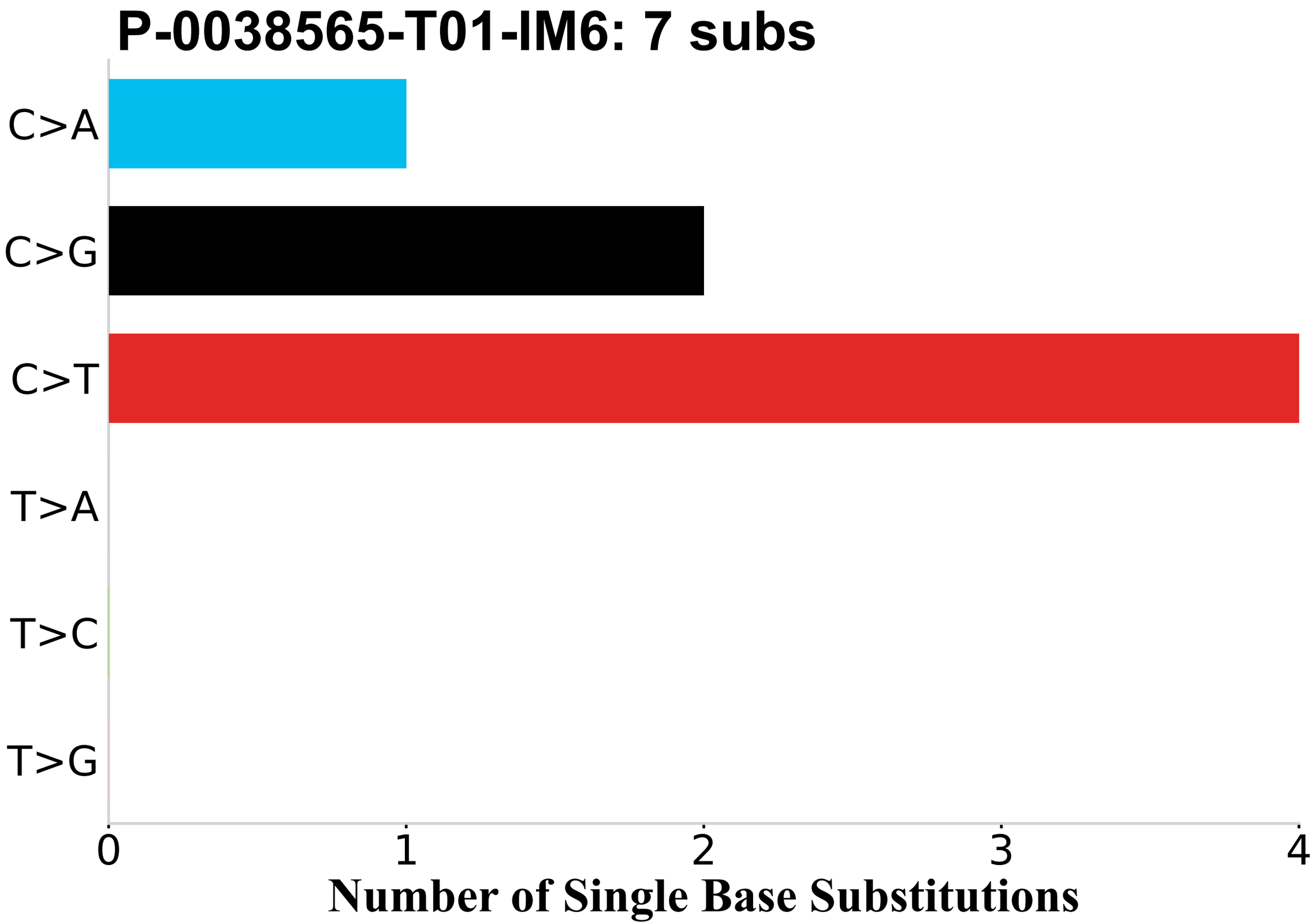

P-0038414-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

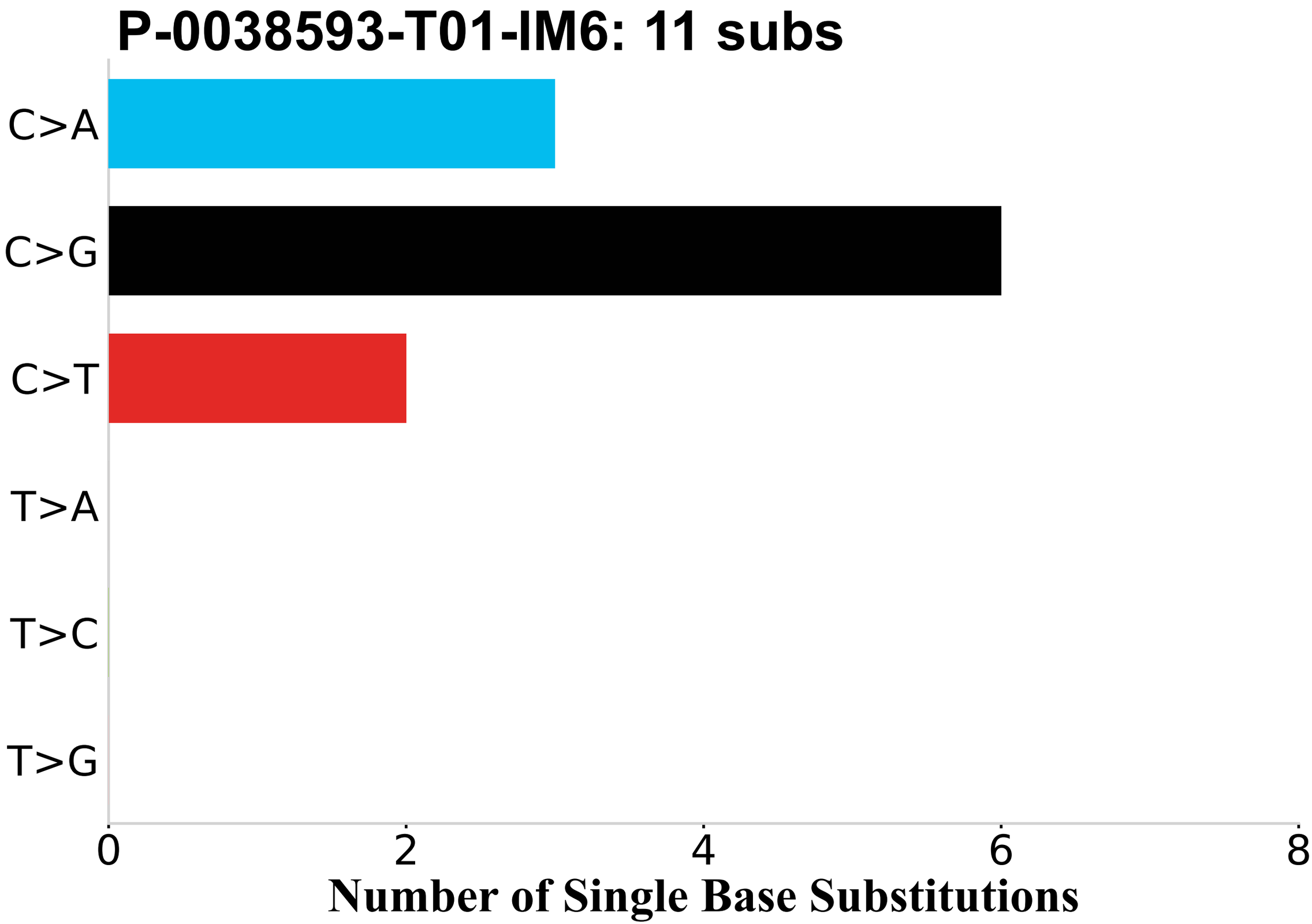

P-0038426-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

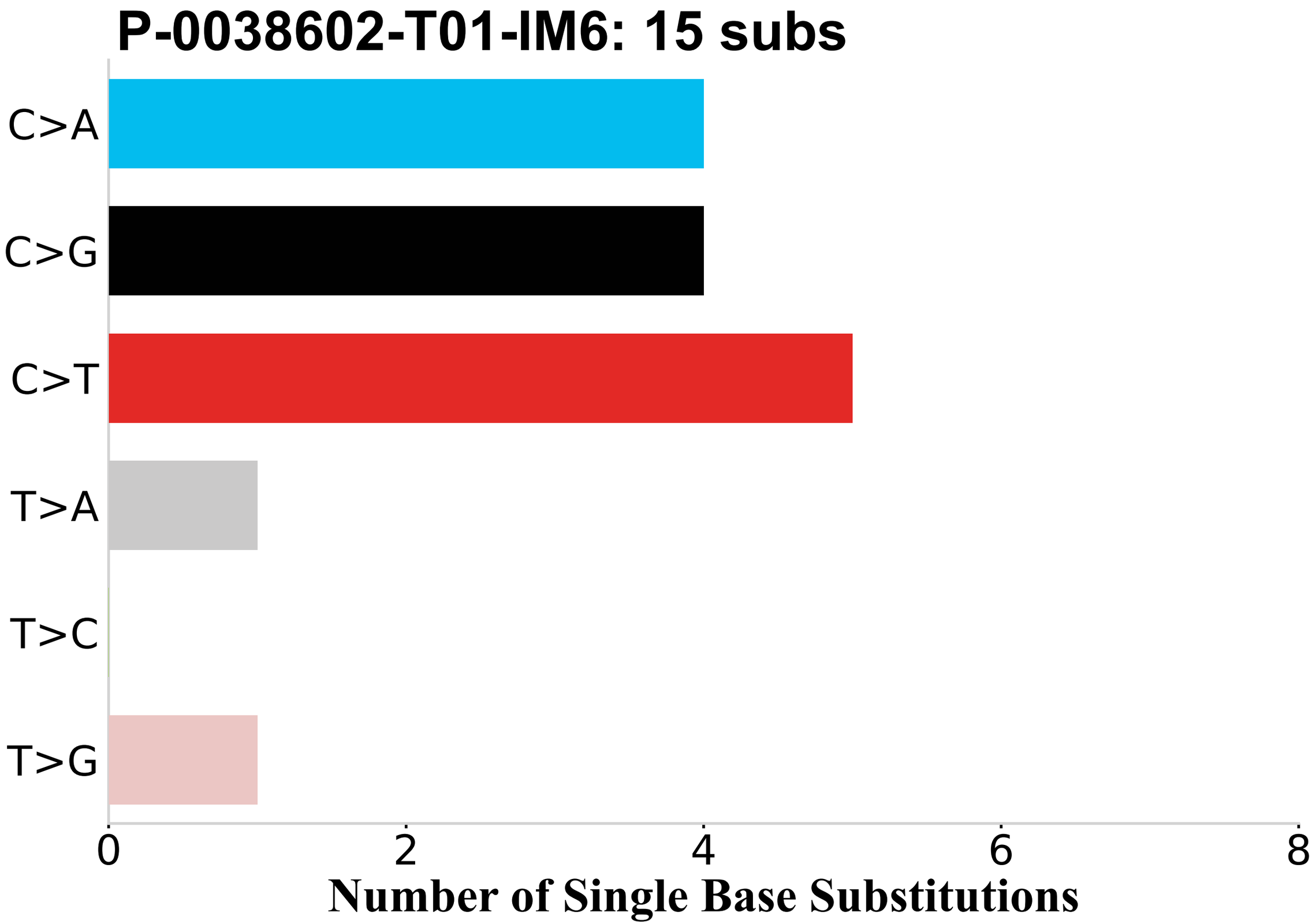

P-0038450-T01-IM6: 29 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

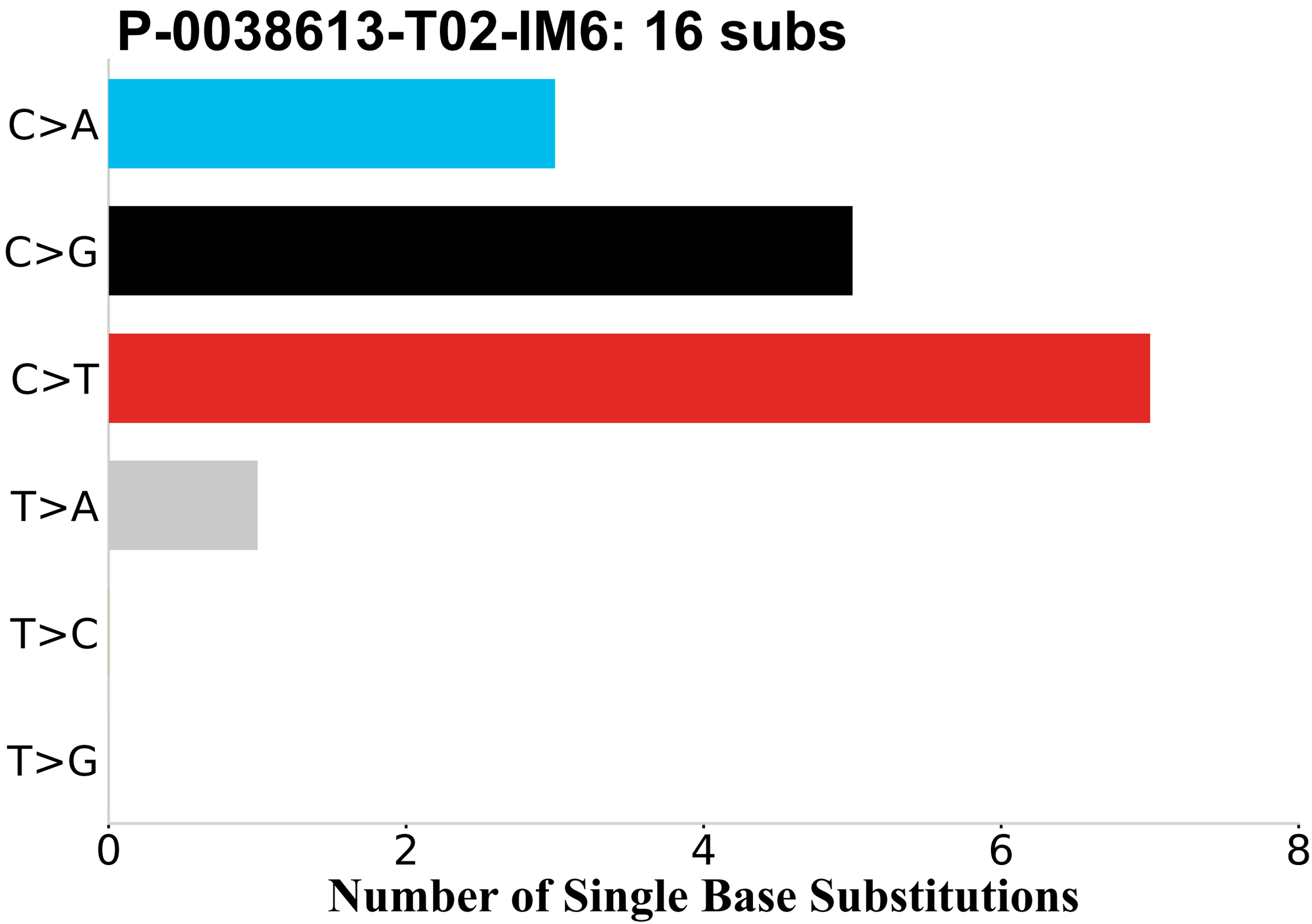

P-0038500-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

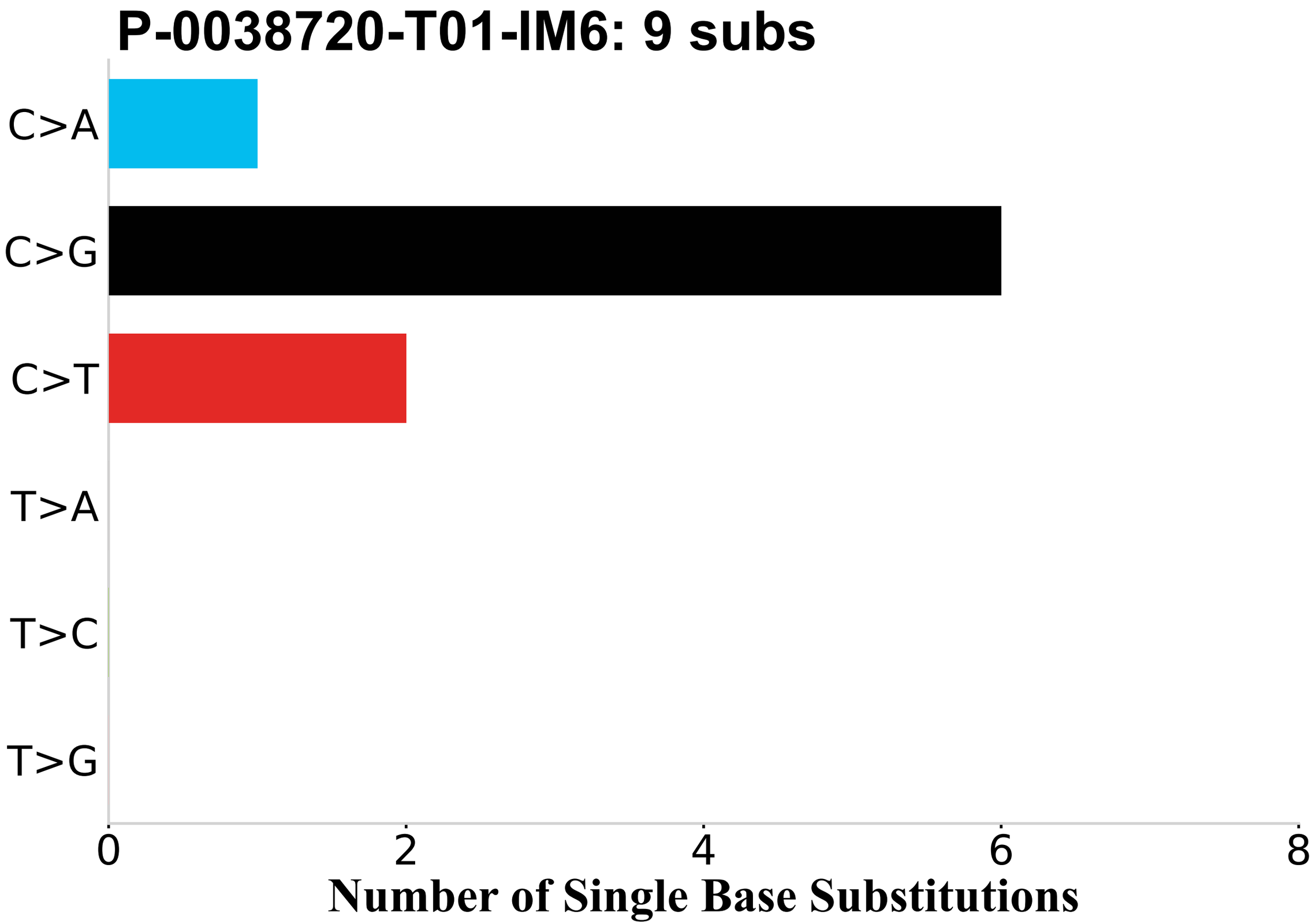

P-0038551-T01-IM6: 70 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
9
18
27
36
Number of Single Base Substitutions


P-0038565-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0038593-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038602-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038613-T02-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038720-T01-IM6: 9 subs
C>A
C>G
C>T
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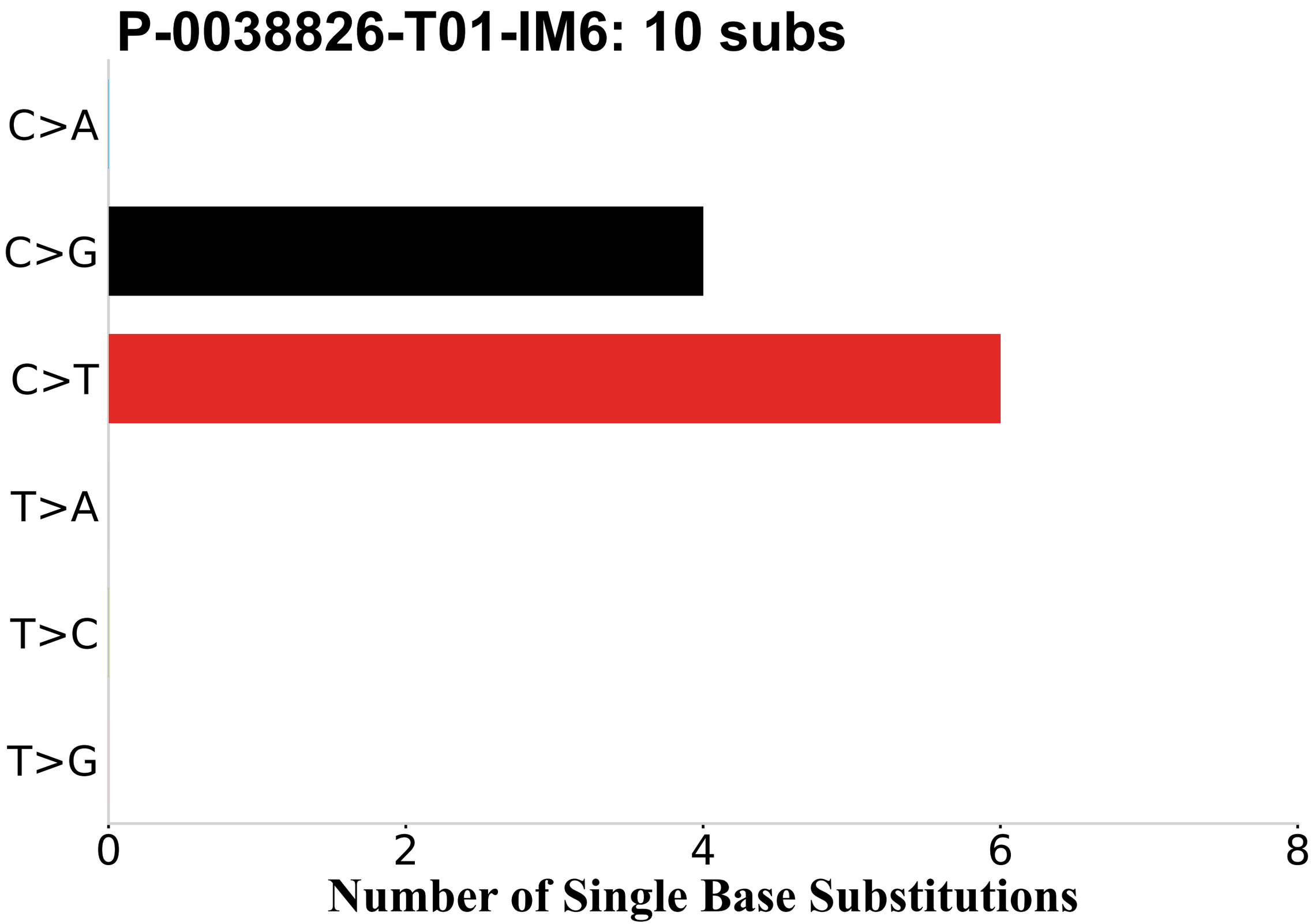
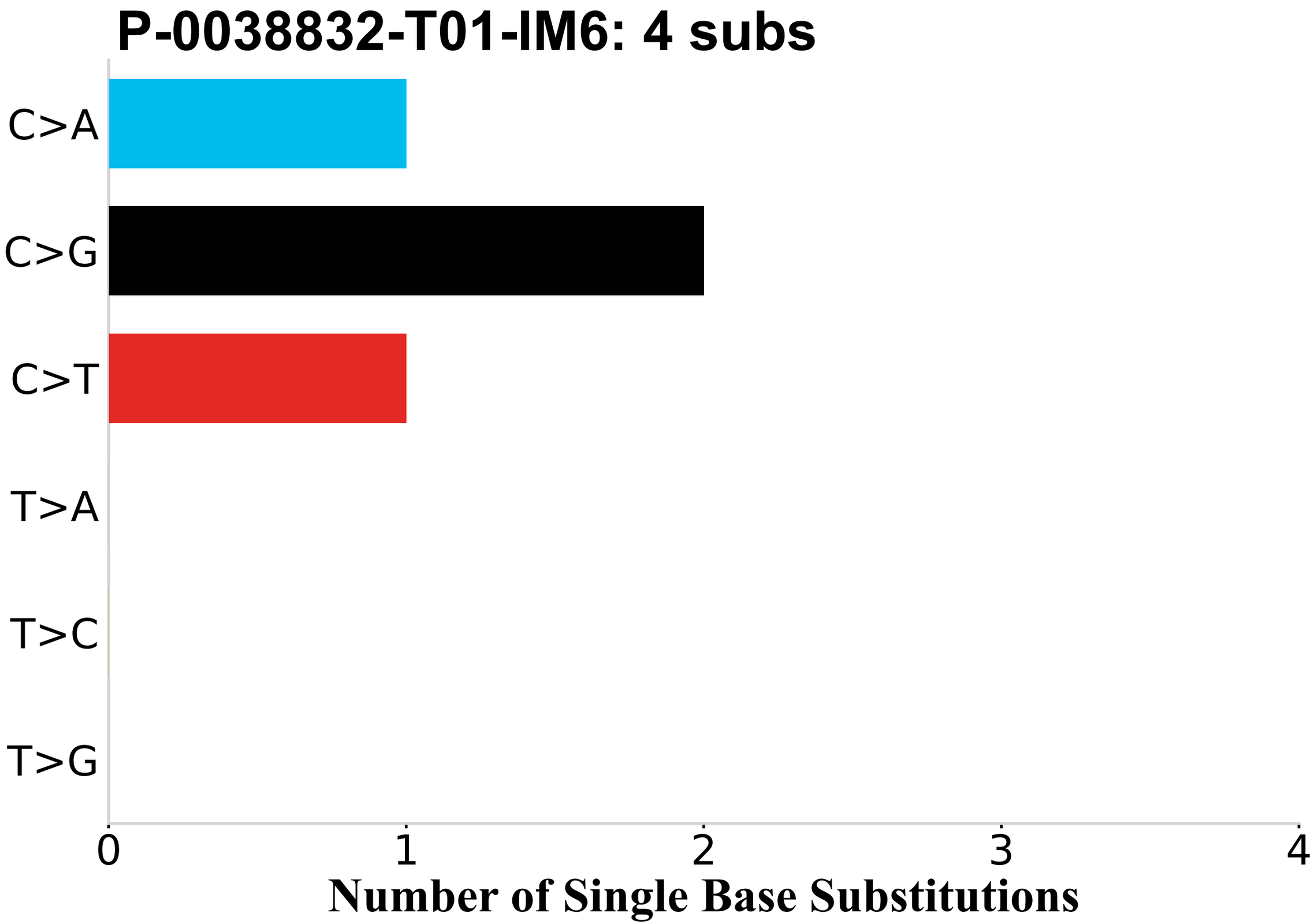
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038826-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038832-T01-IM6: 4 subs
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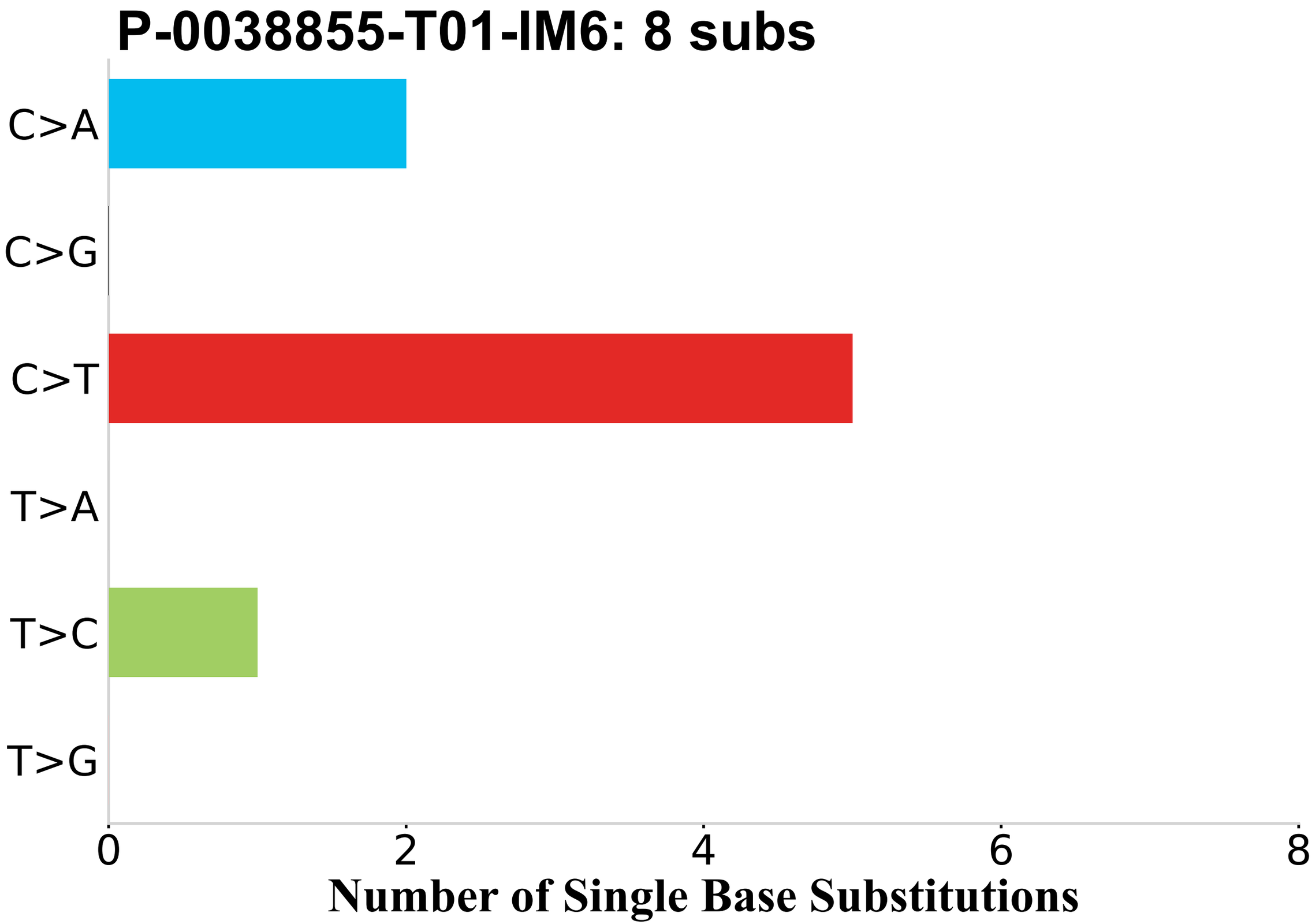
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0038855-T01-IM6: 8 subs
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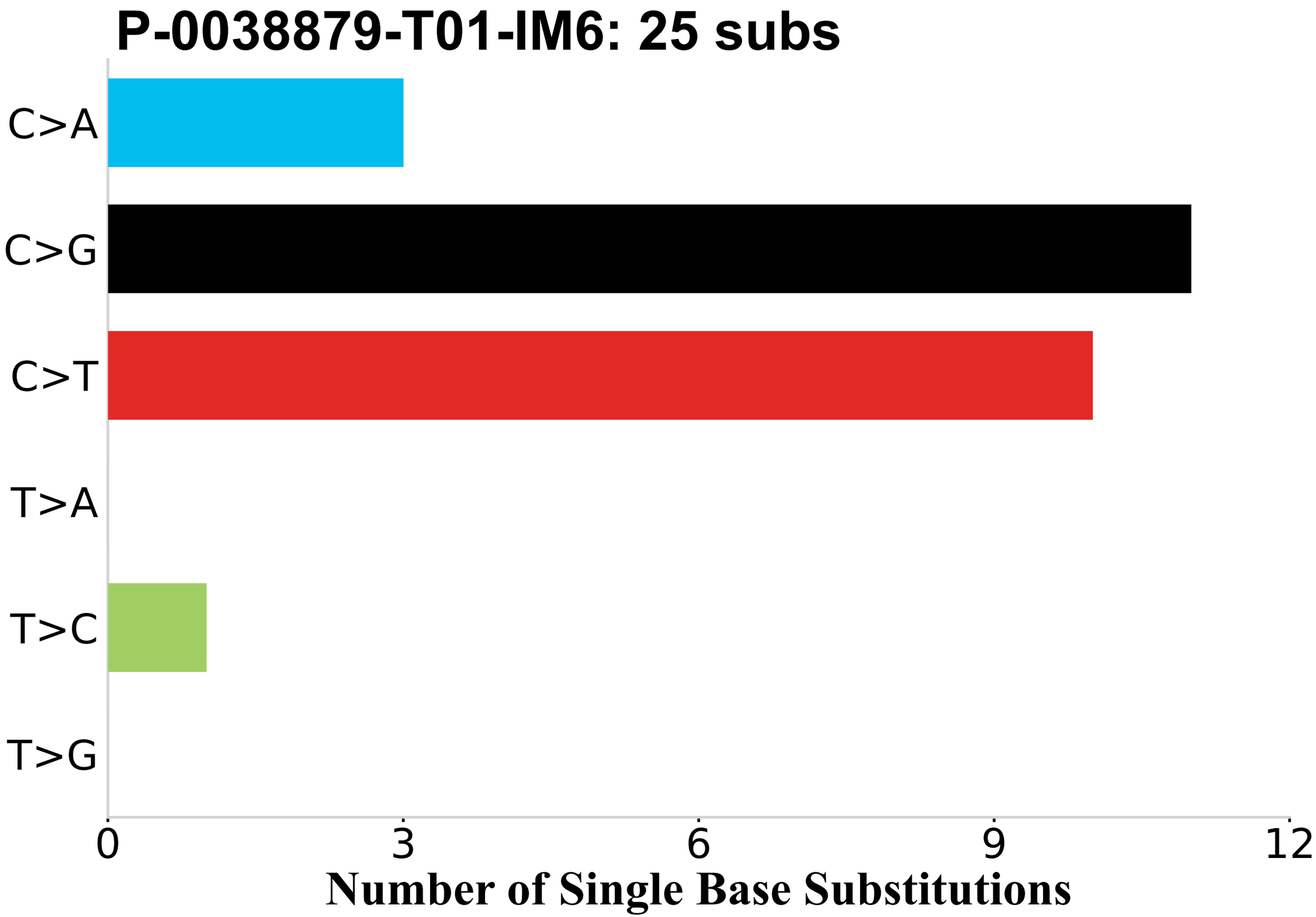
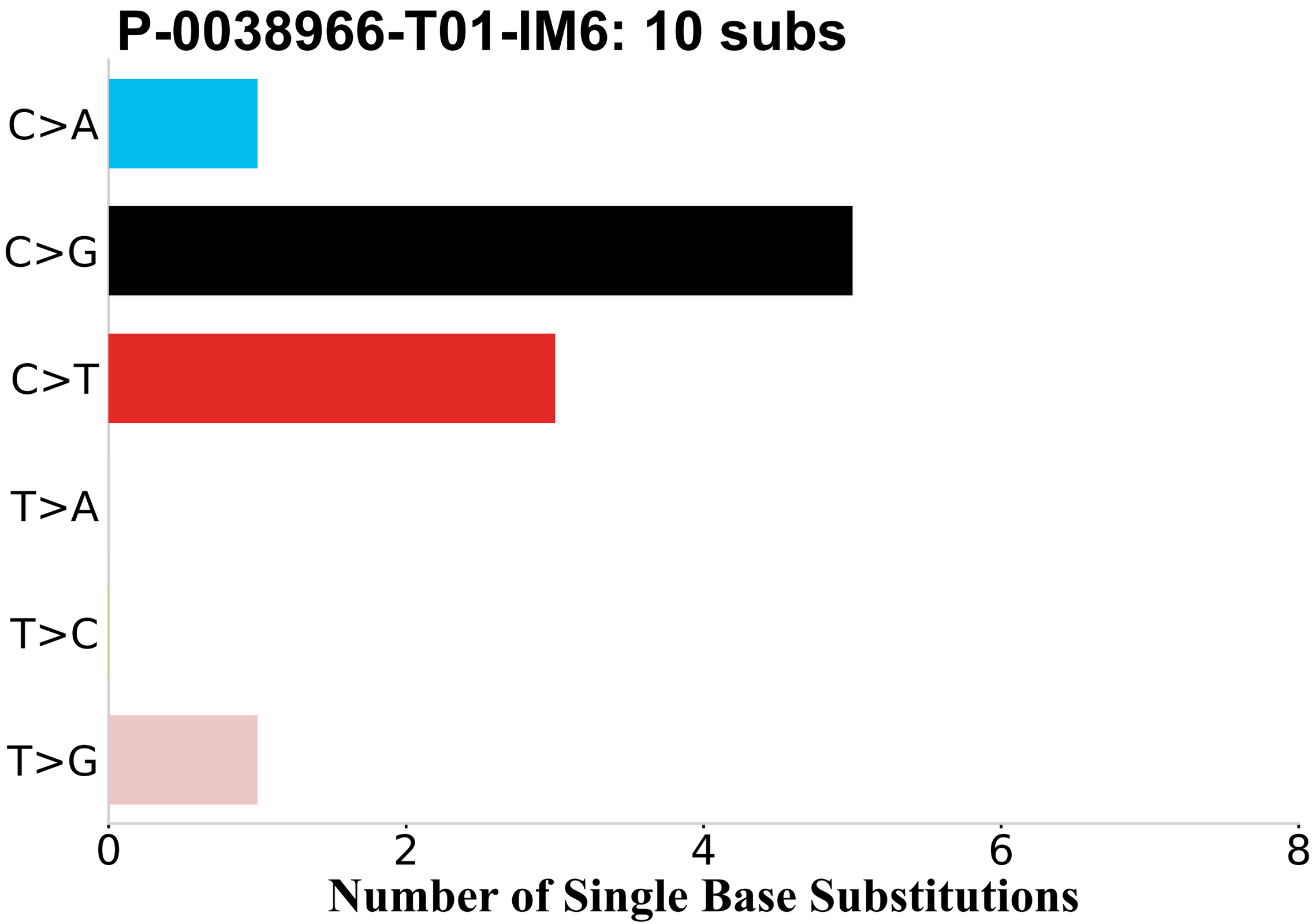
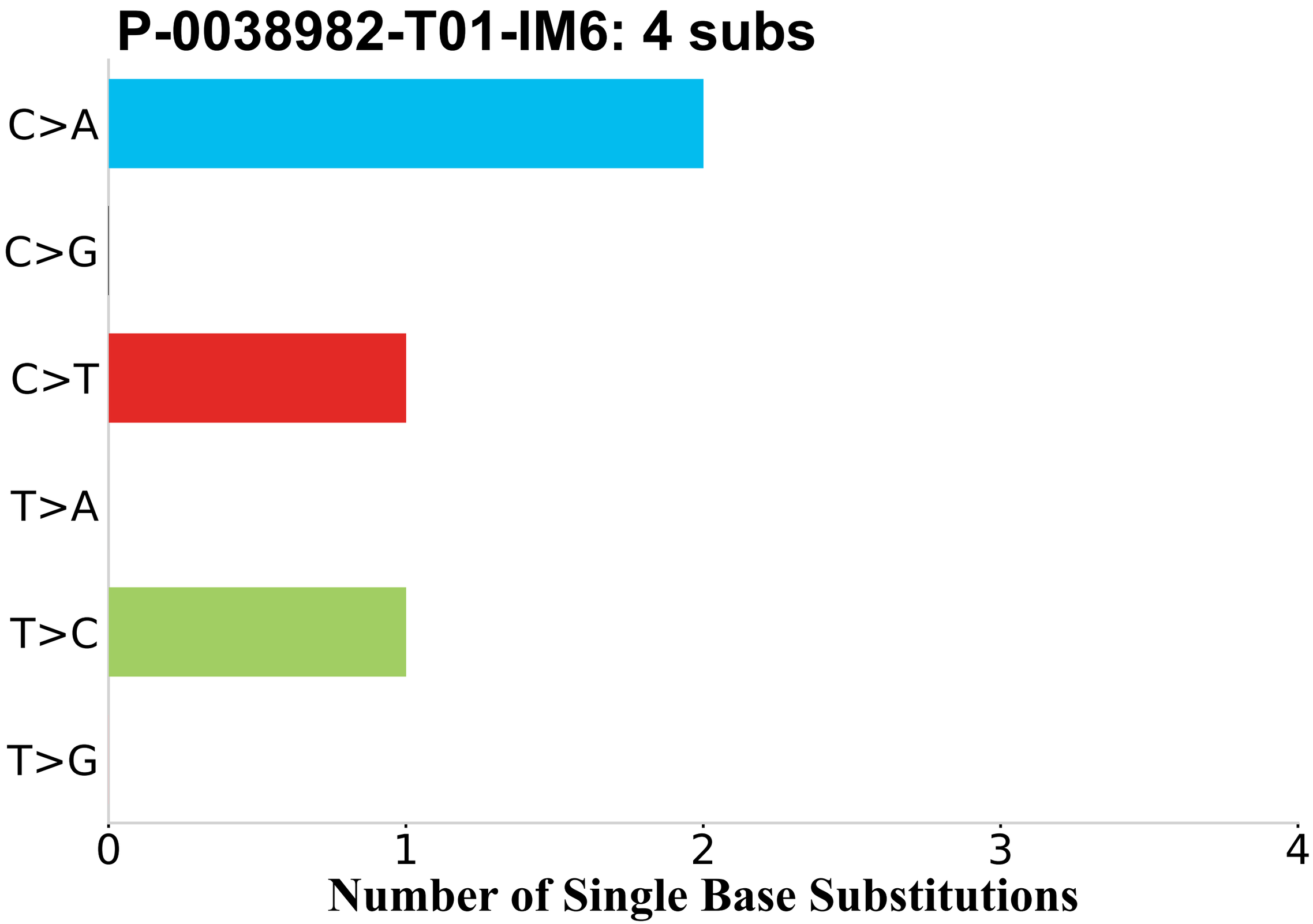
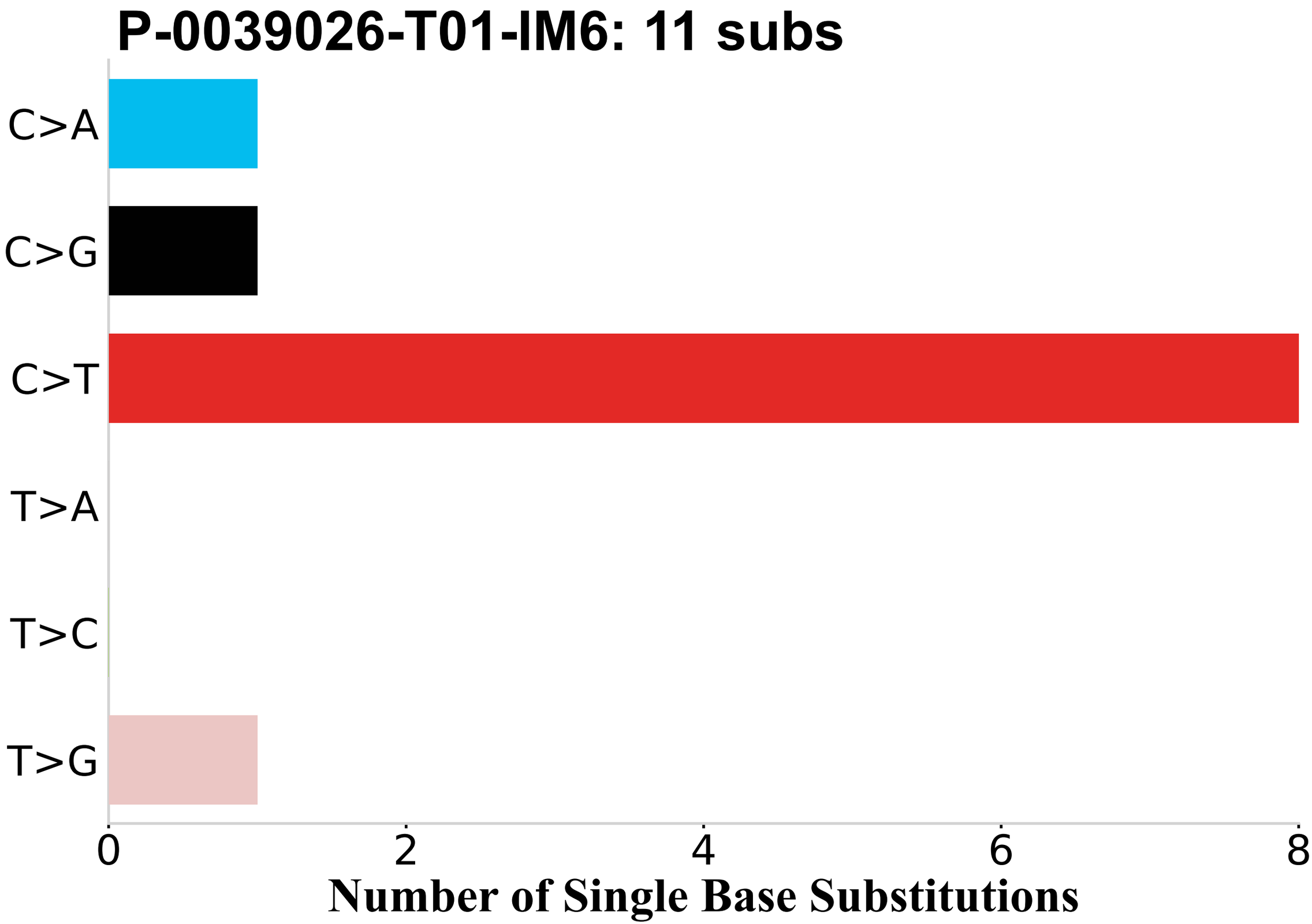
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038879-T01-IM6: 25 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0038966-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0038982-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0039026-T01-IM6: 11 subs
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T>G
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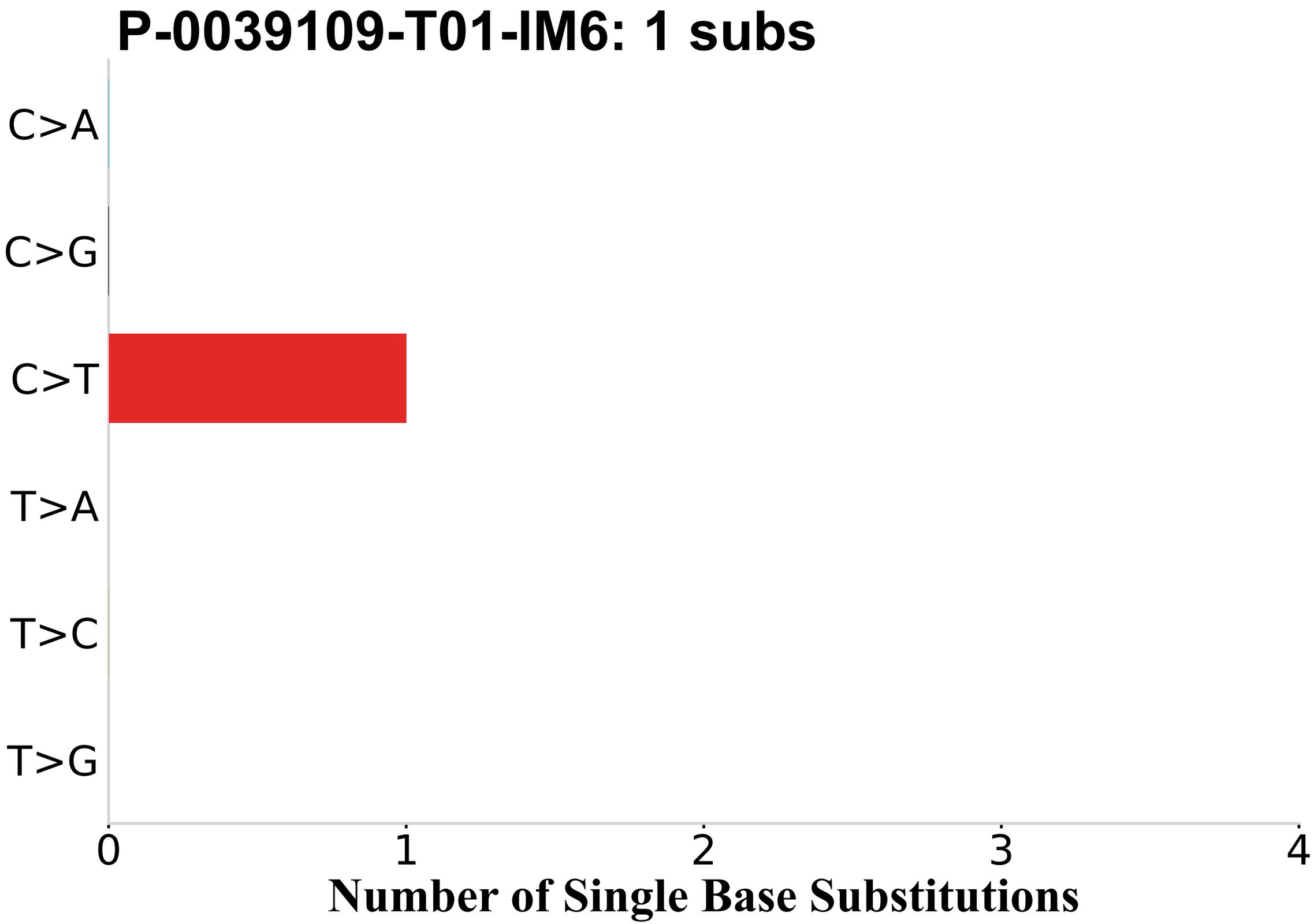
Number of Single Base Substitutions


P-0039109-T01-IM6: 1 subs
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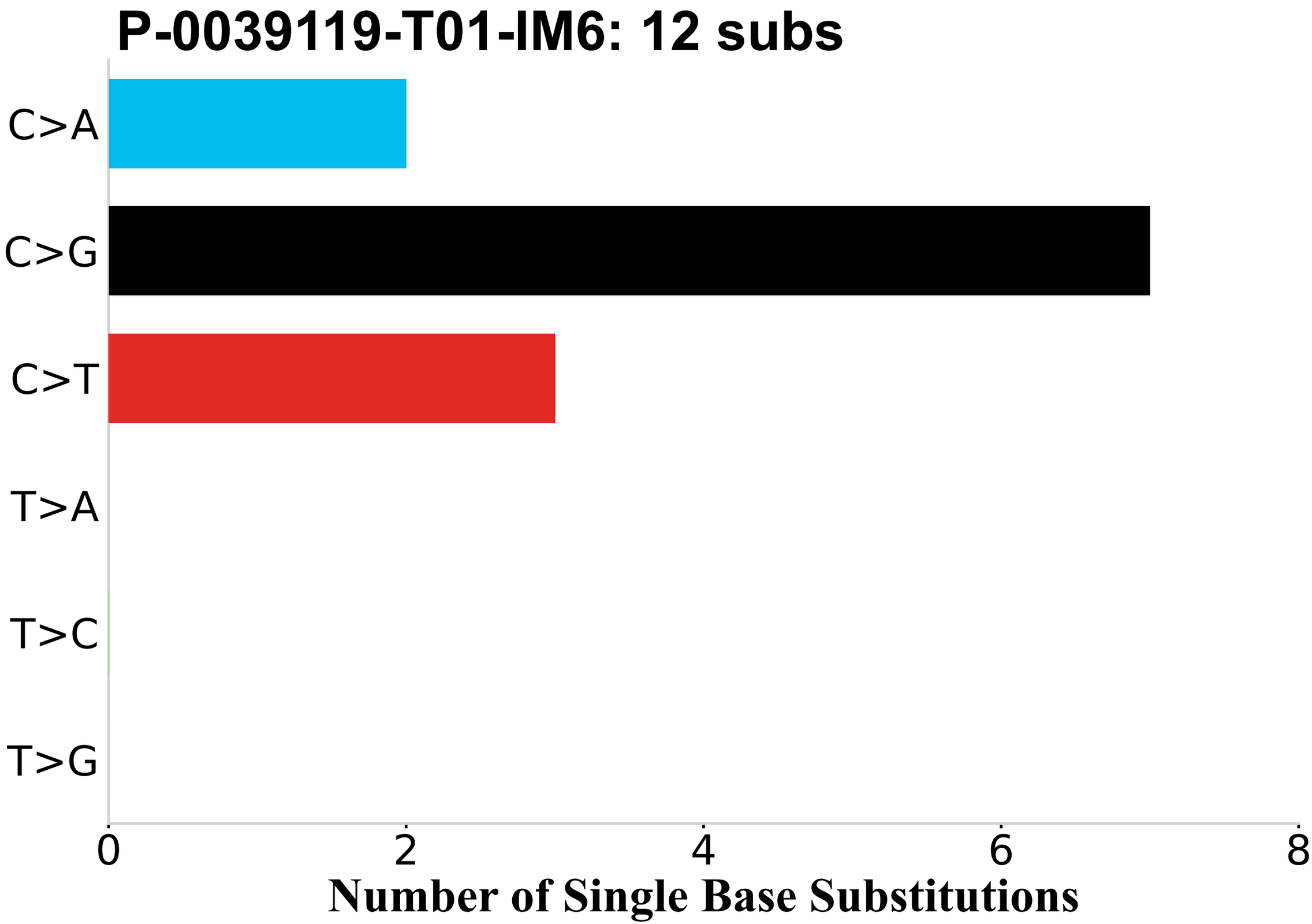
4
Number of Single Base Substitutions


P-0039119-T01-IM6: 12 subs
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T>G
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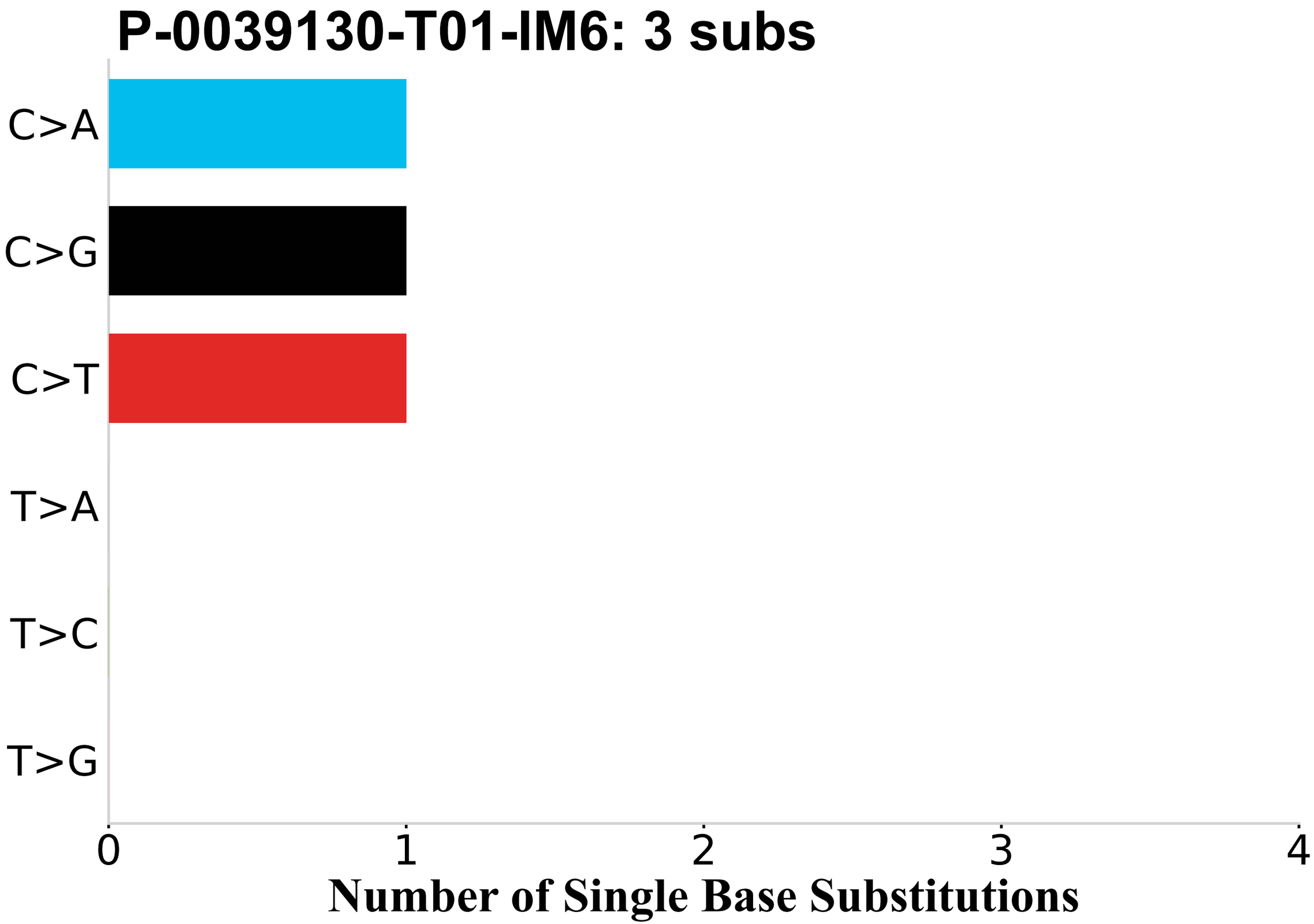
Number of Single Base Substitutions


P-0039130-T01-IM6: 3 subs
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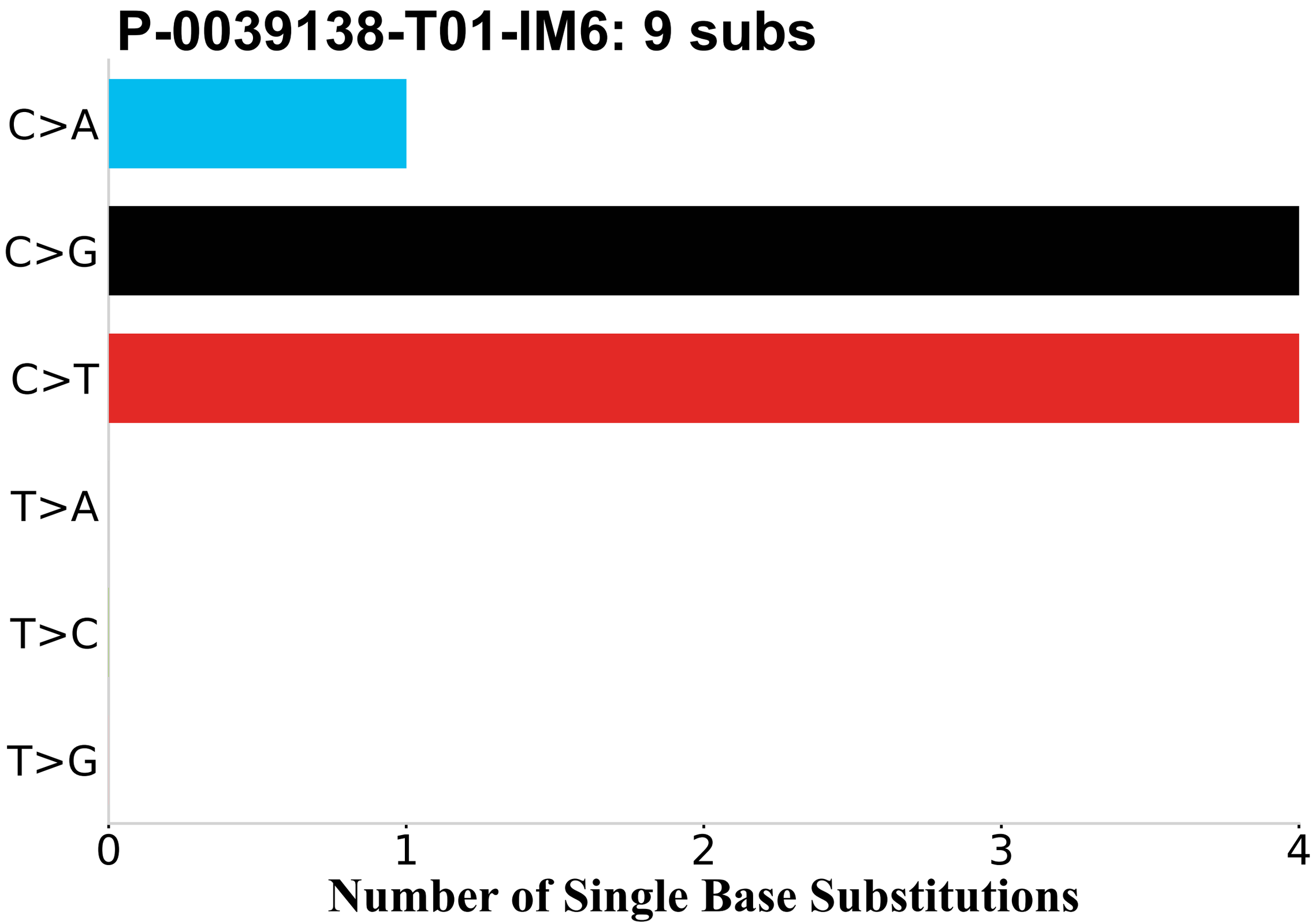
Number of Single Base Substitutions


P-0039138-T01-IM6: 9 subs
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T>G
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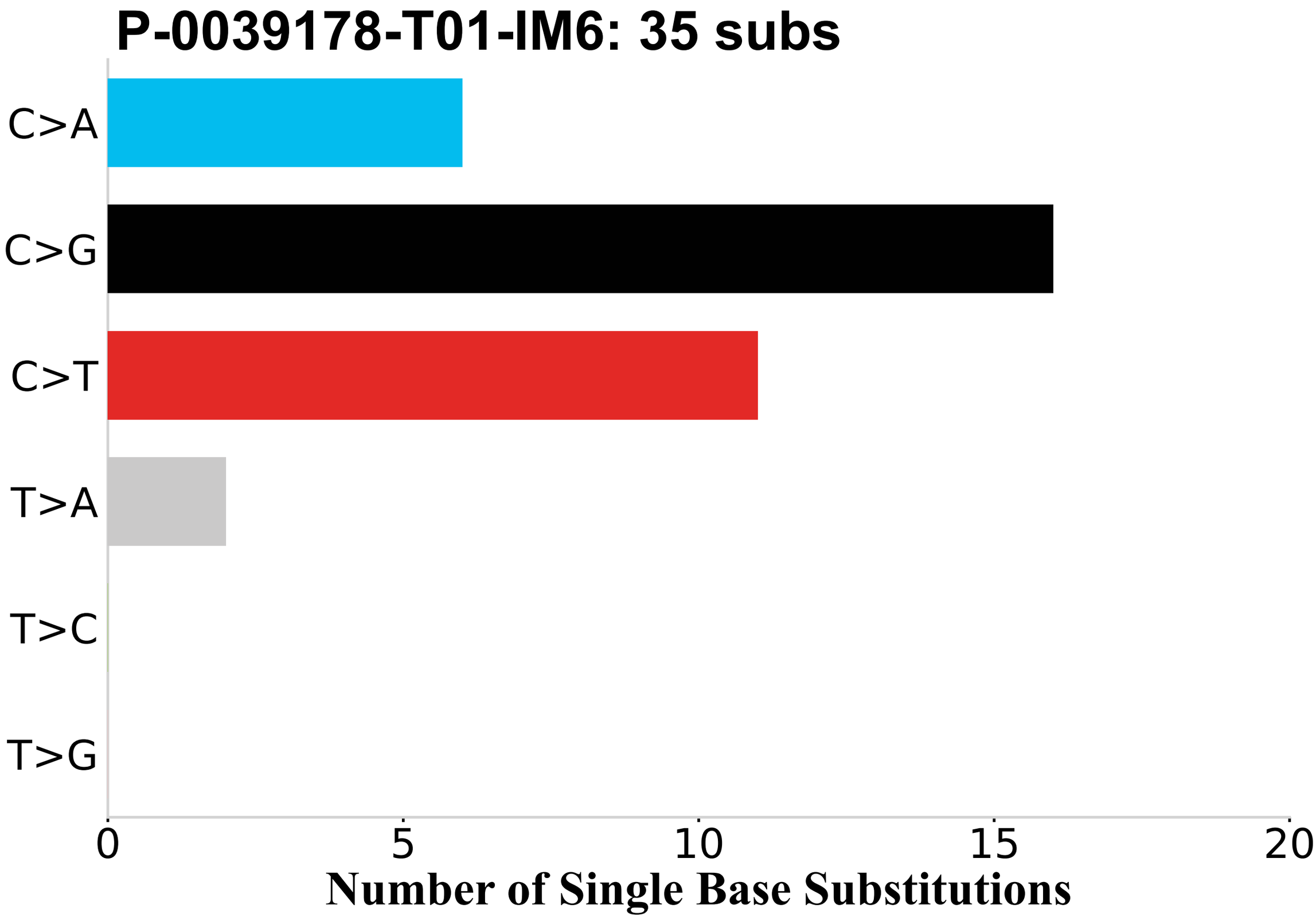
4
Number of Single Base Substitutions


P-0039178-T01-IM6: 35 subs
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T>C
T>G
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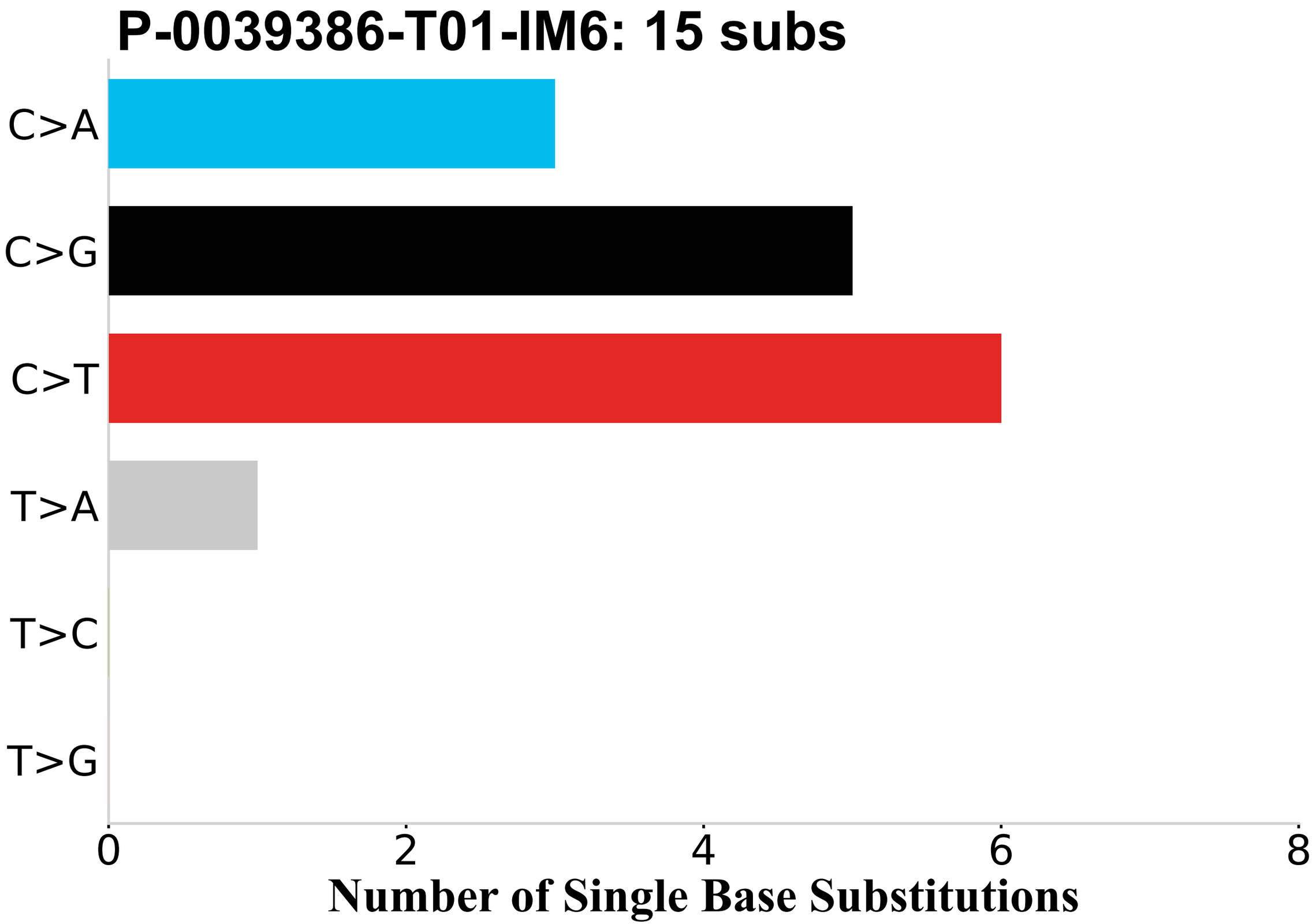
5
10
15
20
Number of Single Base Substitutions


P-0039386-T01-IM6: 15 subs
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T>C
T>G
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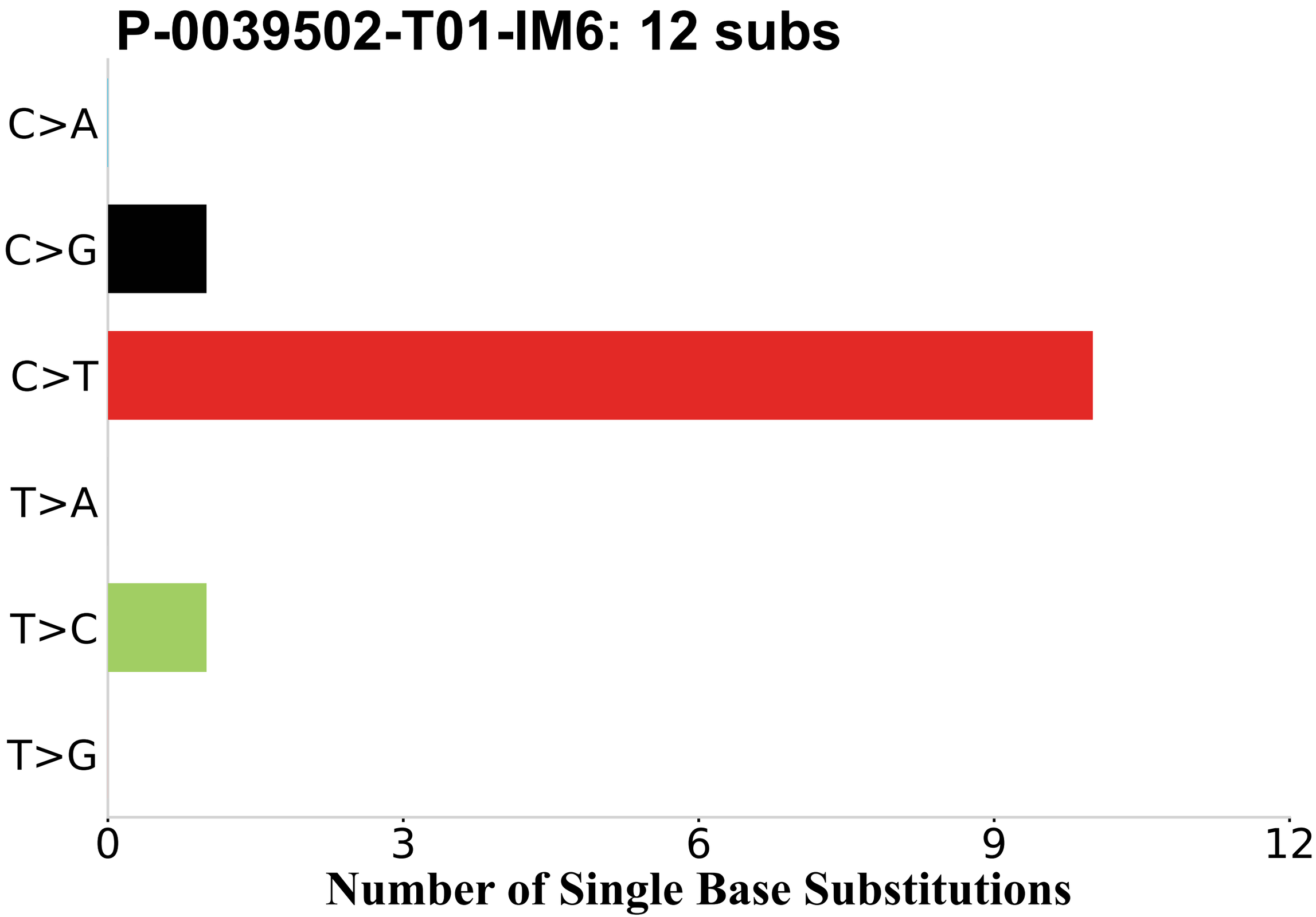
6
8
Number of Single Base Substitutions


P-0039502-T01-IM6: 12 subs
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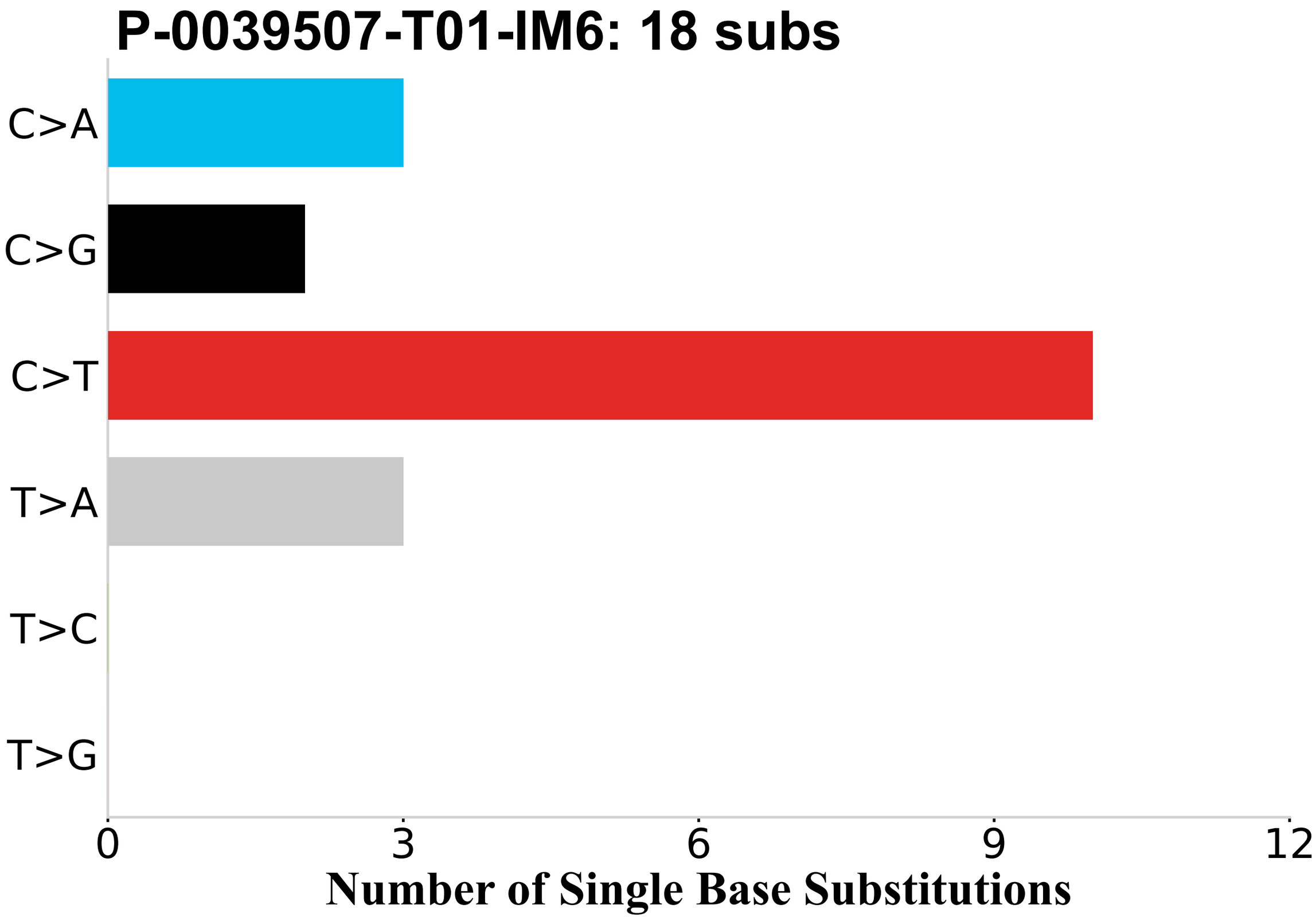
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0039507-T01-IM6: 18 subs
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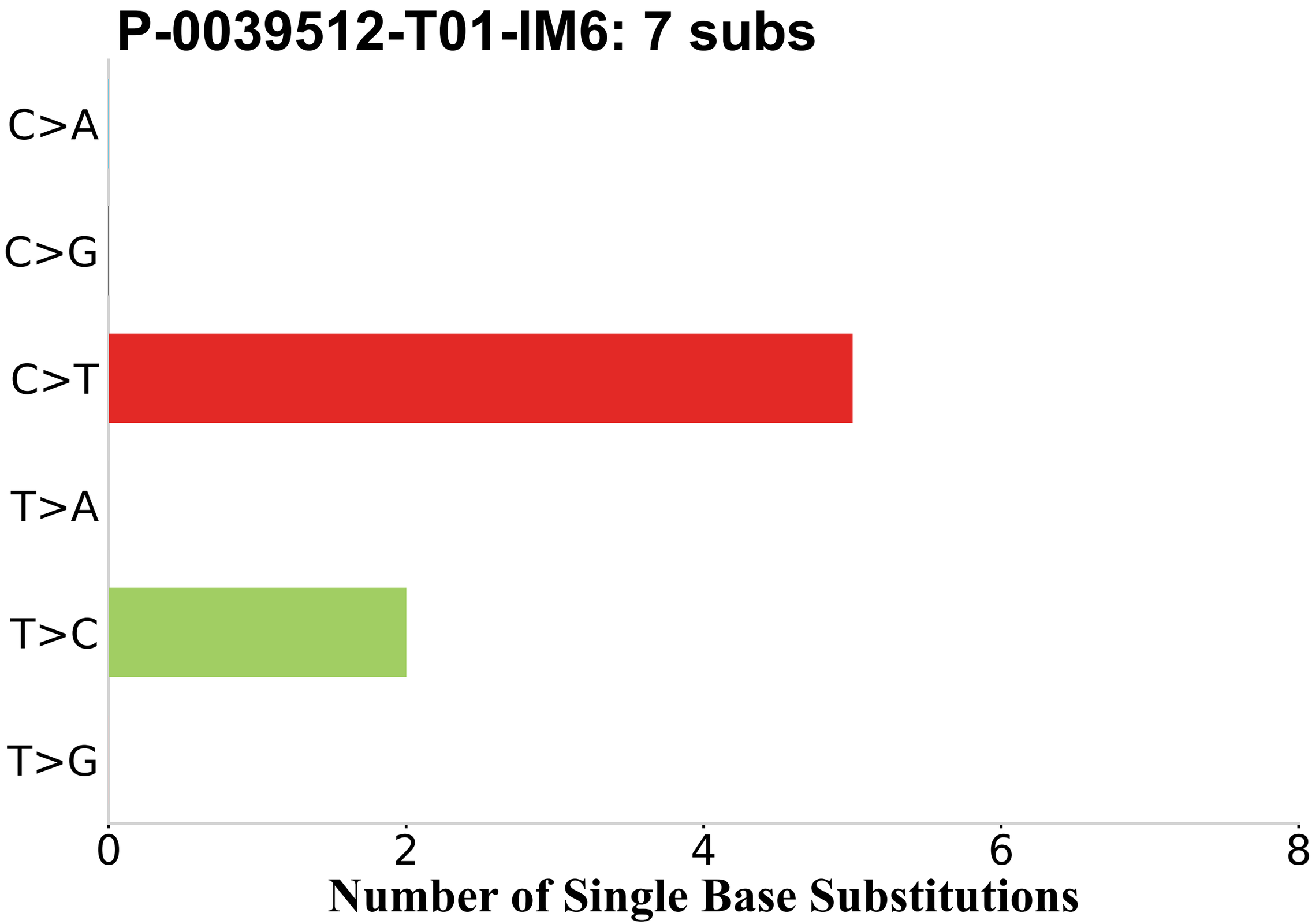
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0039512-T01-IM6: 7 subs
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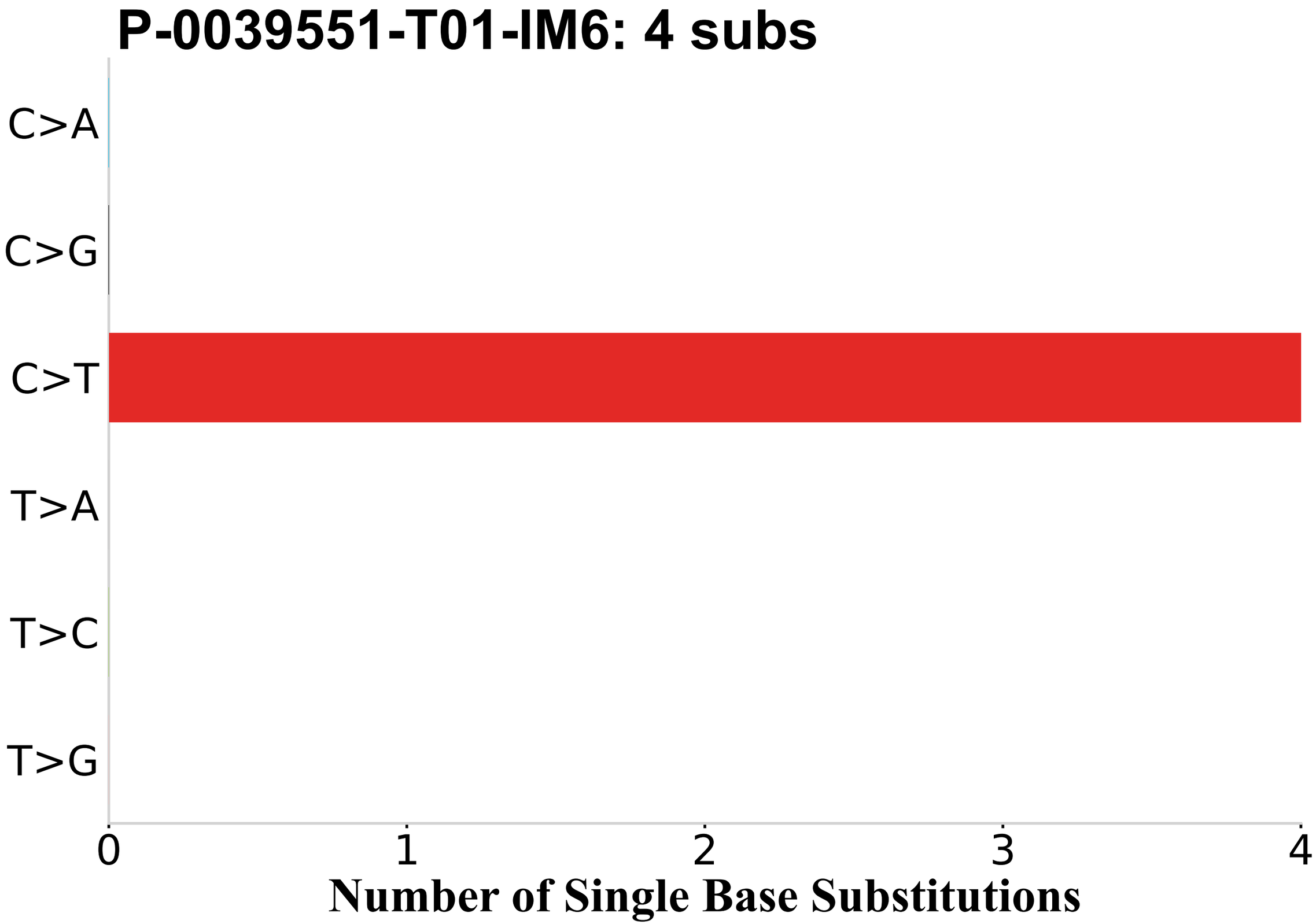
8
Number of Single Base Substitutions


P-0039551-T01-IM6: 4 subs
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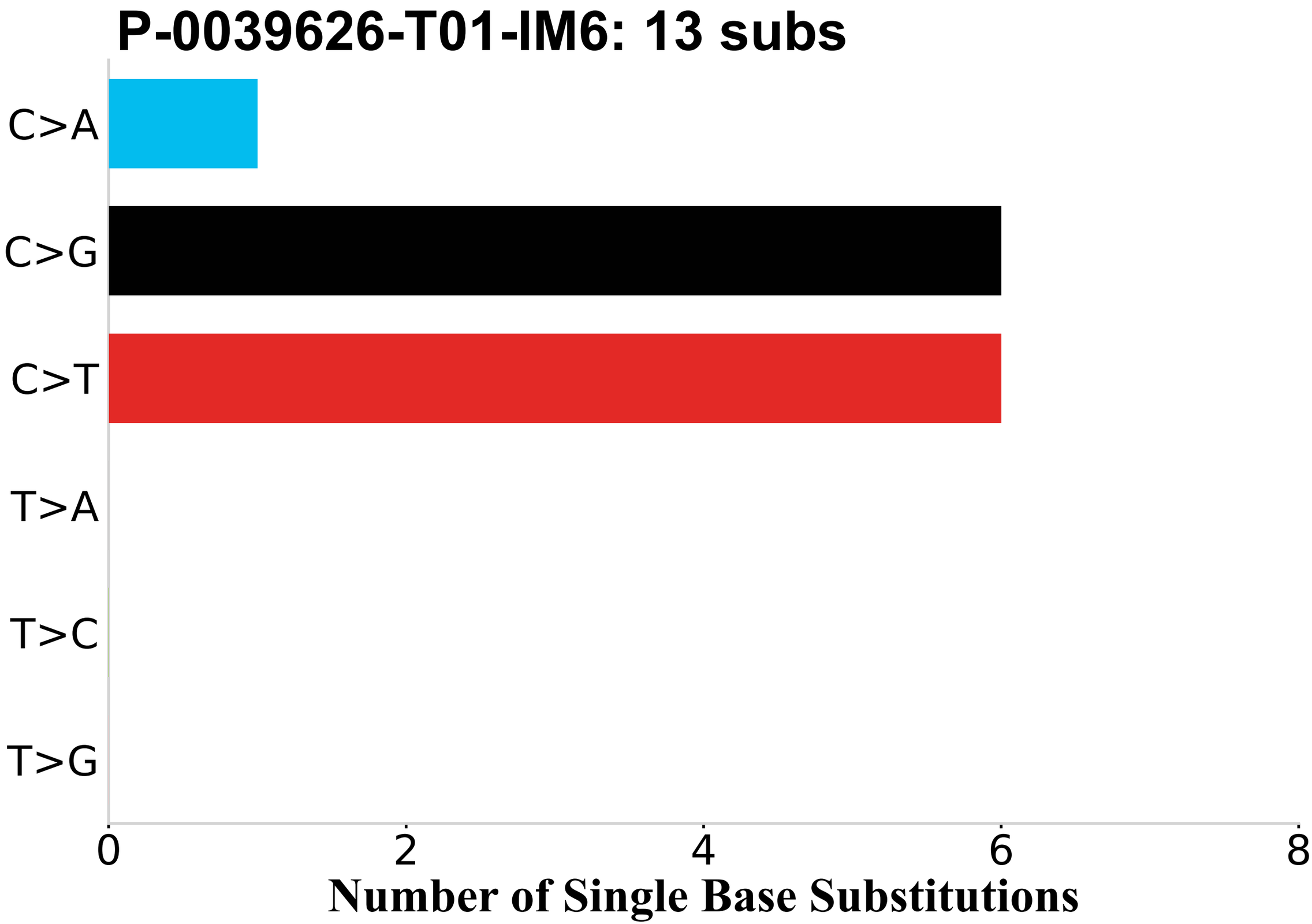
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0039626-T01-IM6: 13 subs
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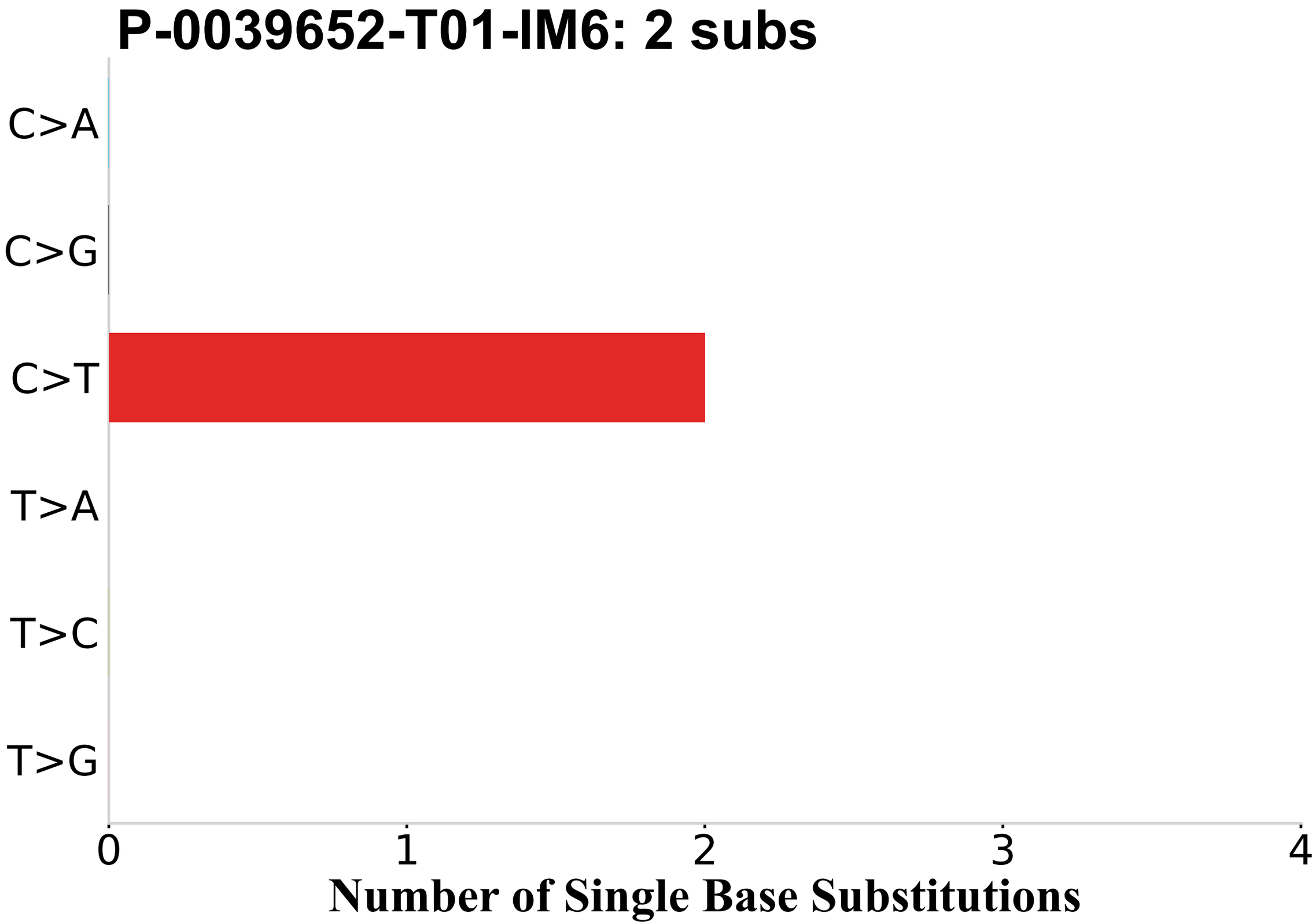
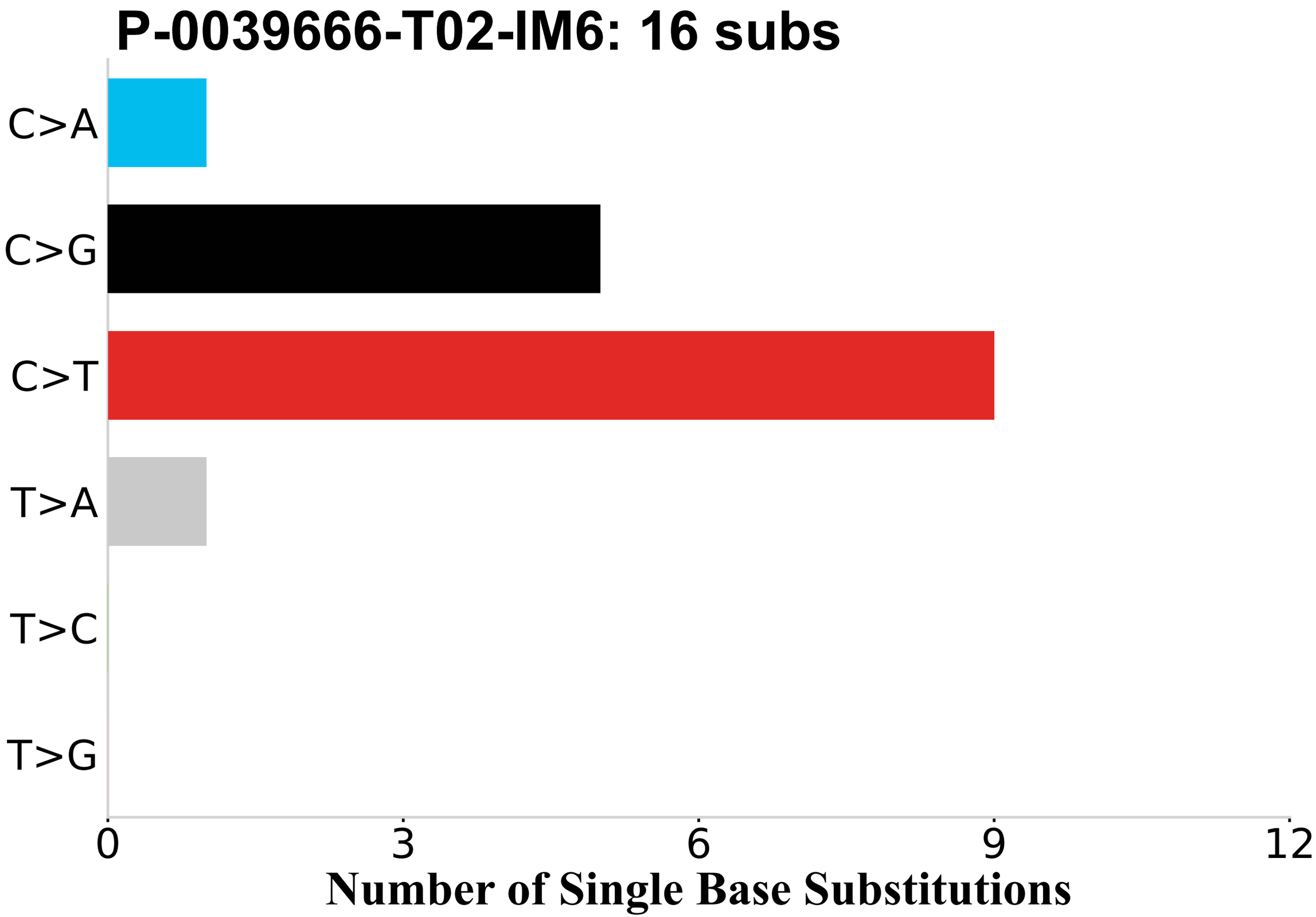
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0039652-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0039666-T02-IM6: 16 subs
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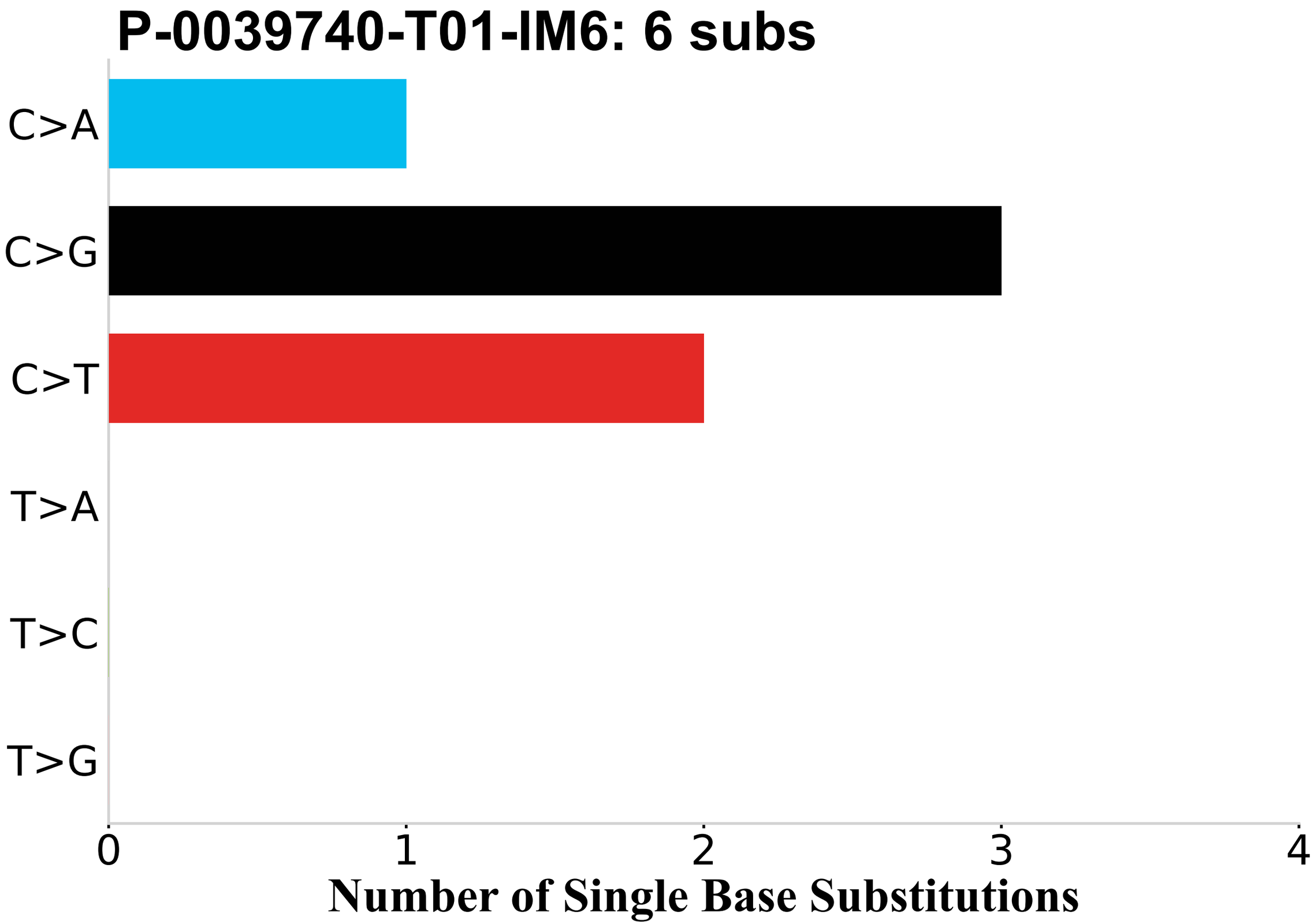
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0039740-T01-IM6: 6 subs
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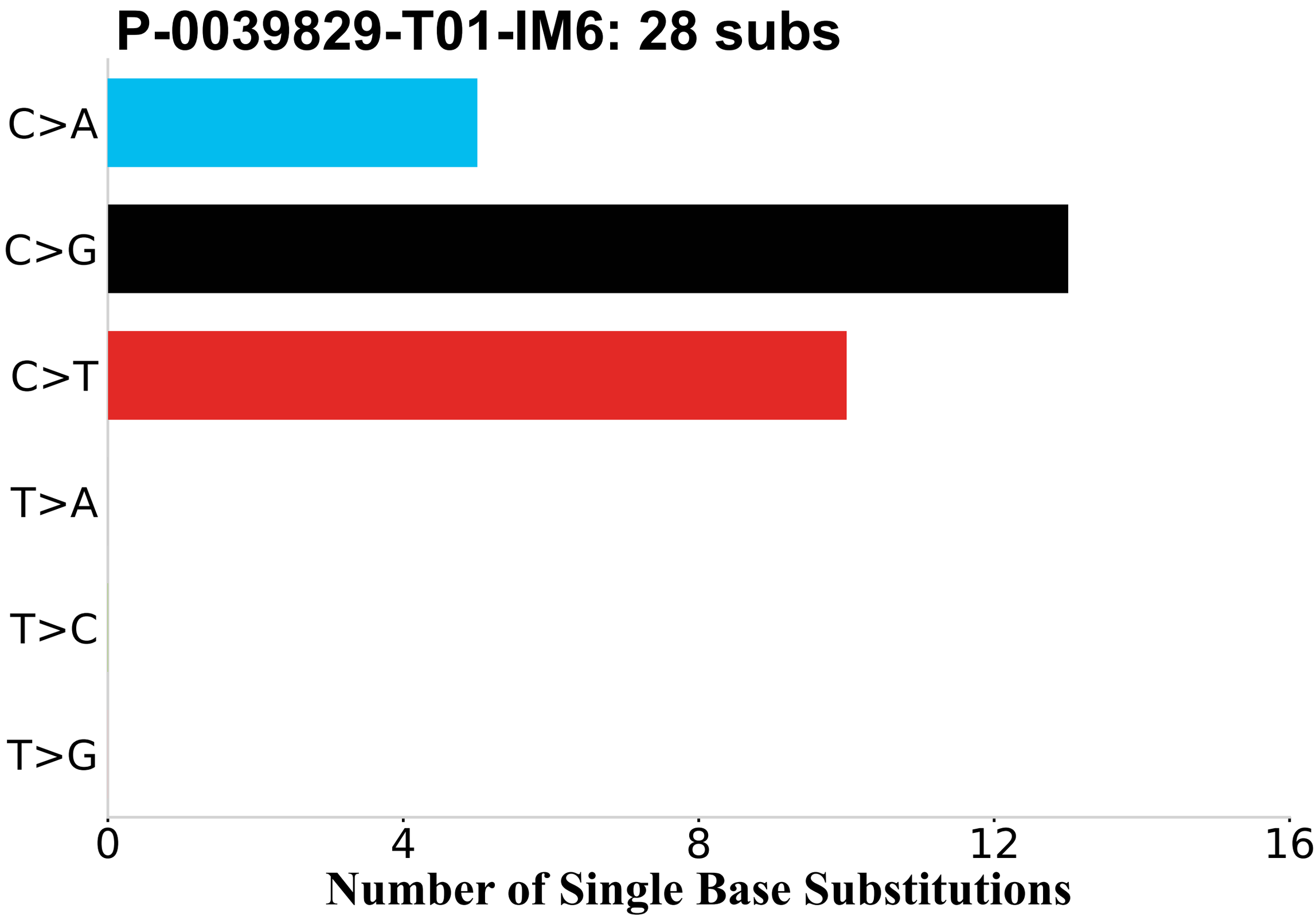
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0039829-T01-IM6: 28 subs
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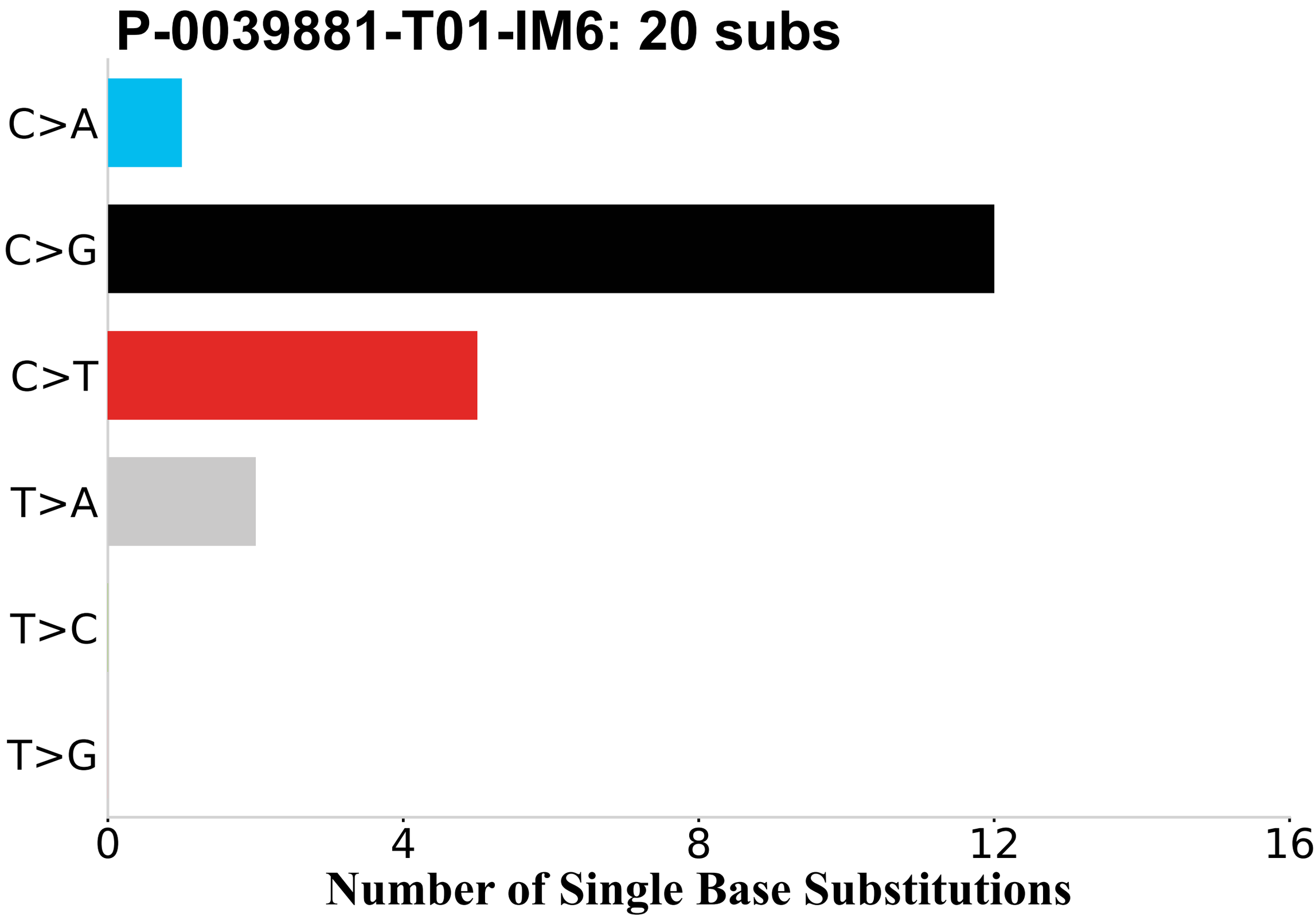
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0039881-T01-IM6: 20 subs
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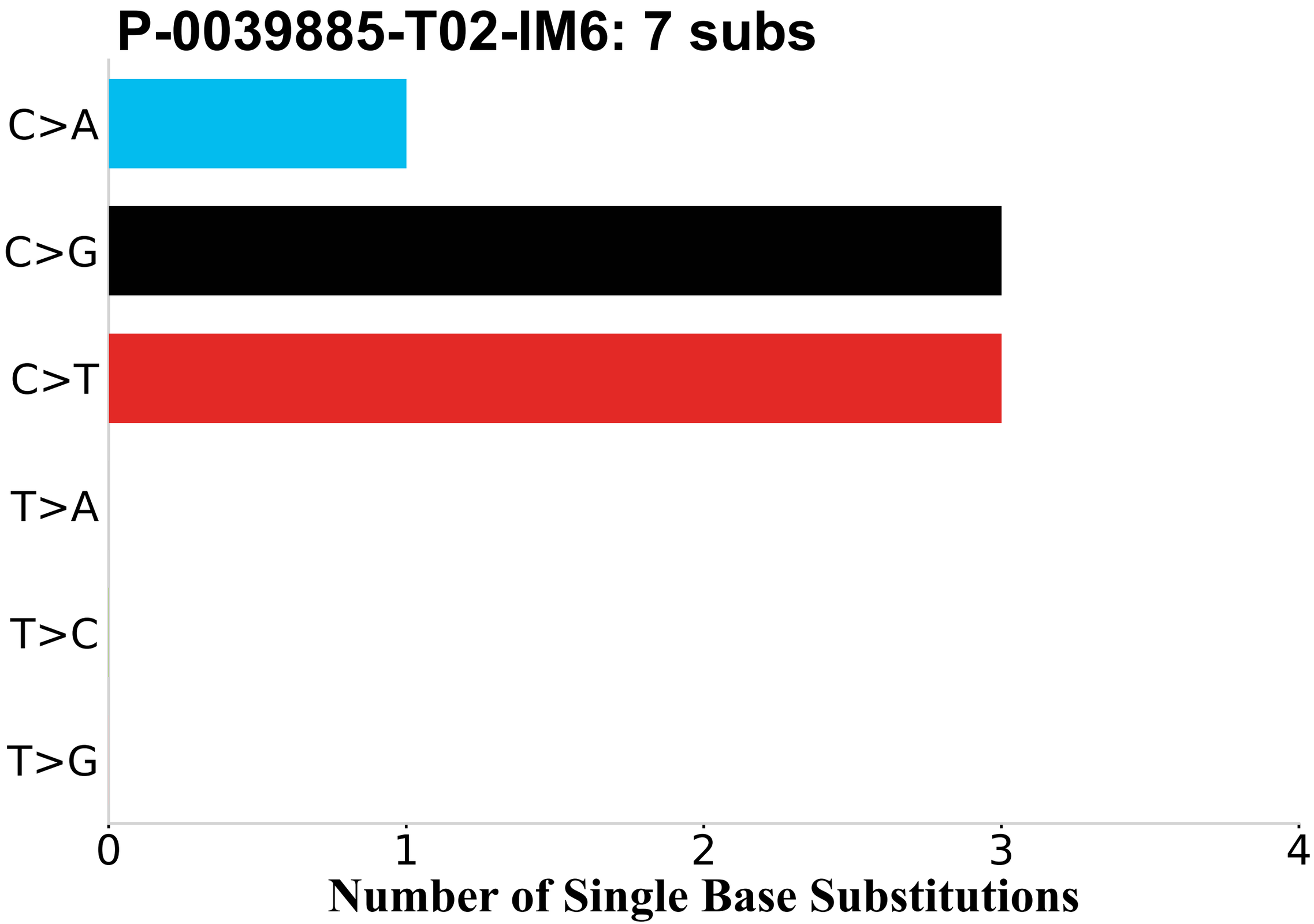
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0039885-T02-IM6: 7 subs
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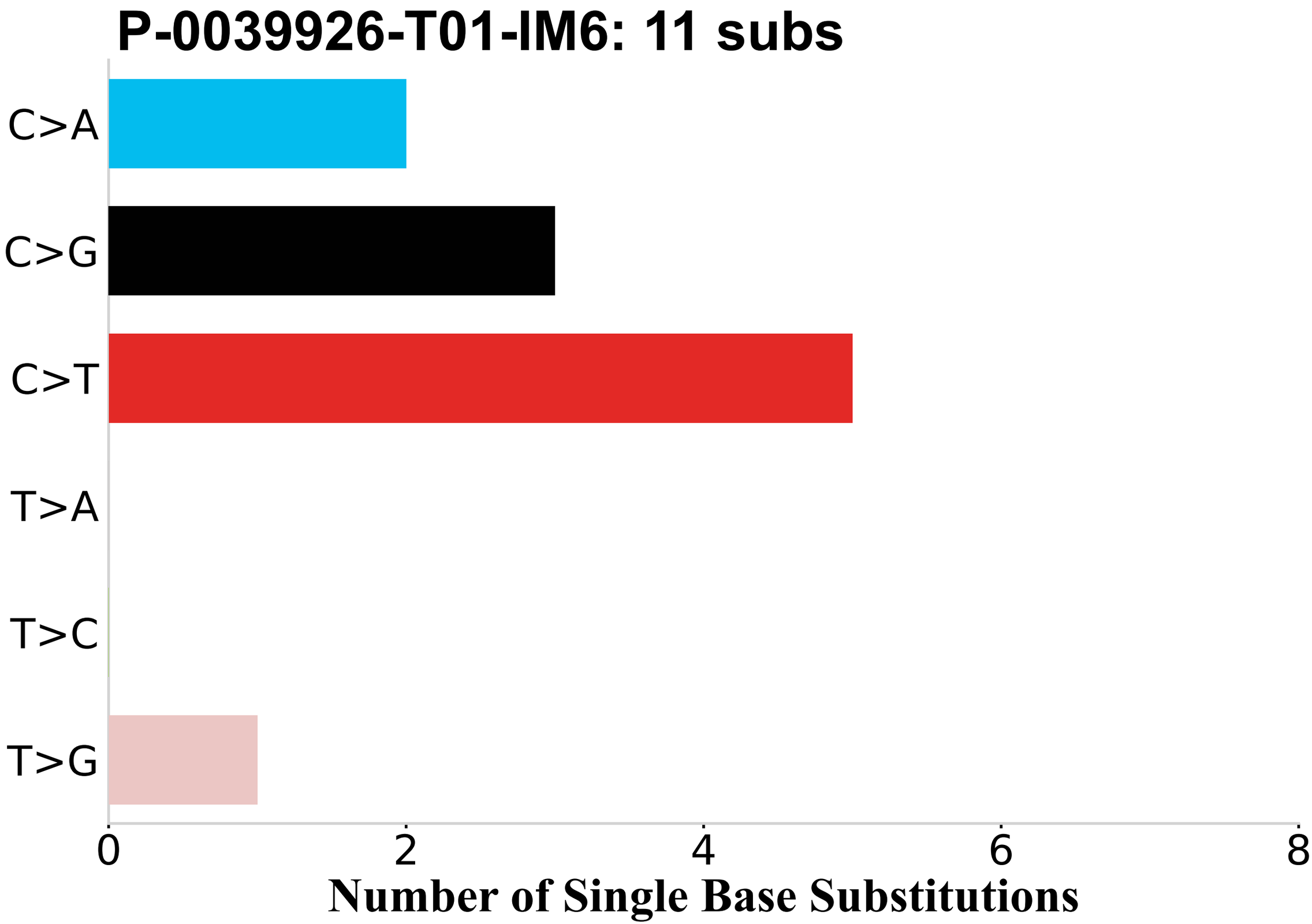
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0039926-T01-IM6: 11 subs
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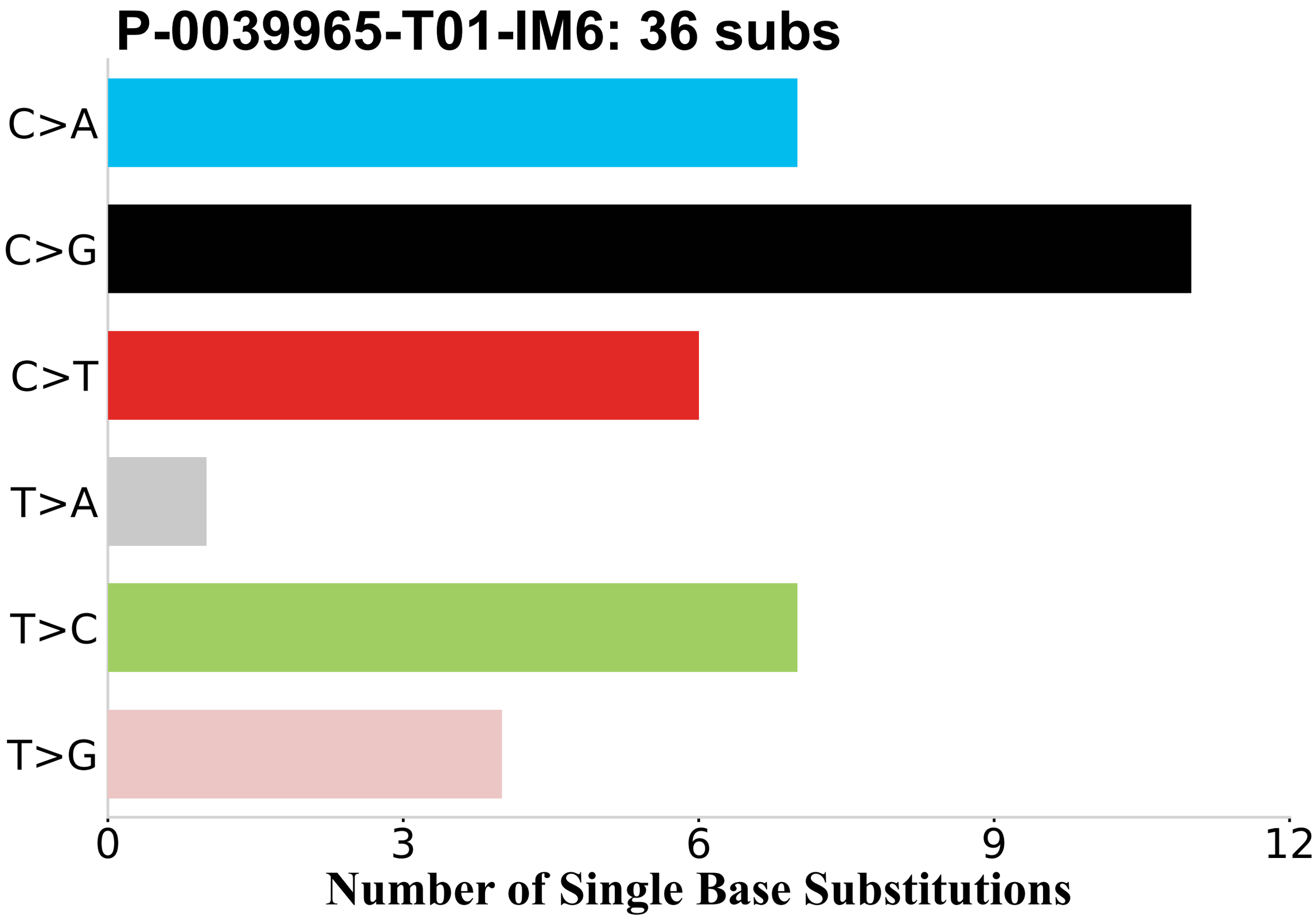
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0039965-T01-IM6: 36 subs
C>A
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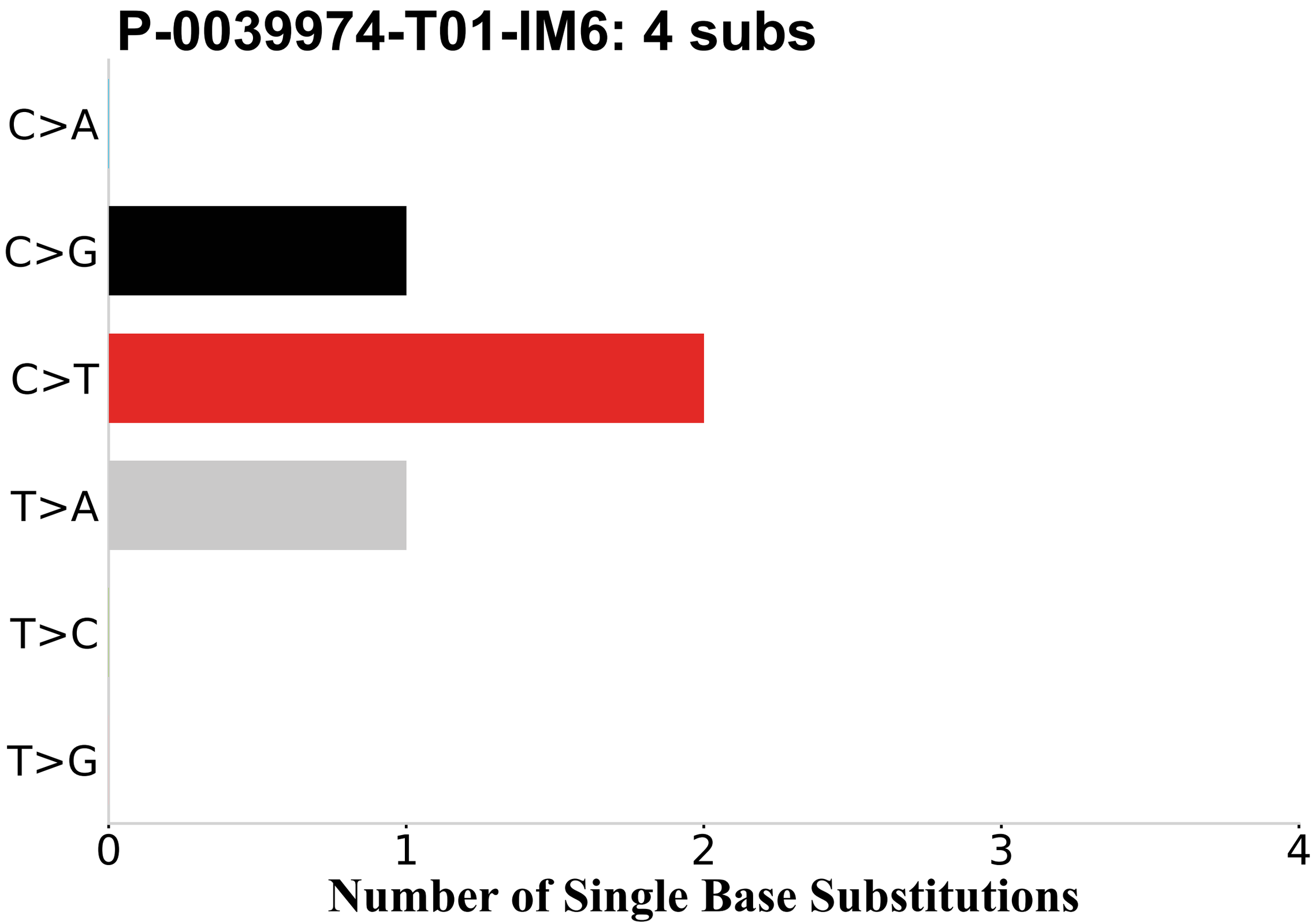
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0039974-T01-IM6: 4 subs
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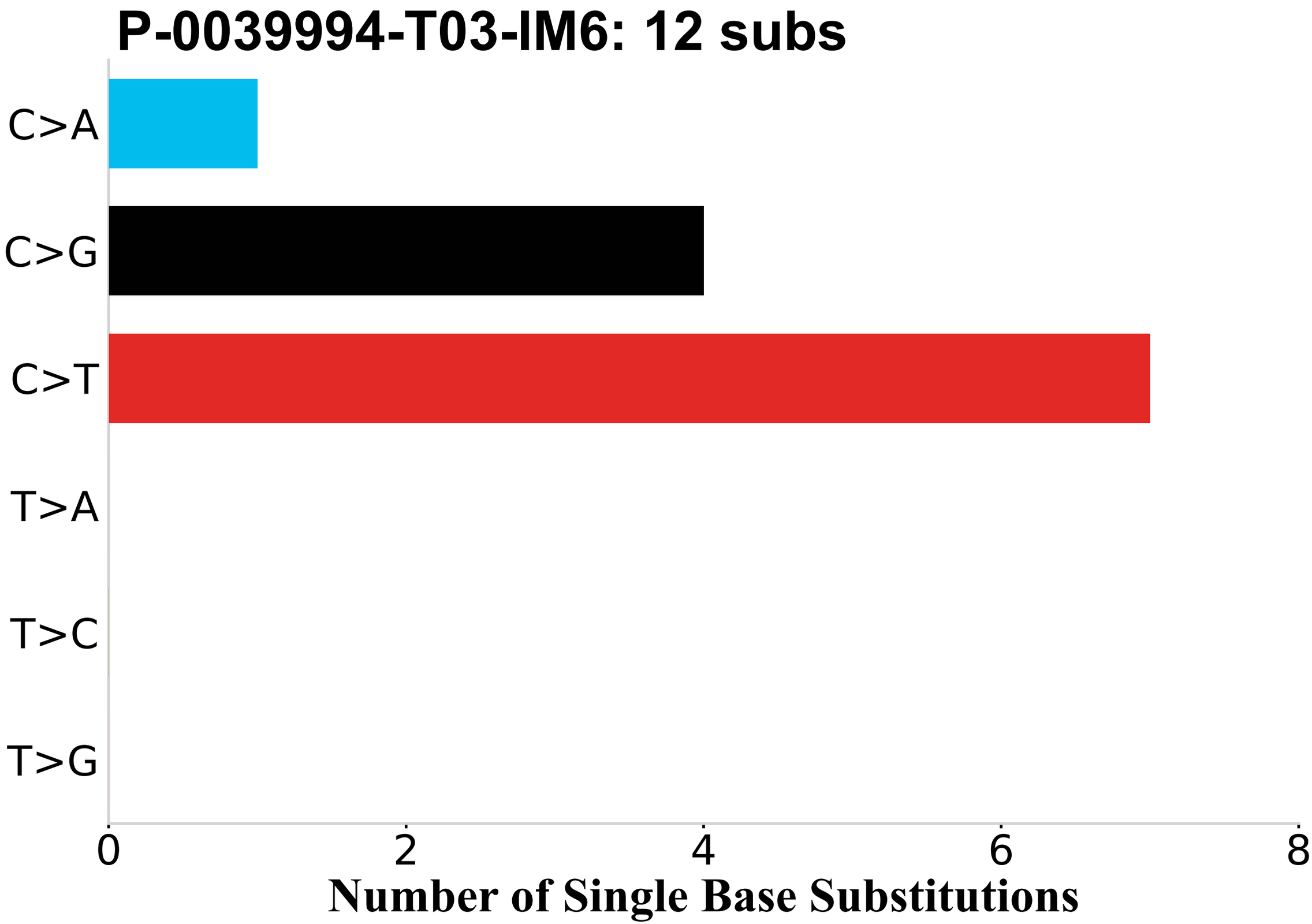
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0039994-T03-IM6: 12 subs
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C>T
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T>C
T>G
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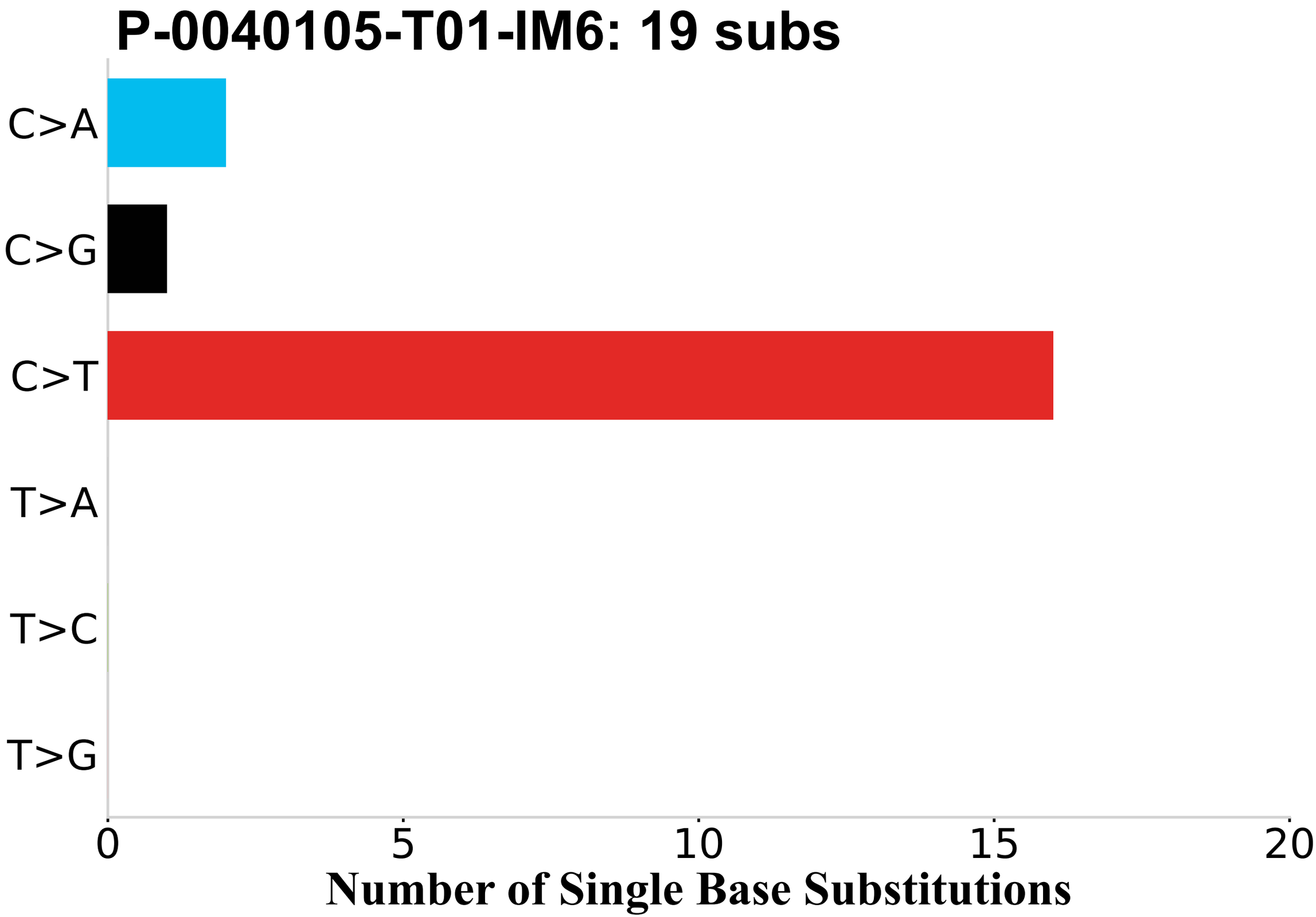
2
4
6
8
Number of Single Base Substitutions


P-0040105-T01-IM6: 19 subs
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T>C
T>G
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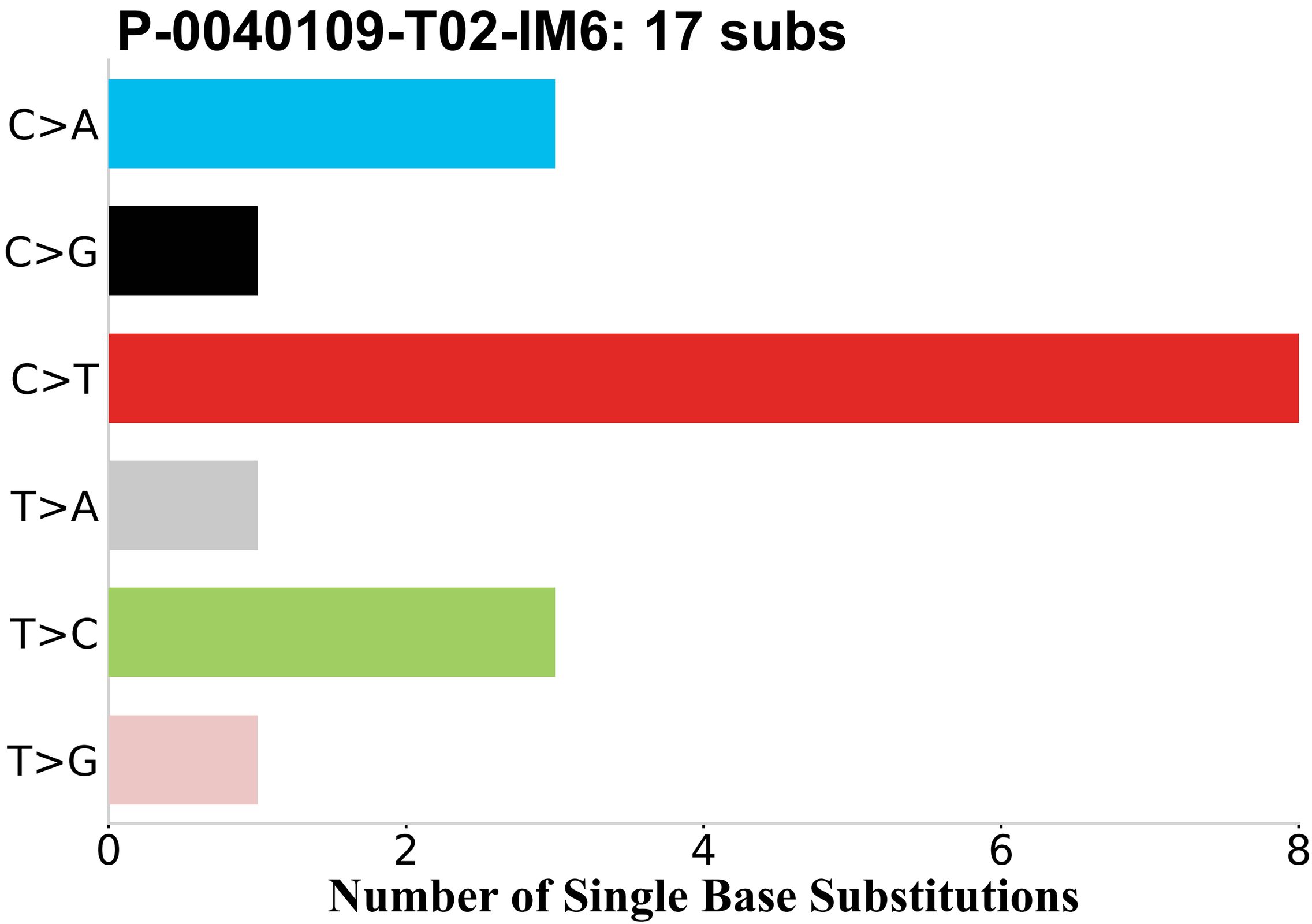
5
10
15
20
Number of Single Base Substitutions


P-0040109-T02-IM6: 17 subs
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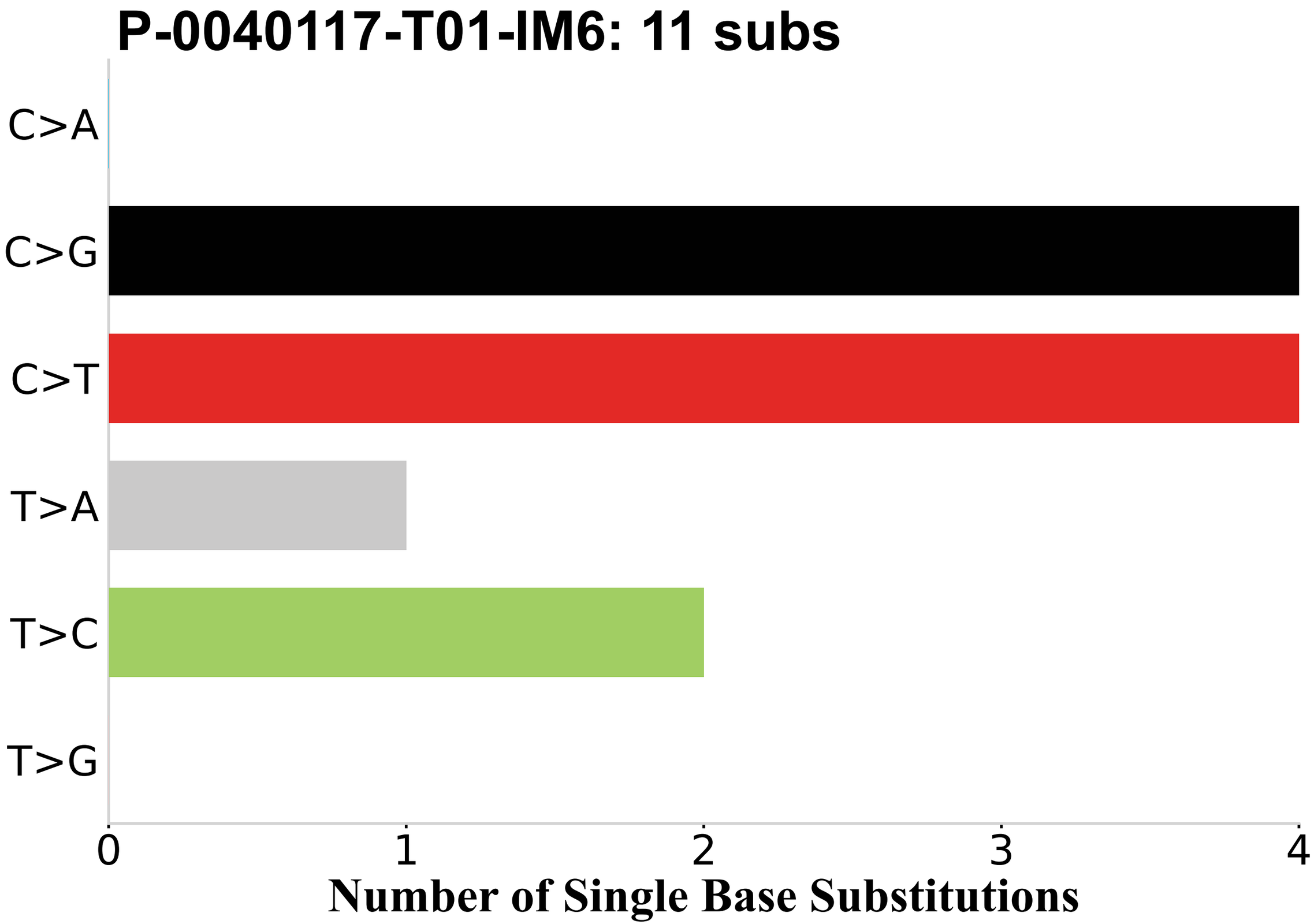
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0040117-T01-IM6: 11 subs
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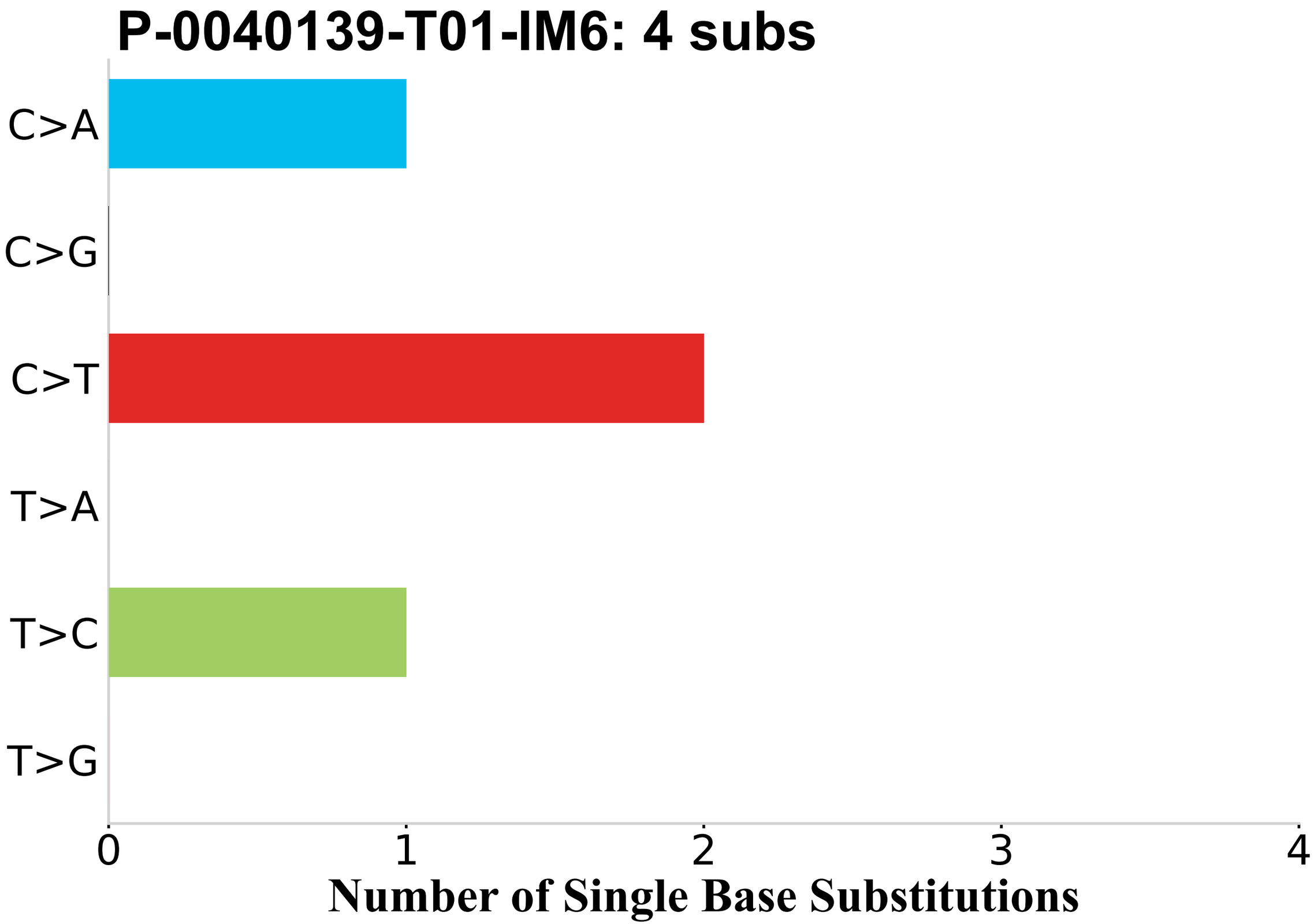
2
3
4
Number of Single Base Substitutions


P-0040139-T01-IM6: 4 subs
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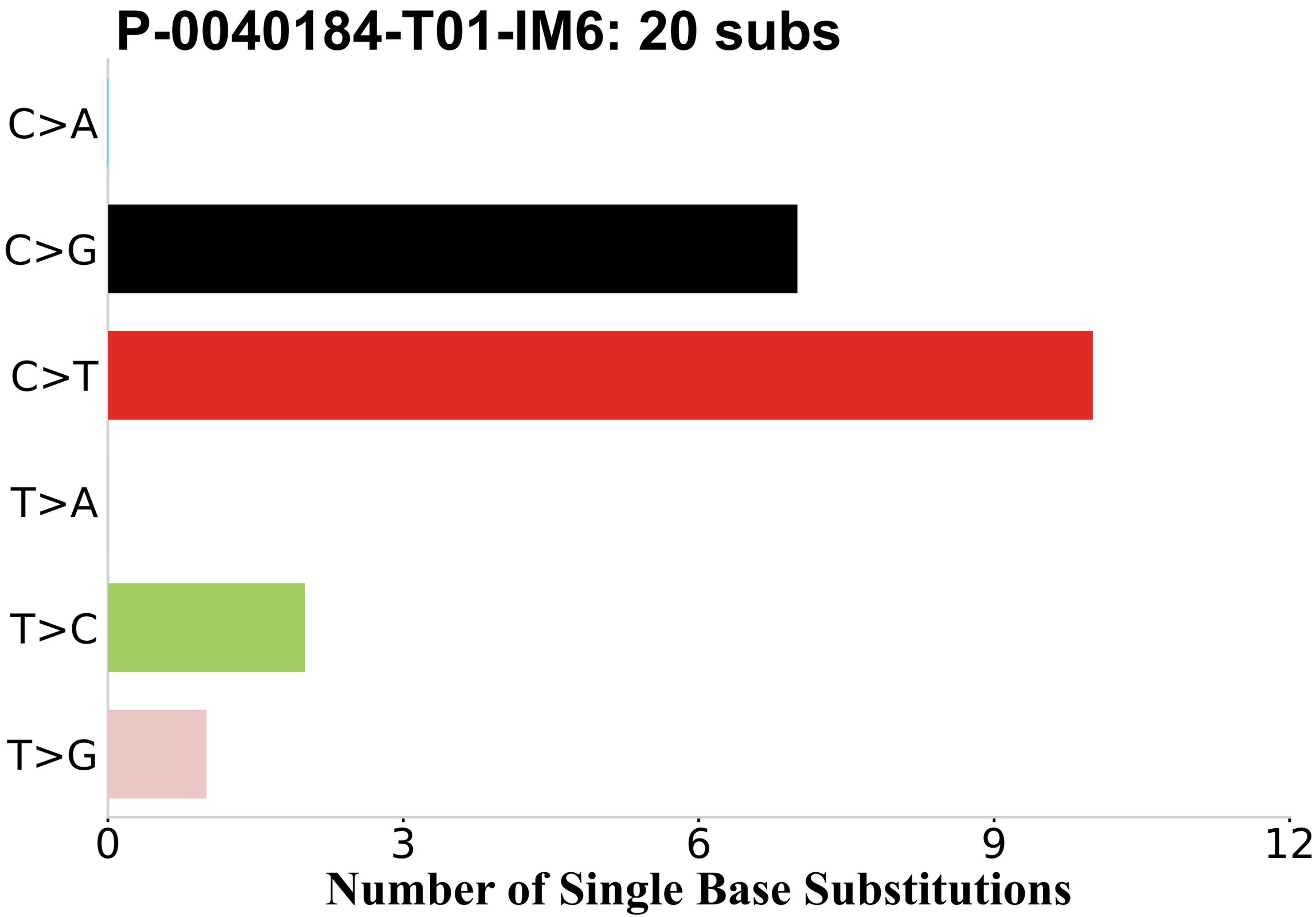
4
Number of Single Base Substitutions


P-0040184-T01-IM6: 20 subs
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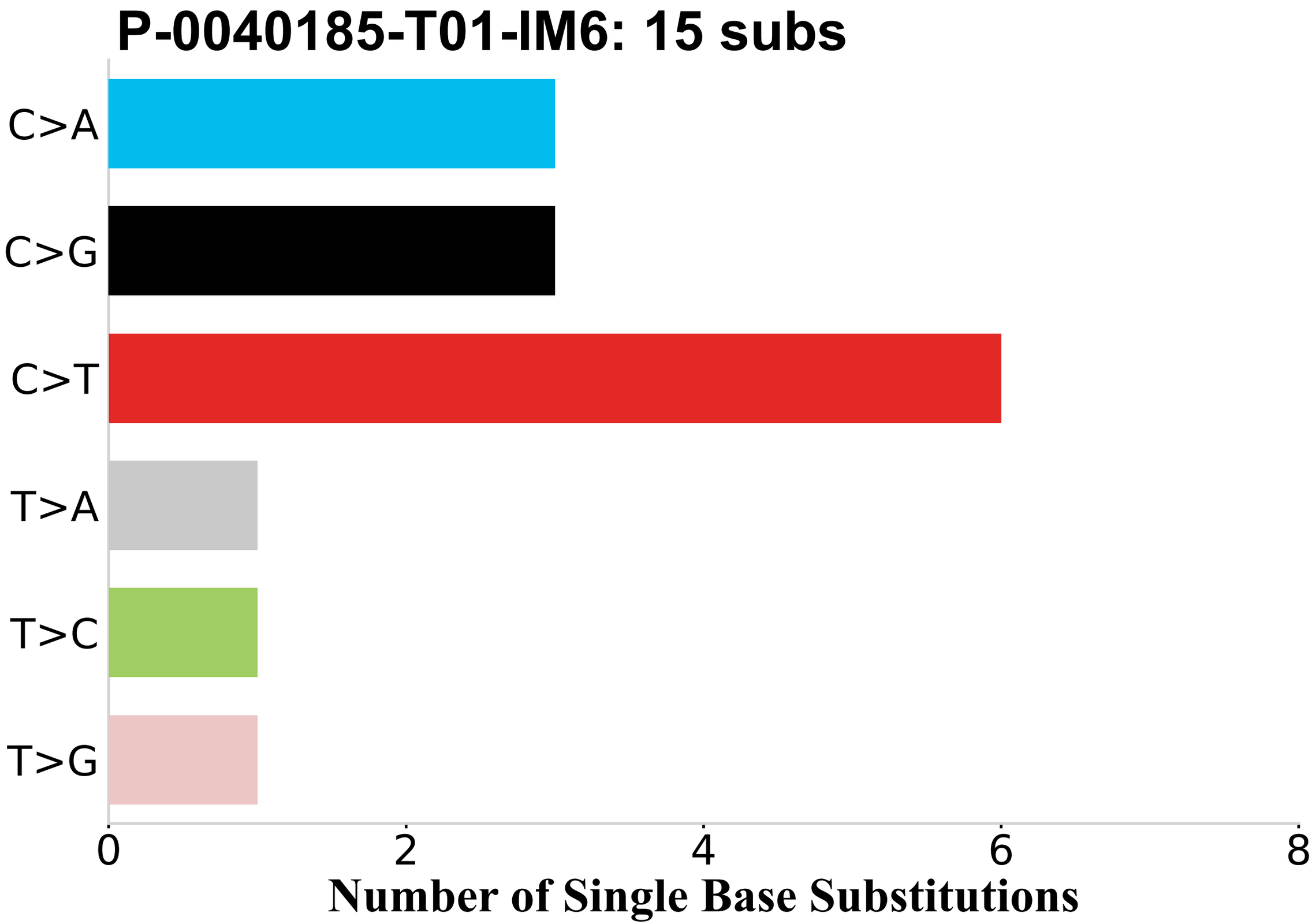
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0040185-T01-IM6: 15 subs
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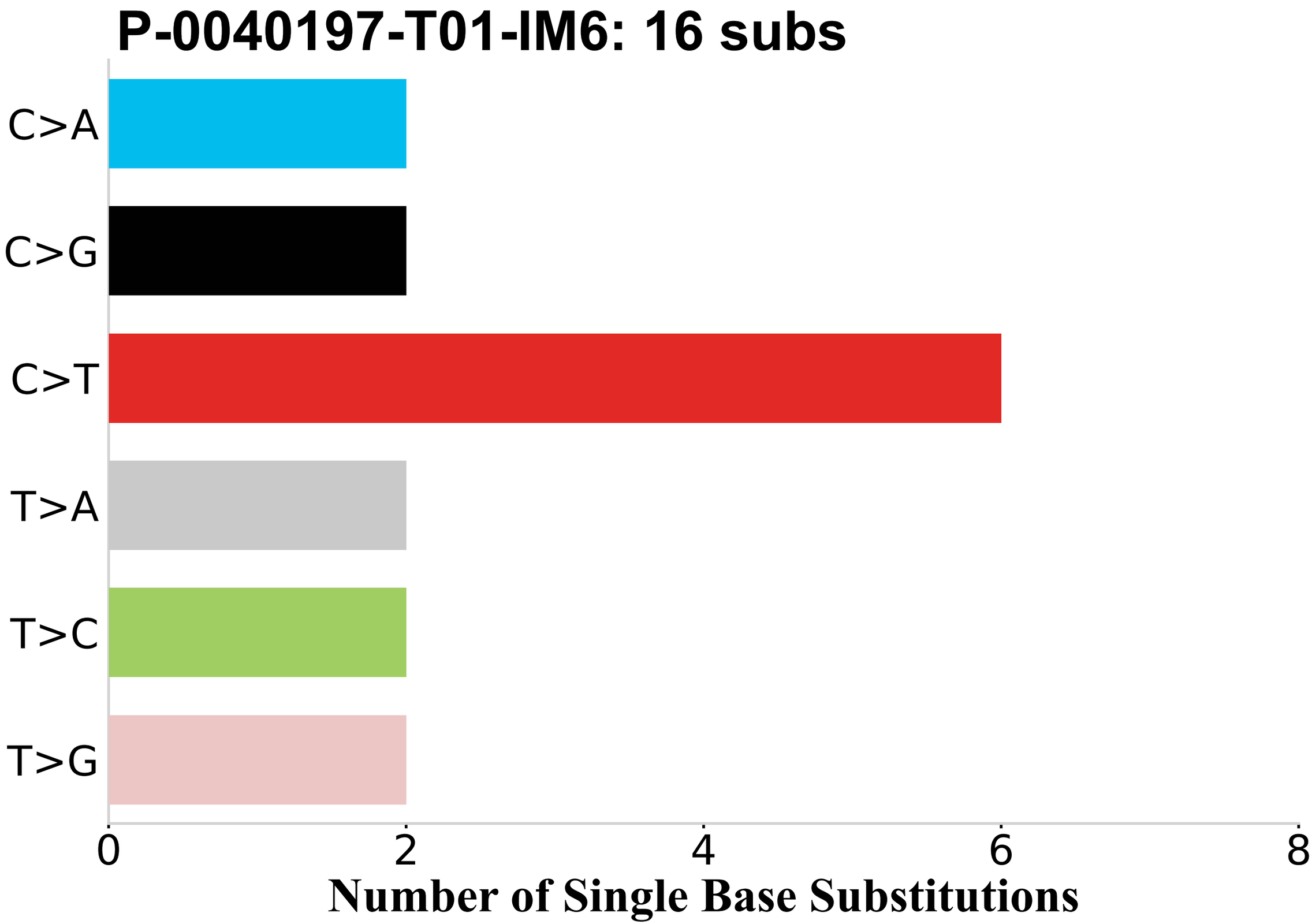
6
8
Number of Single Base Substitutions


P-0040197-T01-IM6: 16 subs
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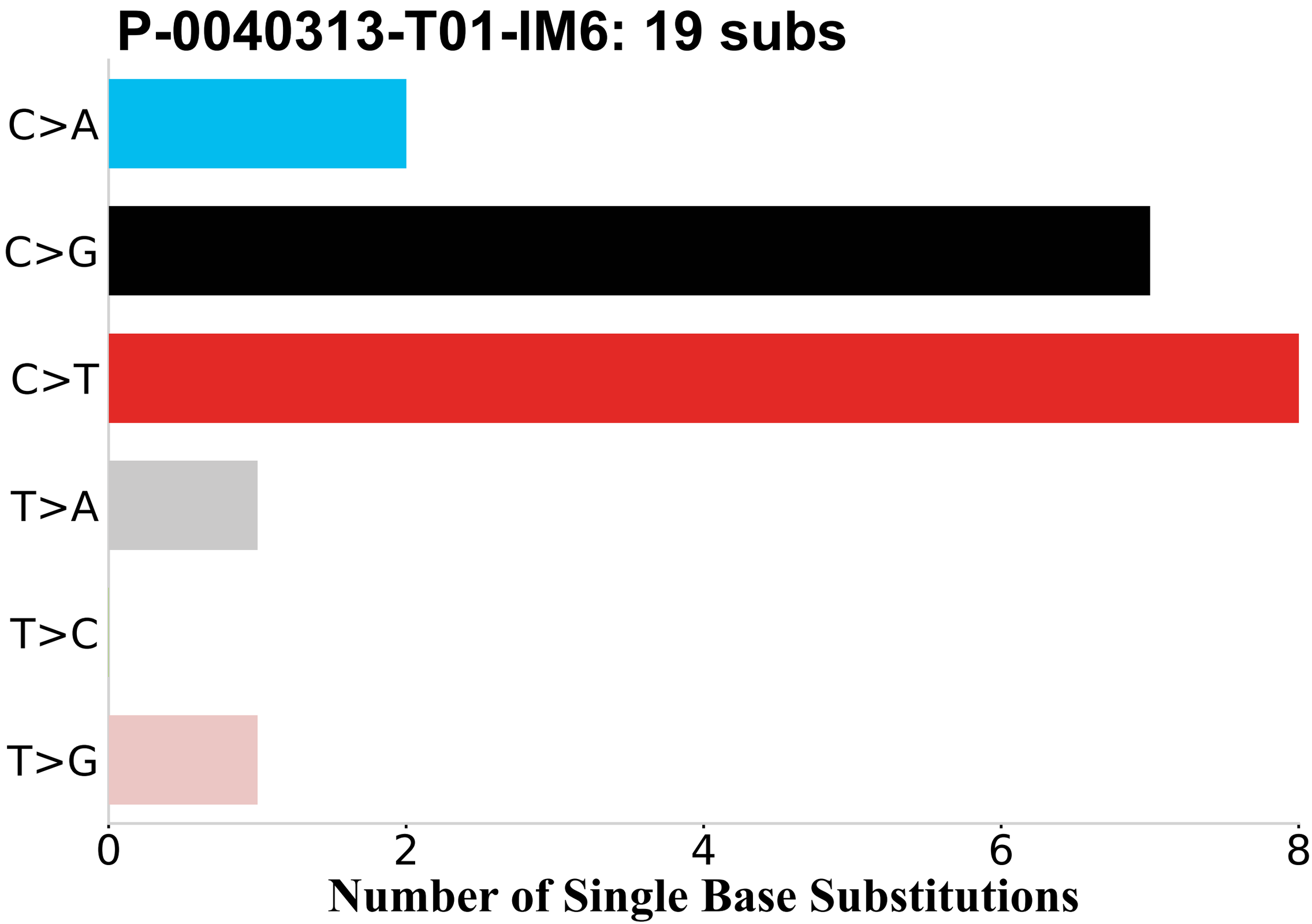
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0040313-T01-IM6: 19 subs
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C>T
T>A
T>C
T>G
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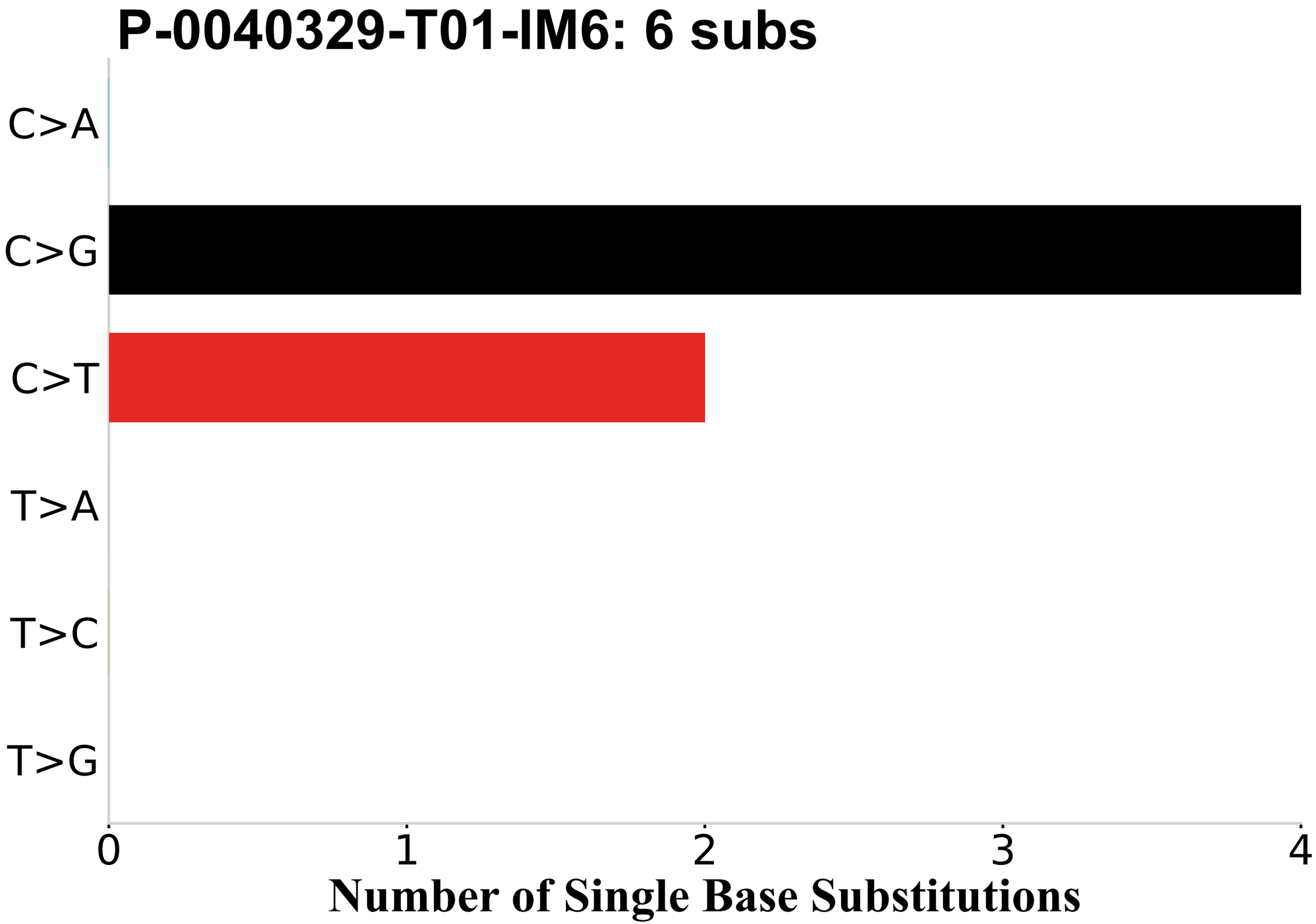
2
4
6
8
Number of Single Base Substitutions


P-0040329-T01-IM6: 6 subs
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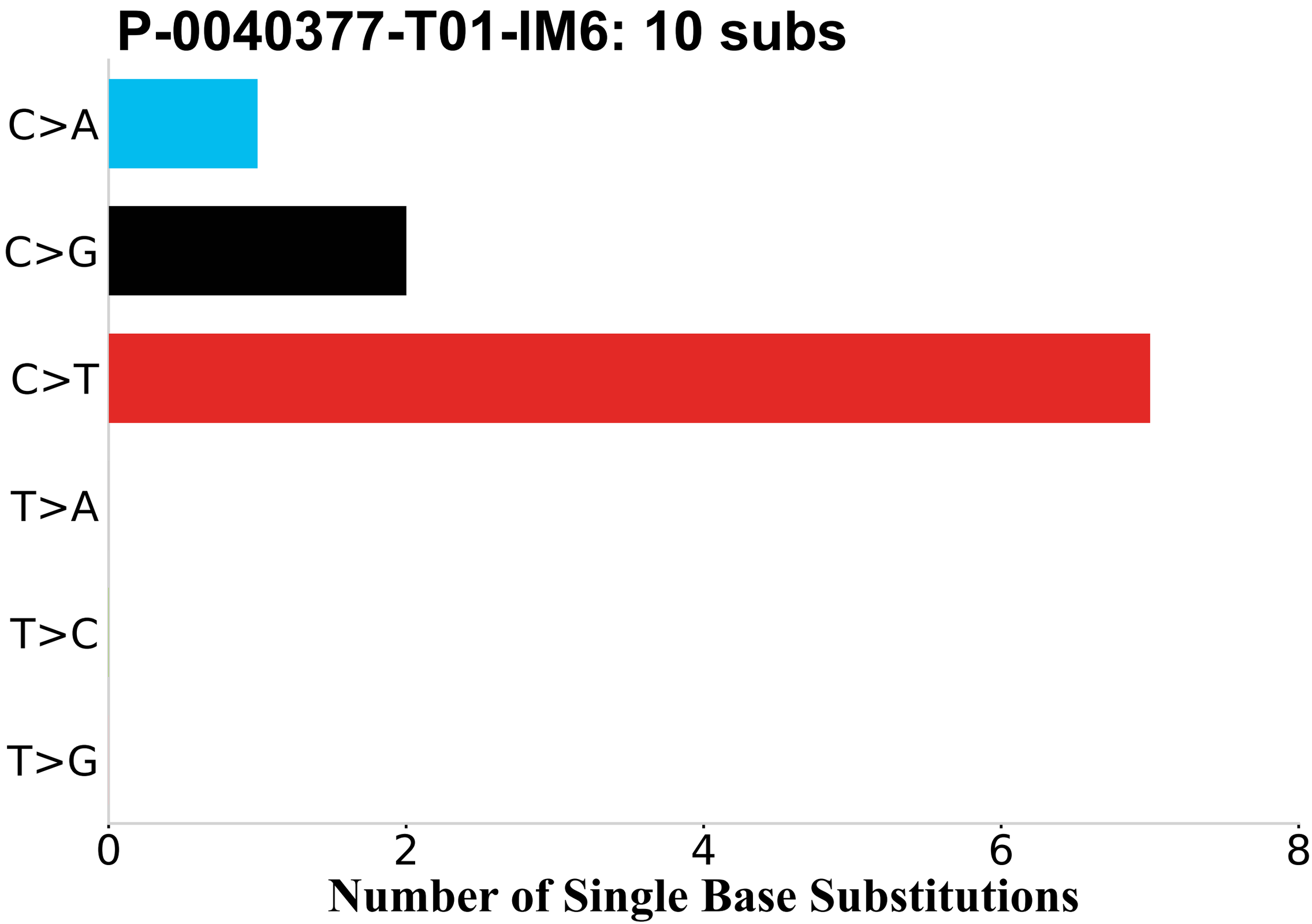
4
Number of Single Base Substitutions


P-0040377-T01-IM6: 10 subs
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T>C
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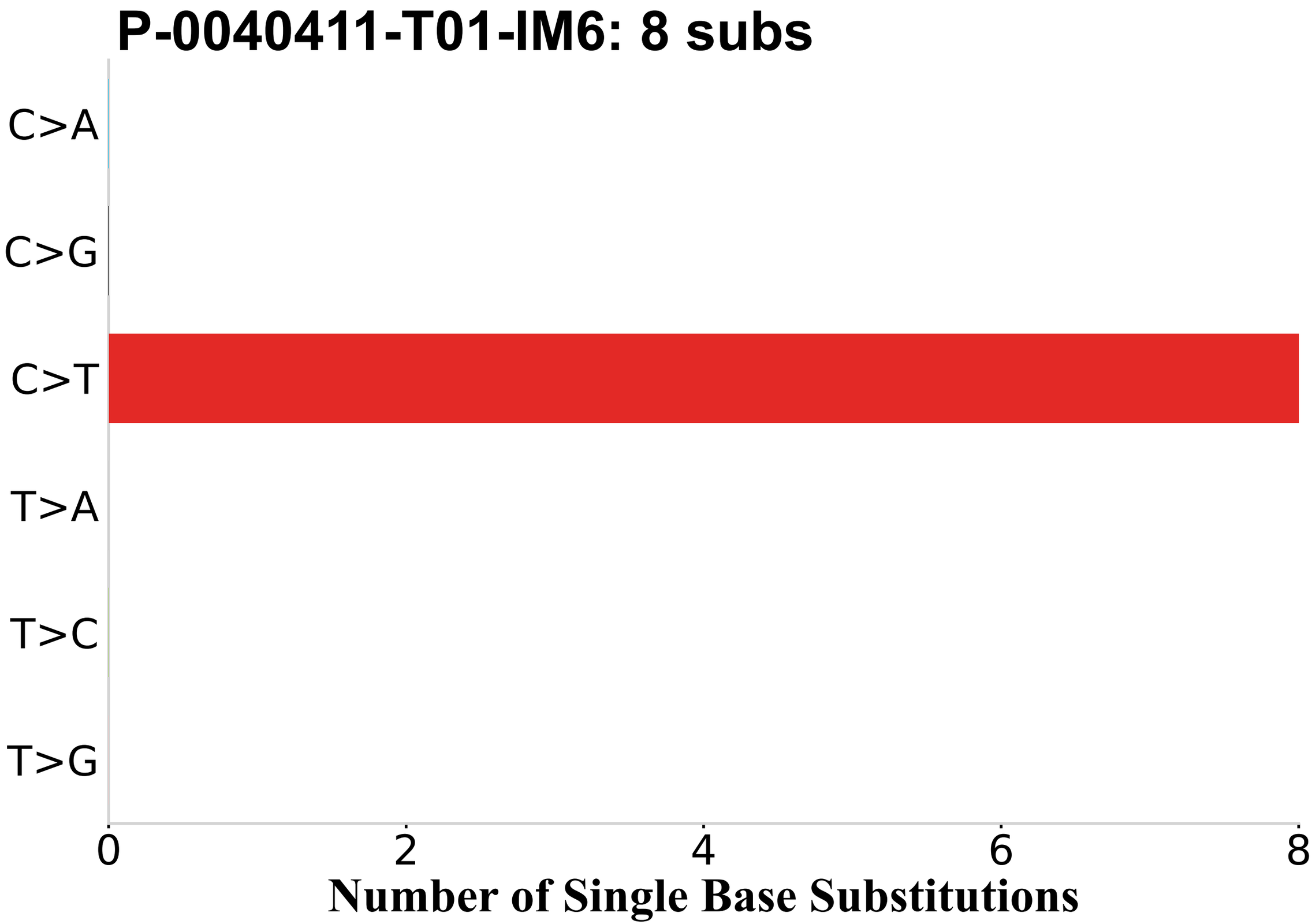
6
8
Number of Single Base Substitutions


P-0040411-T01-IM6: 8 subs
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T>C
T>G
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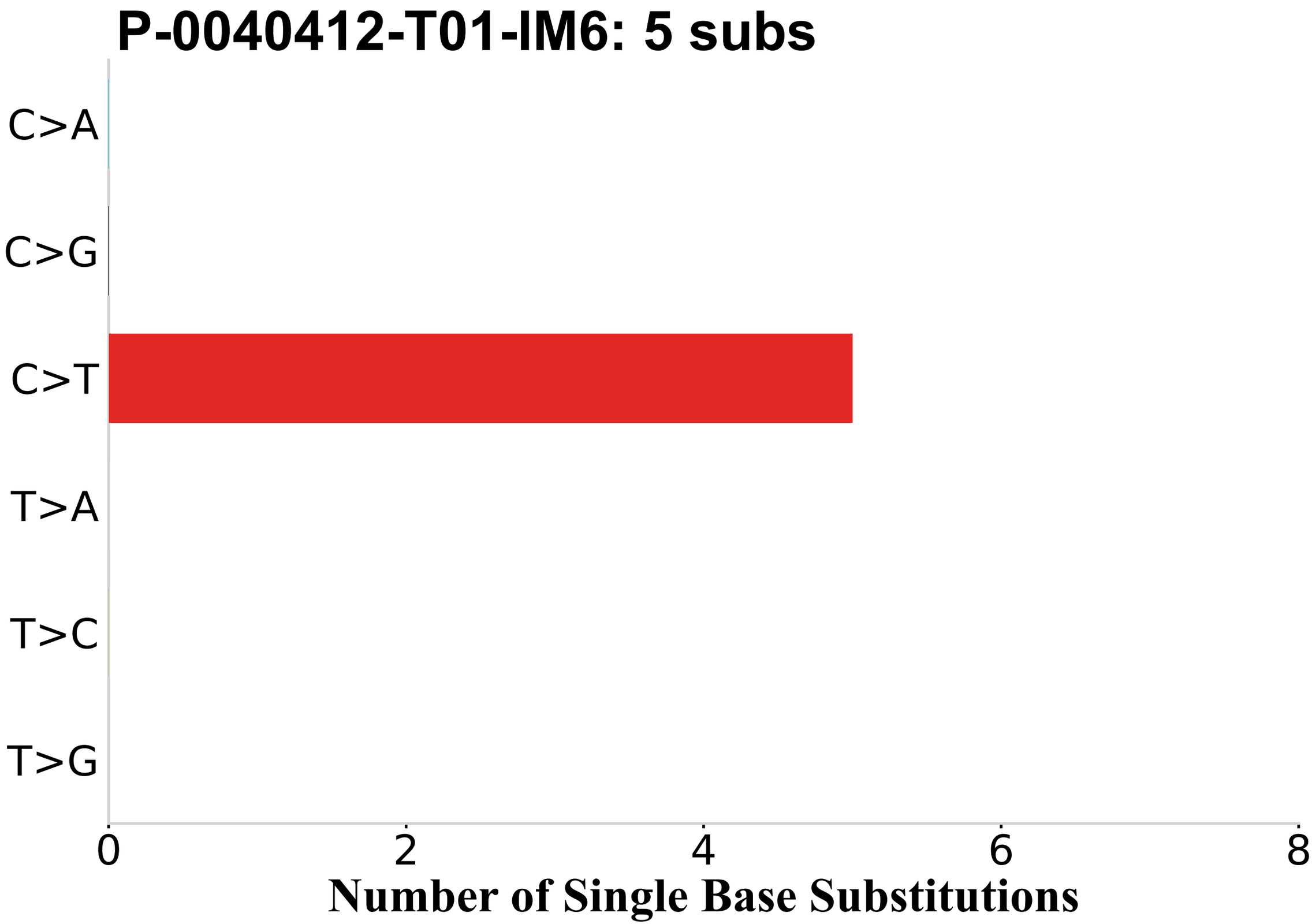
2
4
6
8
Number of Single Base Substitutions


P-0040412-T01-IM6: 5 subs
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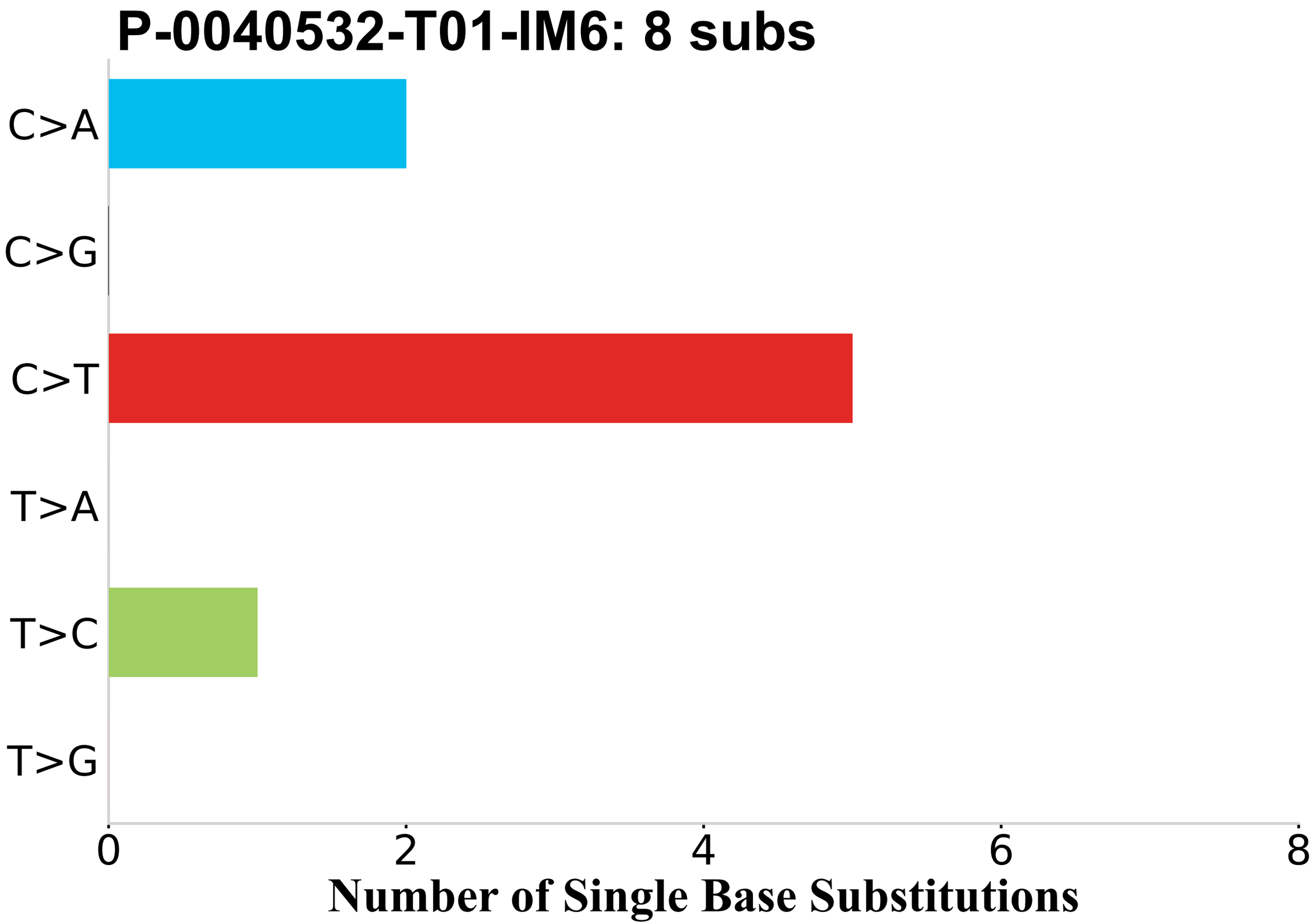
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0040532-T01-IM6: 8 subs
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C>G
C>T
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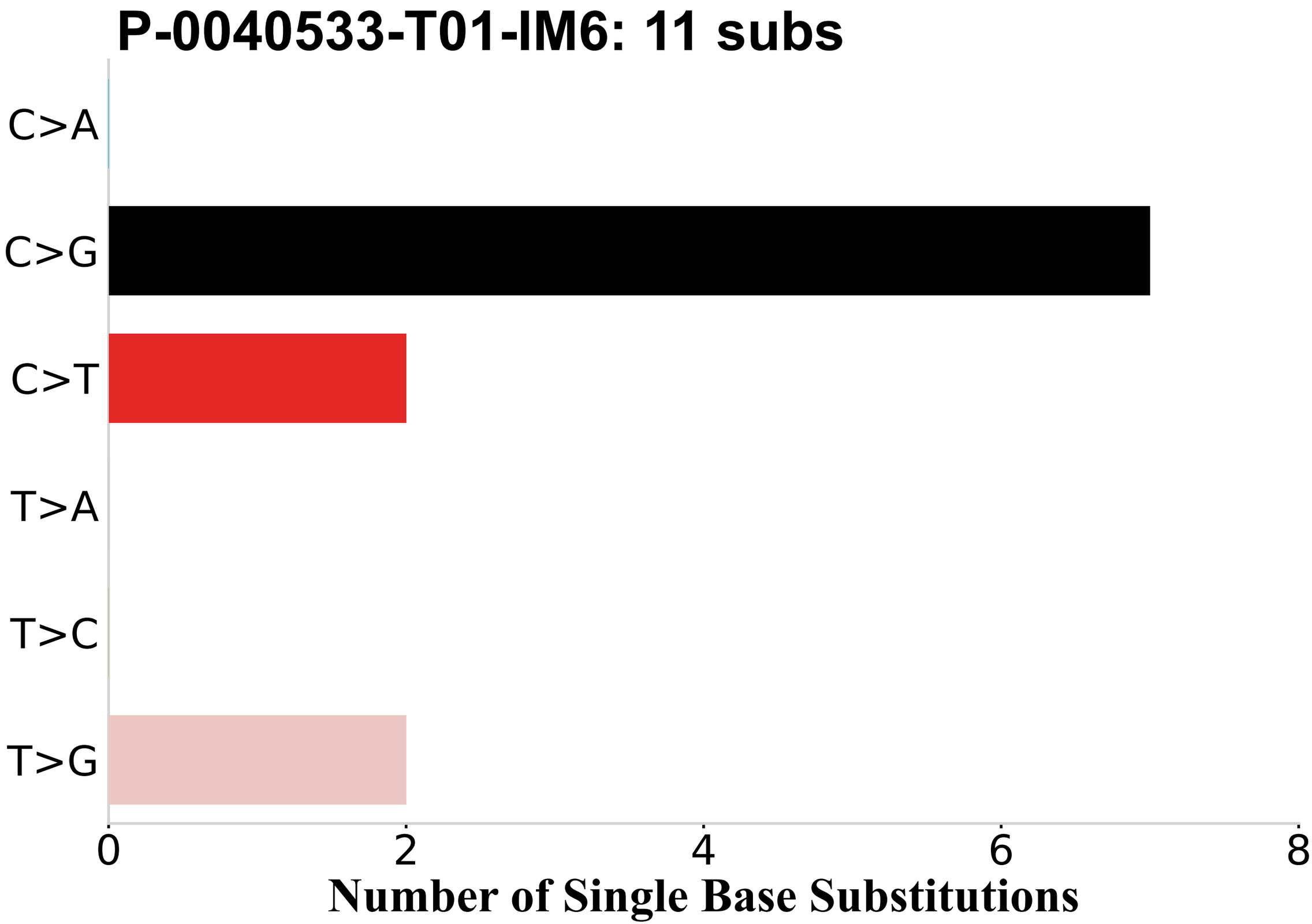
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0040533-T01-IM6: 11 subs
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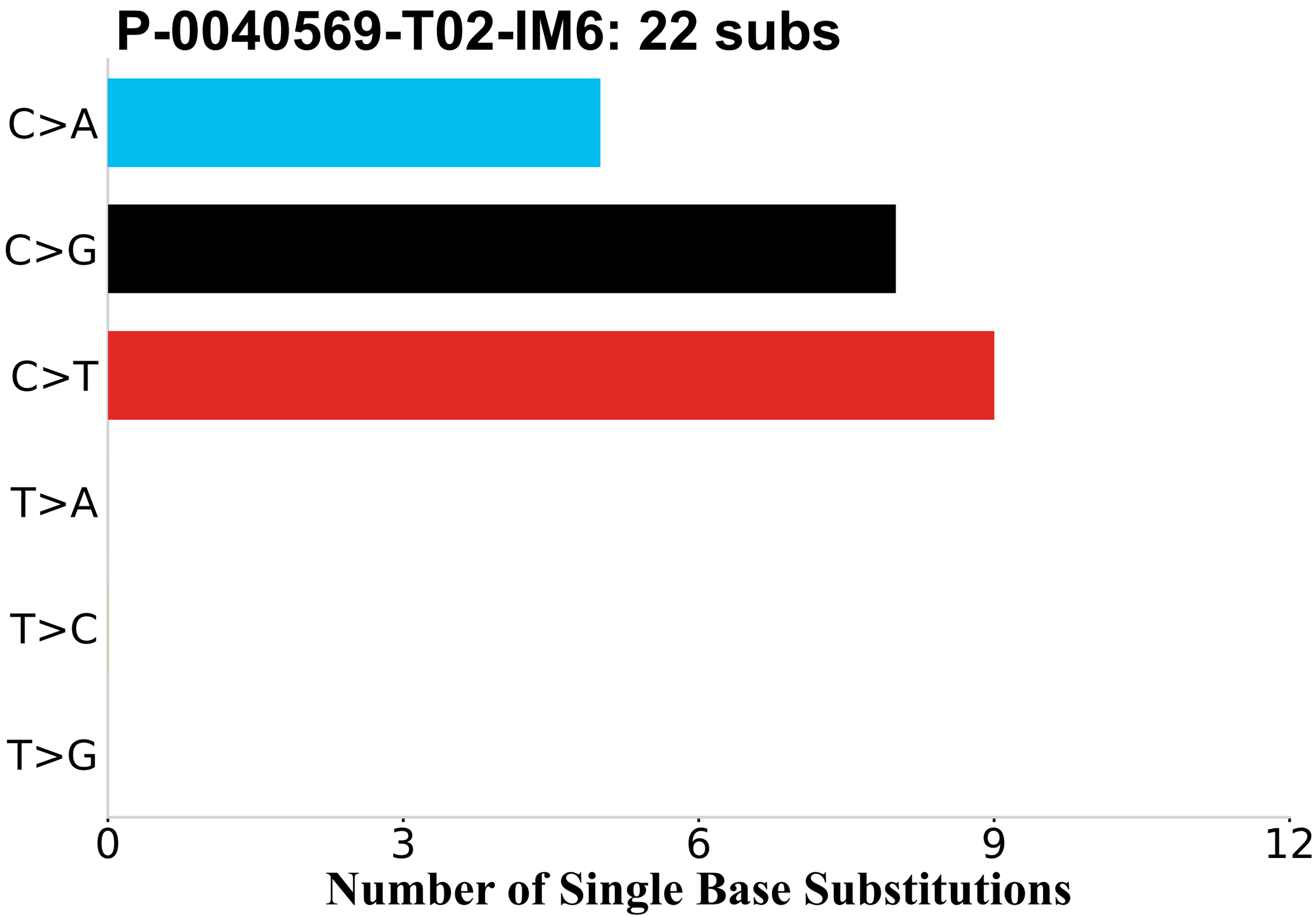
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0040569-T02-IM6: 22 subs
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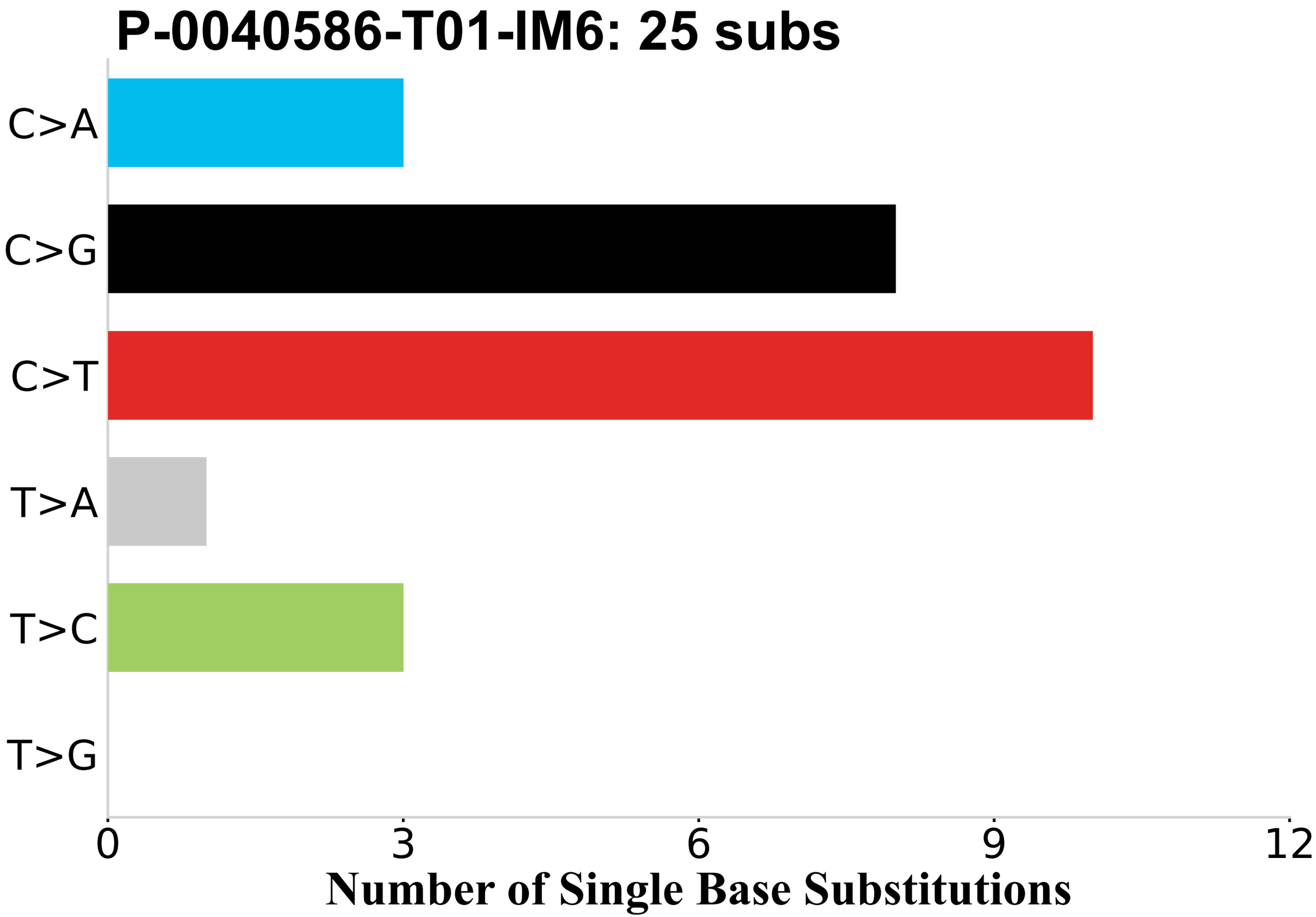
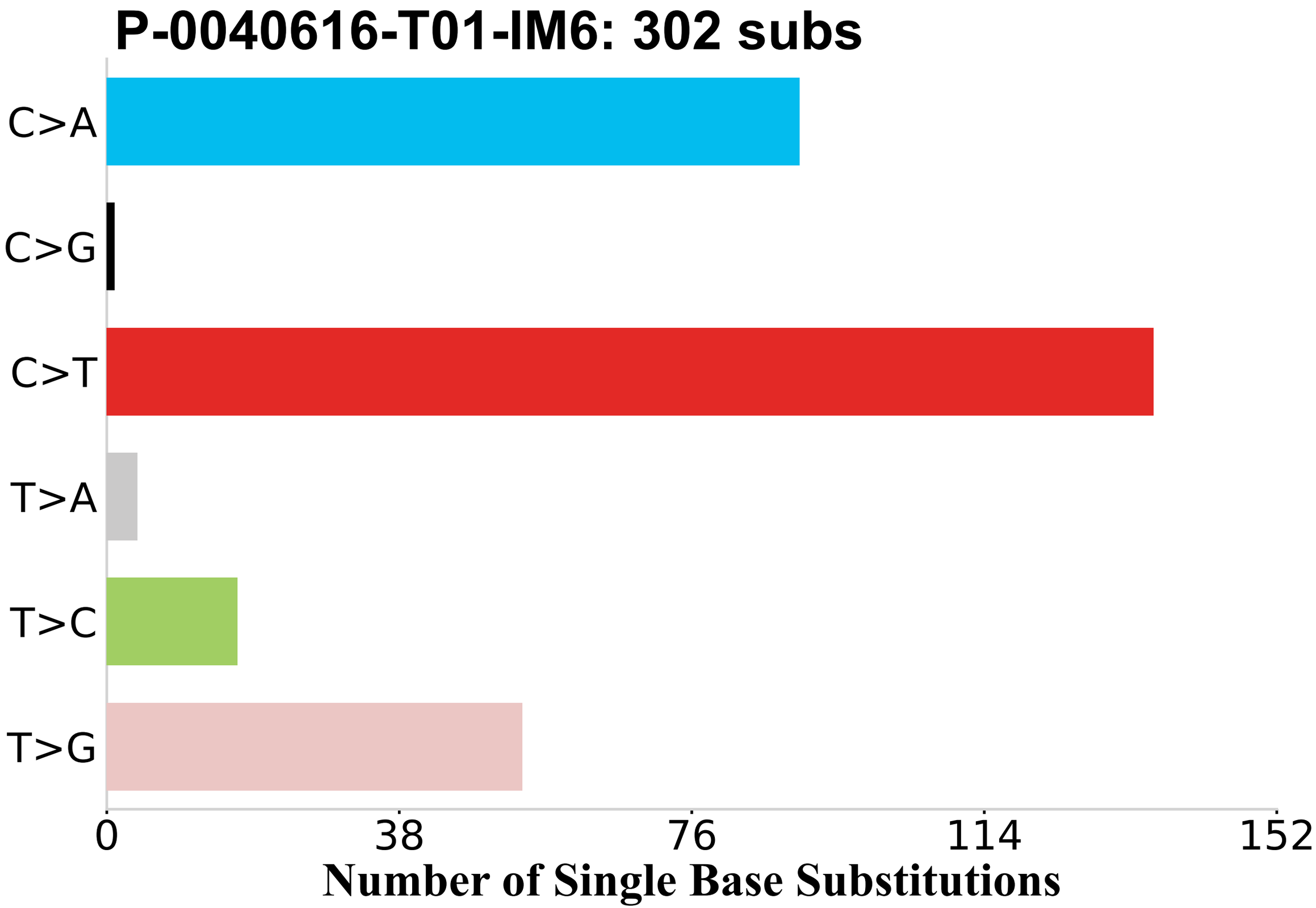
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0040586-T01-IM6: 25 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0040616-T01-IM6: 302 subs
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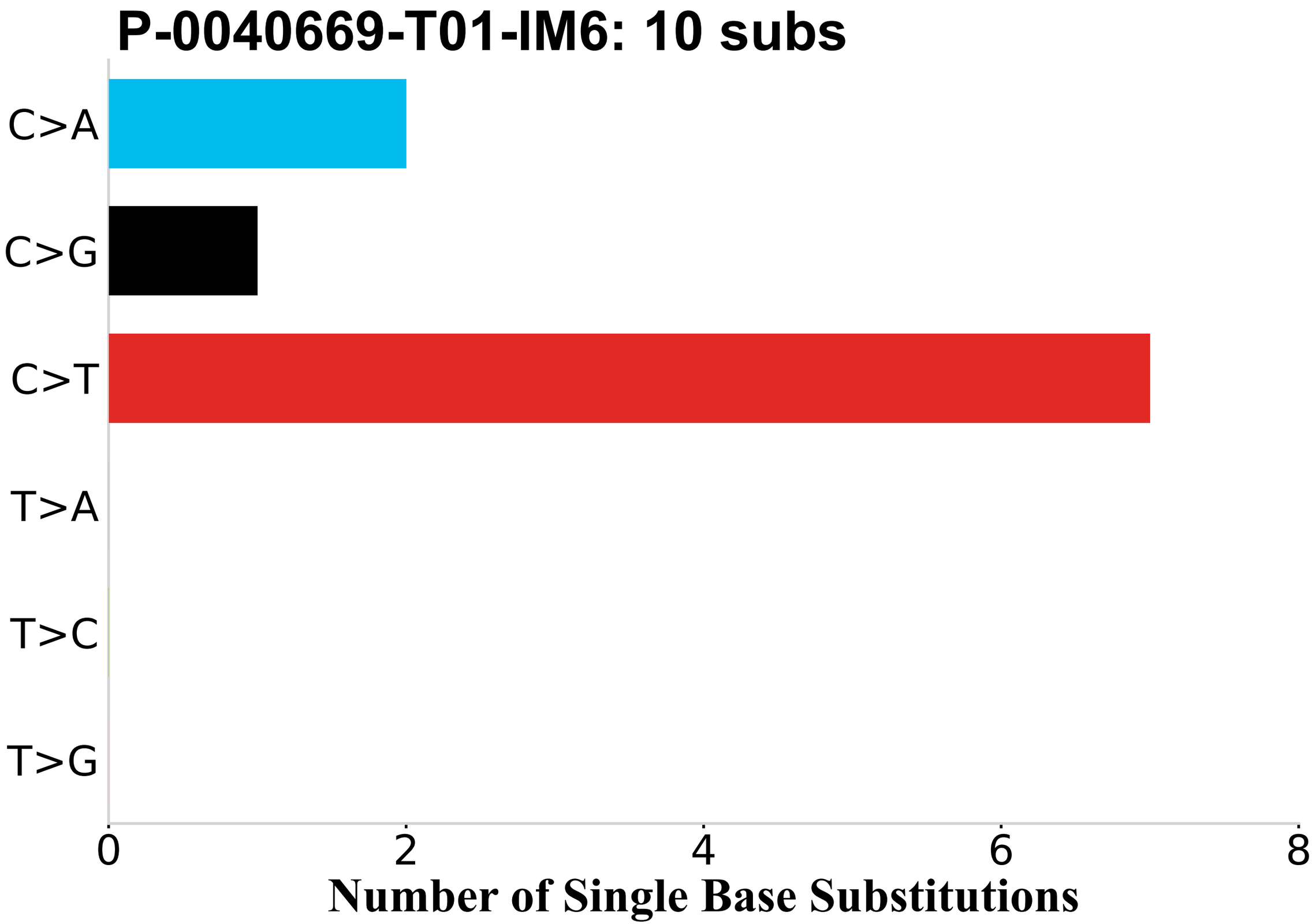
0
38
76
114
152
Number of Single Base Substitutions


P-0040669-T01-IM6: 10 subs
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C>G
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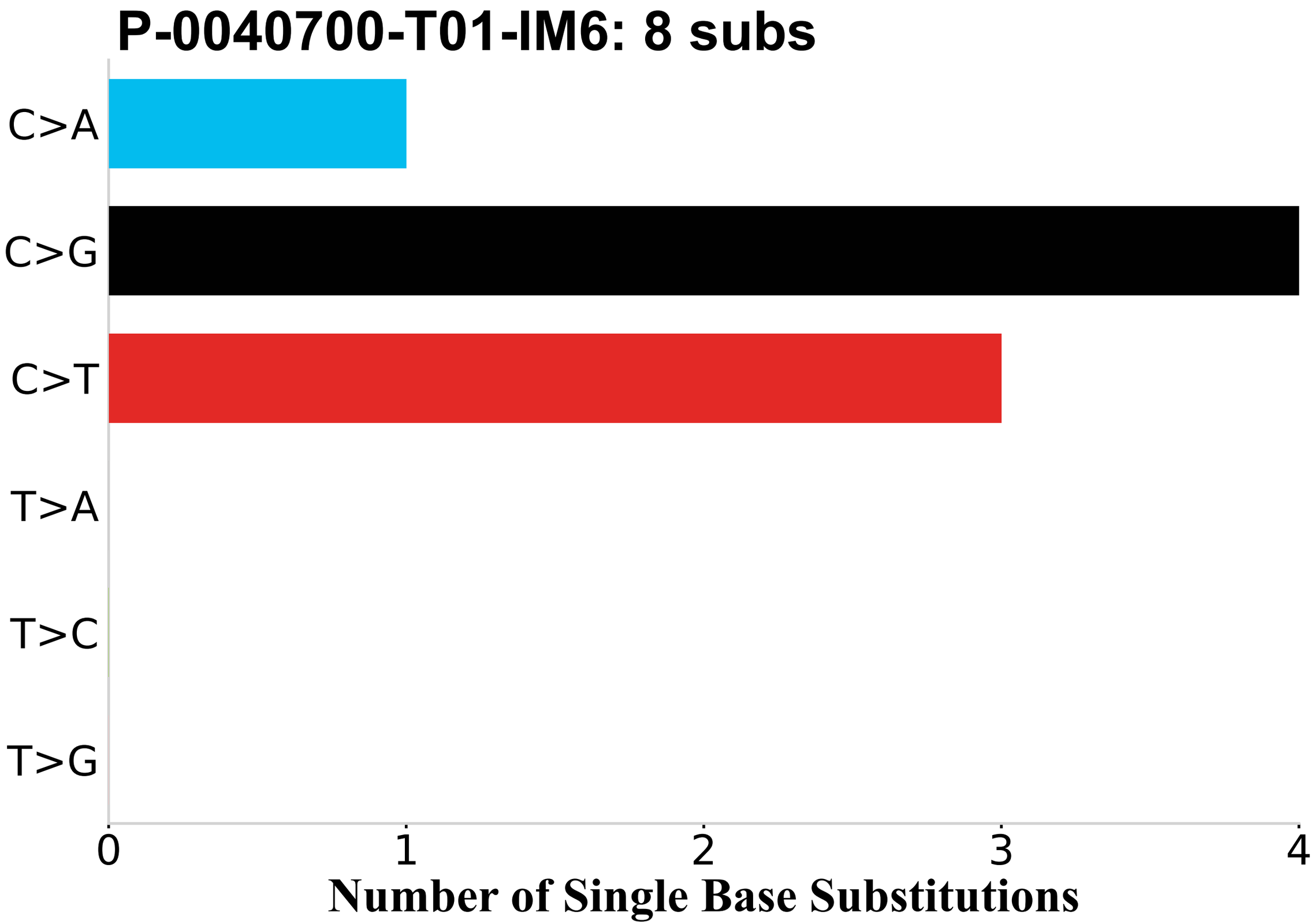
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0040700-T01-IM6: 8 subs
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T>C
T>G
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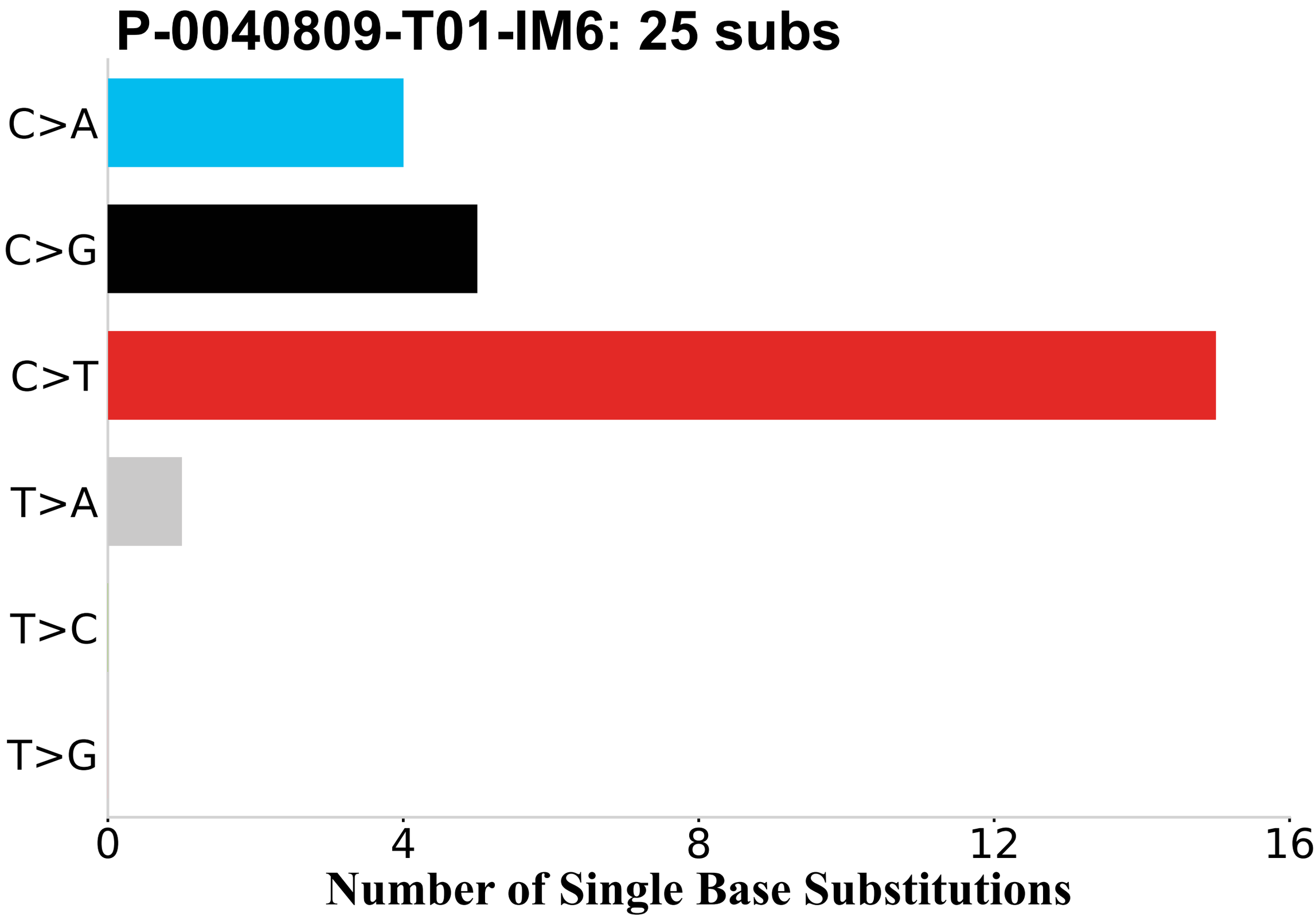
1
2
3
4
Number of Single Base Substitutions


P-0040809-T01-IM6: 25 subs
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C>T
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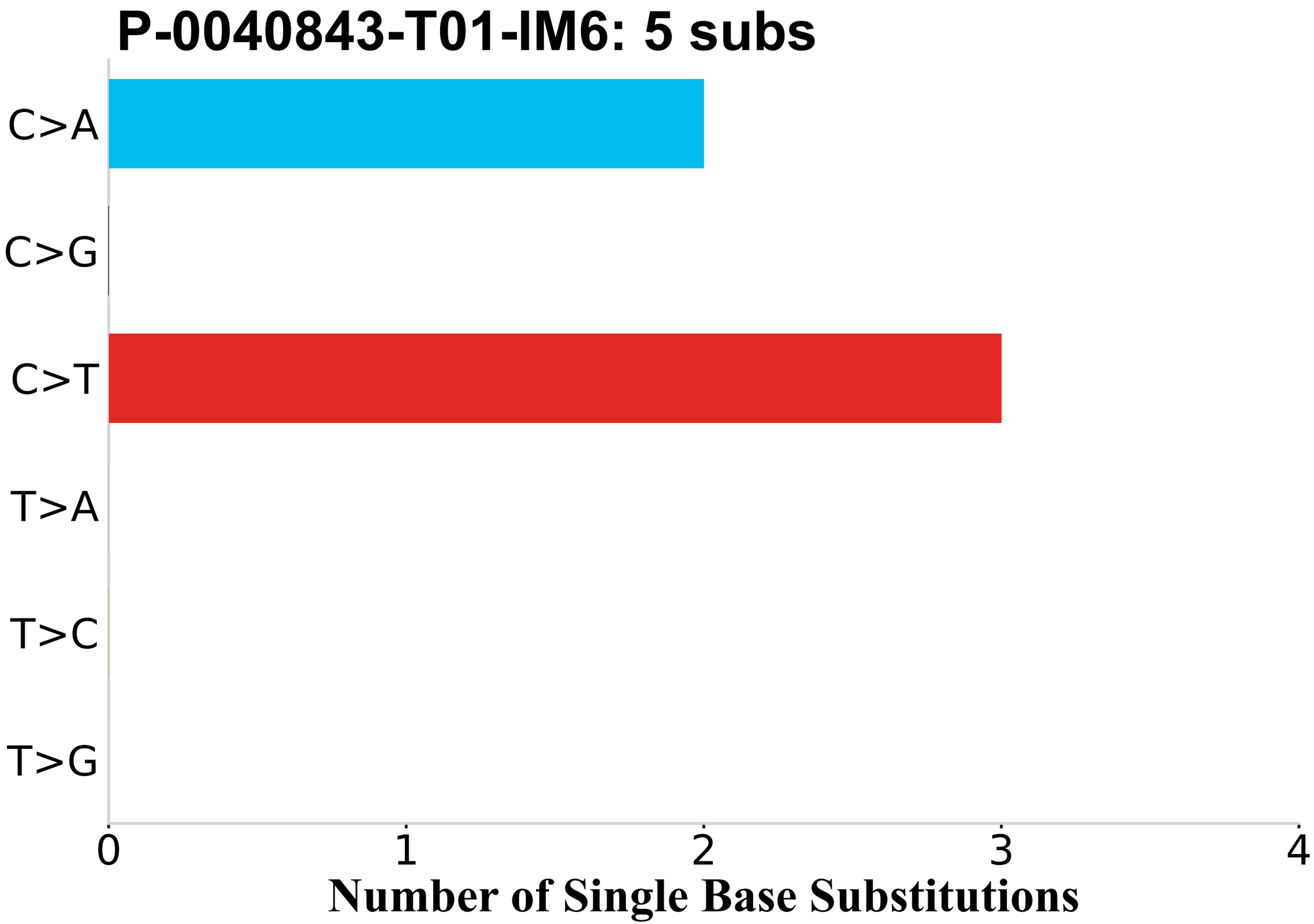
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0040843-T01-IM6: 5 subs
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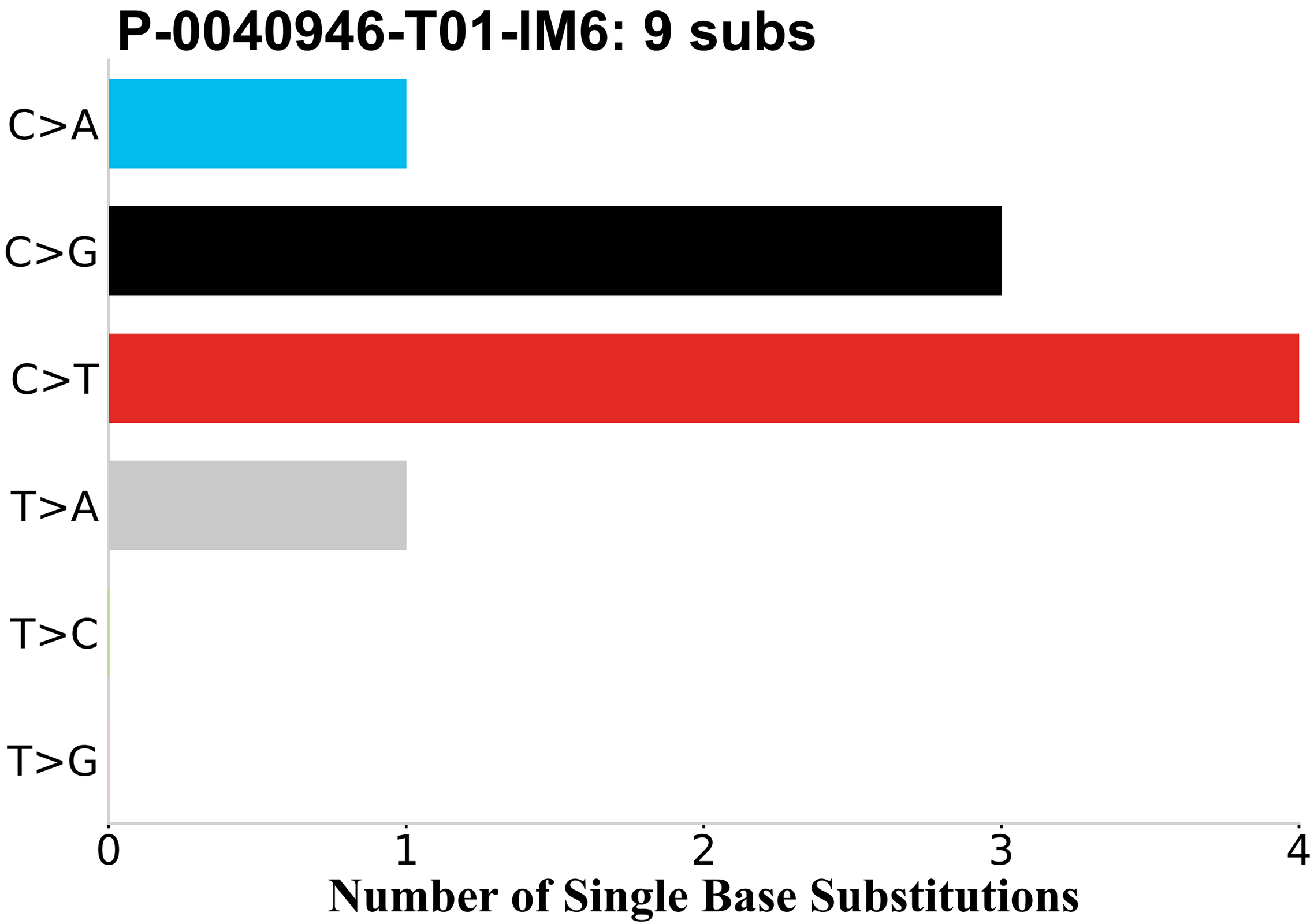
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0040946-T01-IM6: 9 subs
C>A
C>G
C>T
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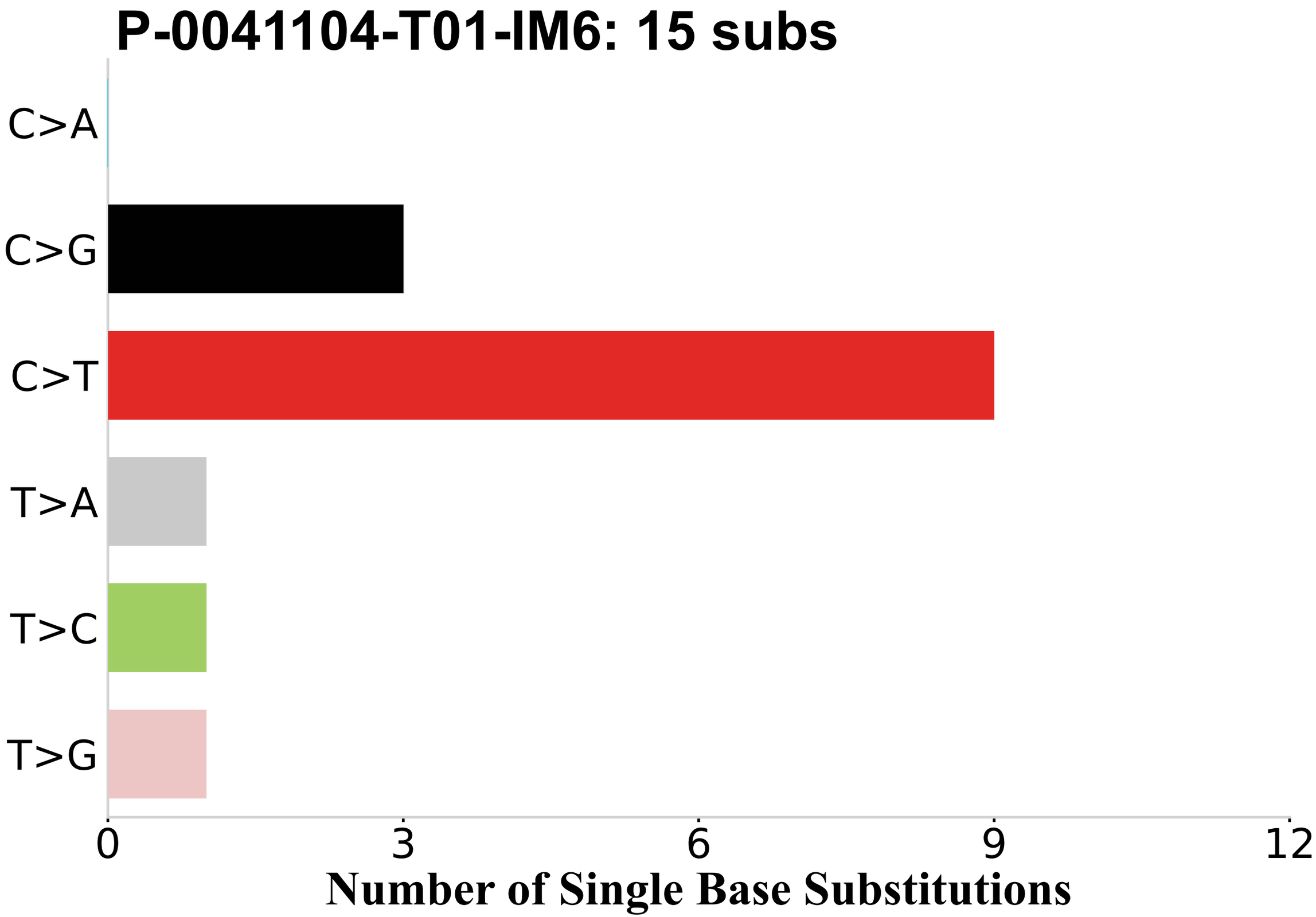
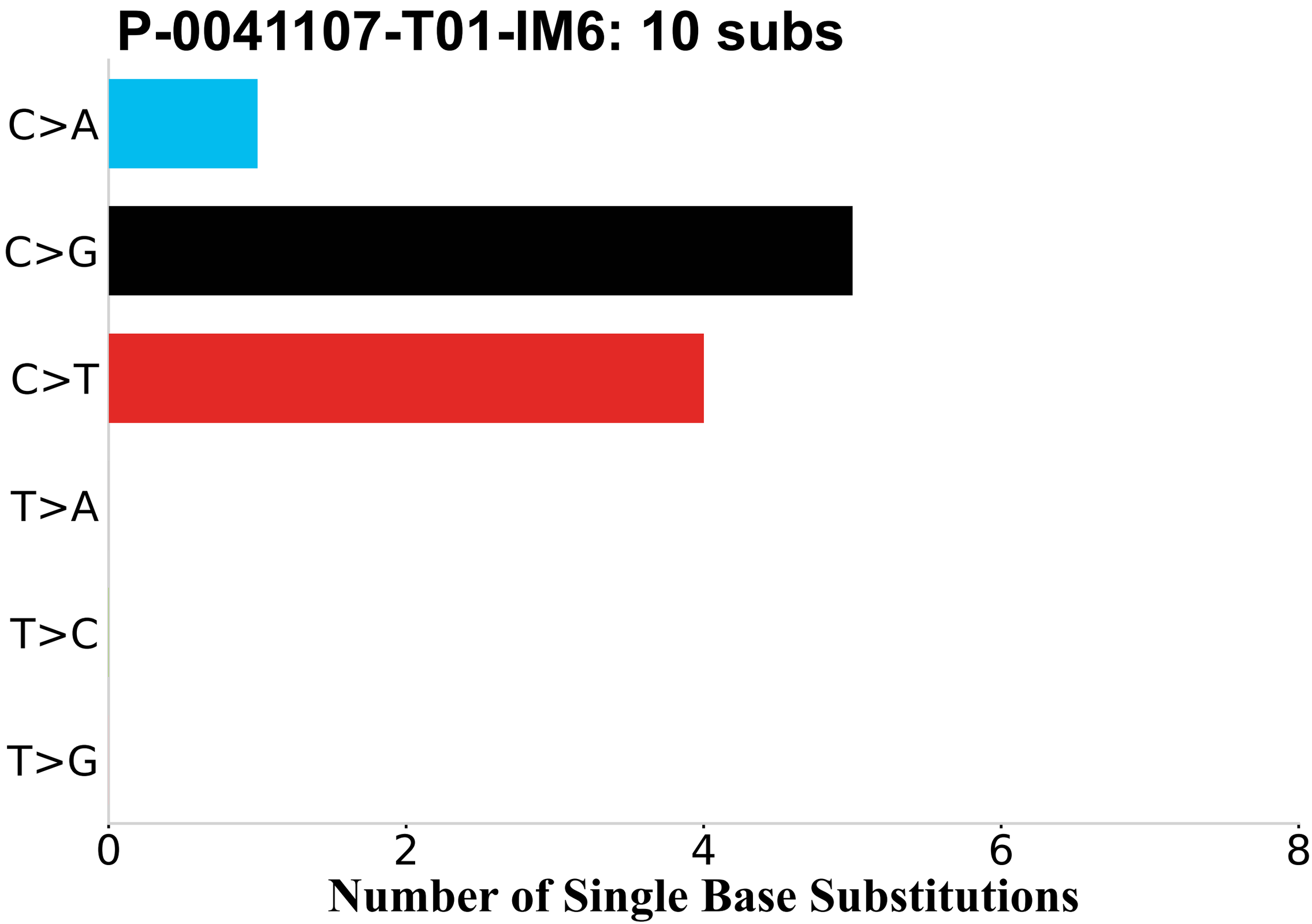
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0041104-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0041107-T01-IM6: 10 subs
C>A
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T>C
T>G
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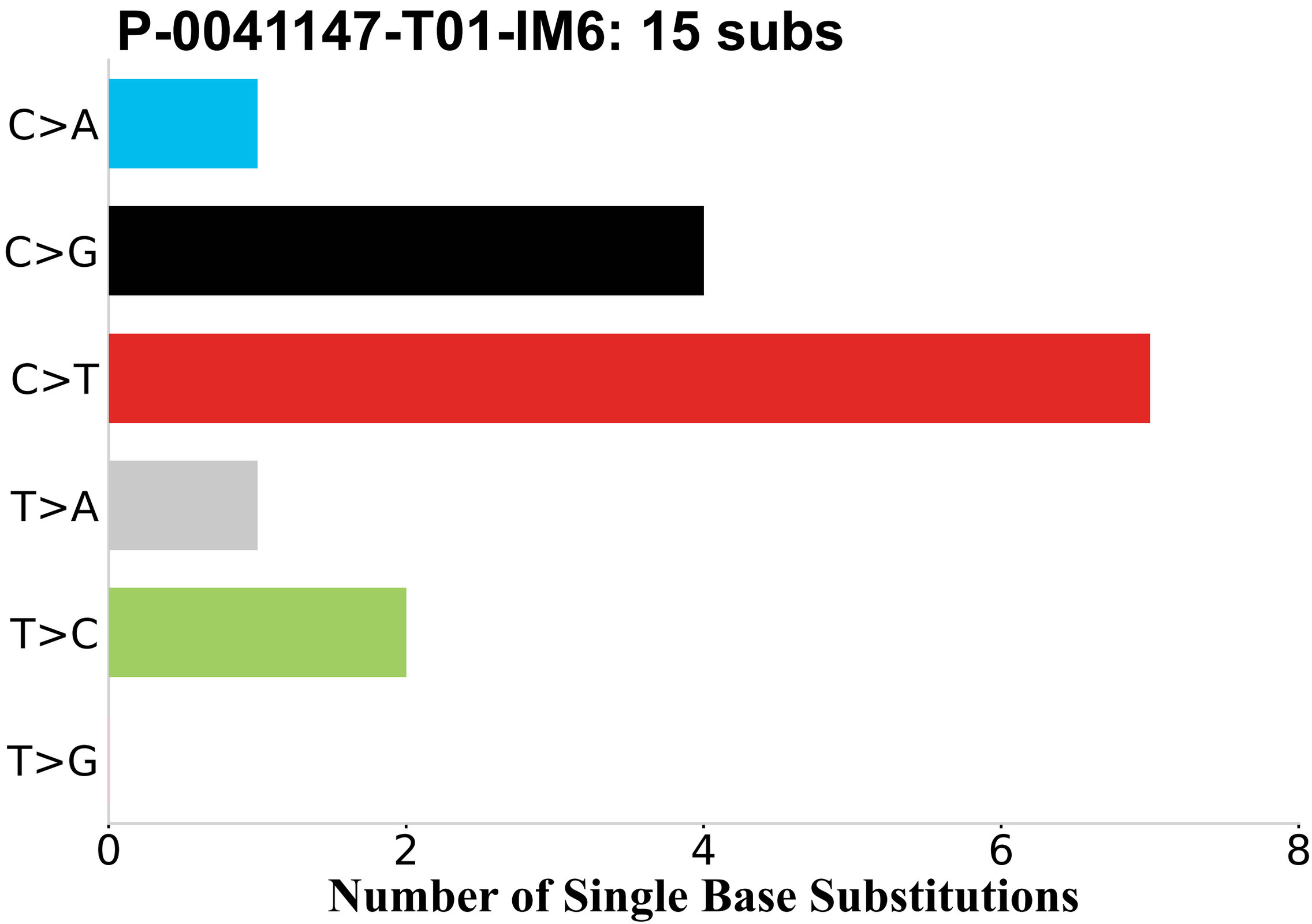
2
4
6
8
Number of Single Base Substitutions


P-0041147-T01-IM6: 15 subs
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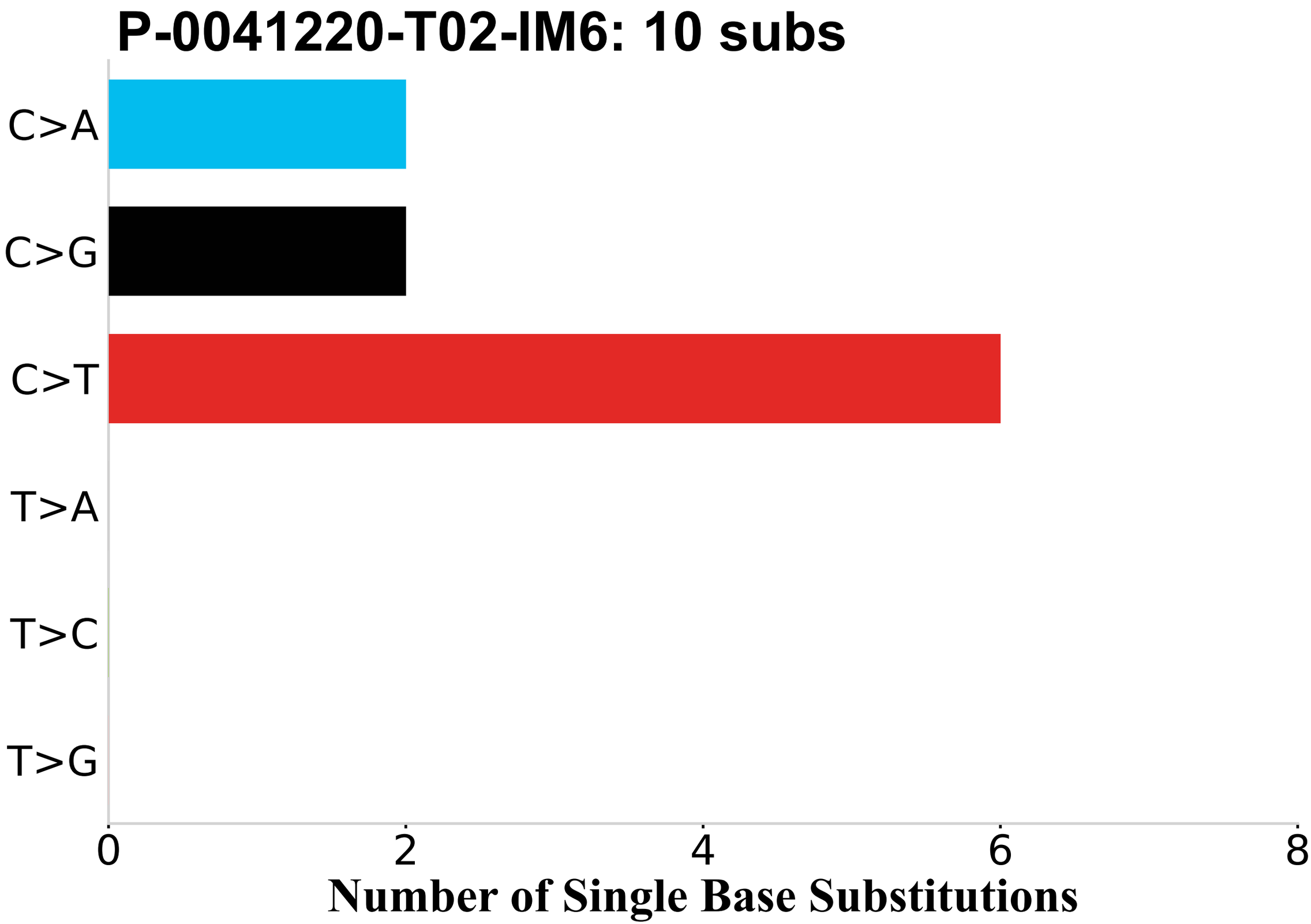
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0041220-T02-IM6: 10 subs
C>A
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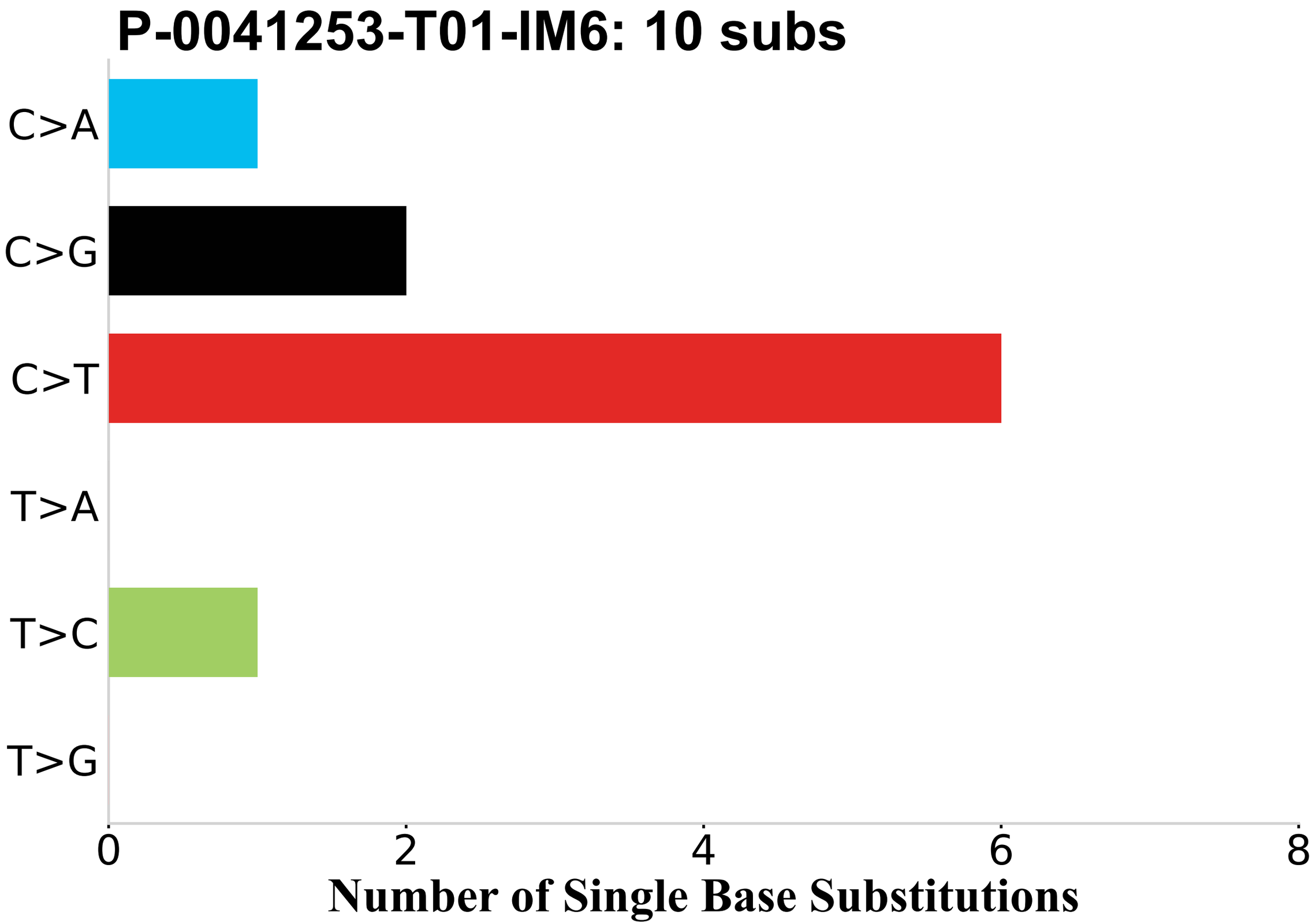
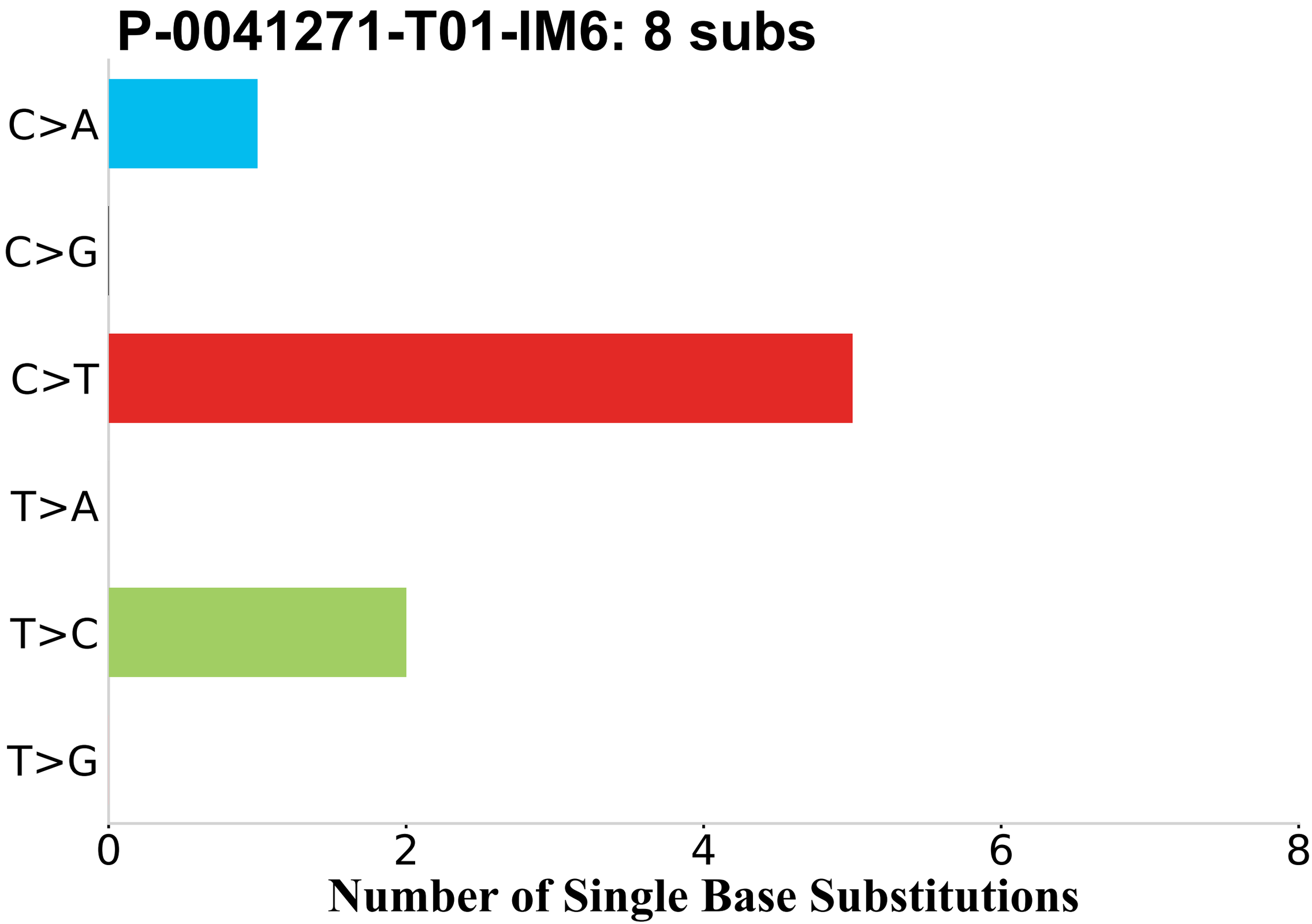
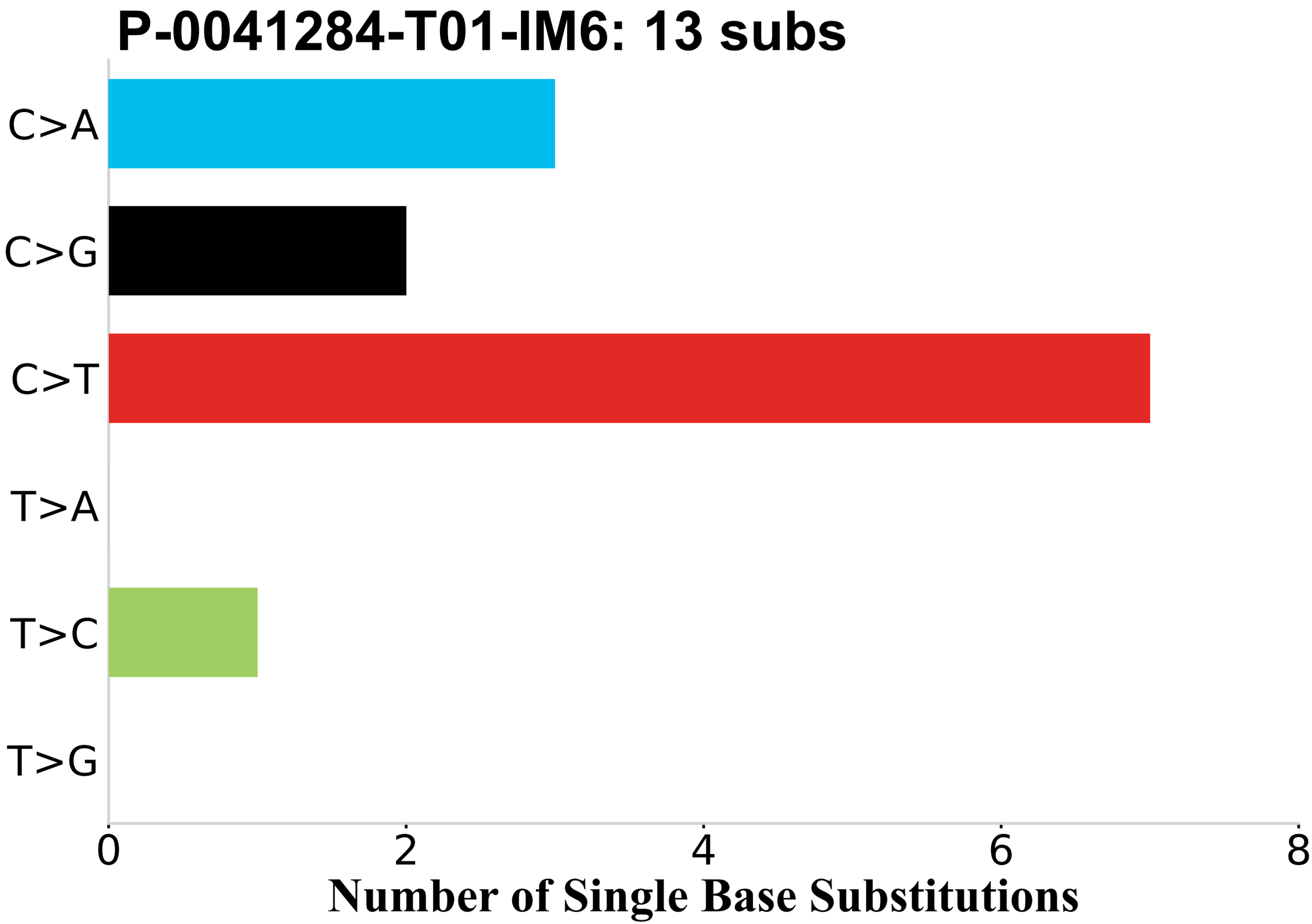
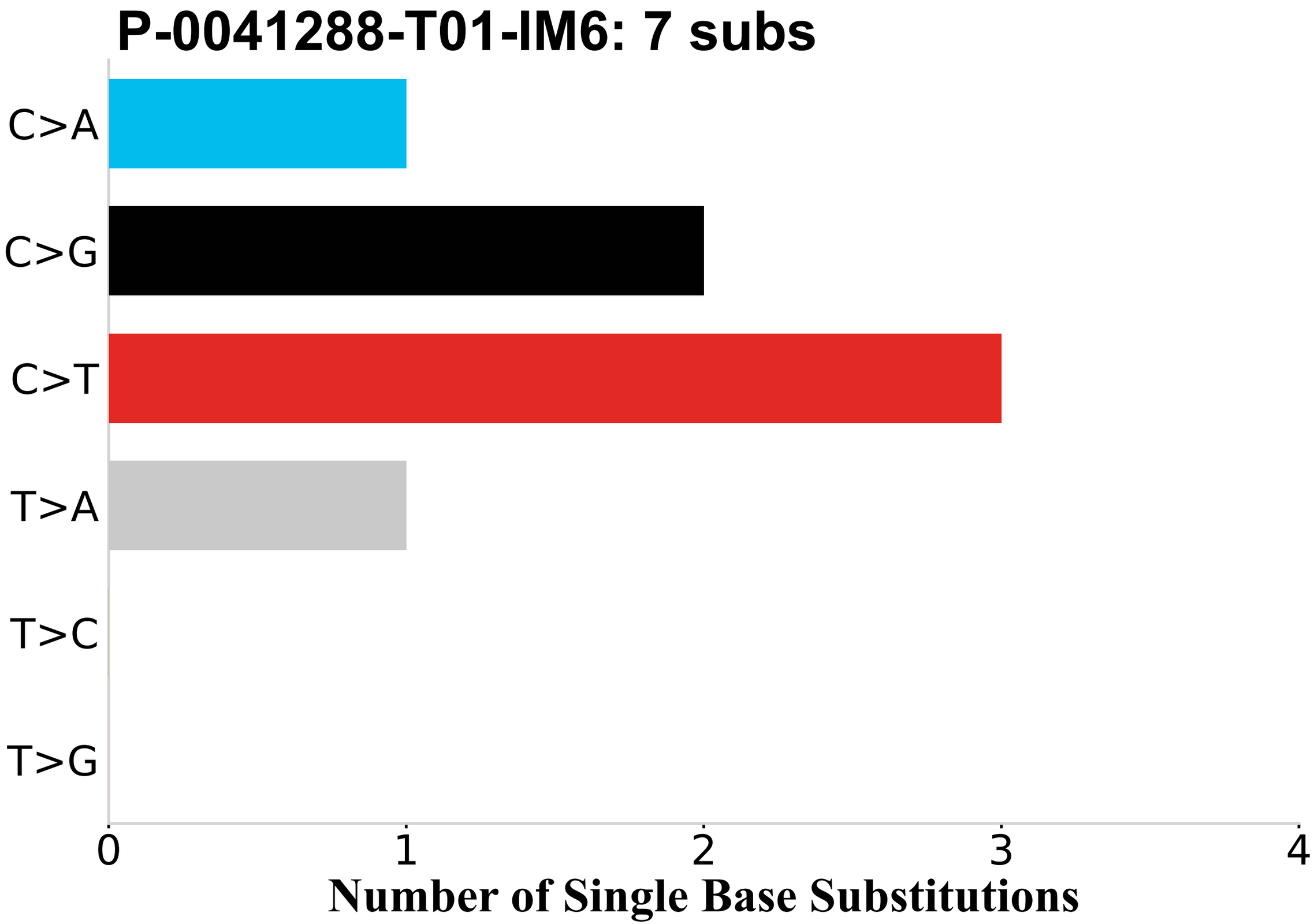
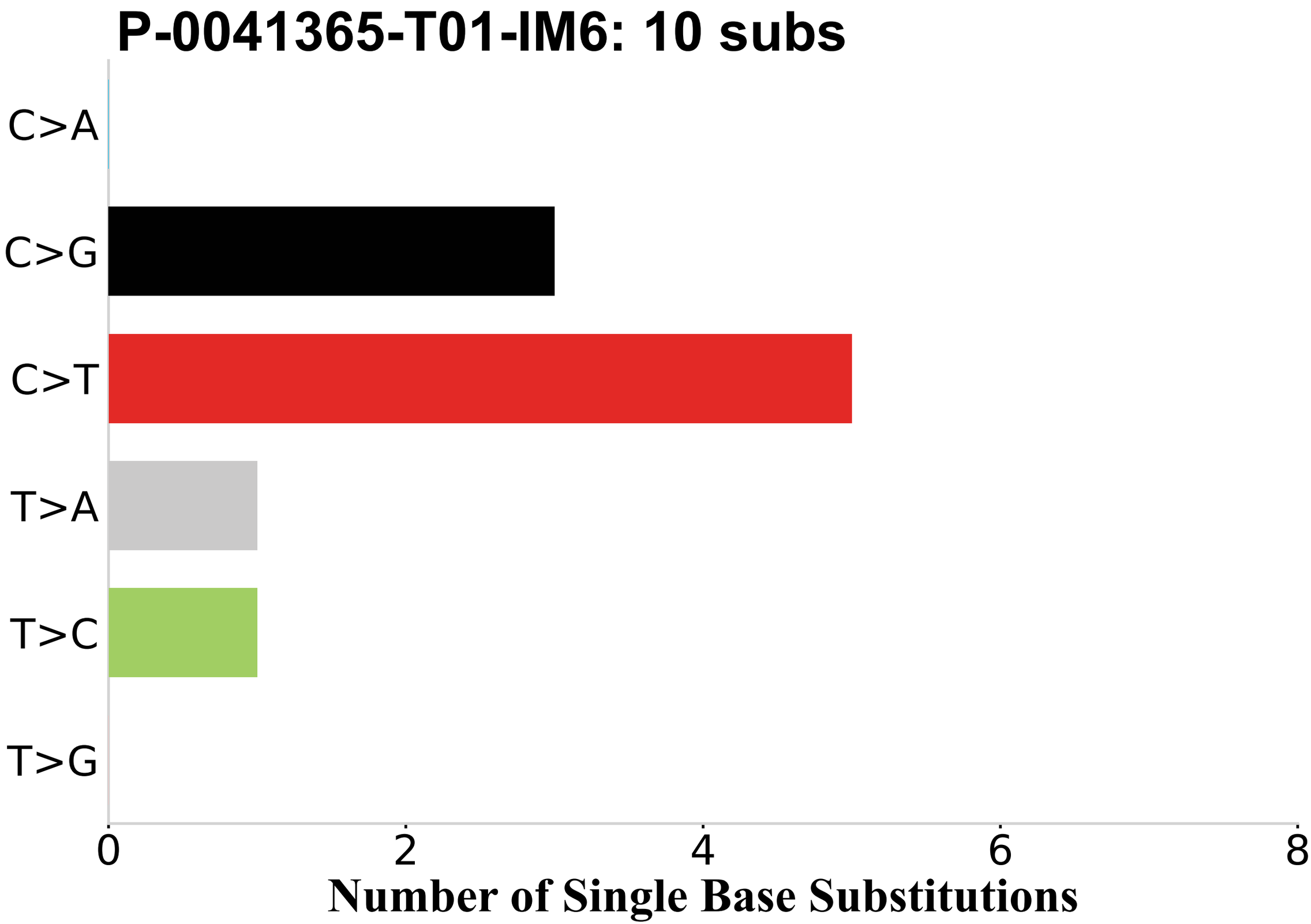
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

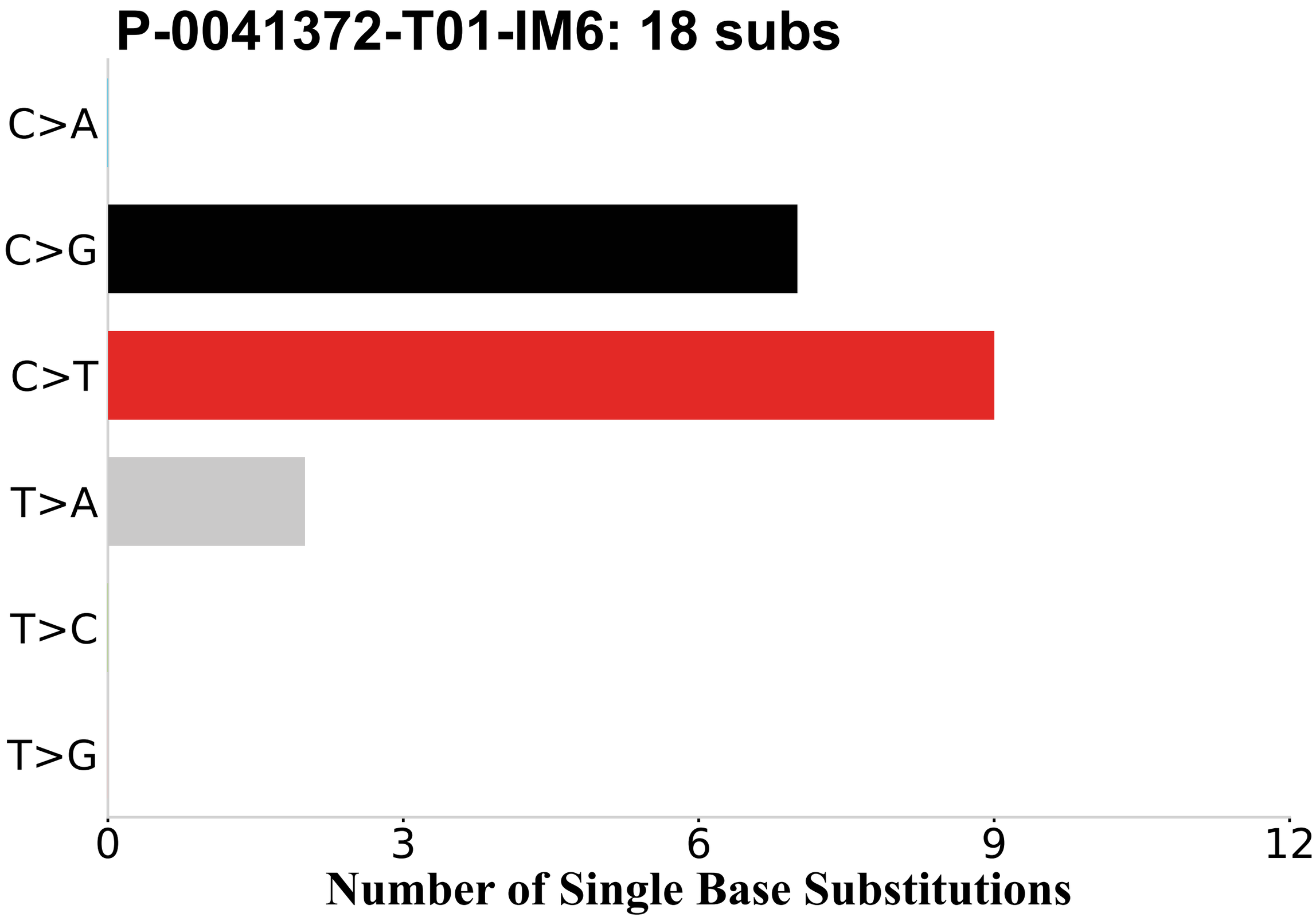

P-0041253-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

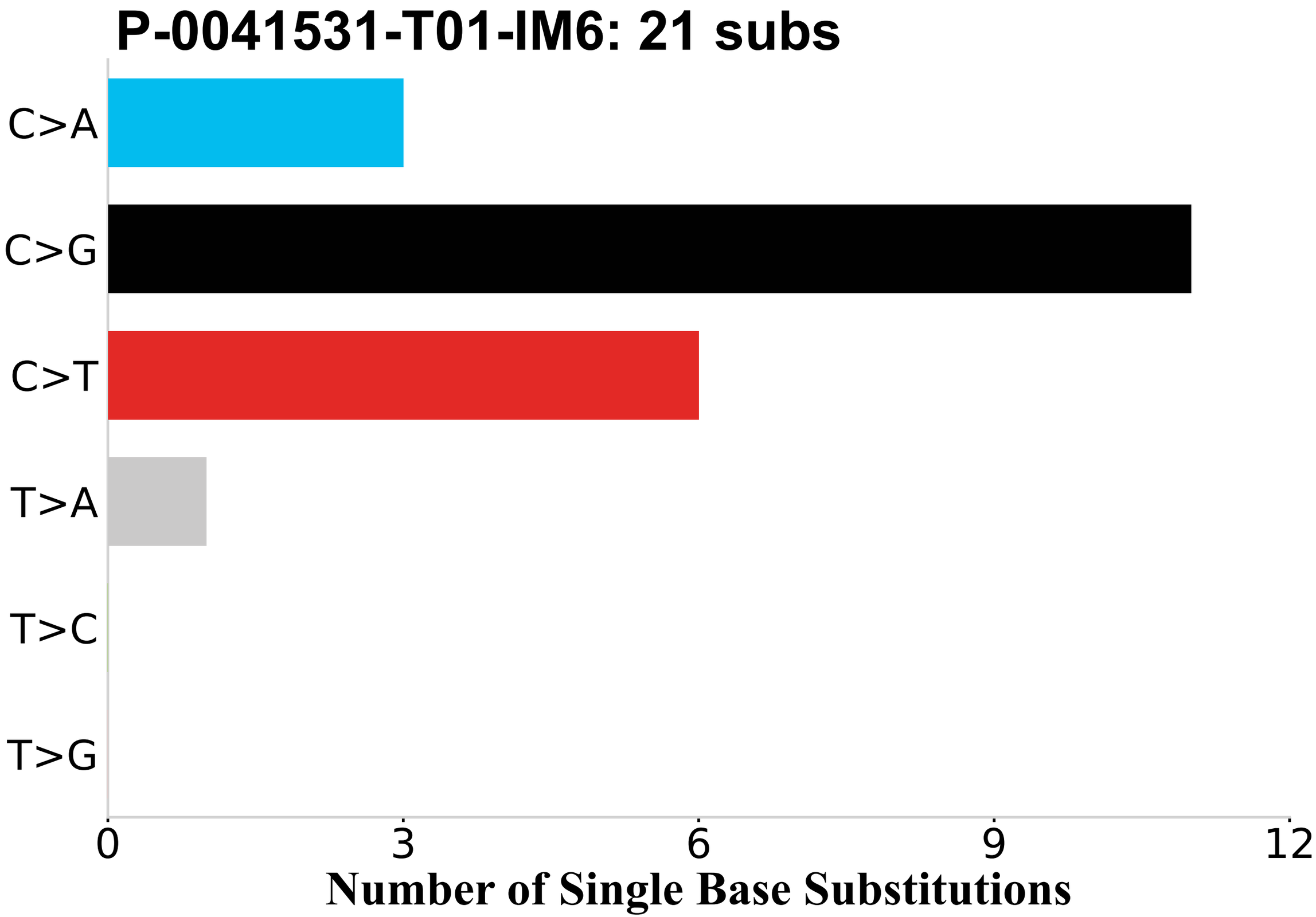

P-0041271-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

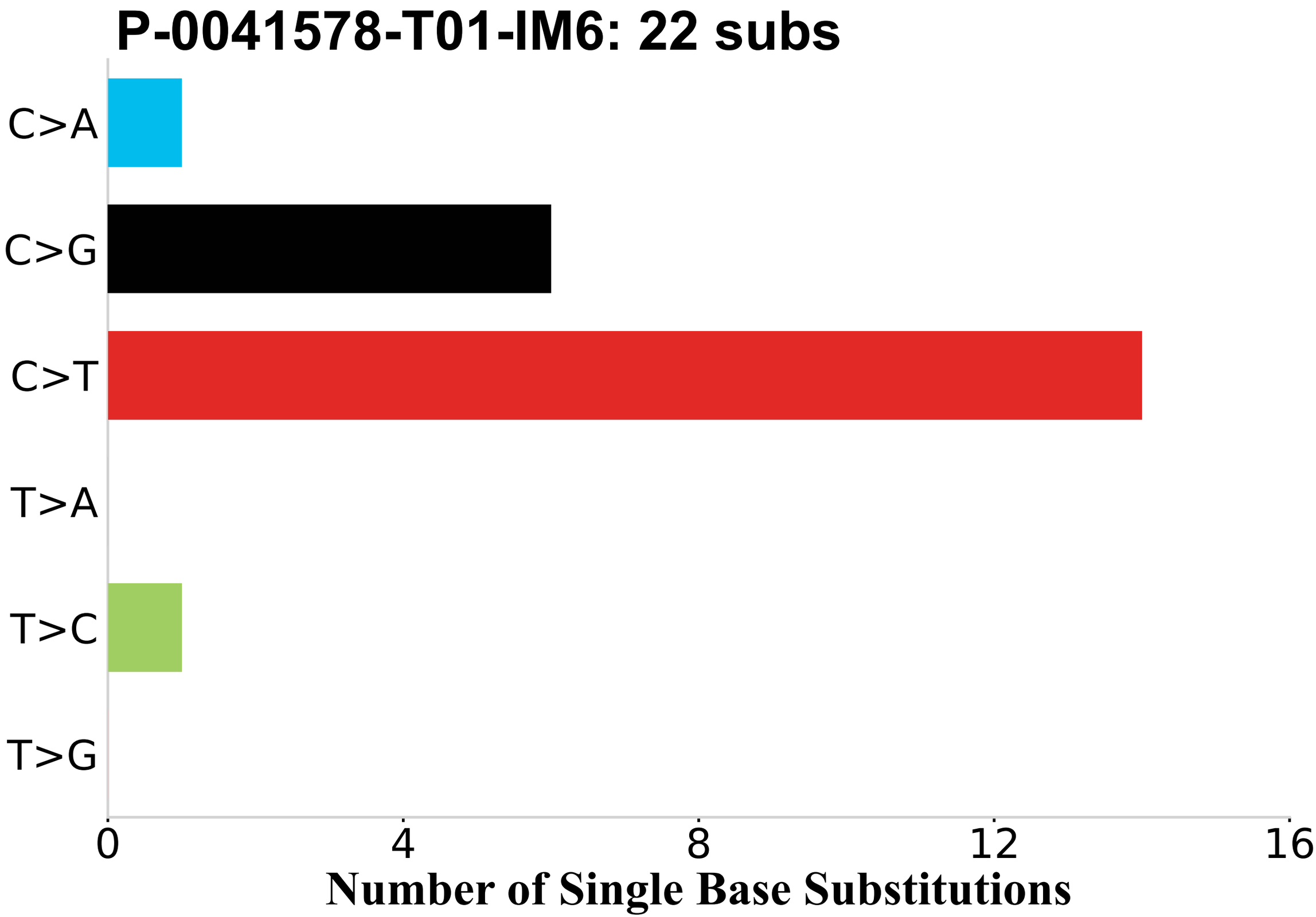

P-0041284-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

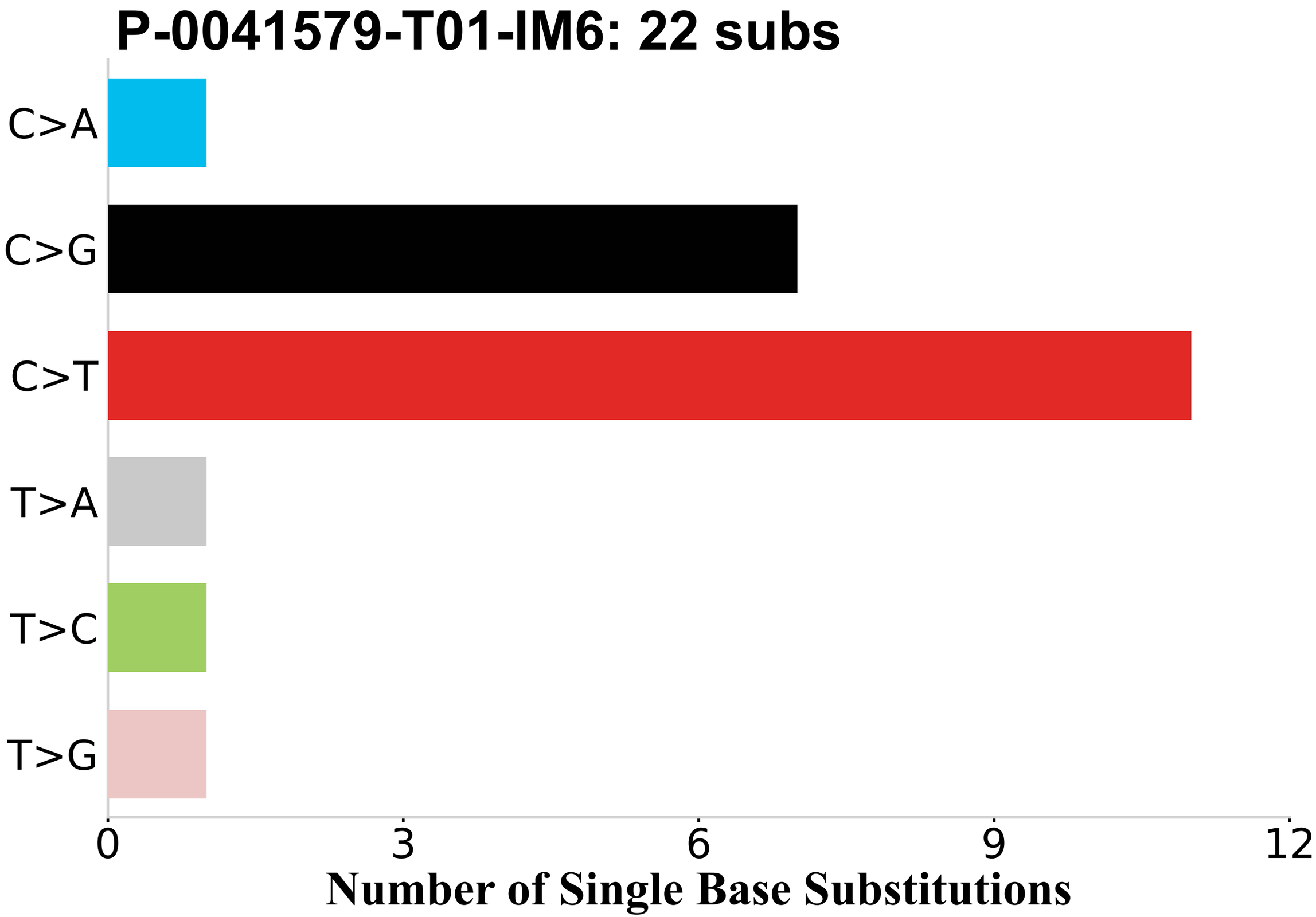

P-0041288-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

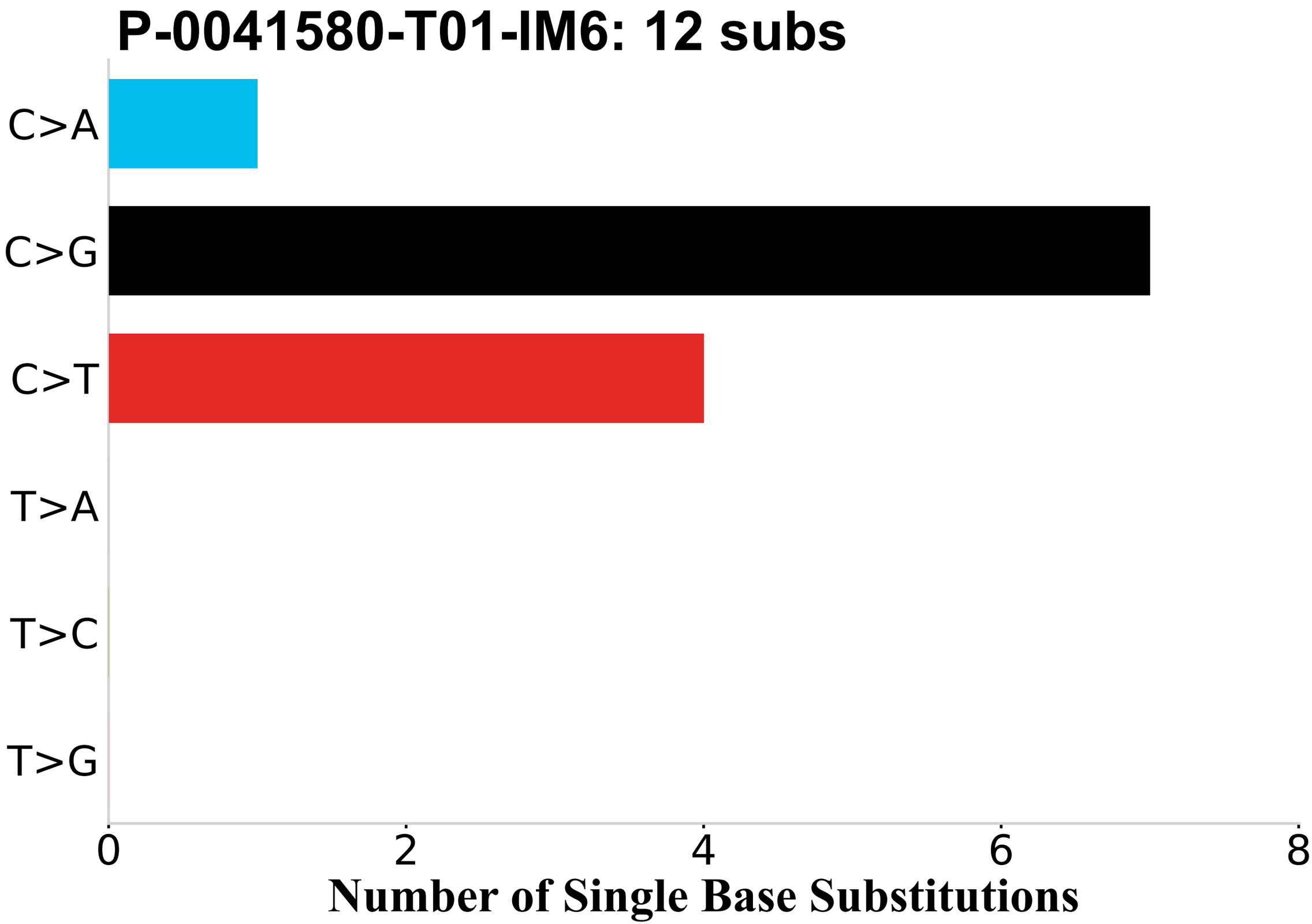

P-0041365-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

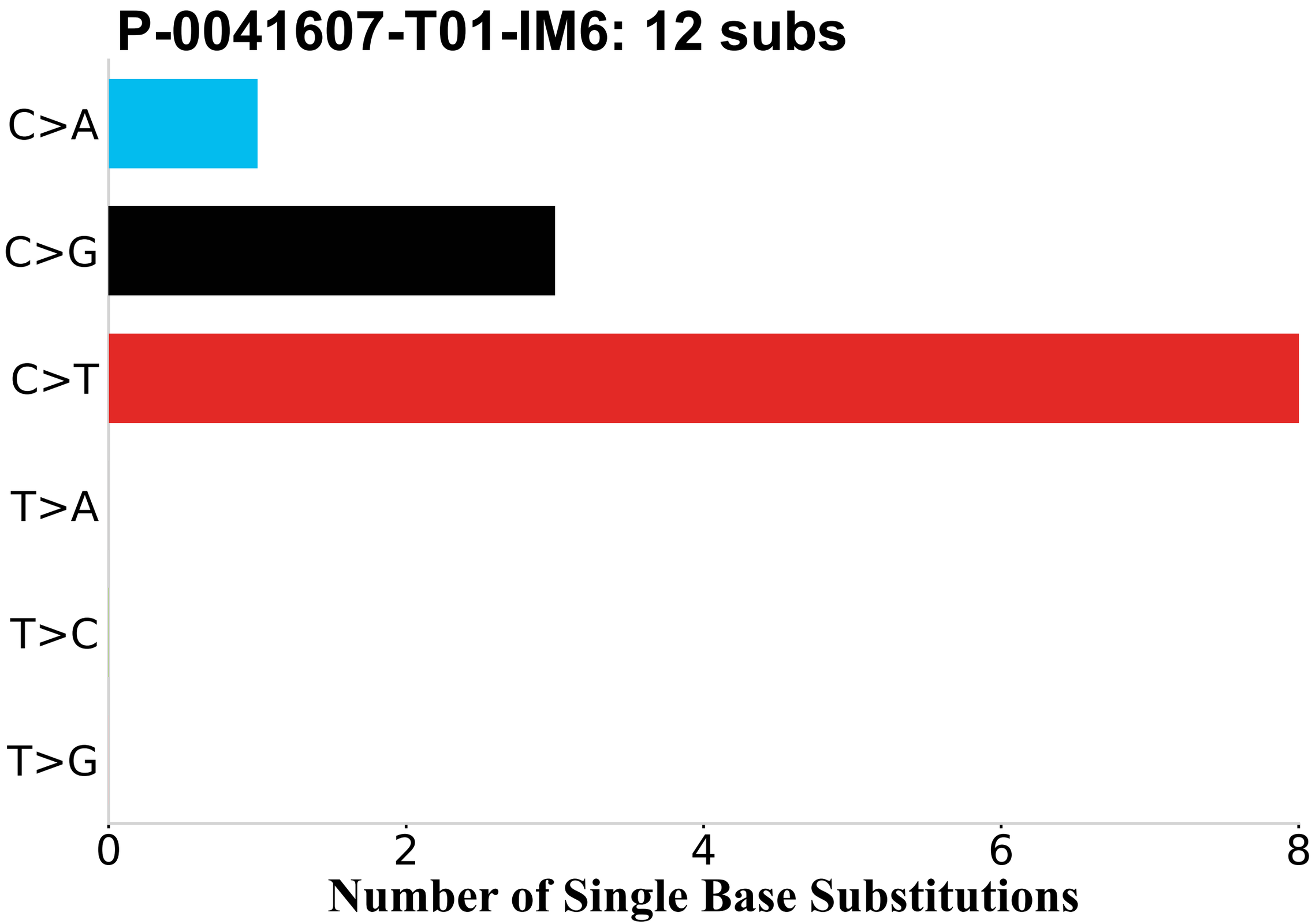

P-0041372-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

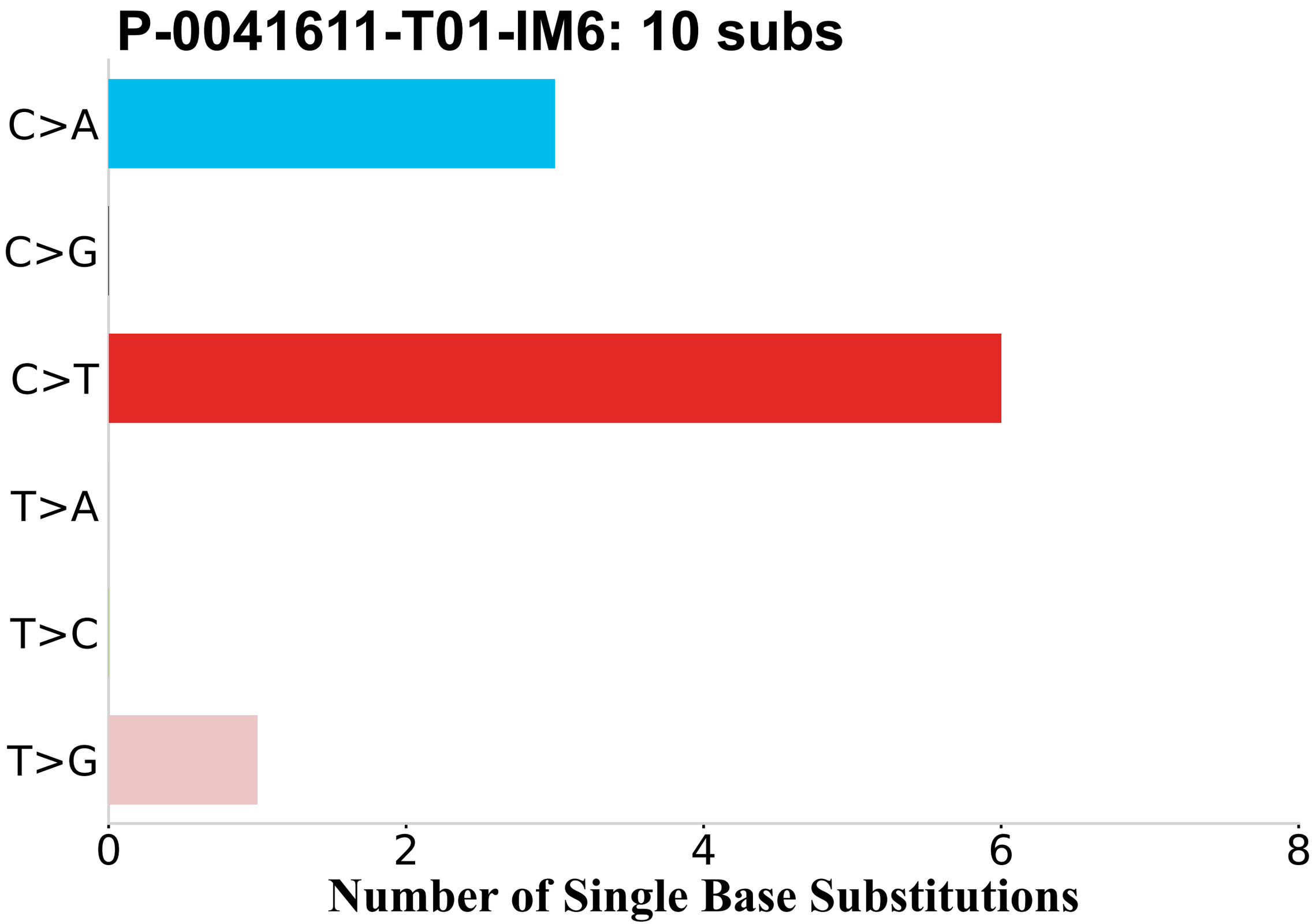

P-0041531-T01-IM6: 21 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

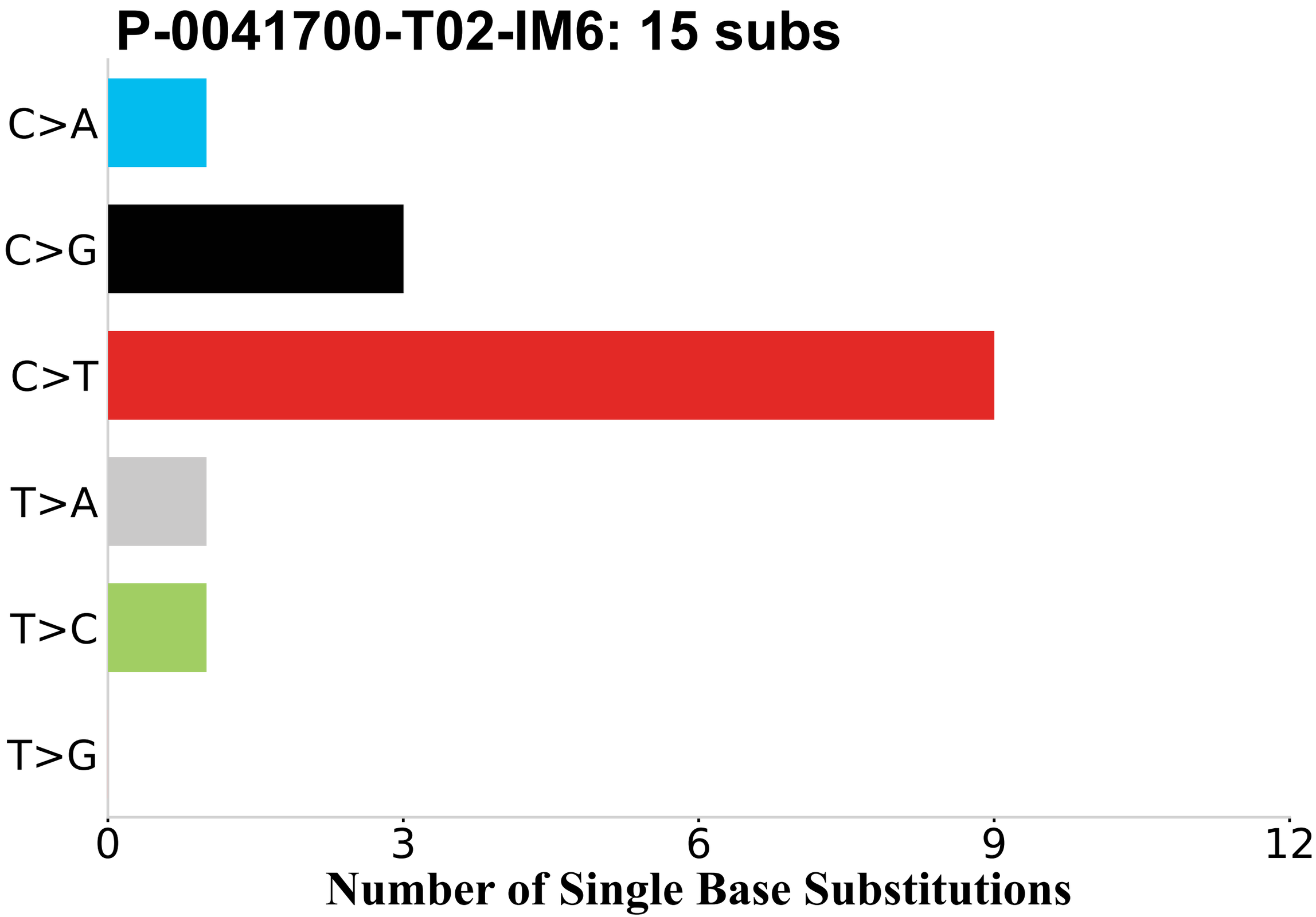

P-0041578-T01-IM6: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

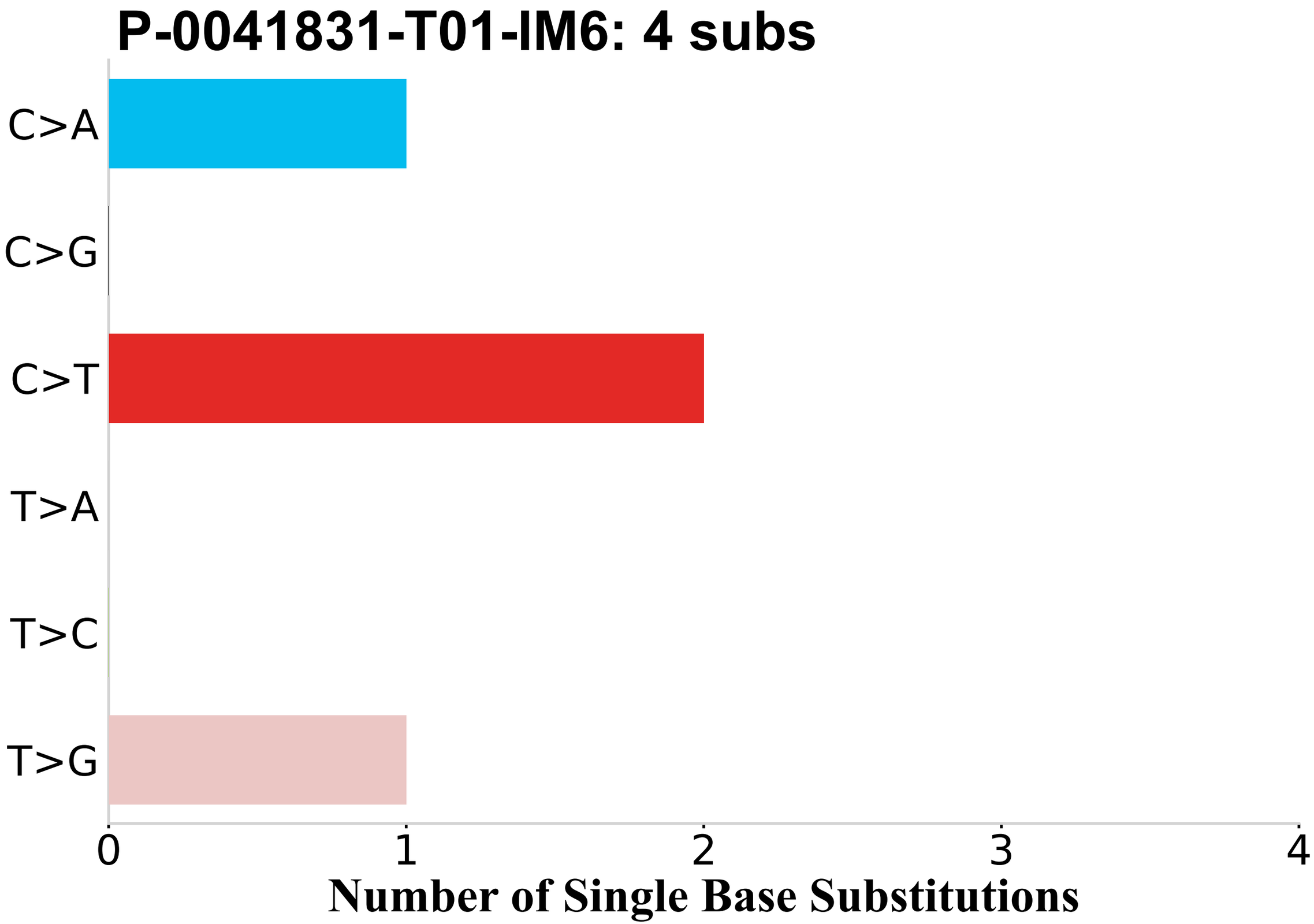

P-0041579-T01-IM6: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0041580-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

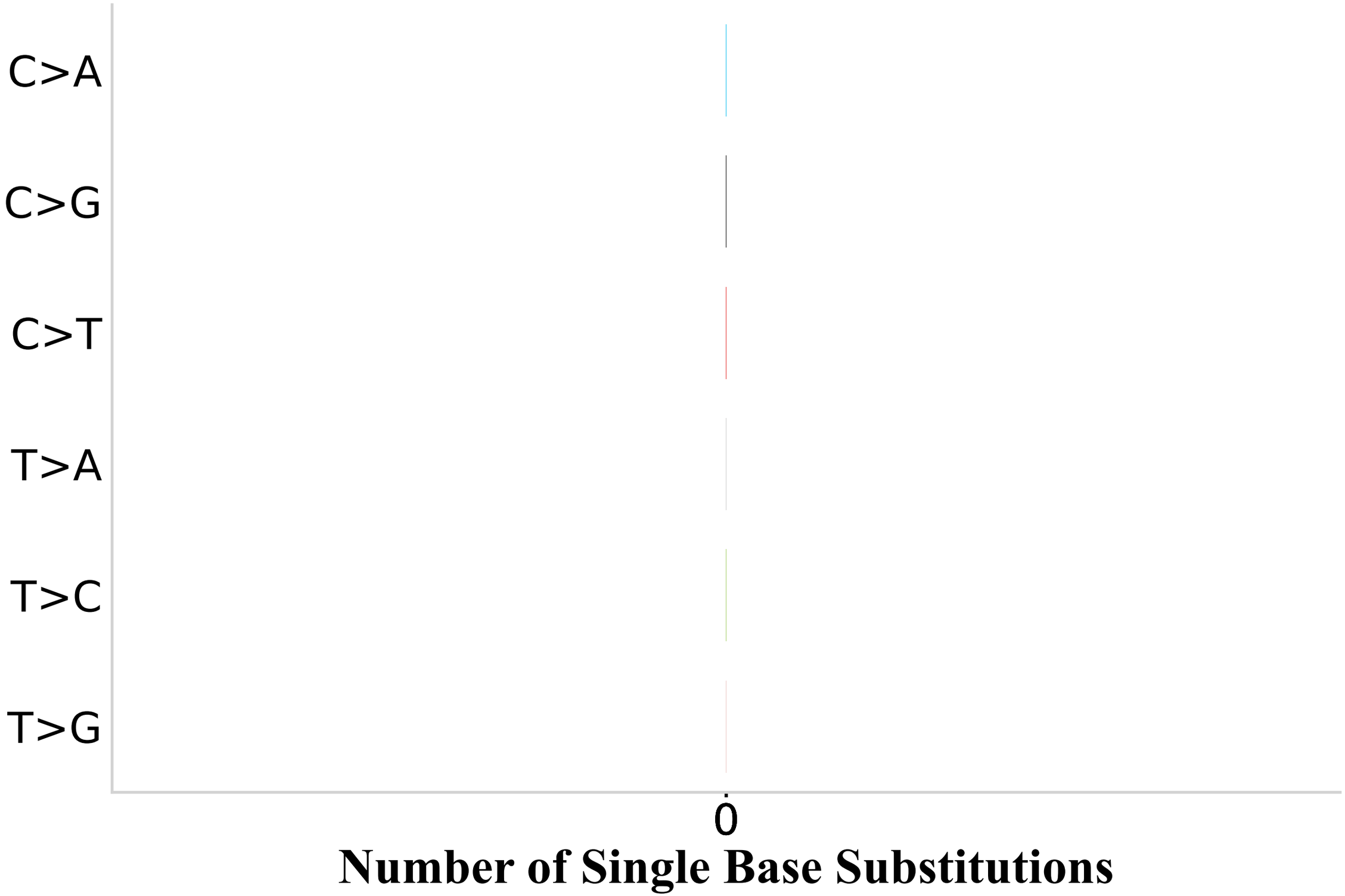

P-0041607-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

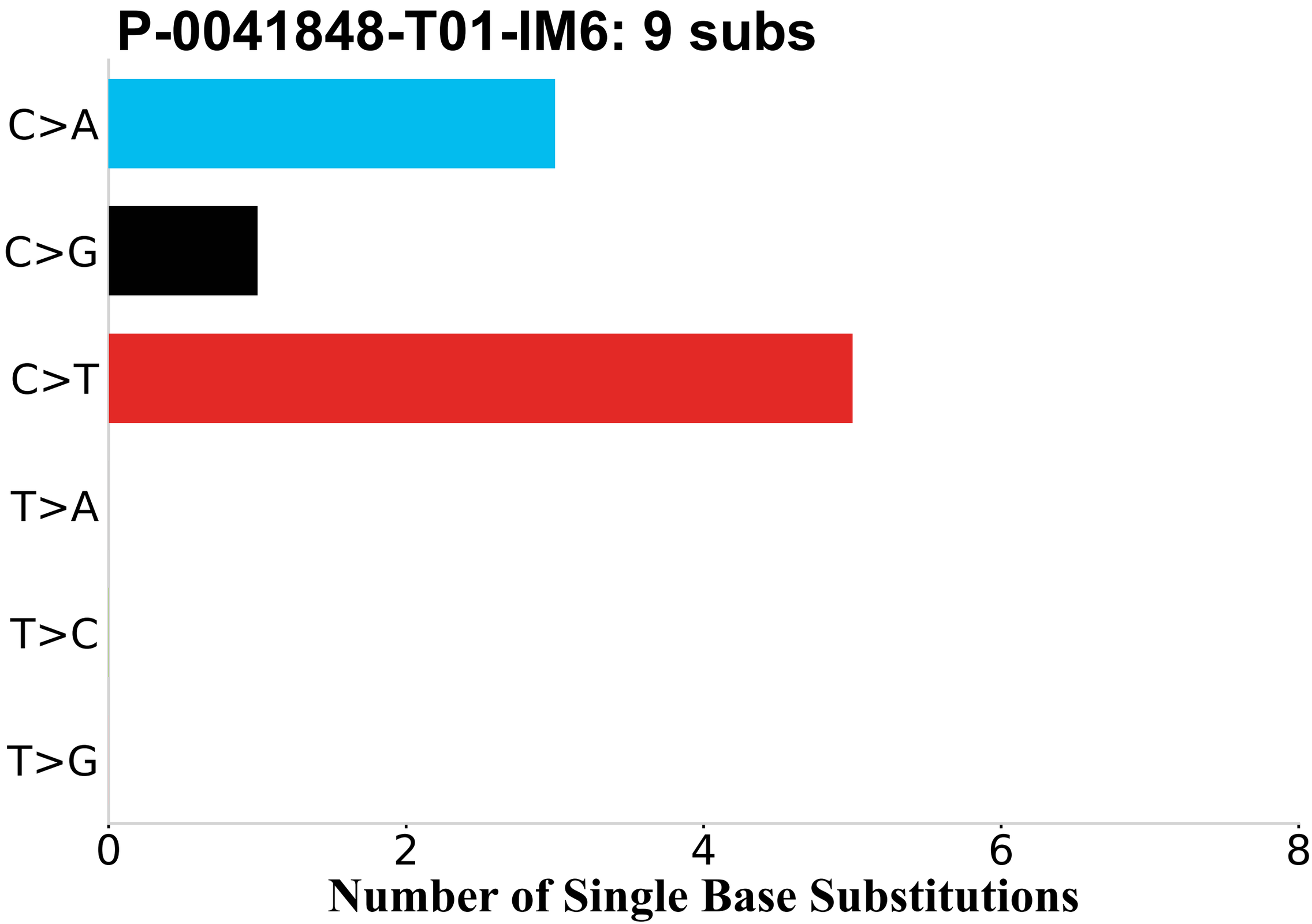

P-0041611-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

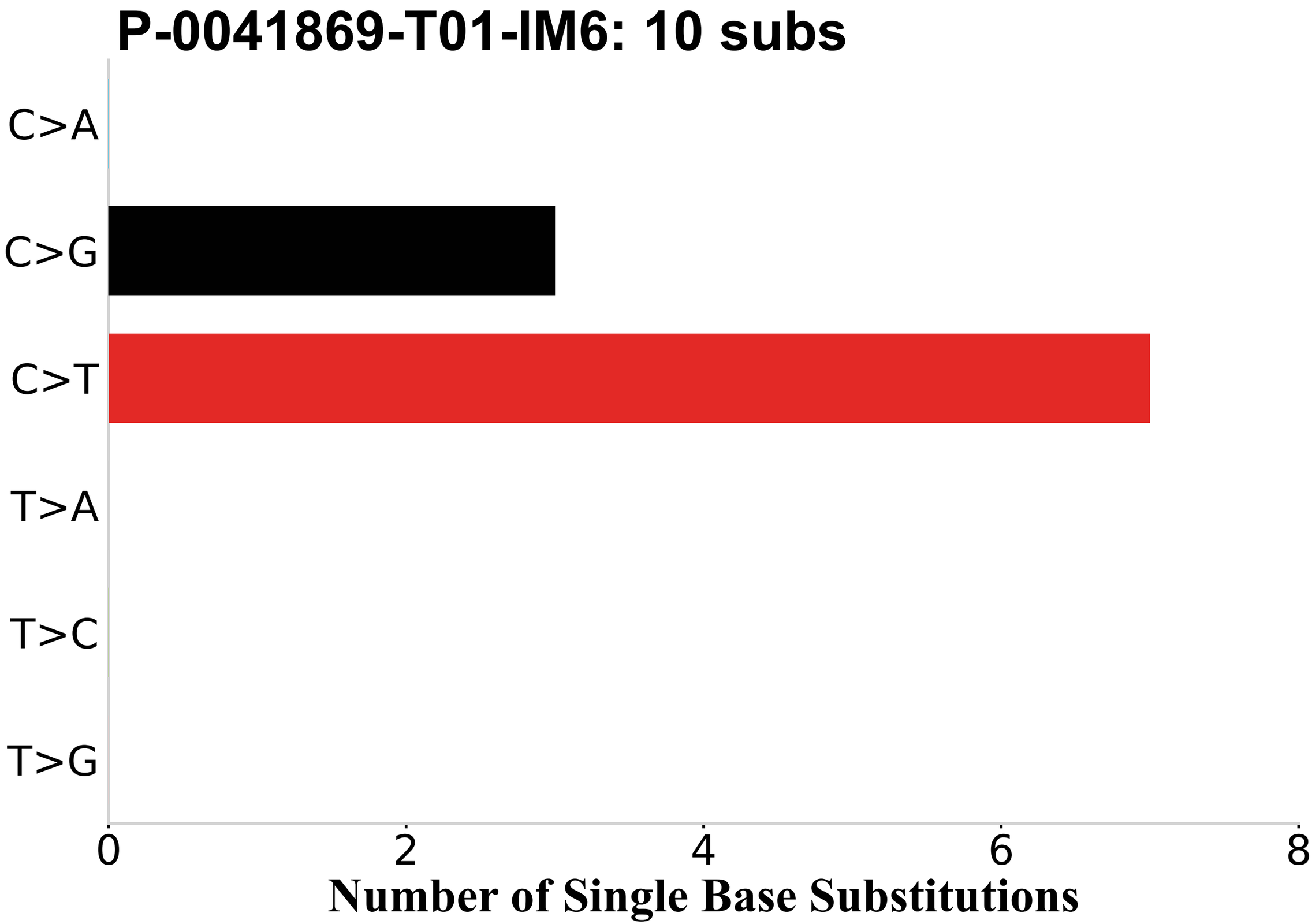

P-0041700-T02-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

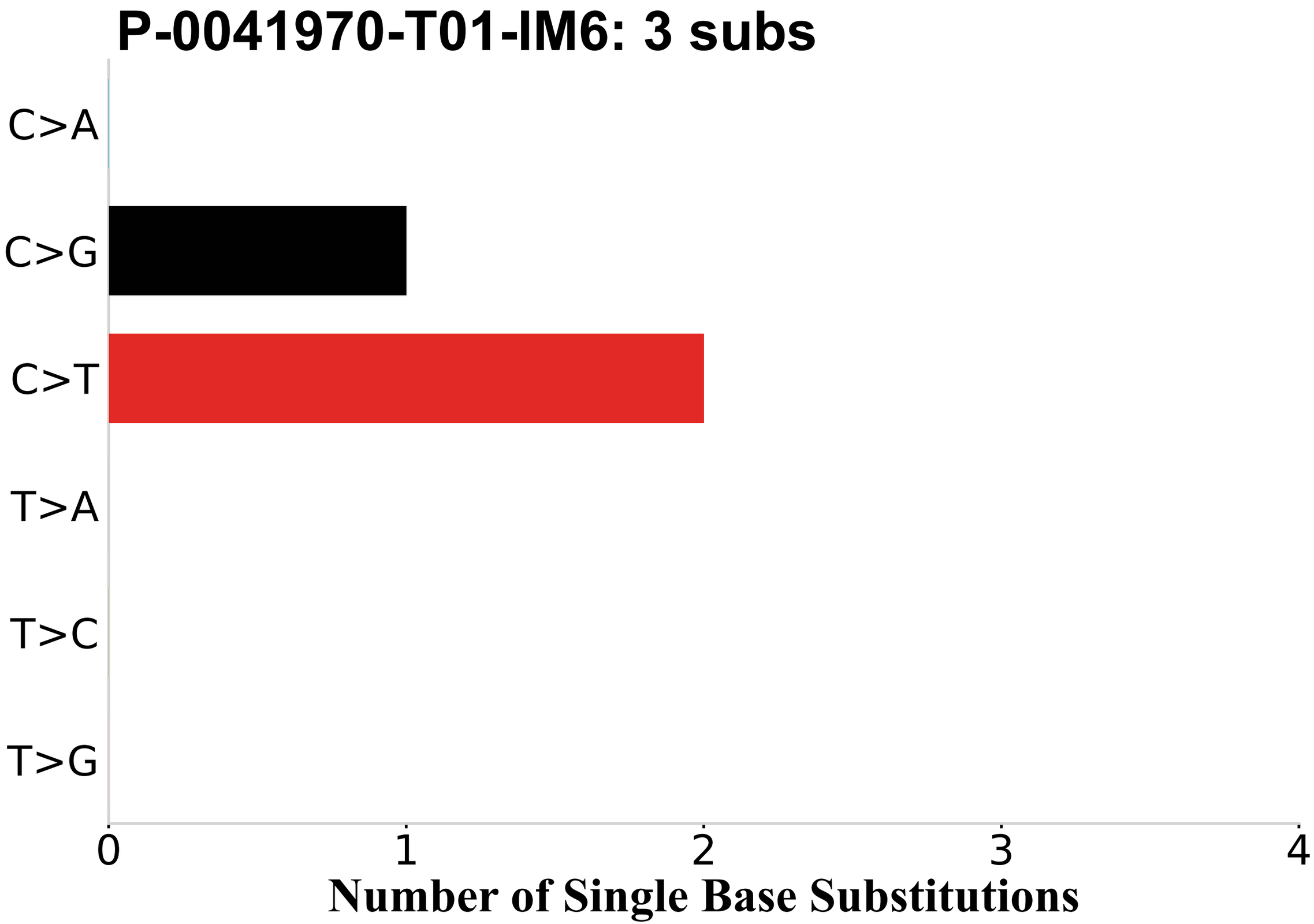

P-0041831-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

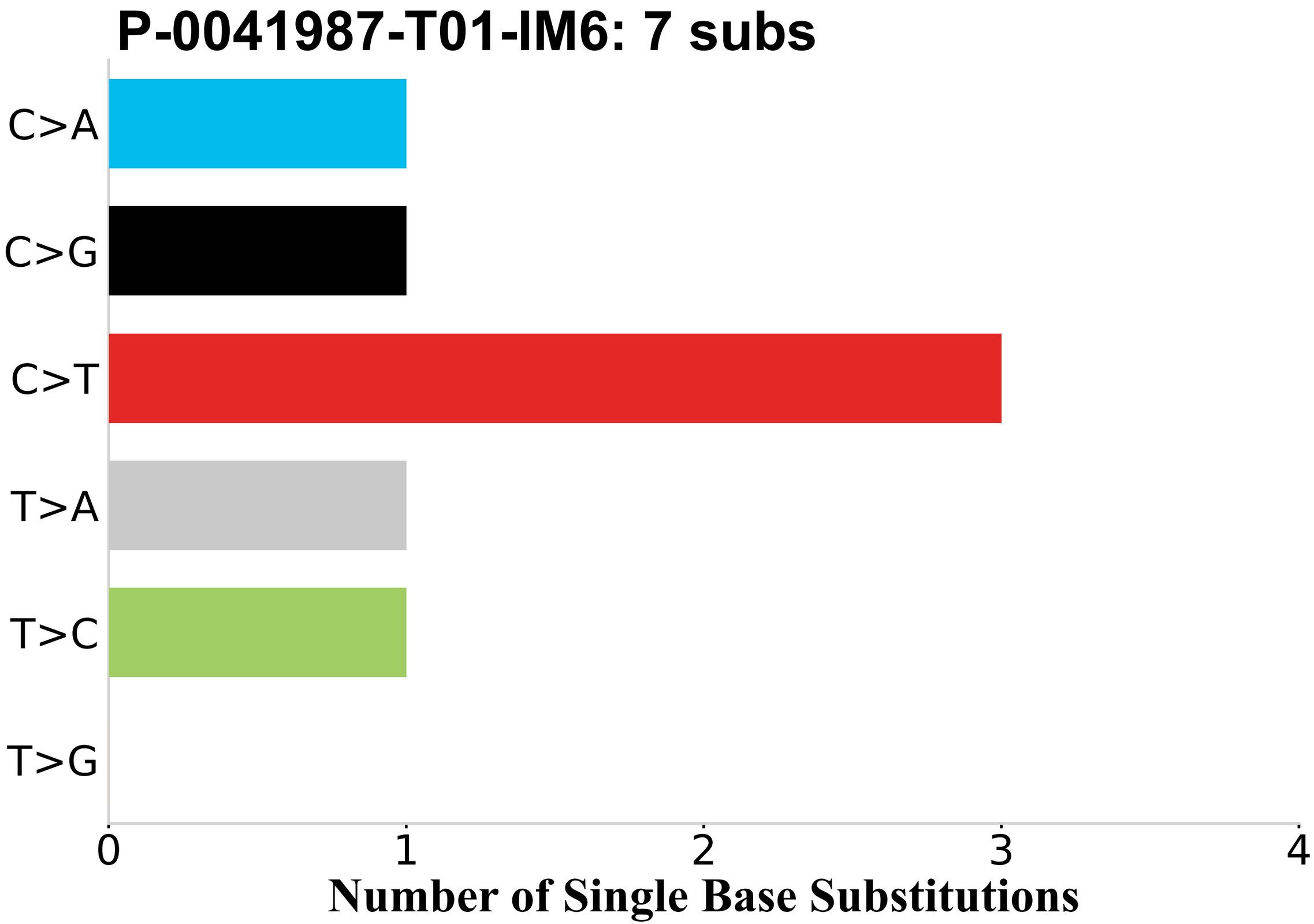
P-0041834-T02-IM6: 0 subs

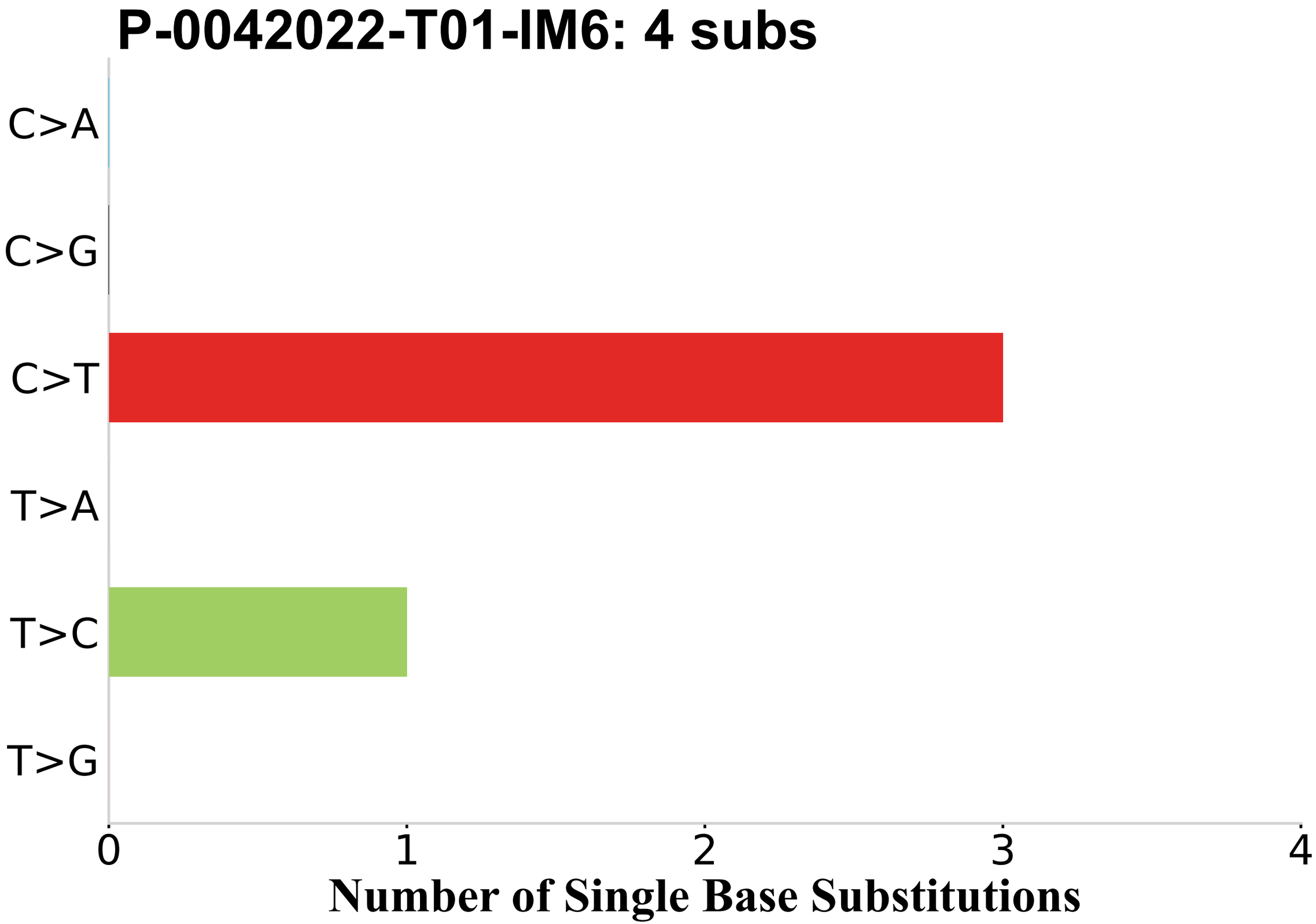


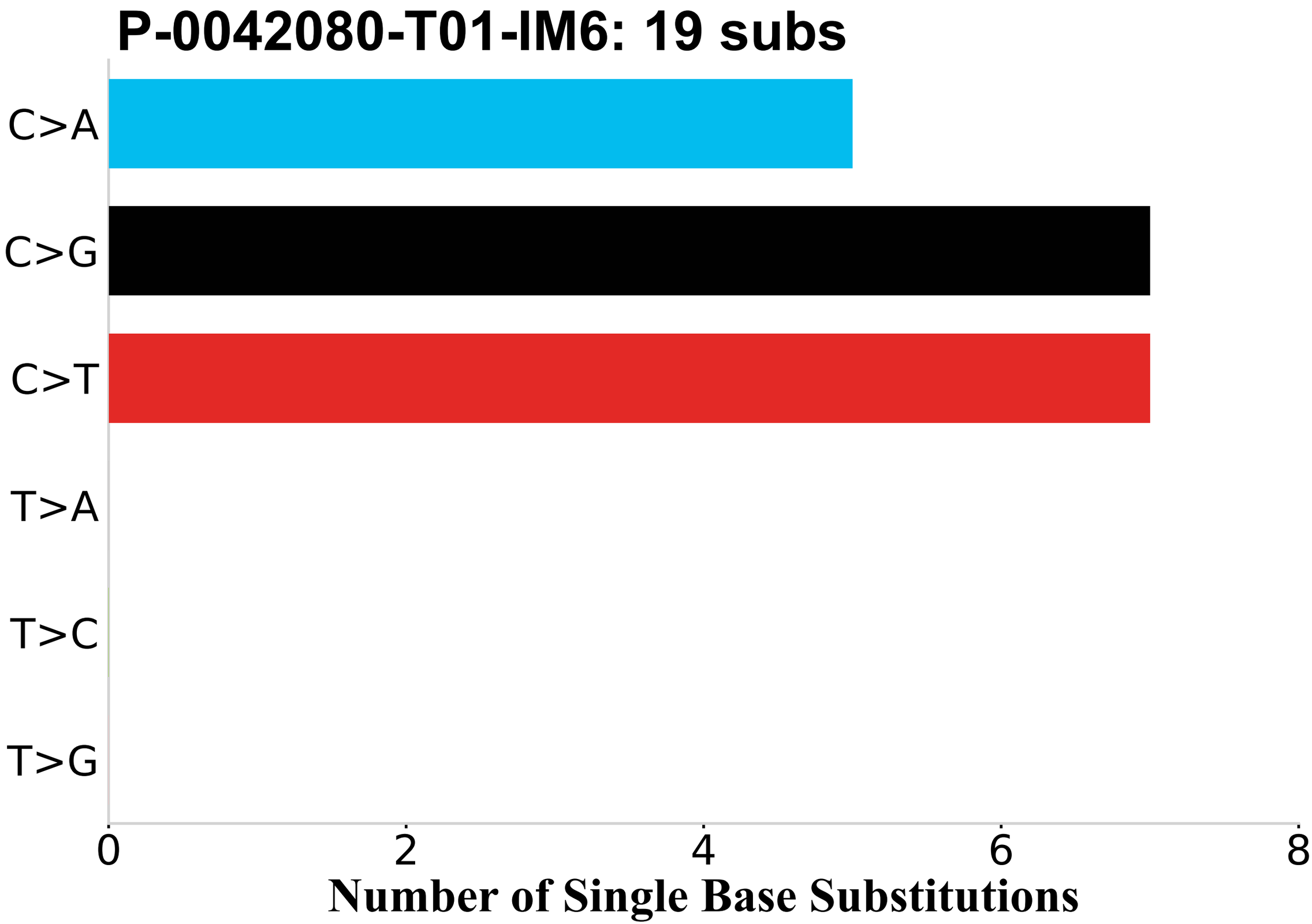

P-0041848-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

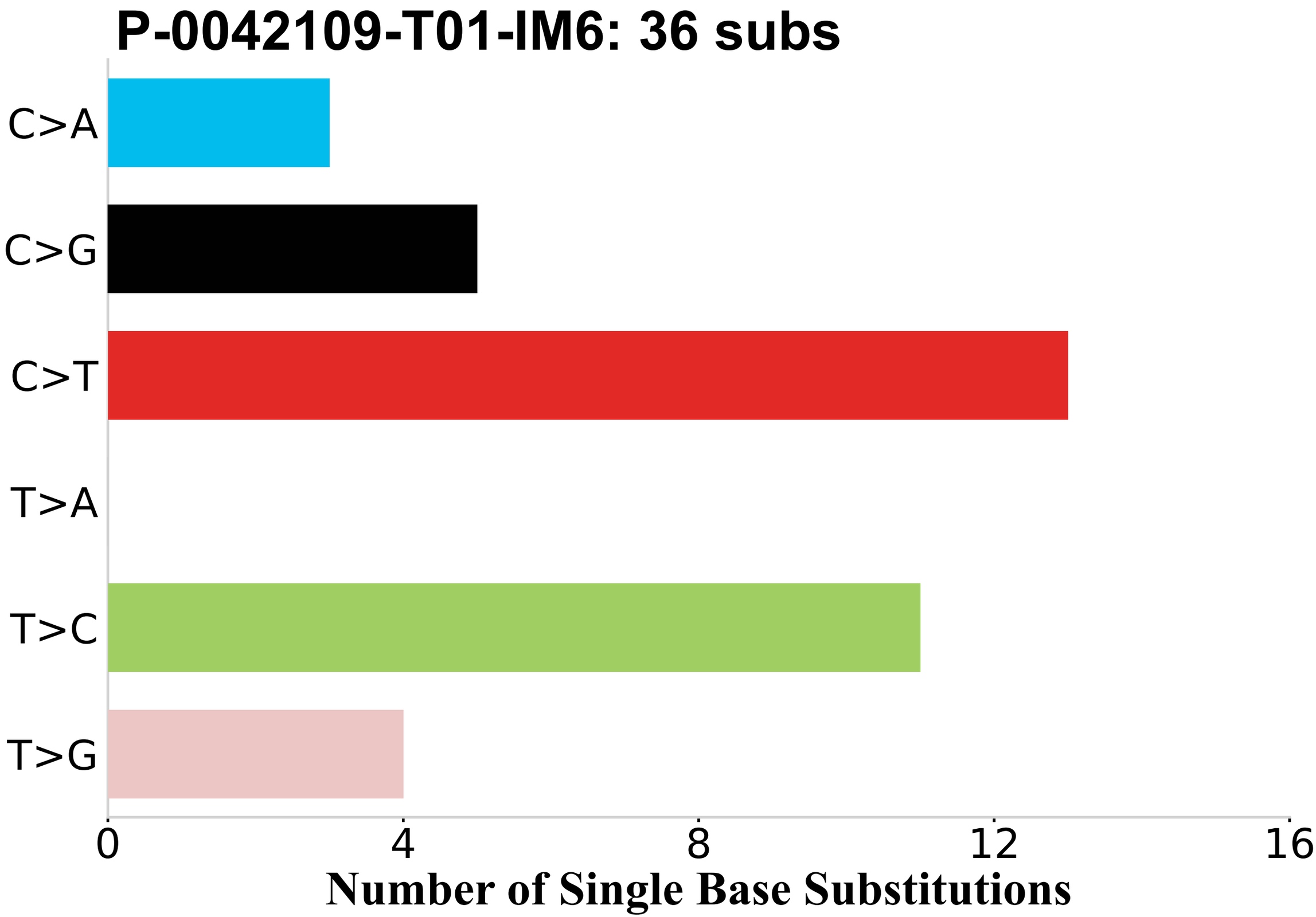

P-0041869-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

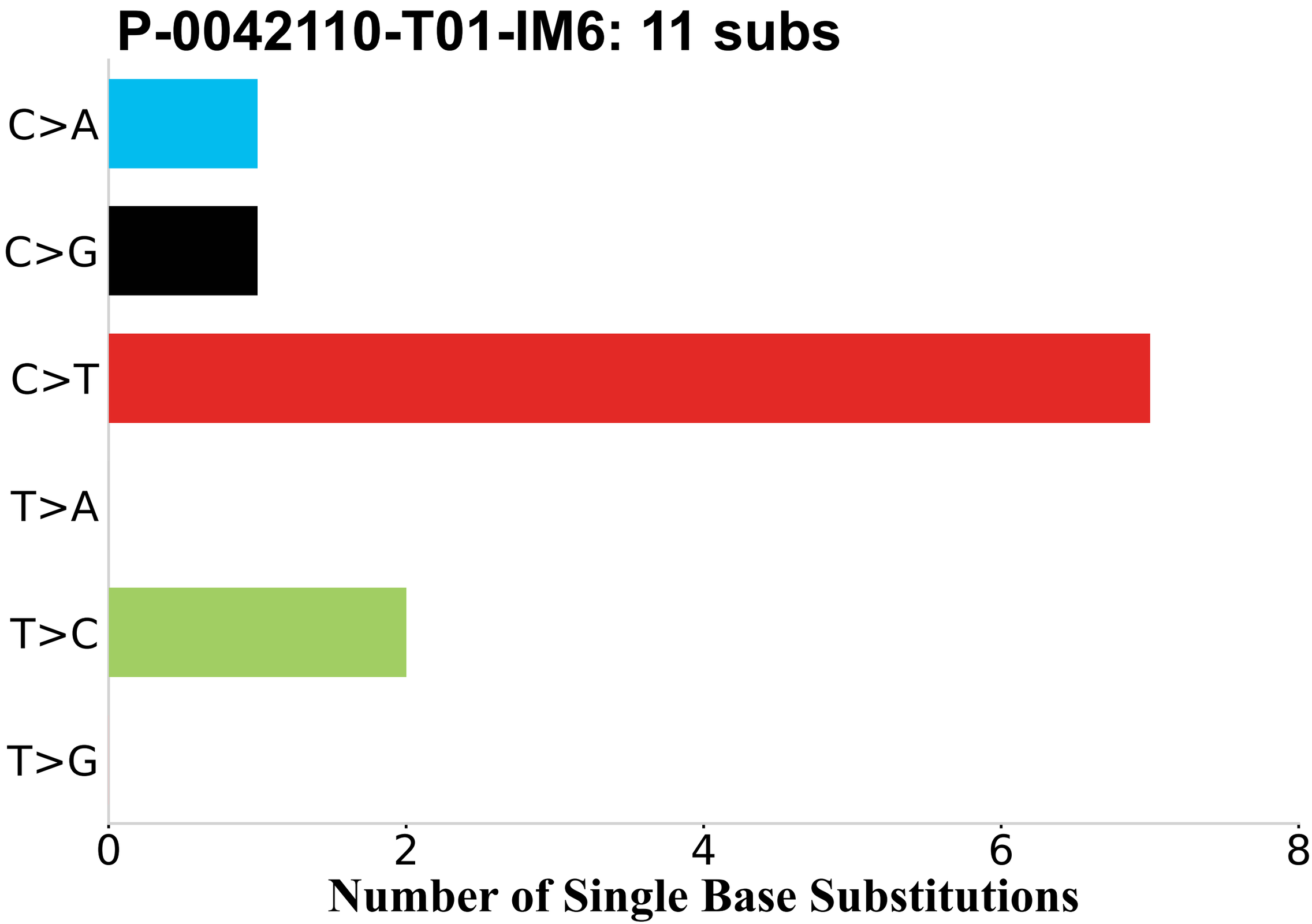

P-0041970-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

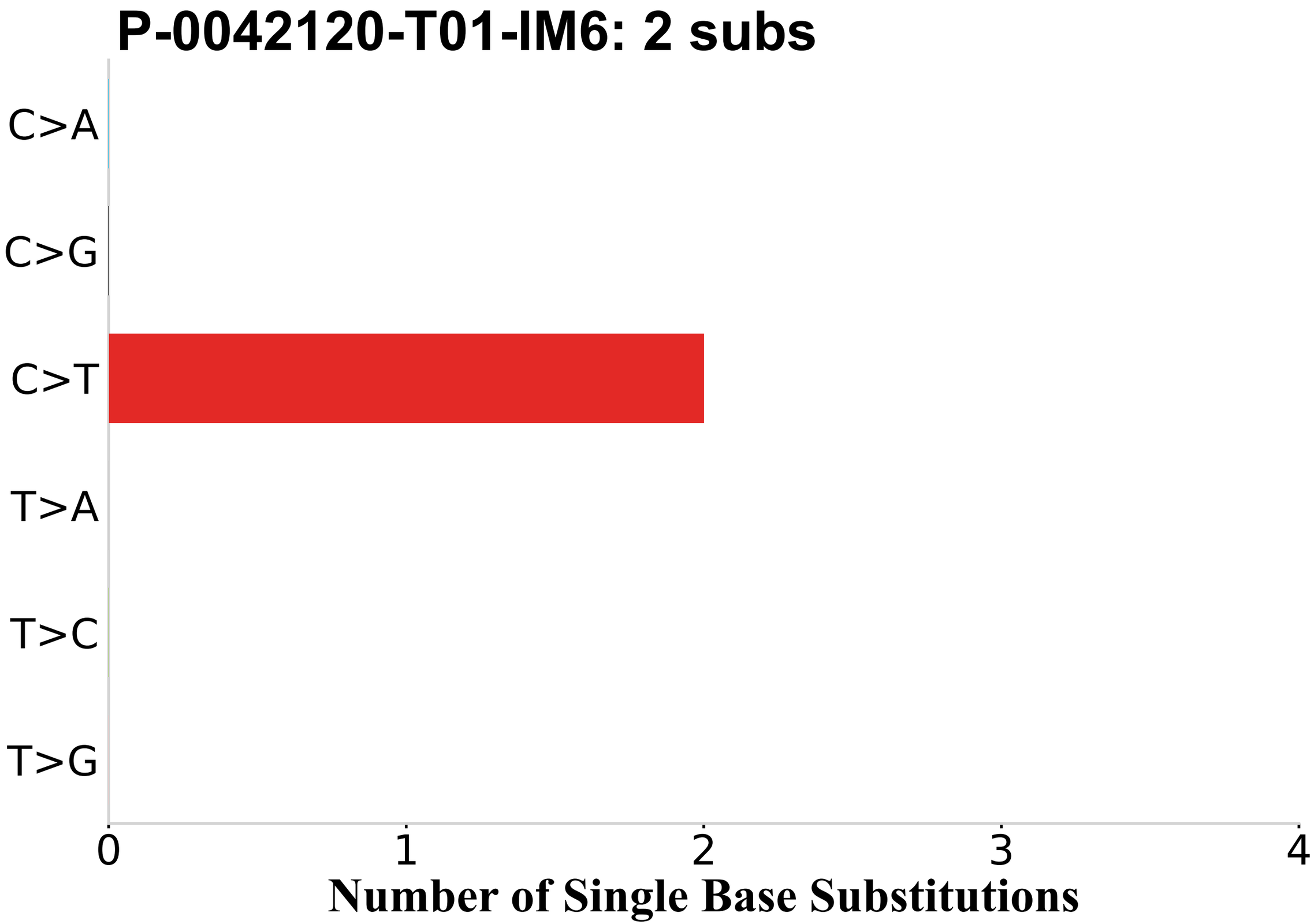

P-0041987-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

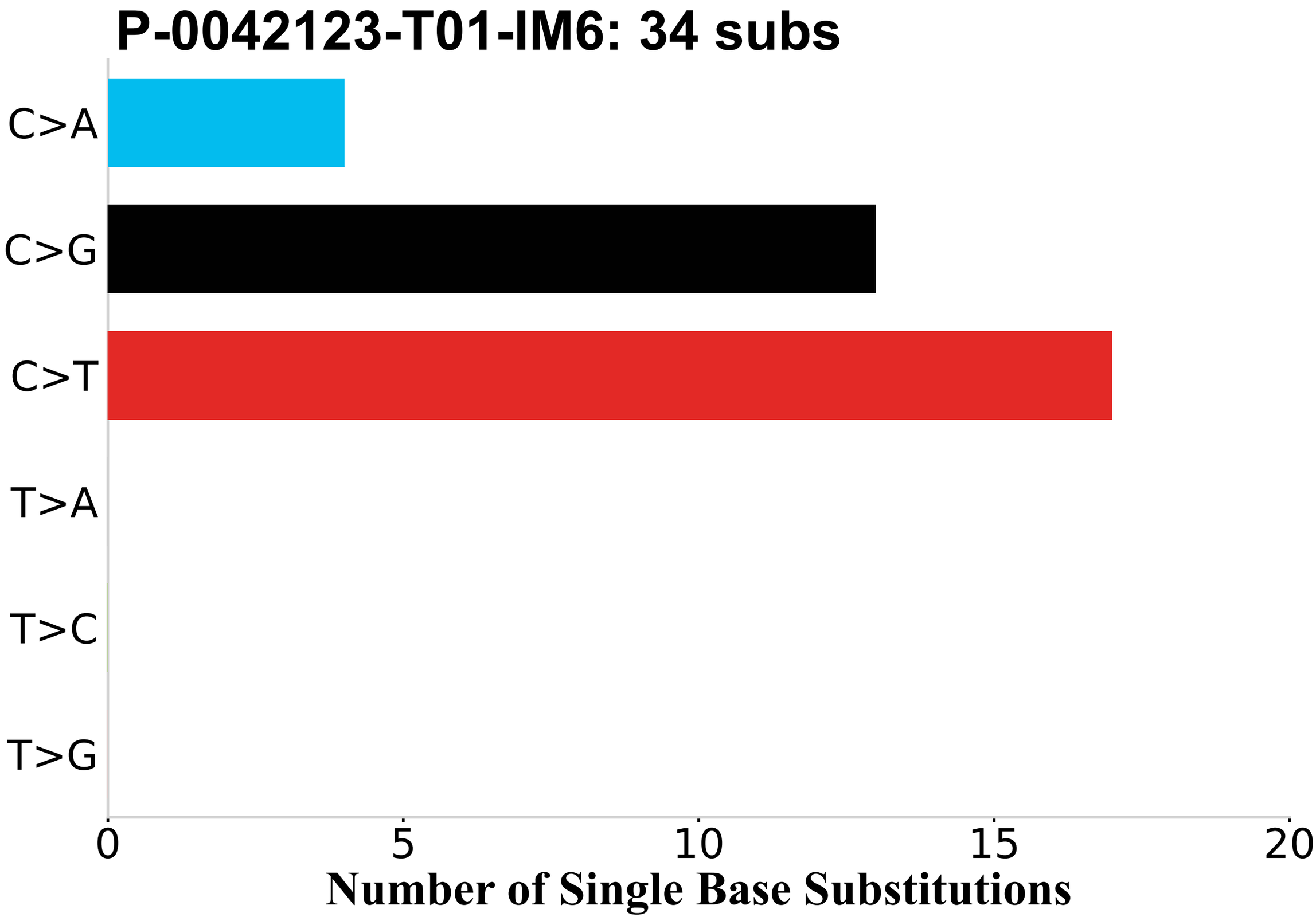

P-0042022-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

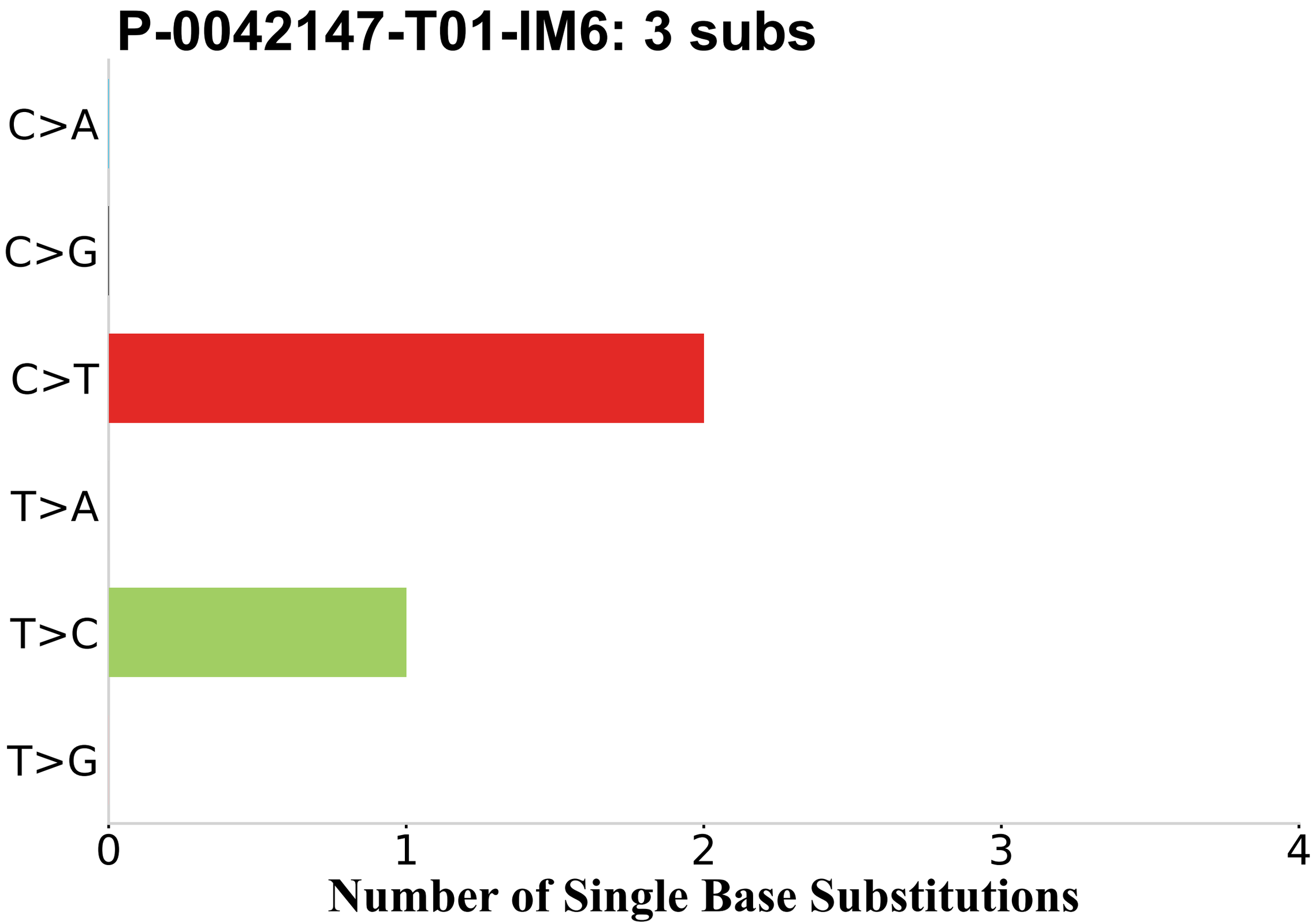

P-0042080-T01-IM6: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

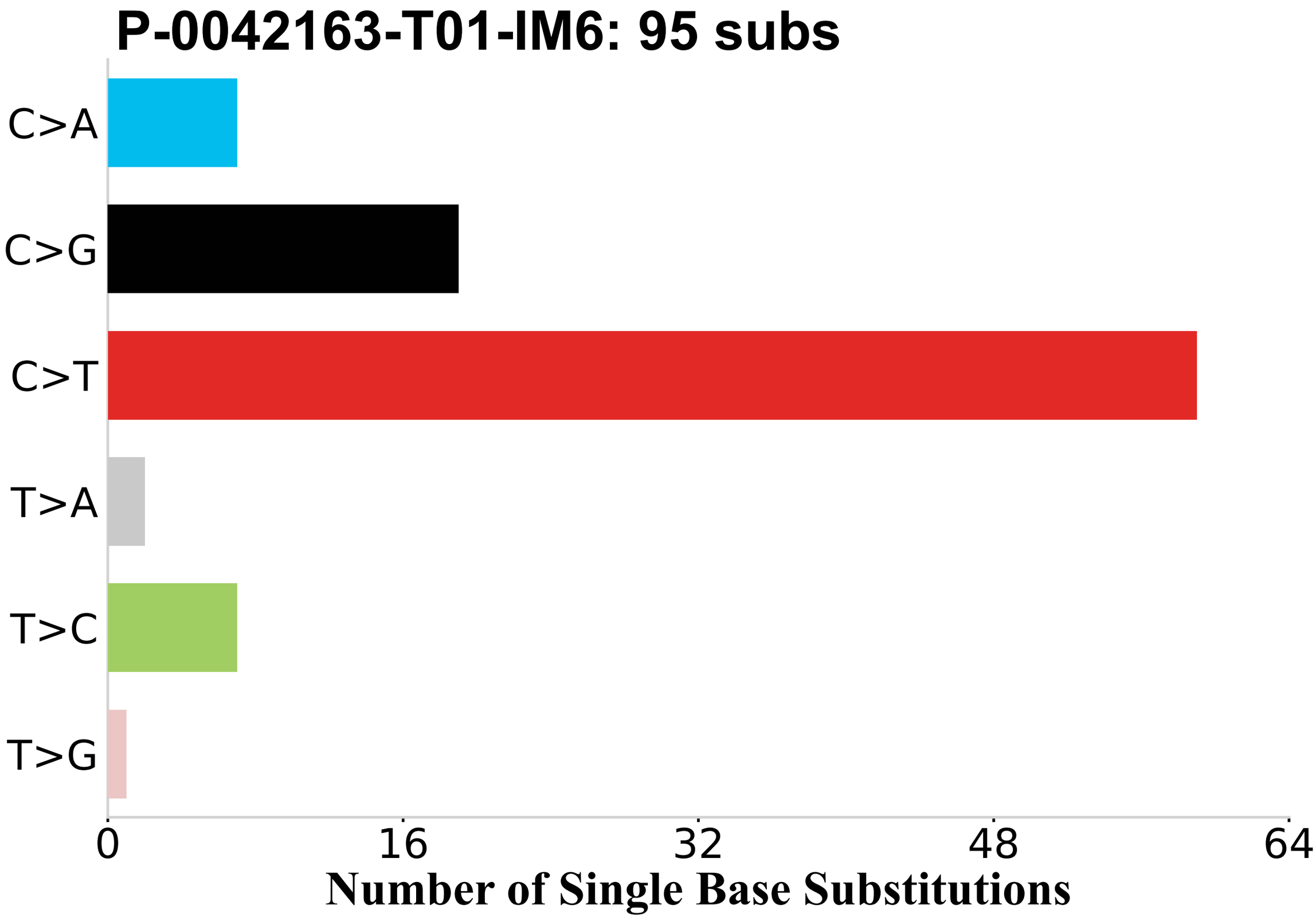

P-0042109-T01-IM6: 36 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

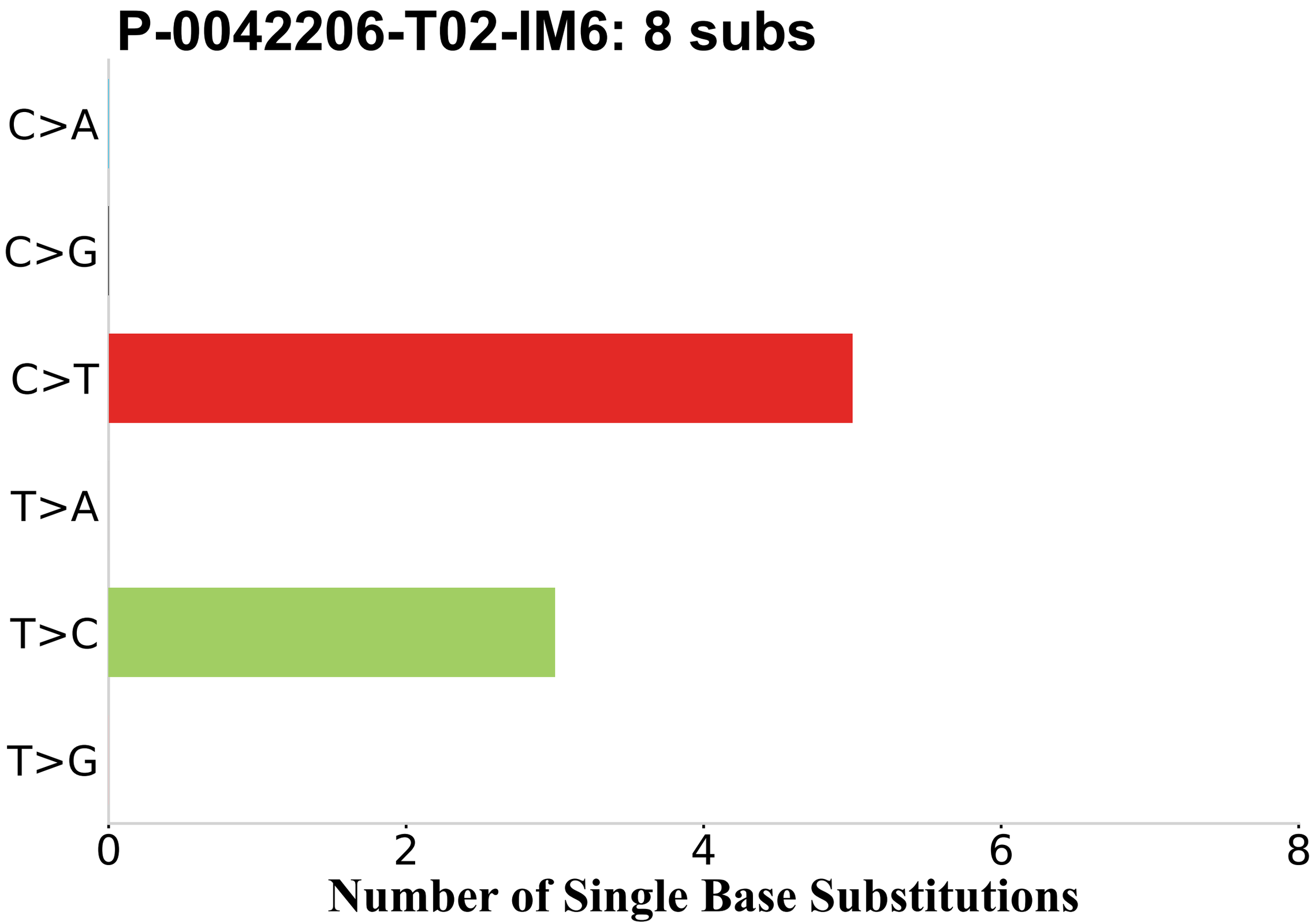

P-0042110-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

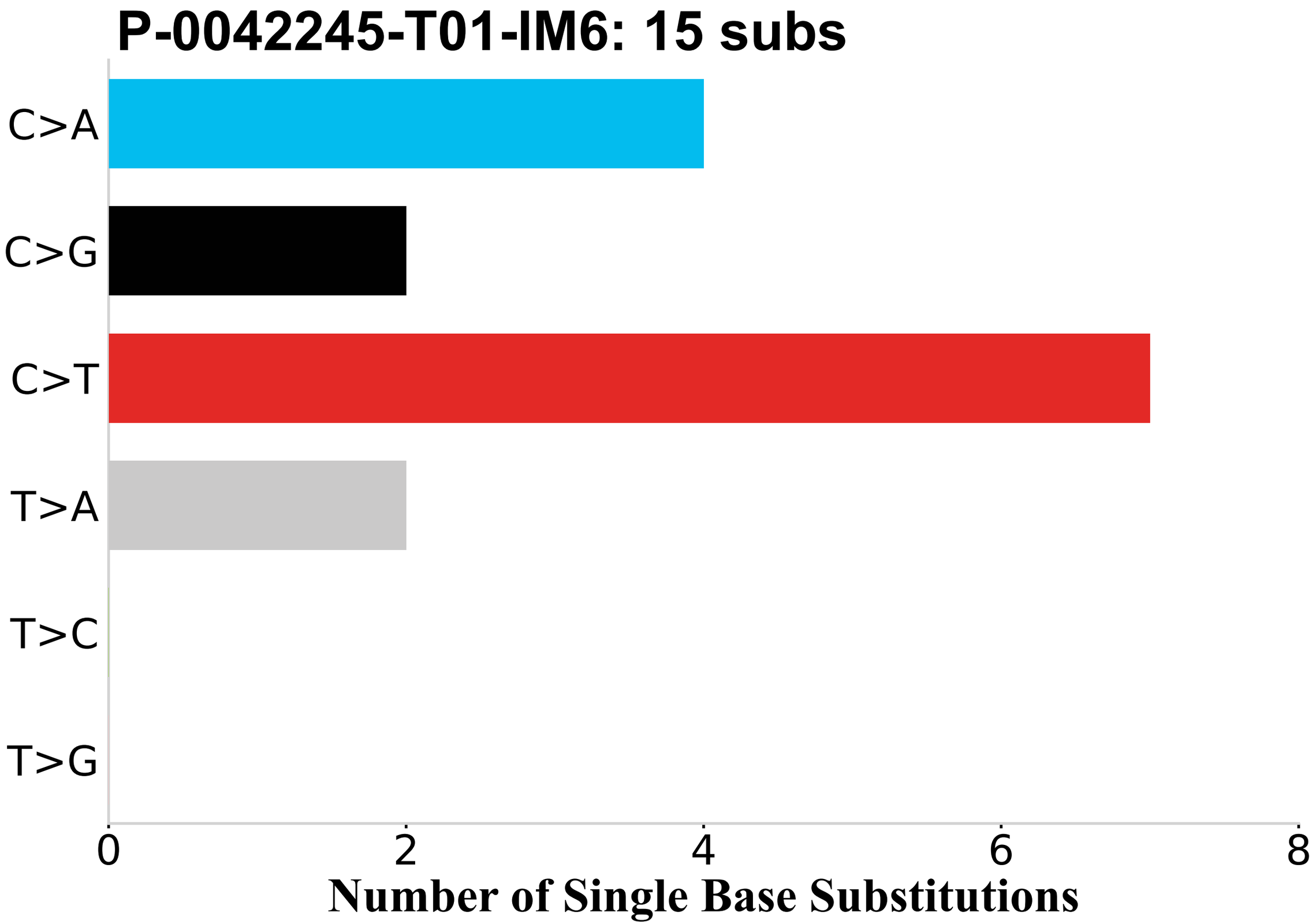

P-0042120-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0042123-T01-IM6: 34 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0042147-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0042163-T01-IM6: 95 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
16
32
48
64
Number of Single Base Substitutions


P-0042206-T02-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0042245-T01-IM6: 15 subs
C>A
C>G
C>T
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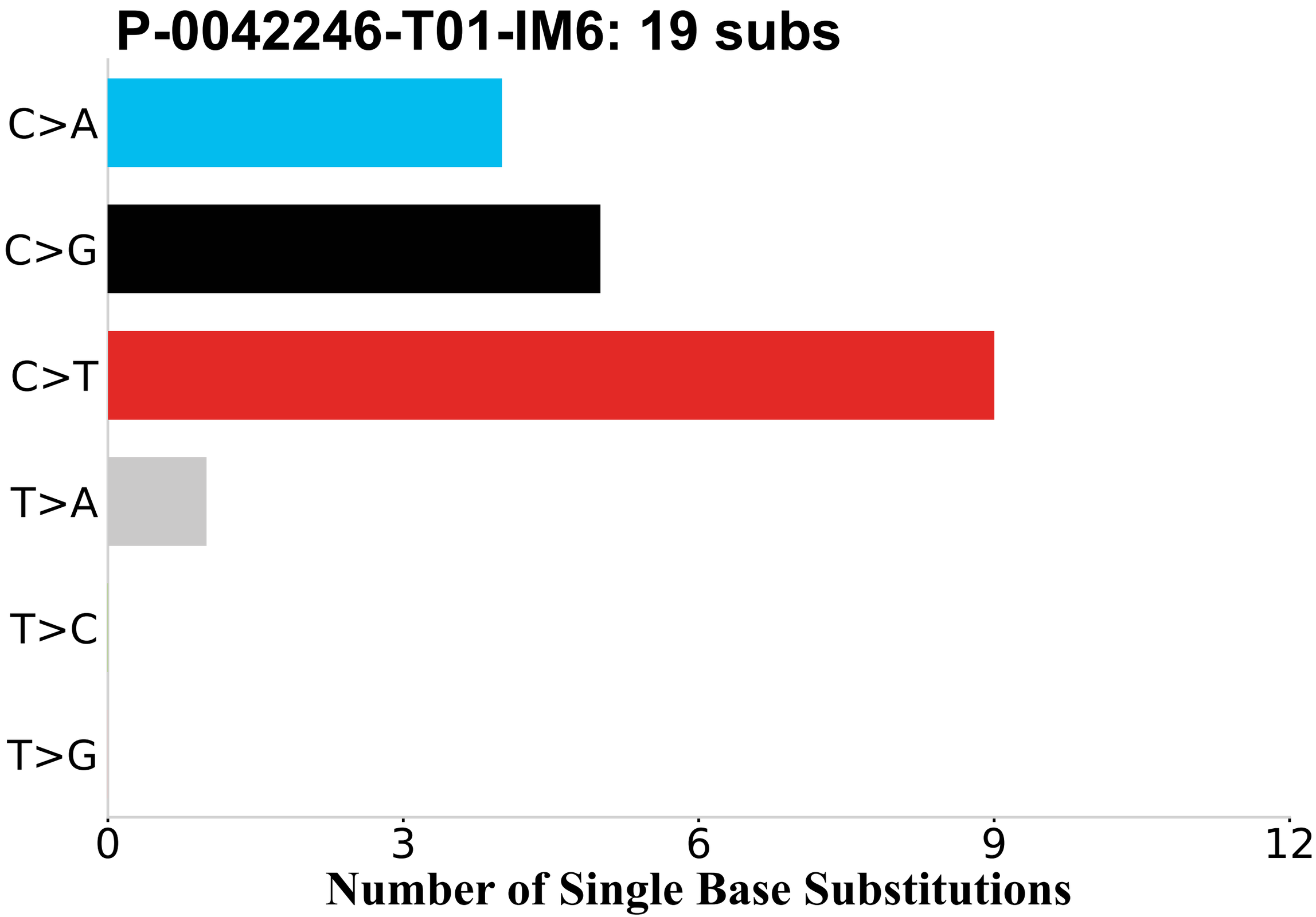
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0042246-T01-IM6: 19 subs
C>A
C>G
C>T
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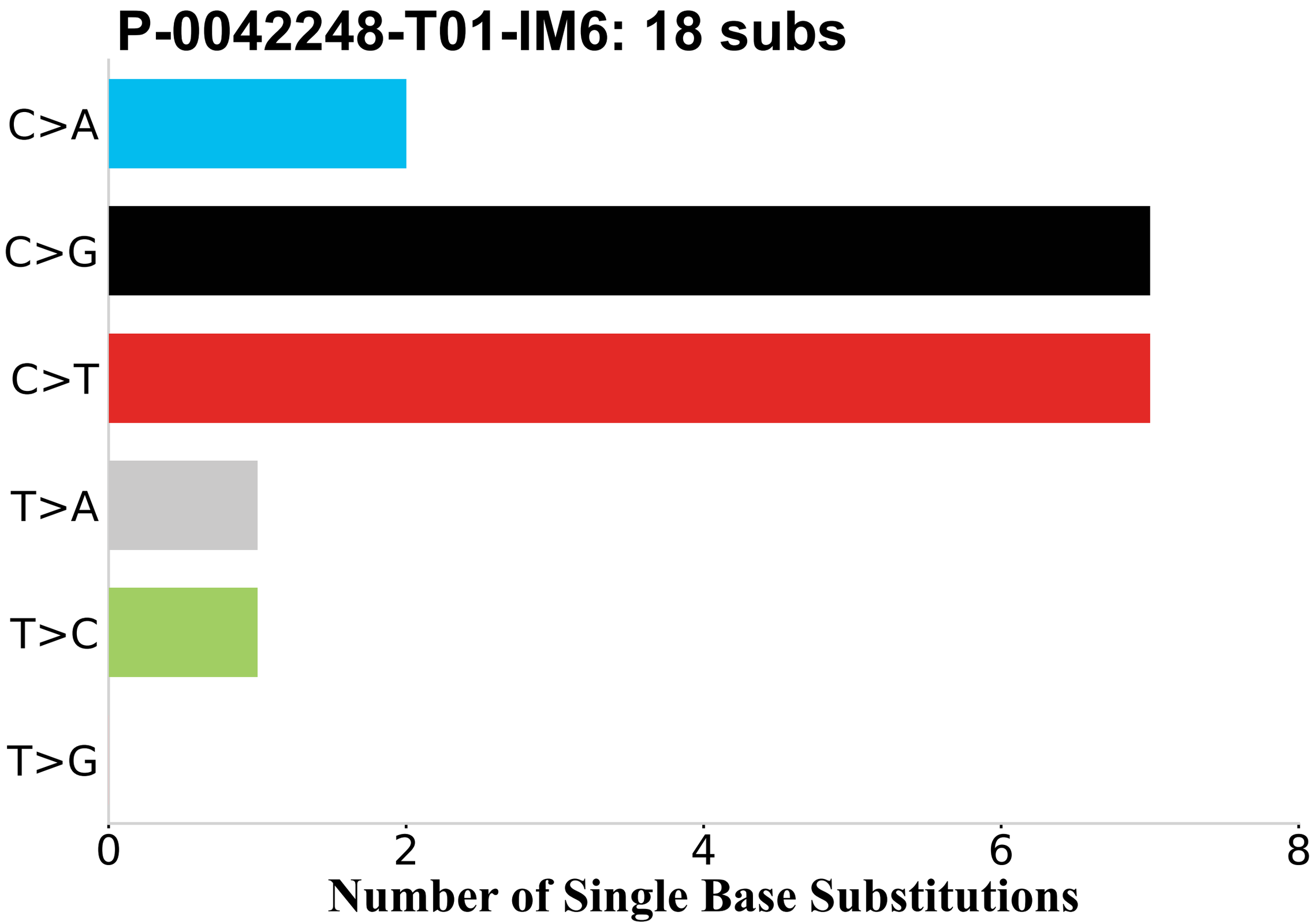
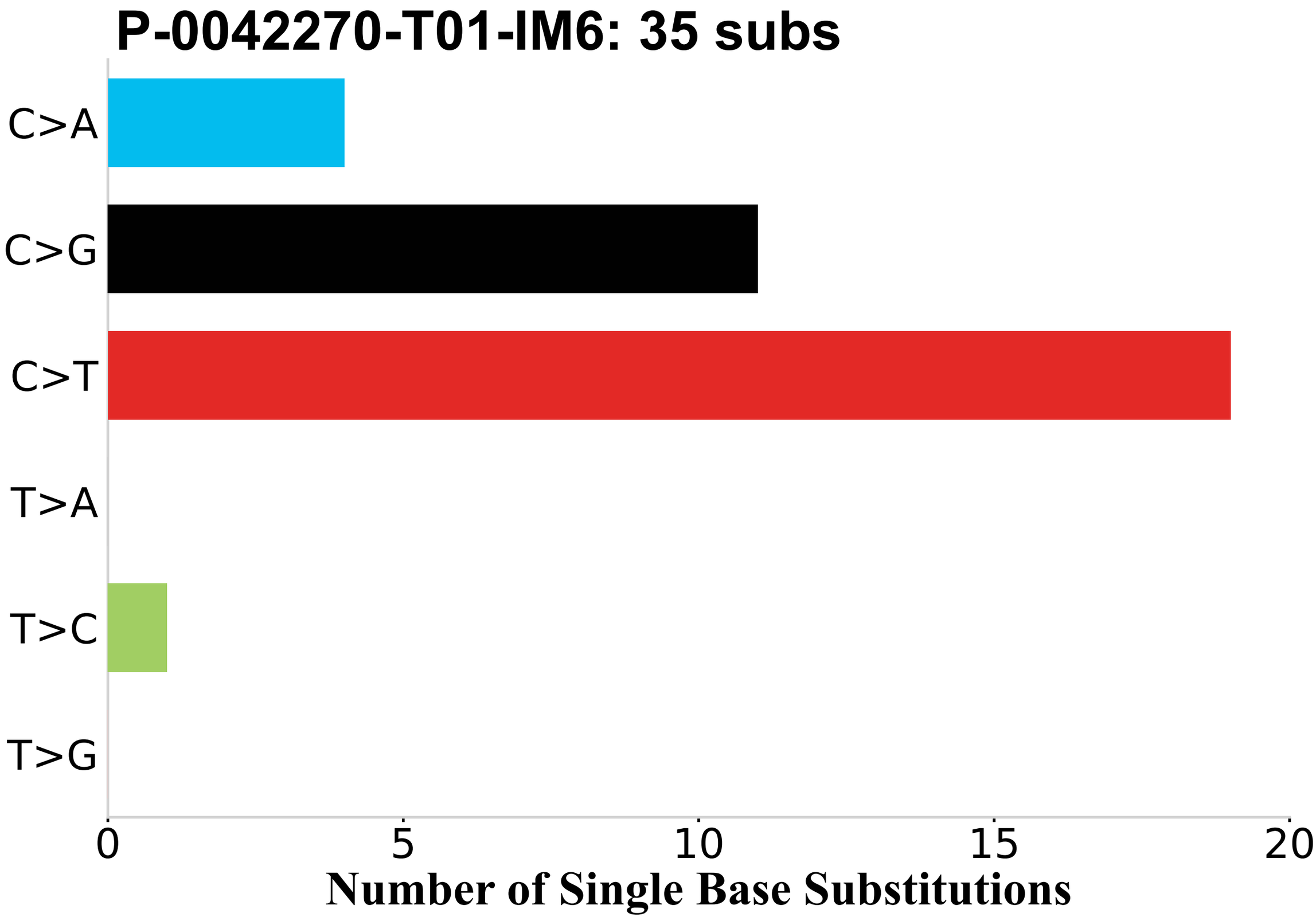
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0042248-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0042270-T01-IM6: 35 subs
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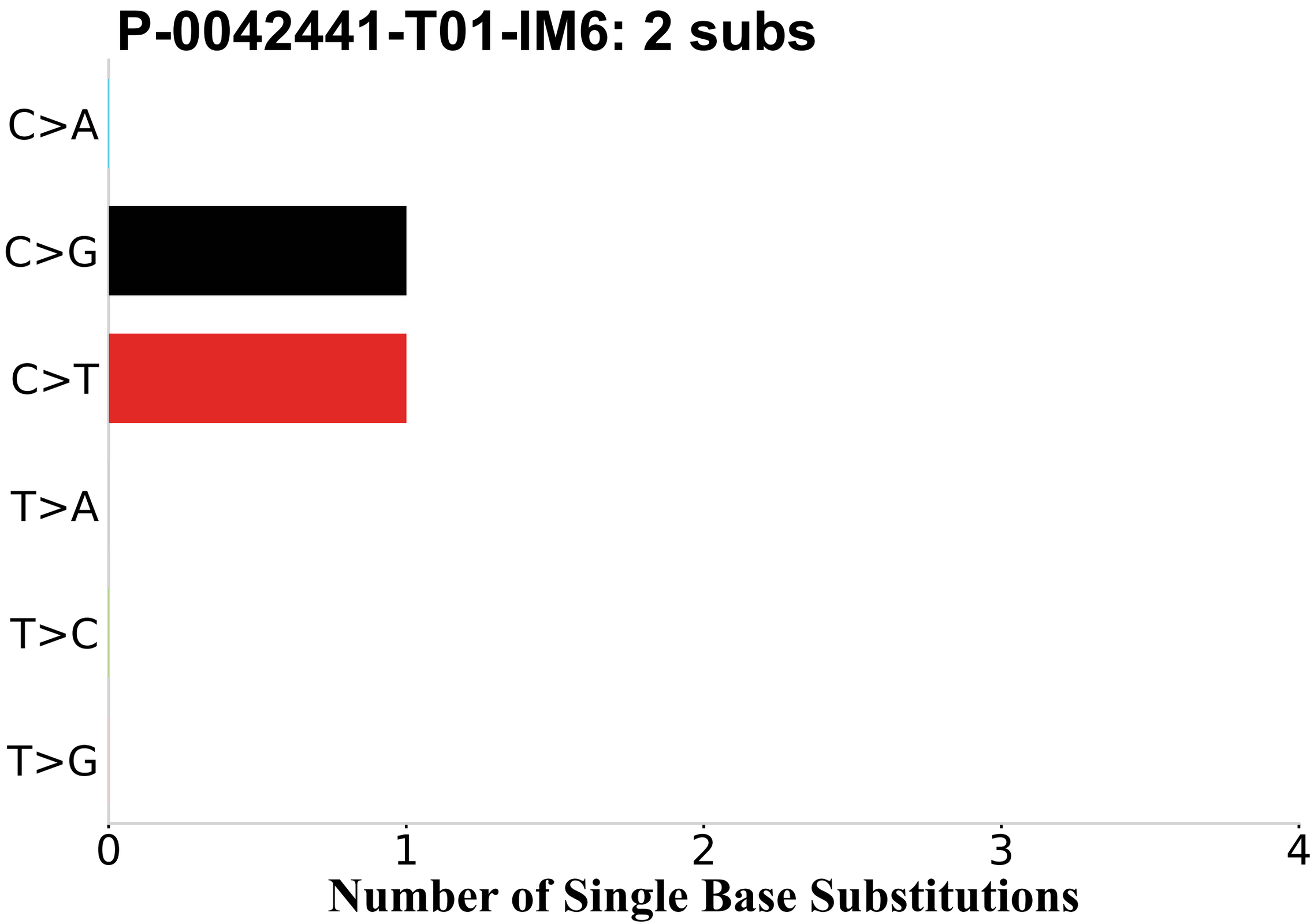
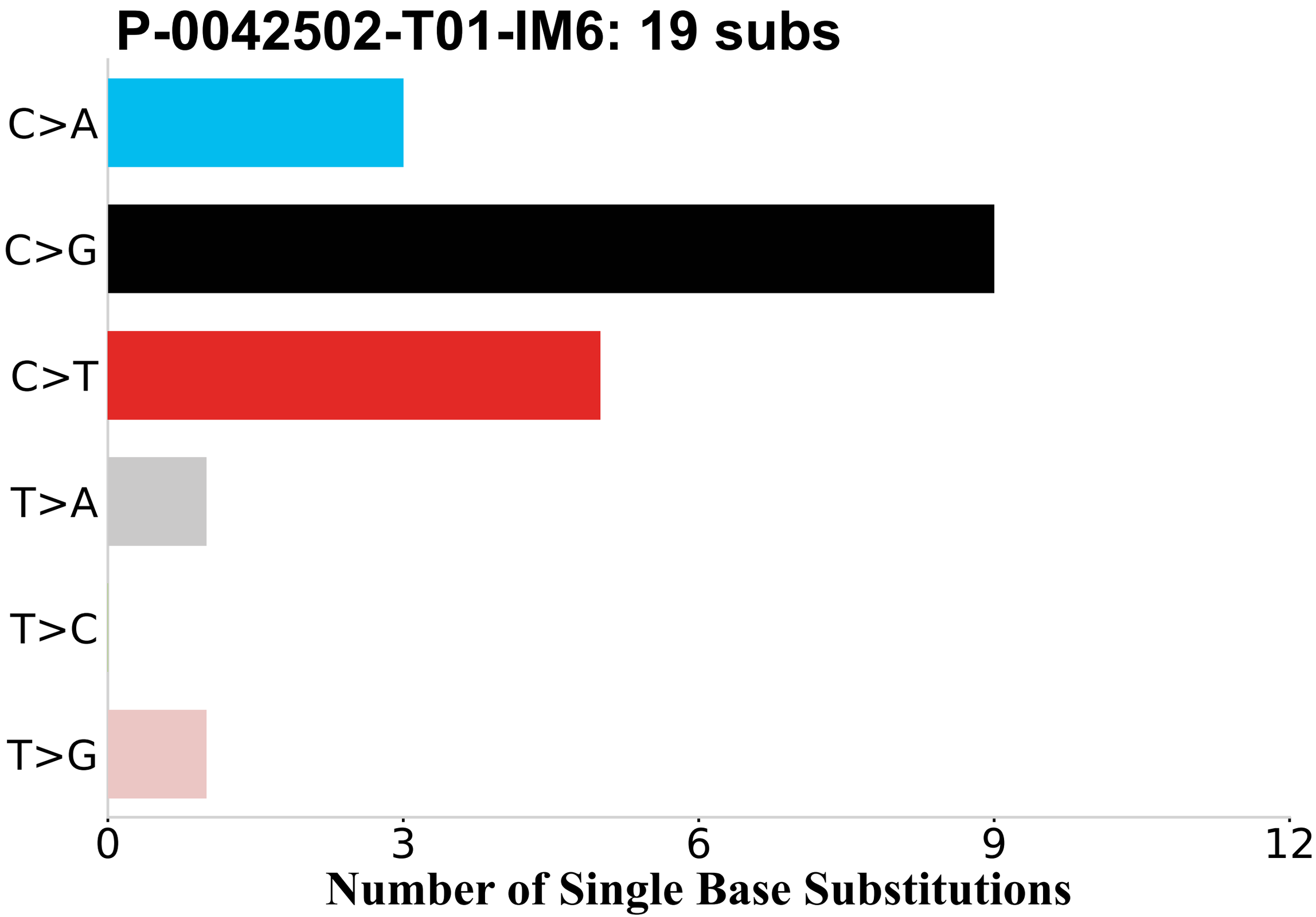
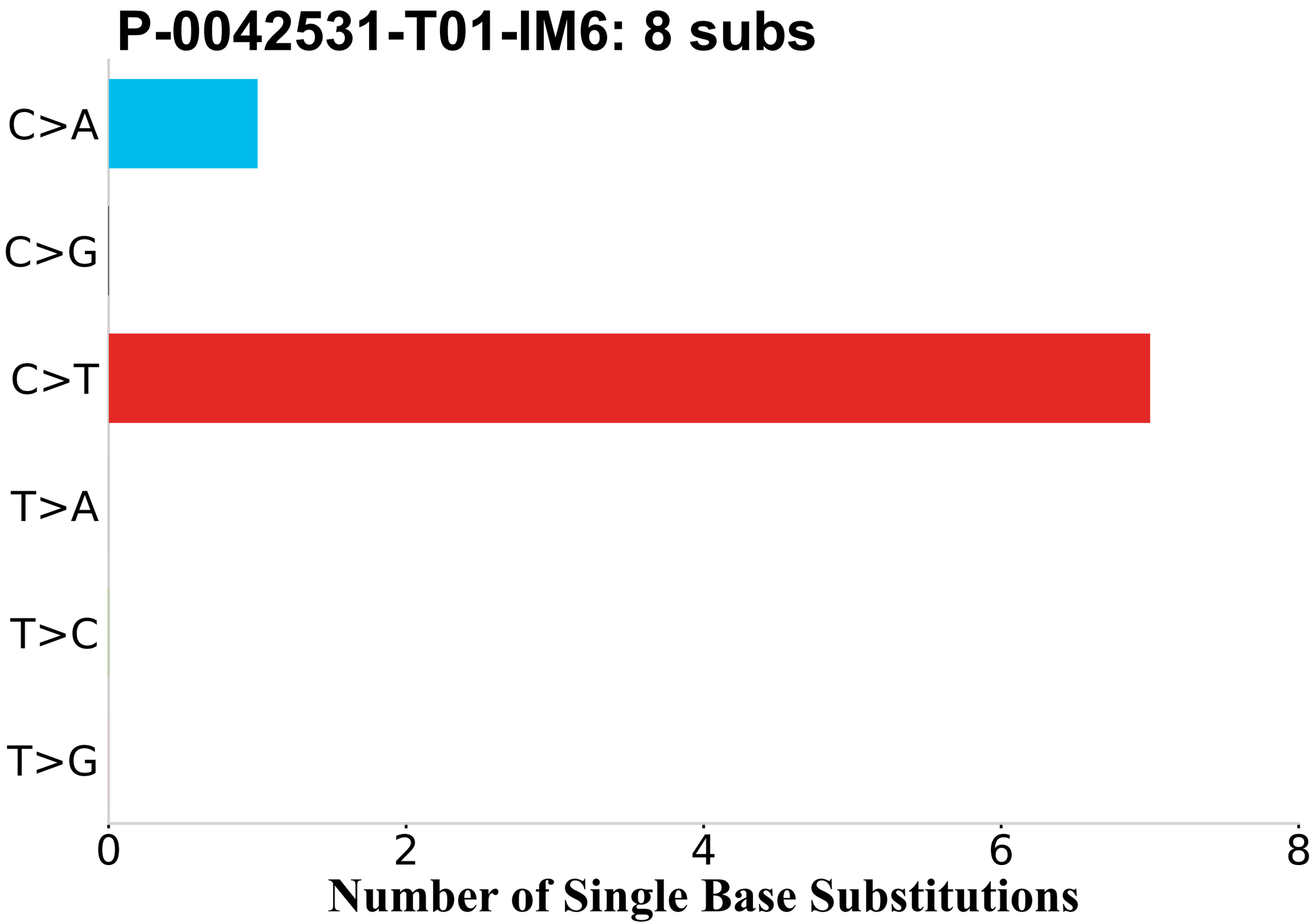
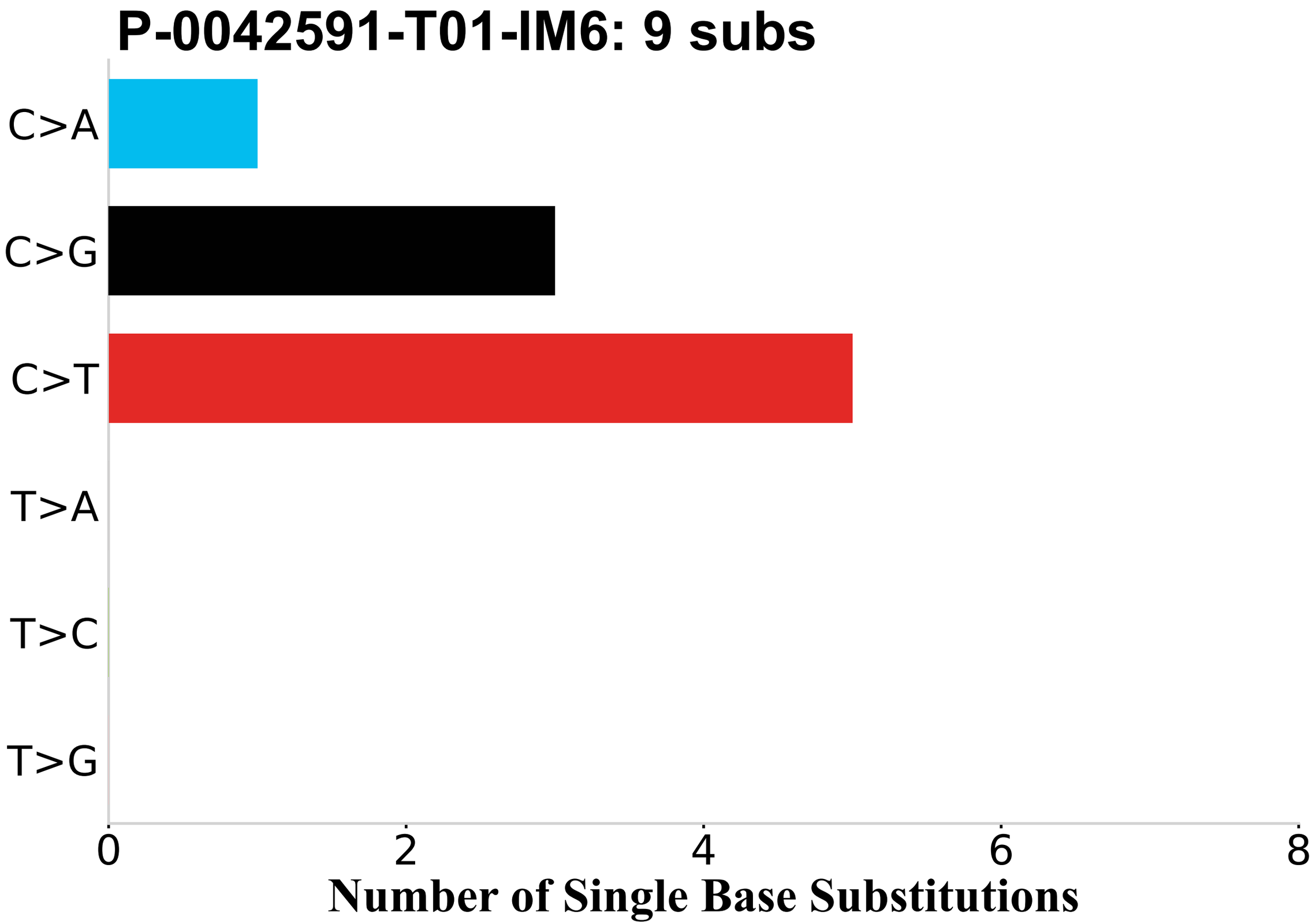
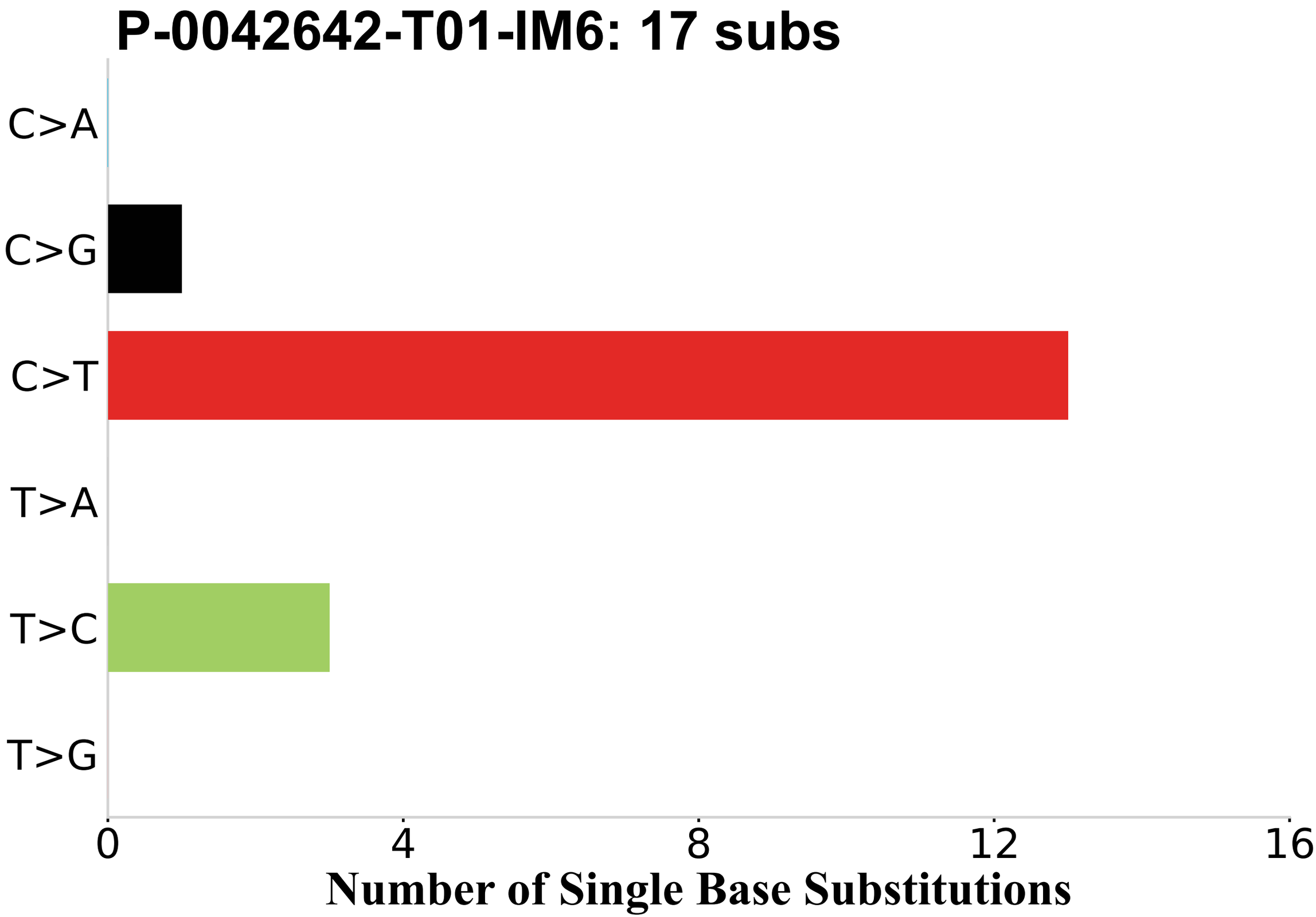
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

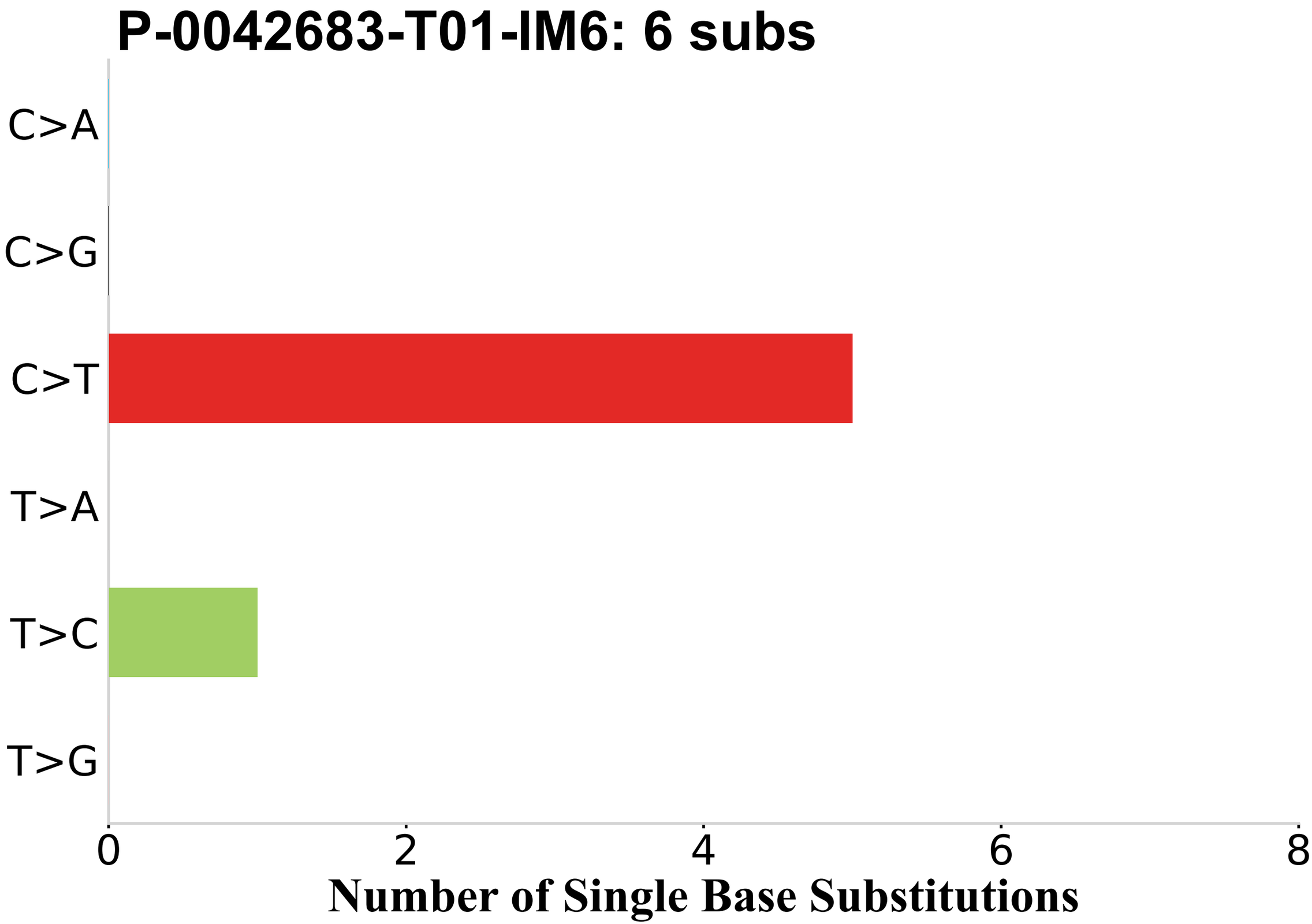

P-0042441-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0042502-T01-IM6: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

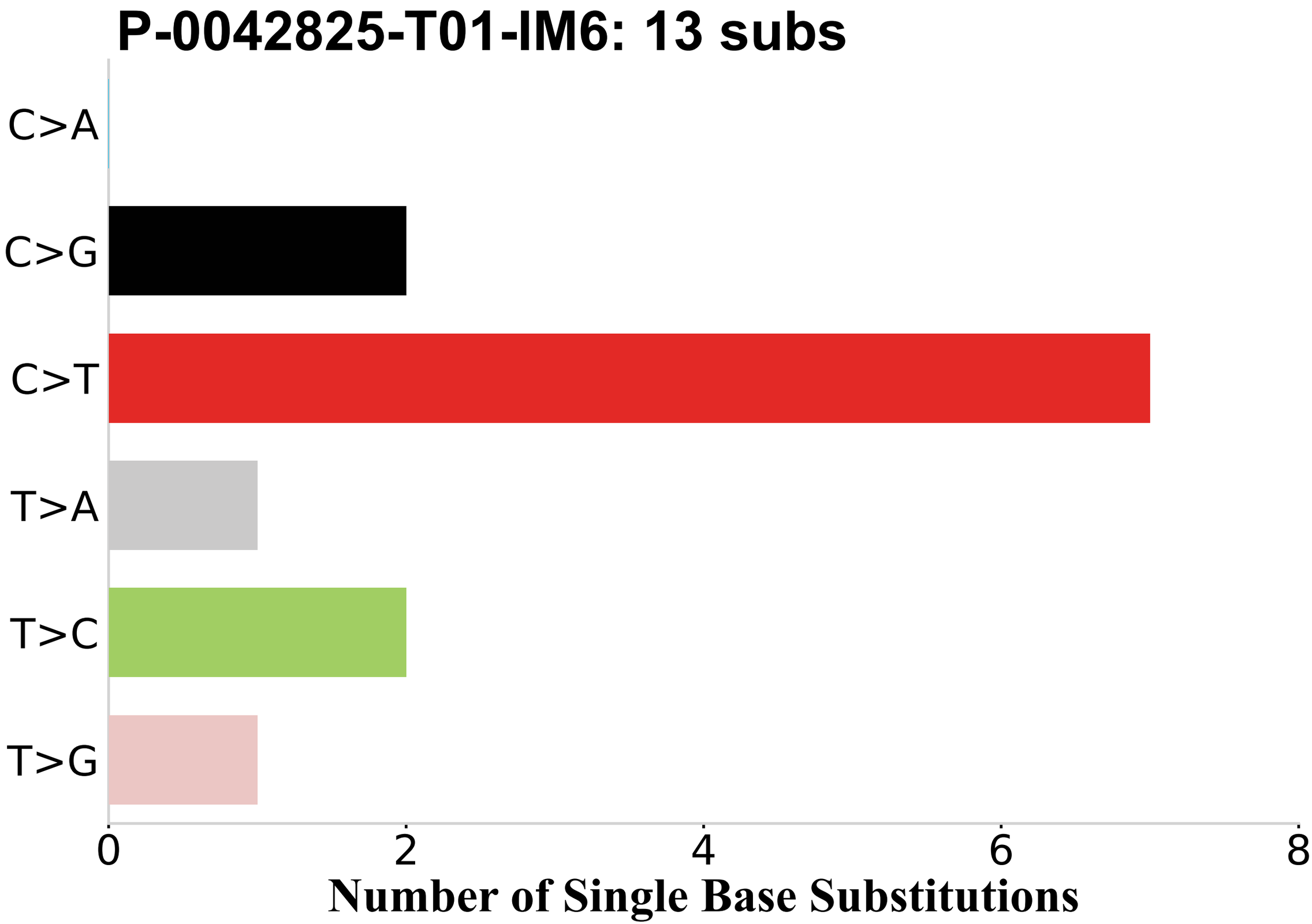

P-0042531-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

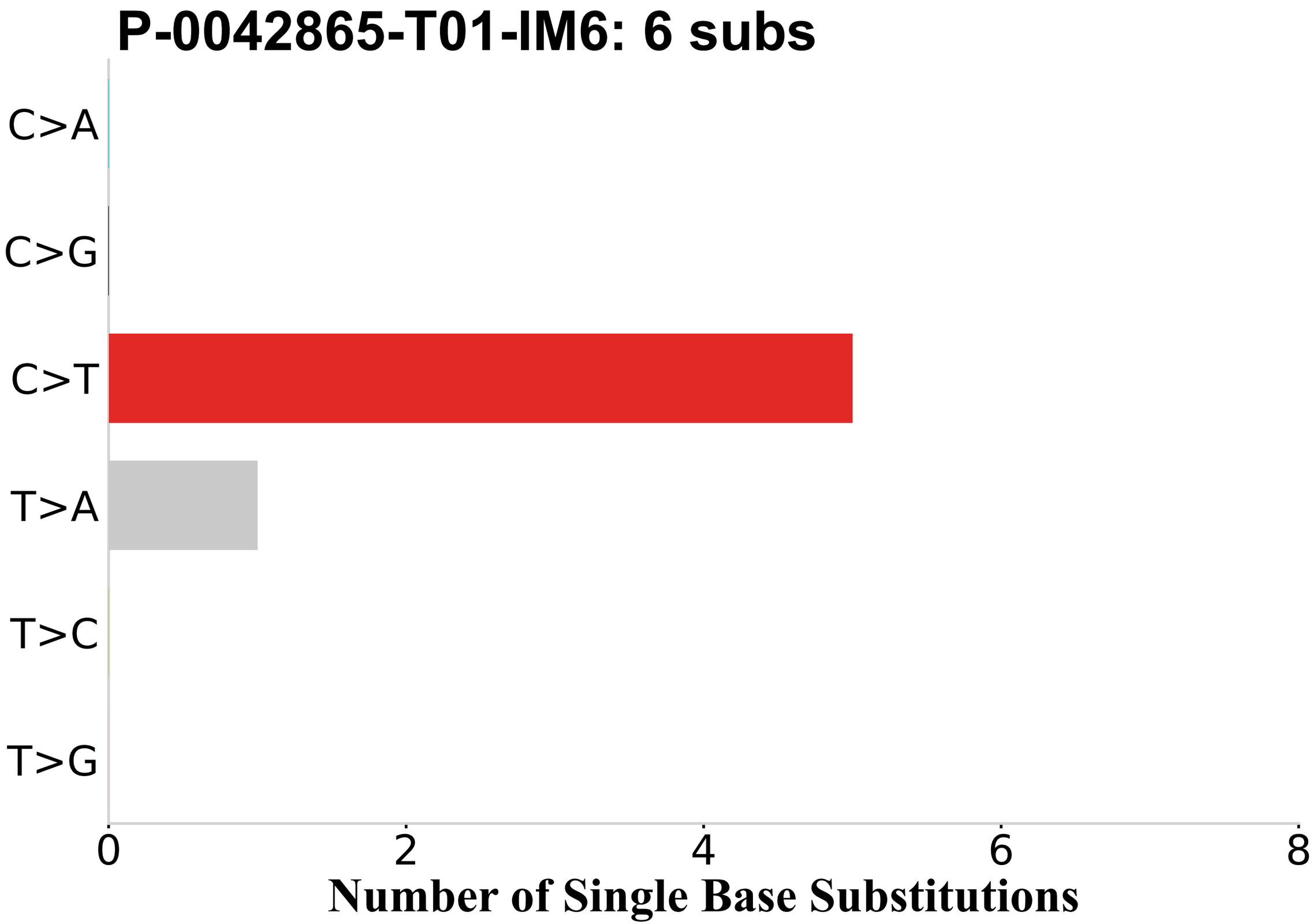

P-0042591-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

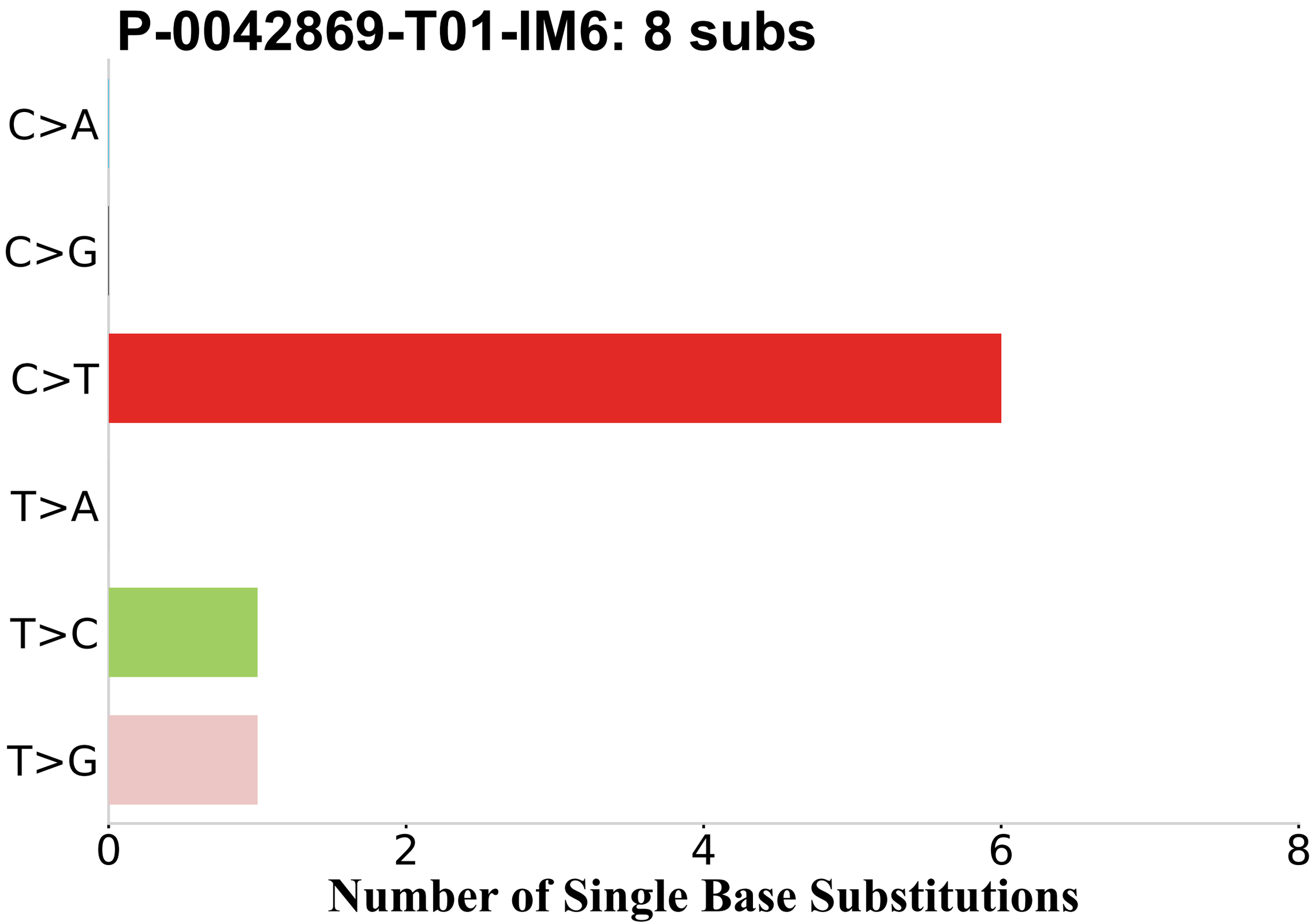

P-0042642-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

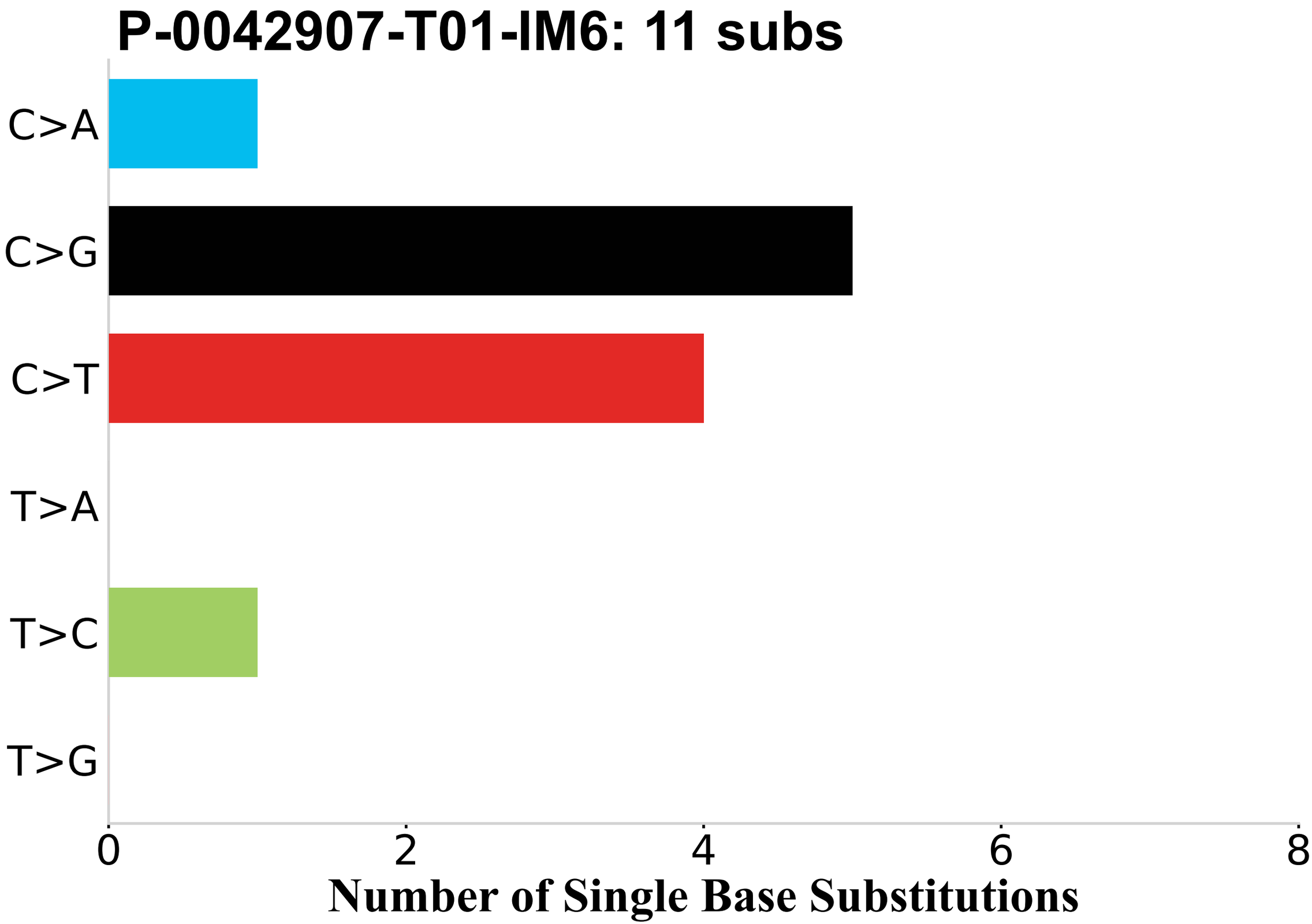

P-0042683-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

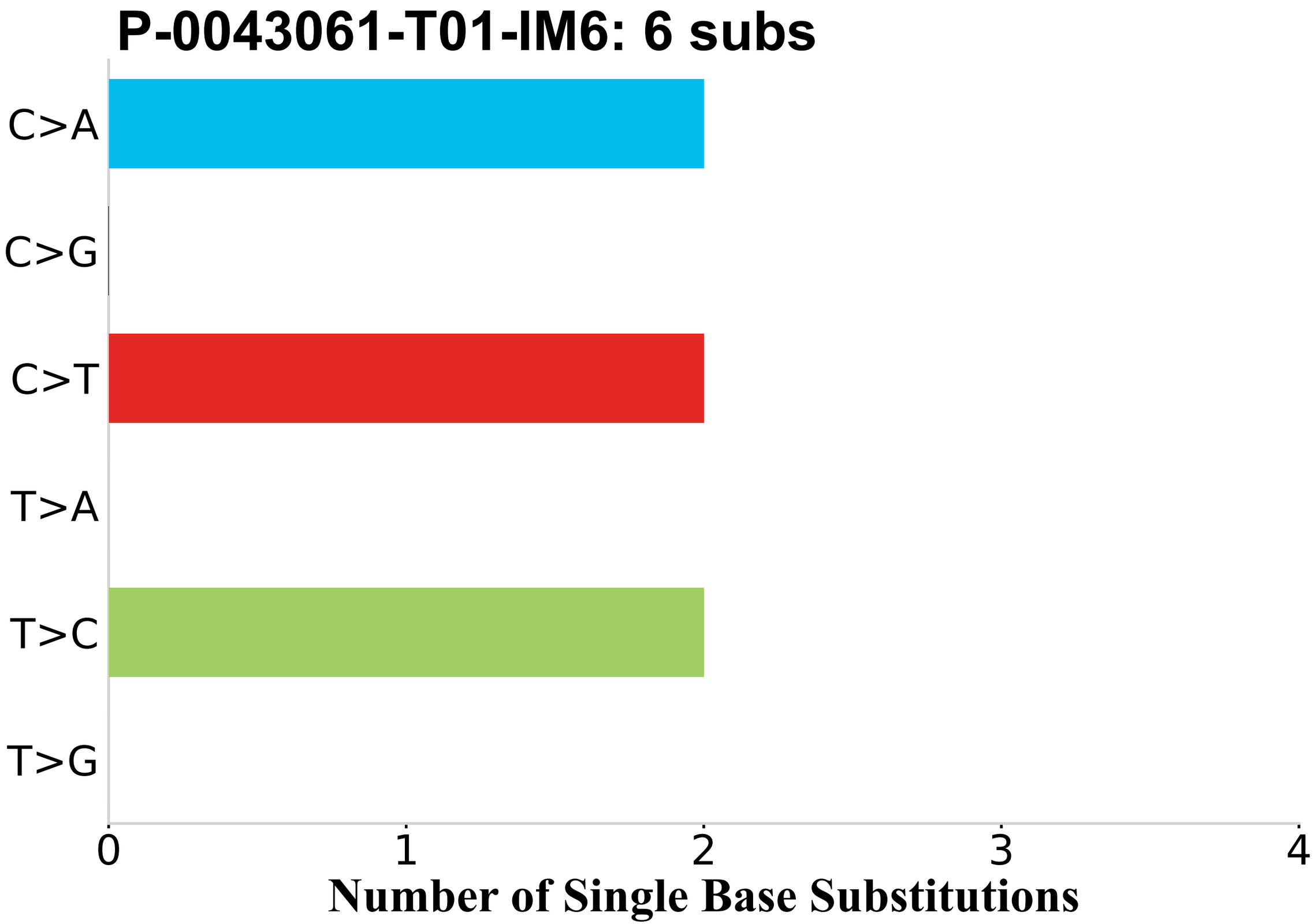
P-0042696-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

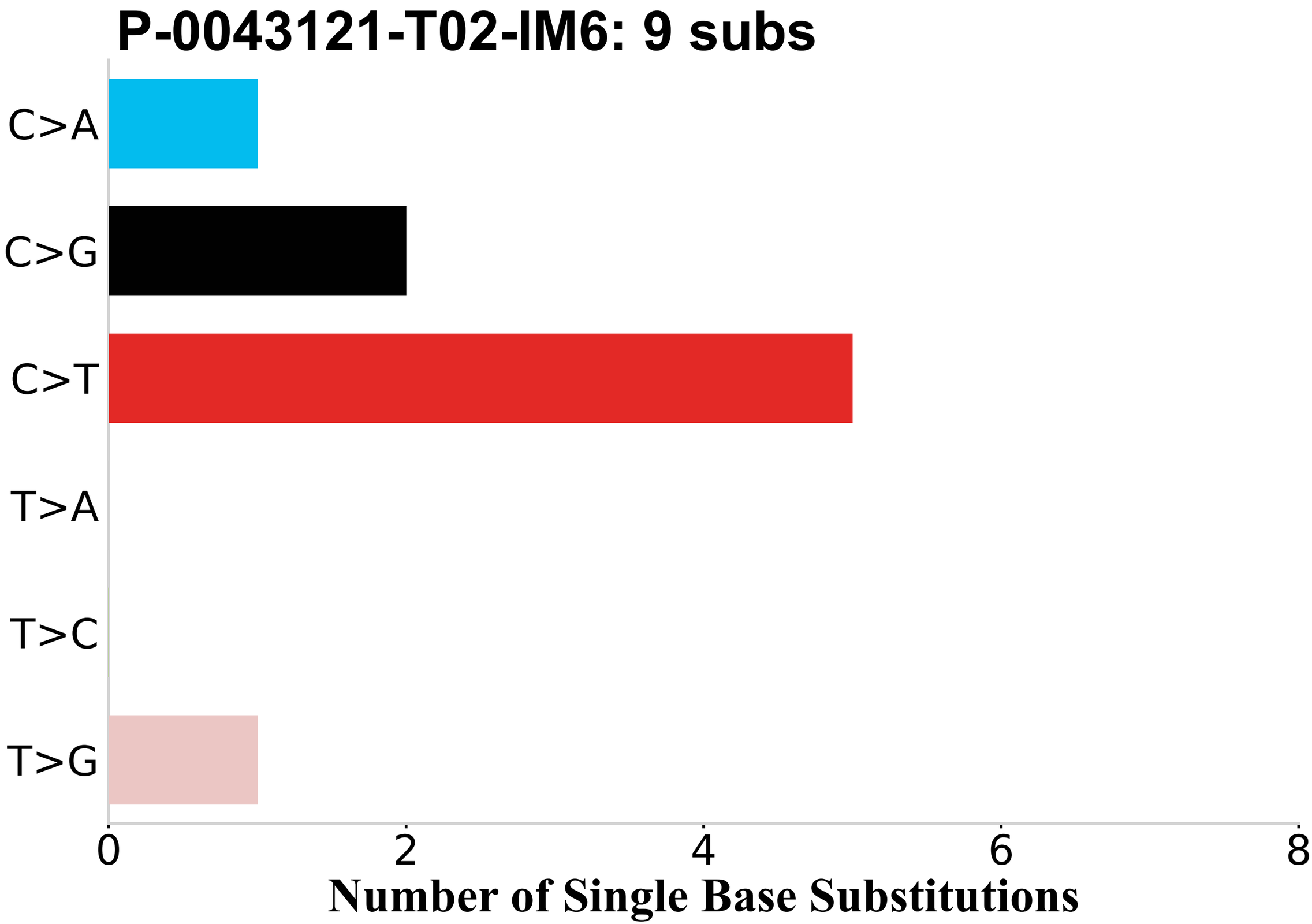

P-0042825-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

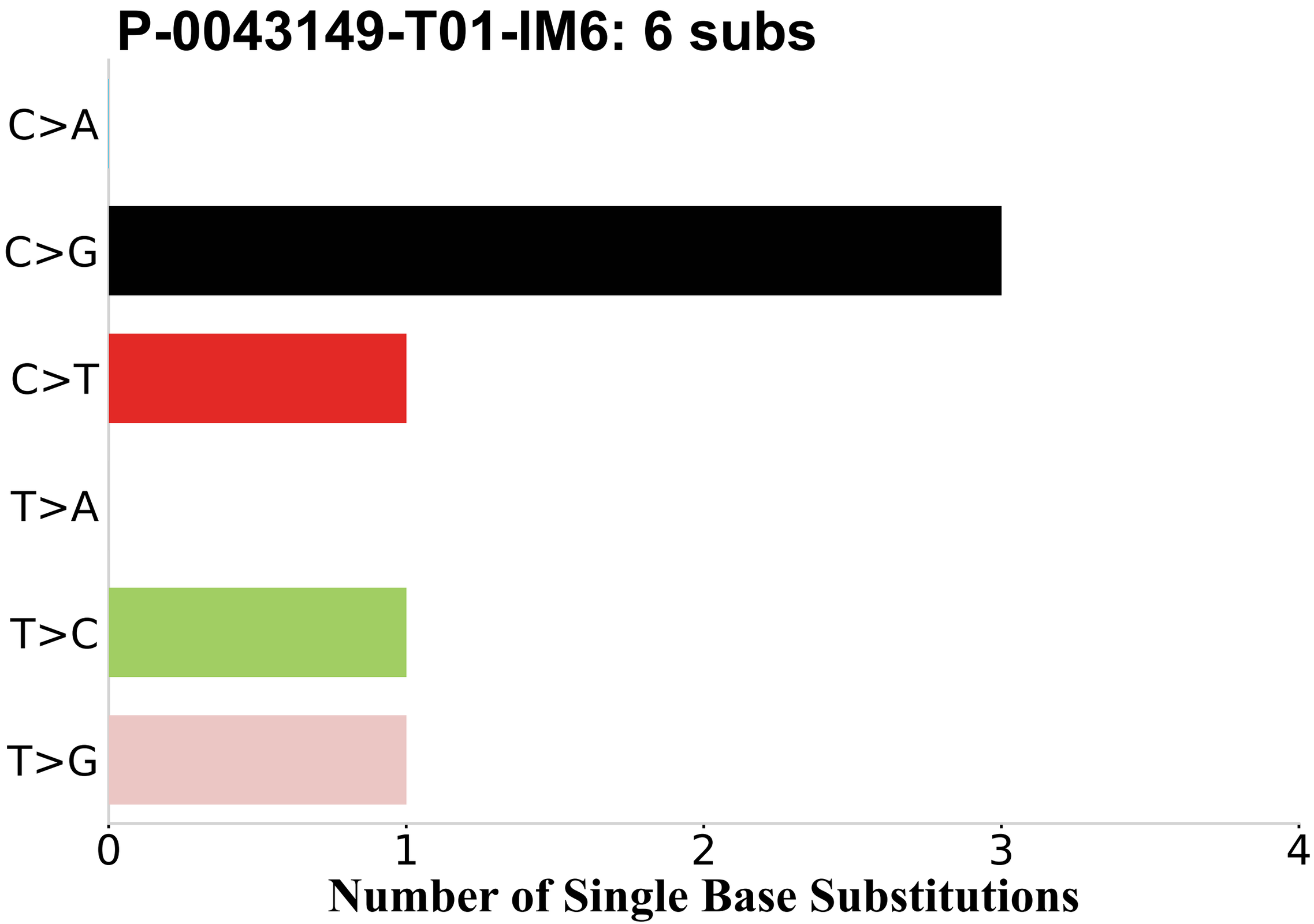

P-0042865-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

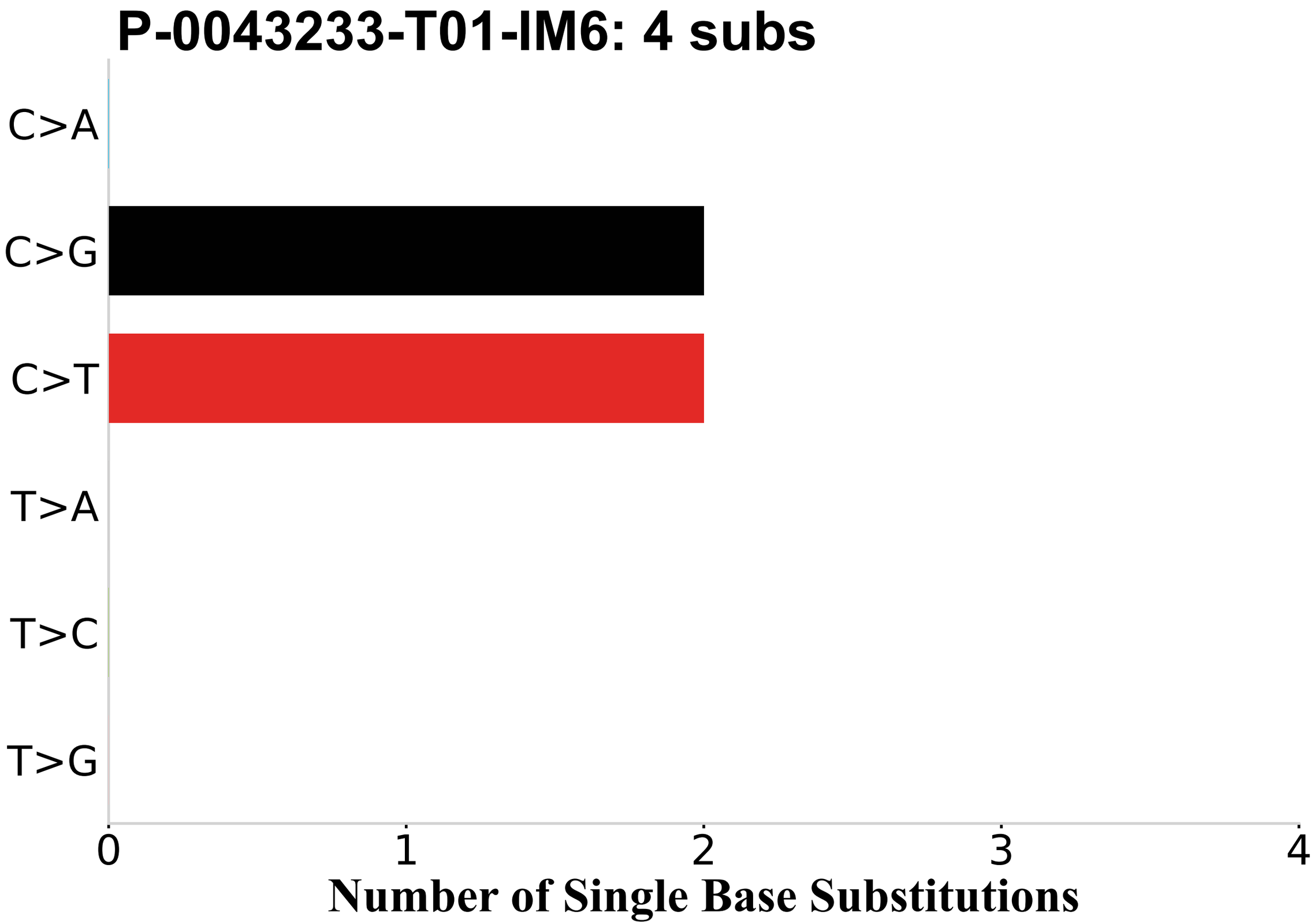

P-0042869-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

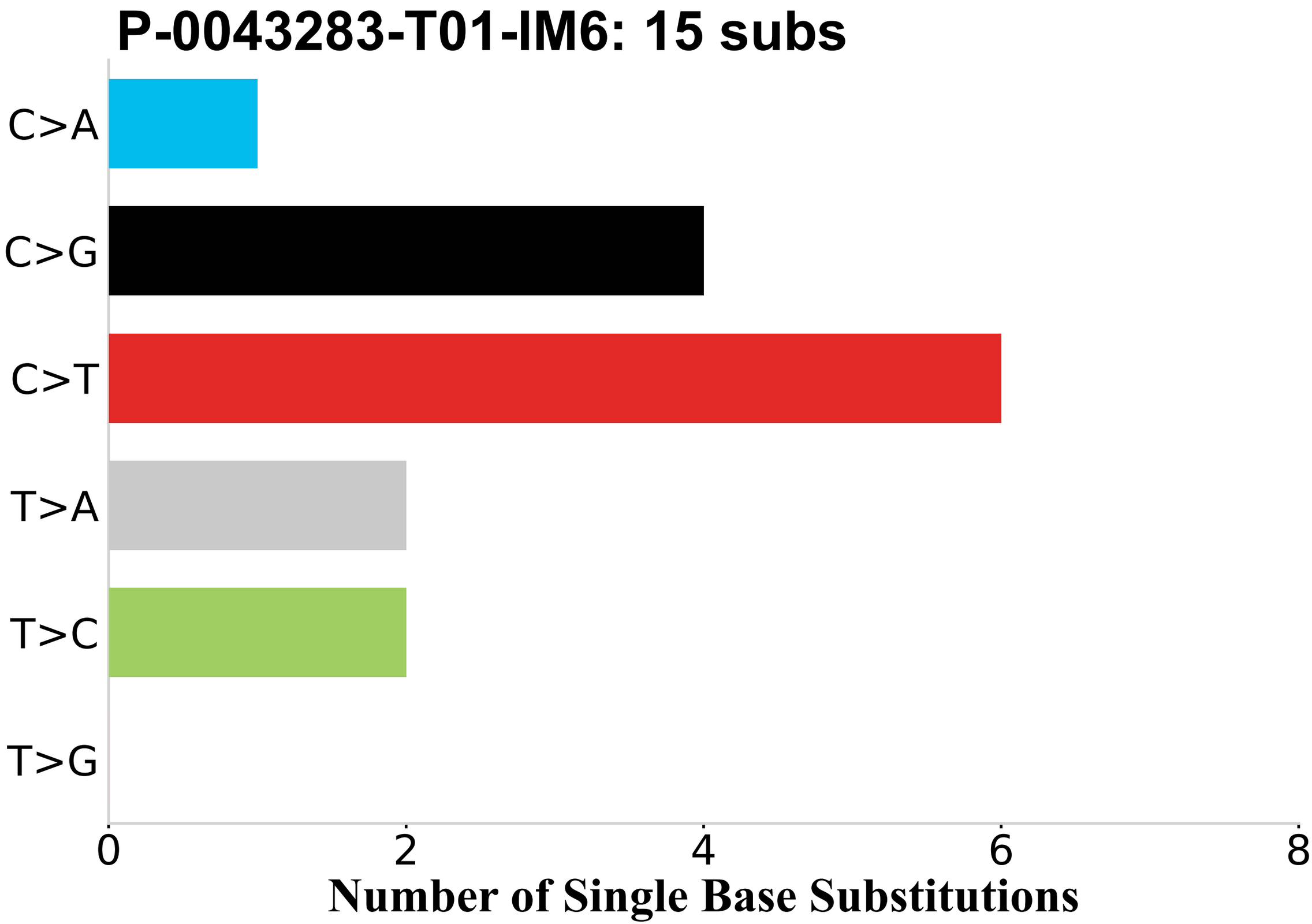

P-0042907-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

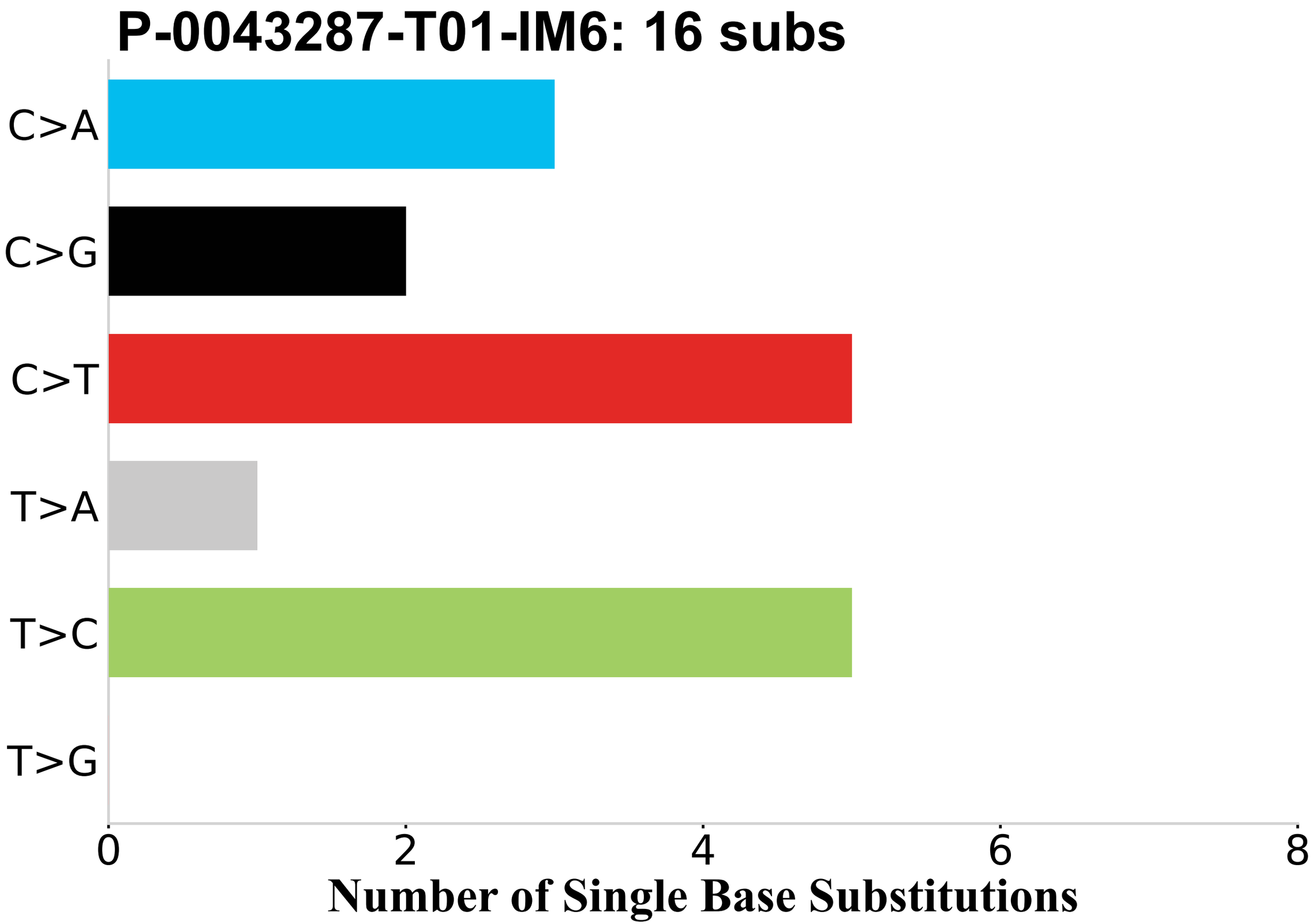

P-0043061-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

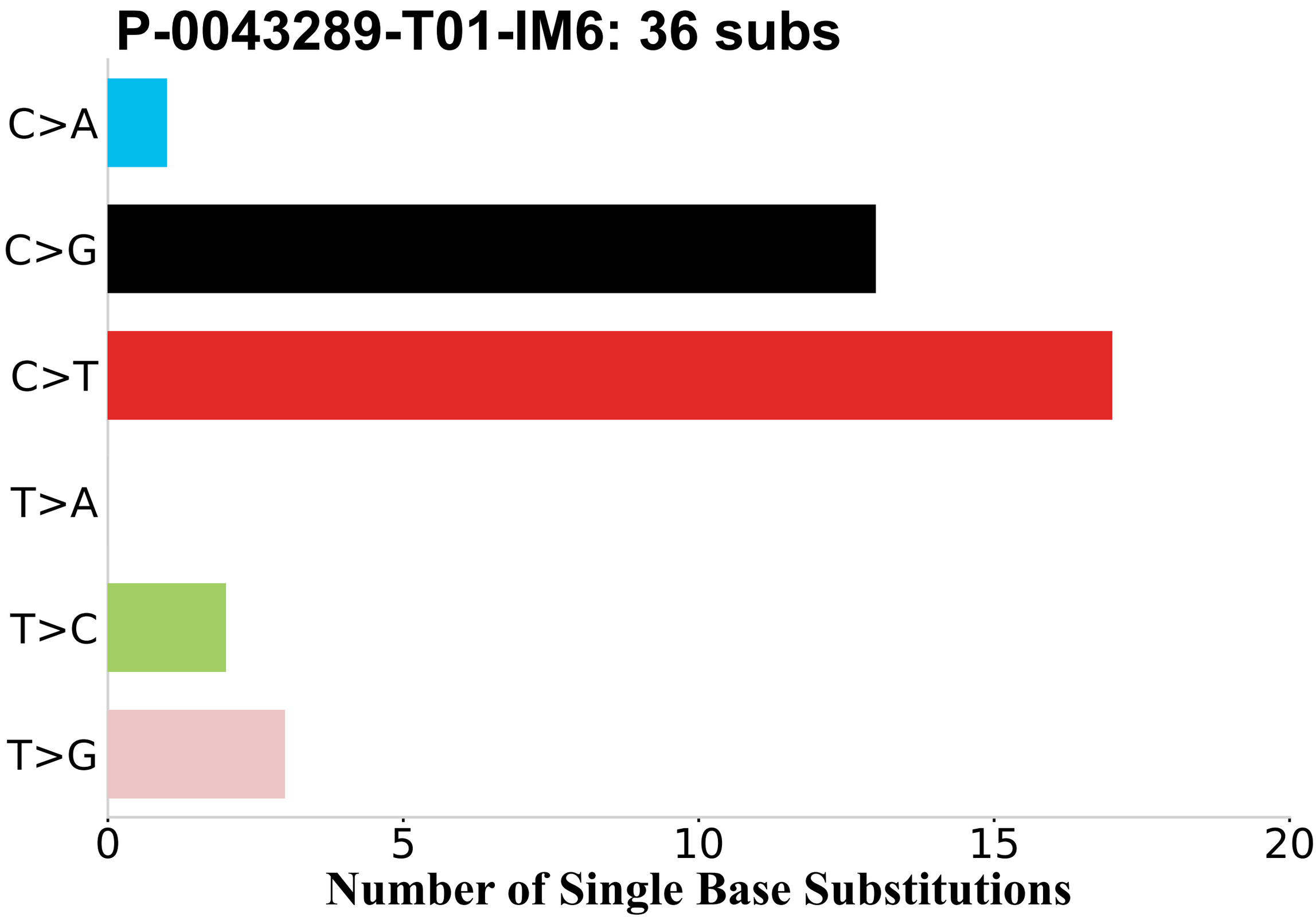

P-0043121-T02-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

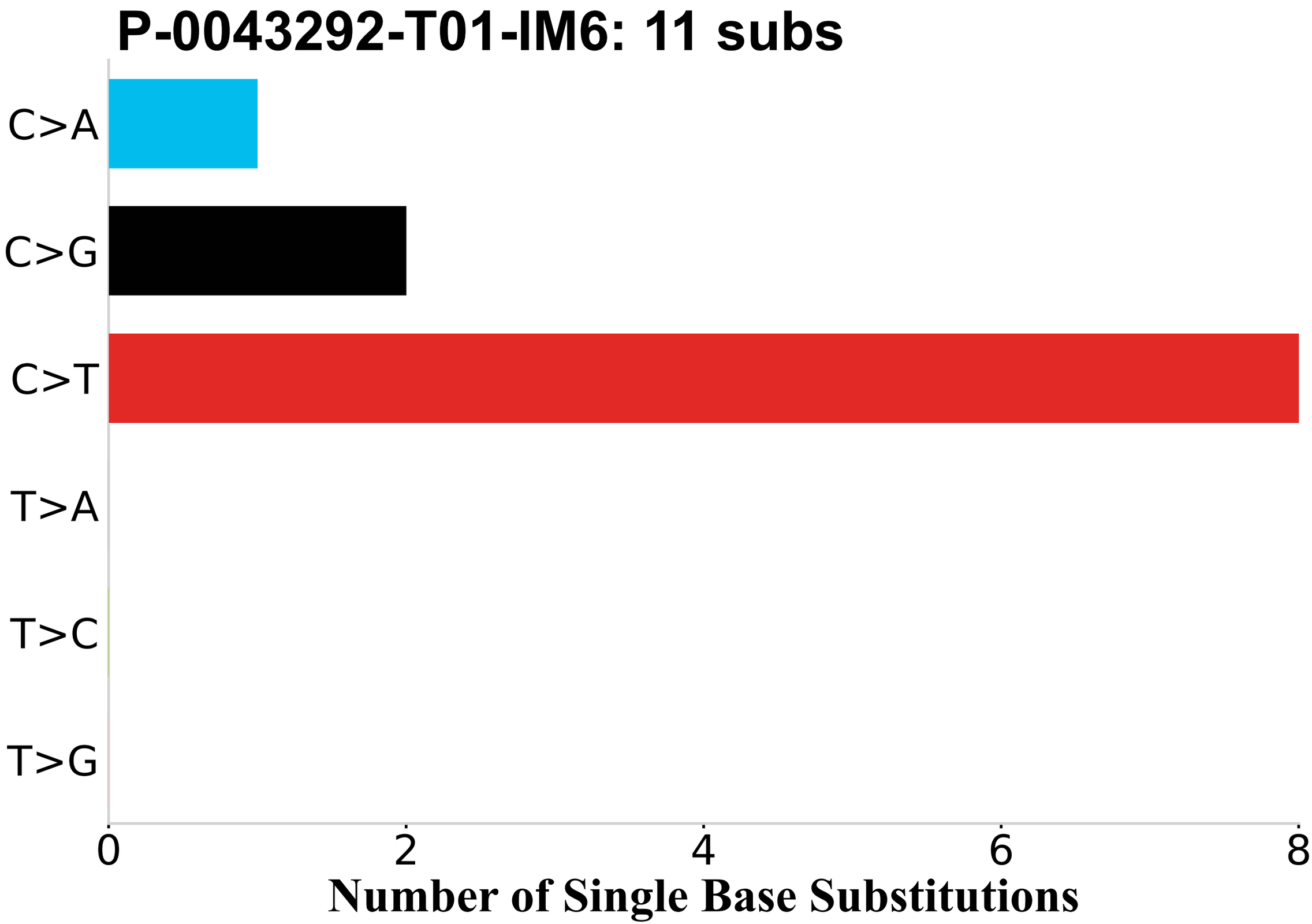

P-0043149-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

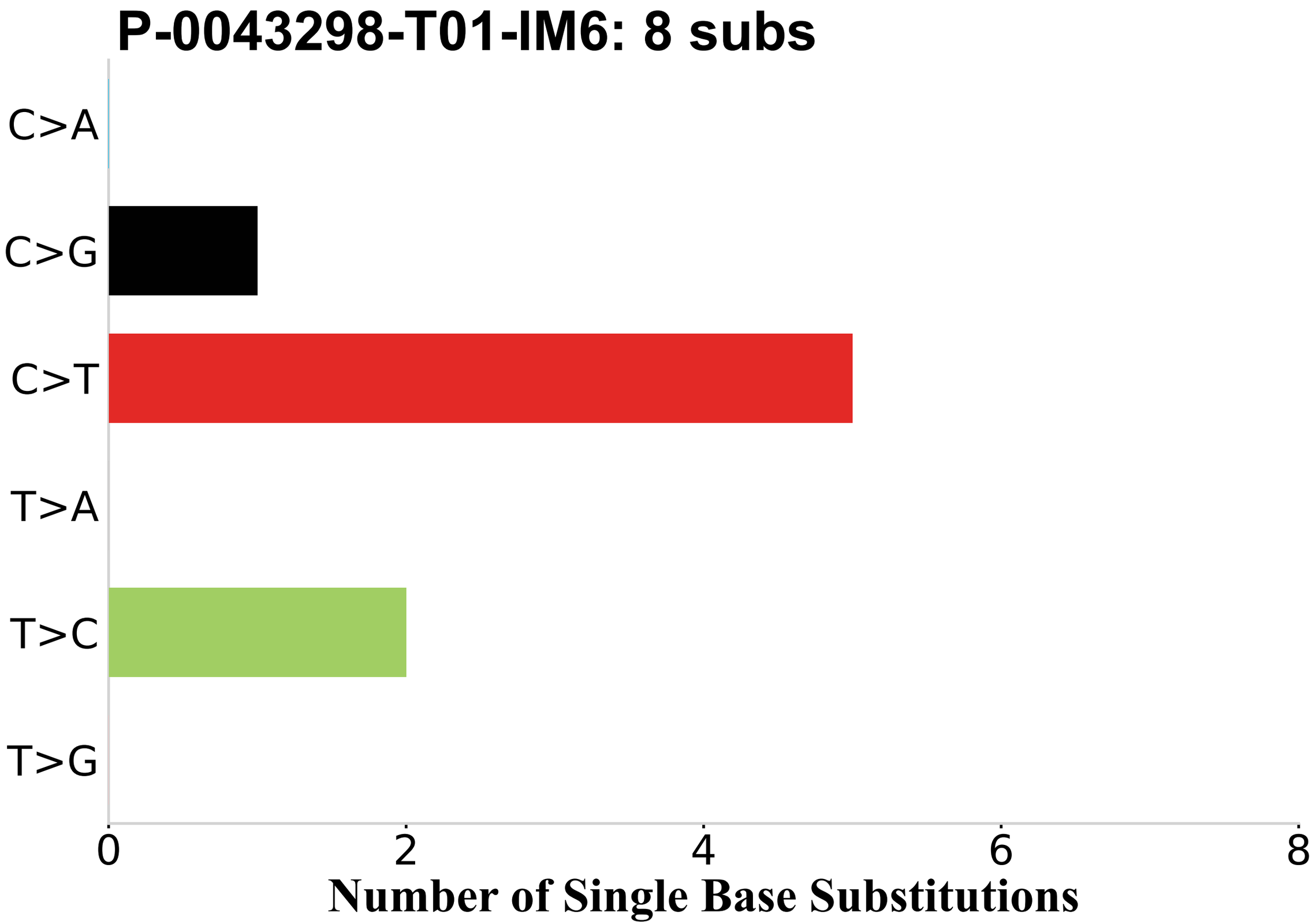

P-0043233-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0043283-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043287-T01-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043289-T01-IM6: 36 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0043292-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043298-T01-IM6: 8 subs
C>A
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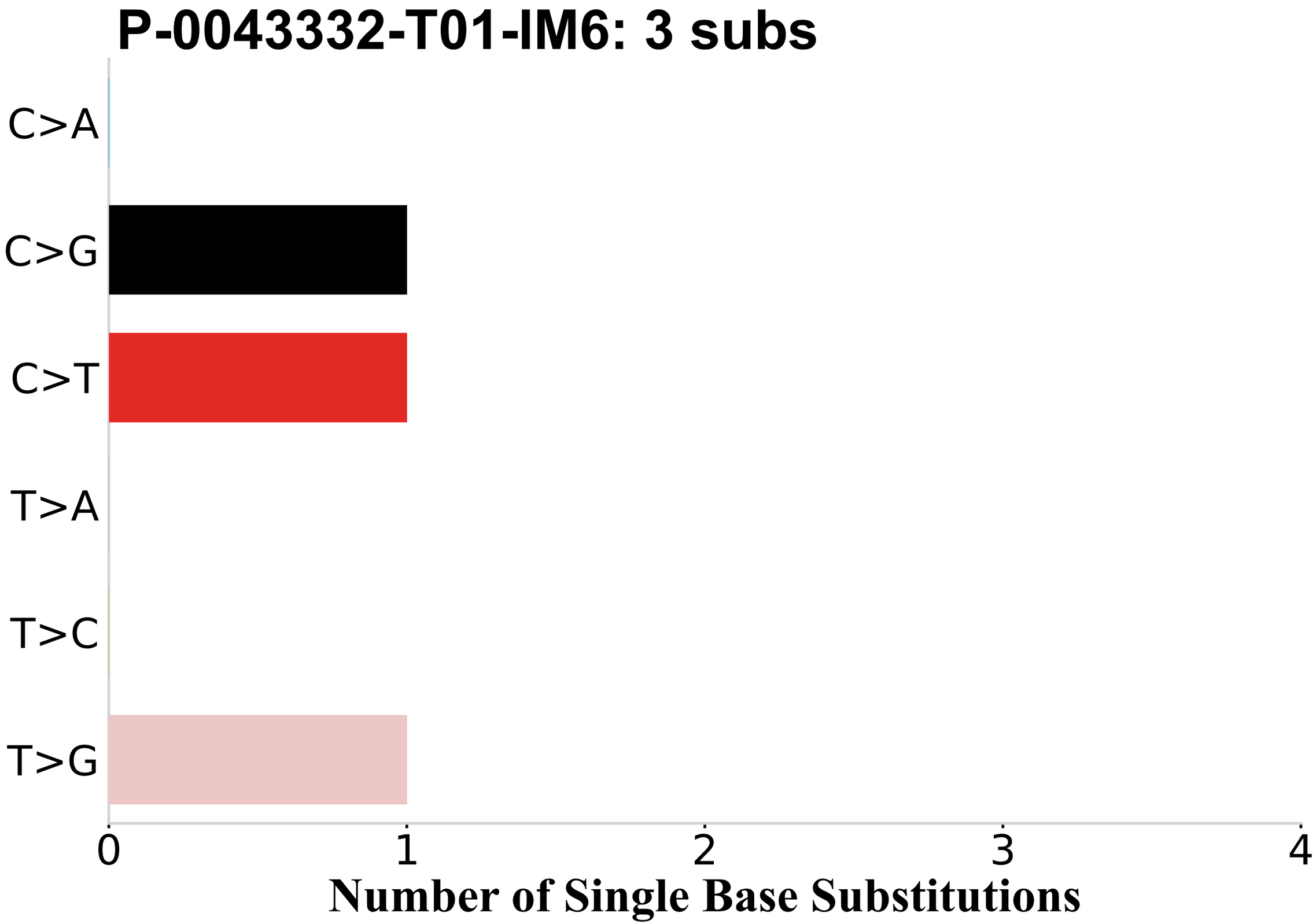
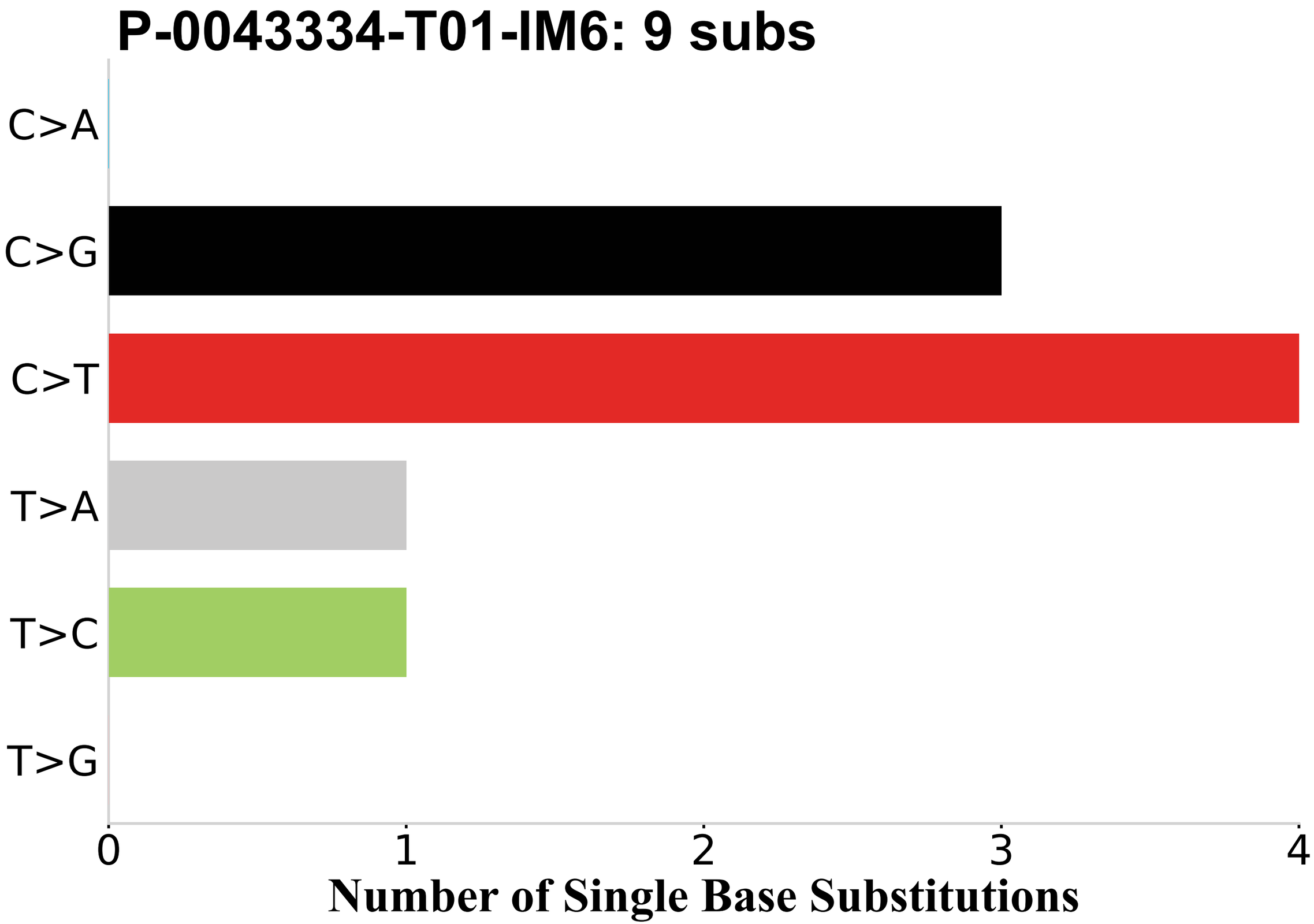
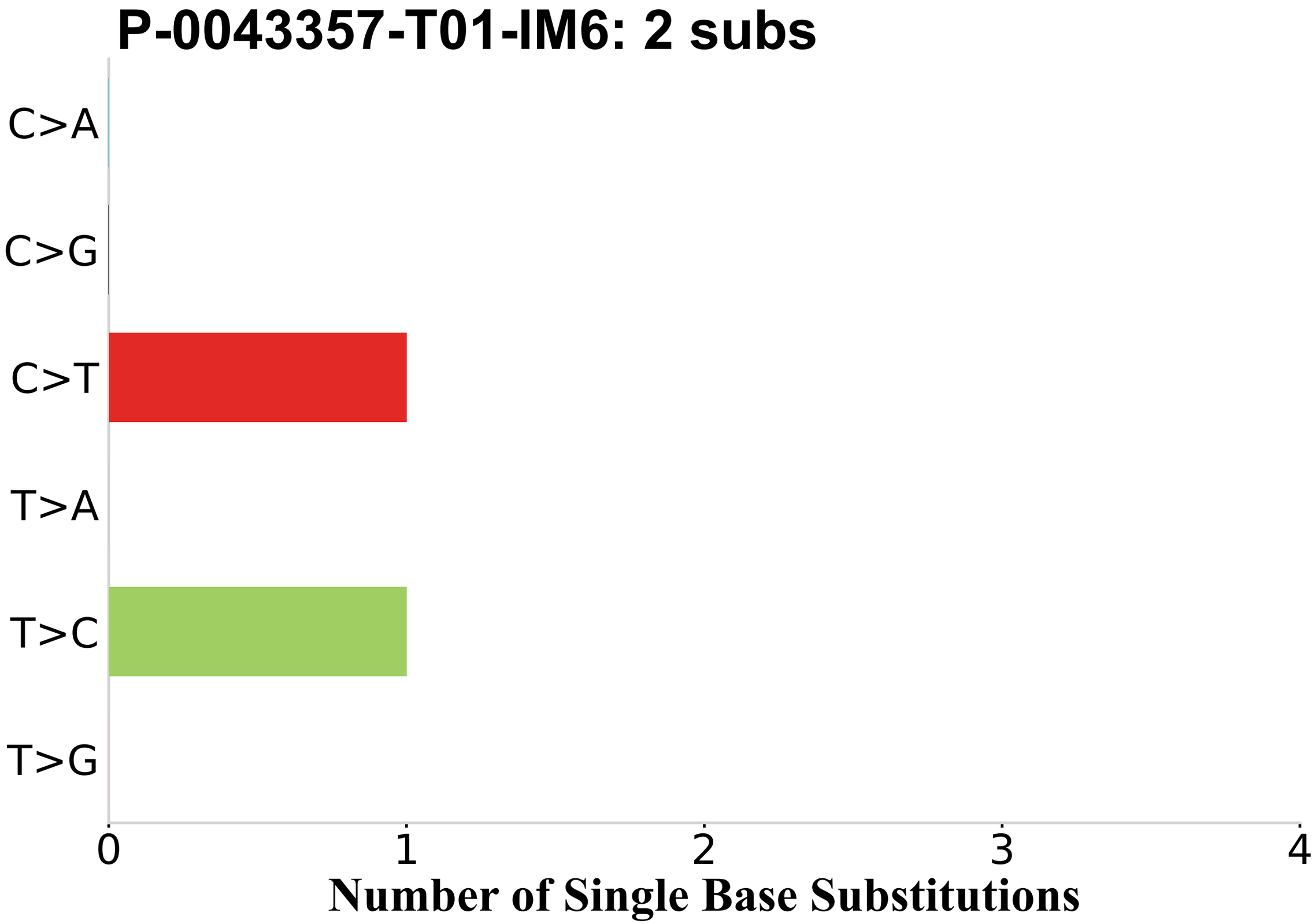
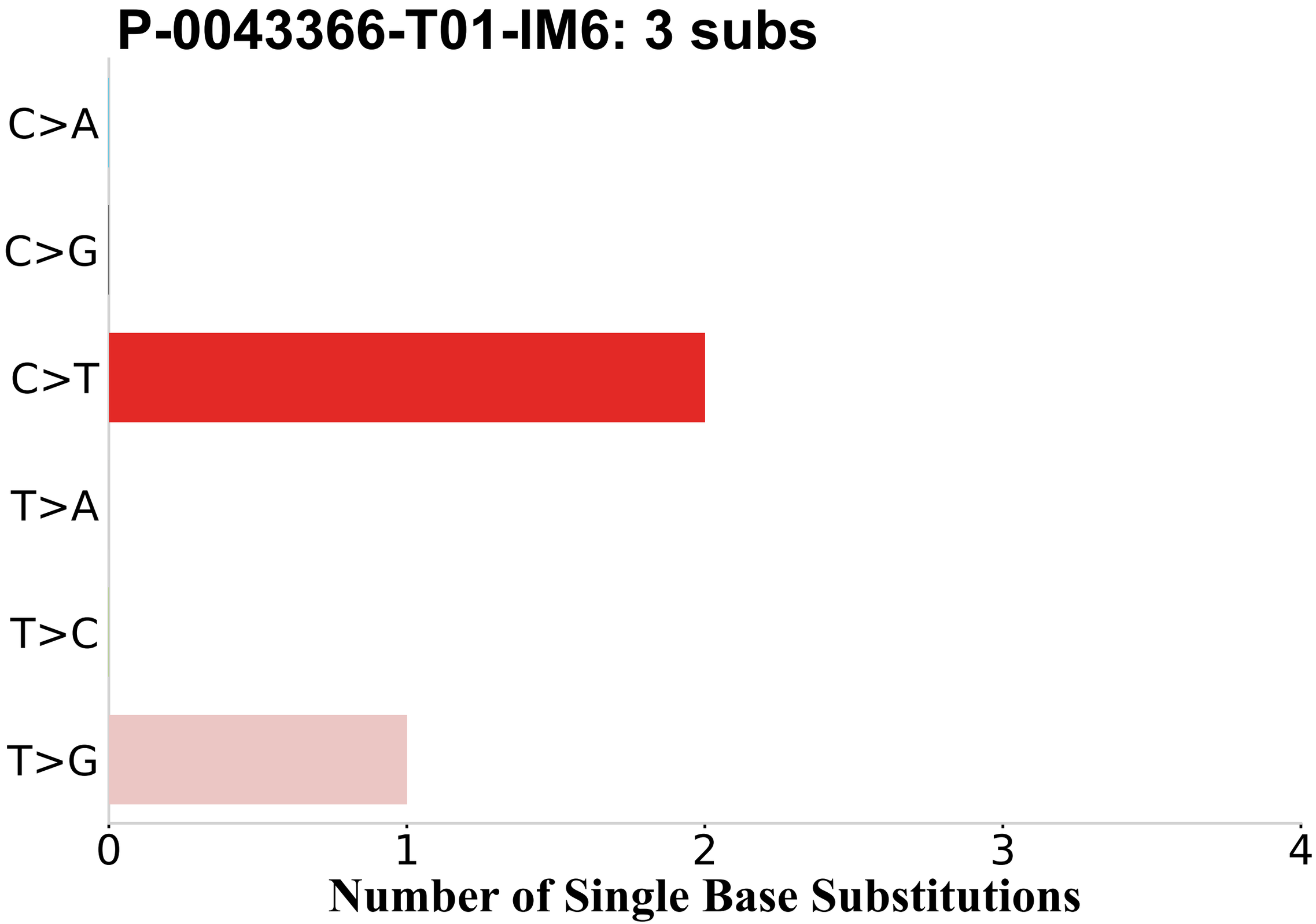
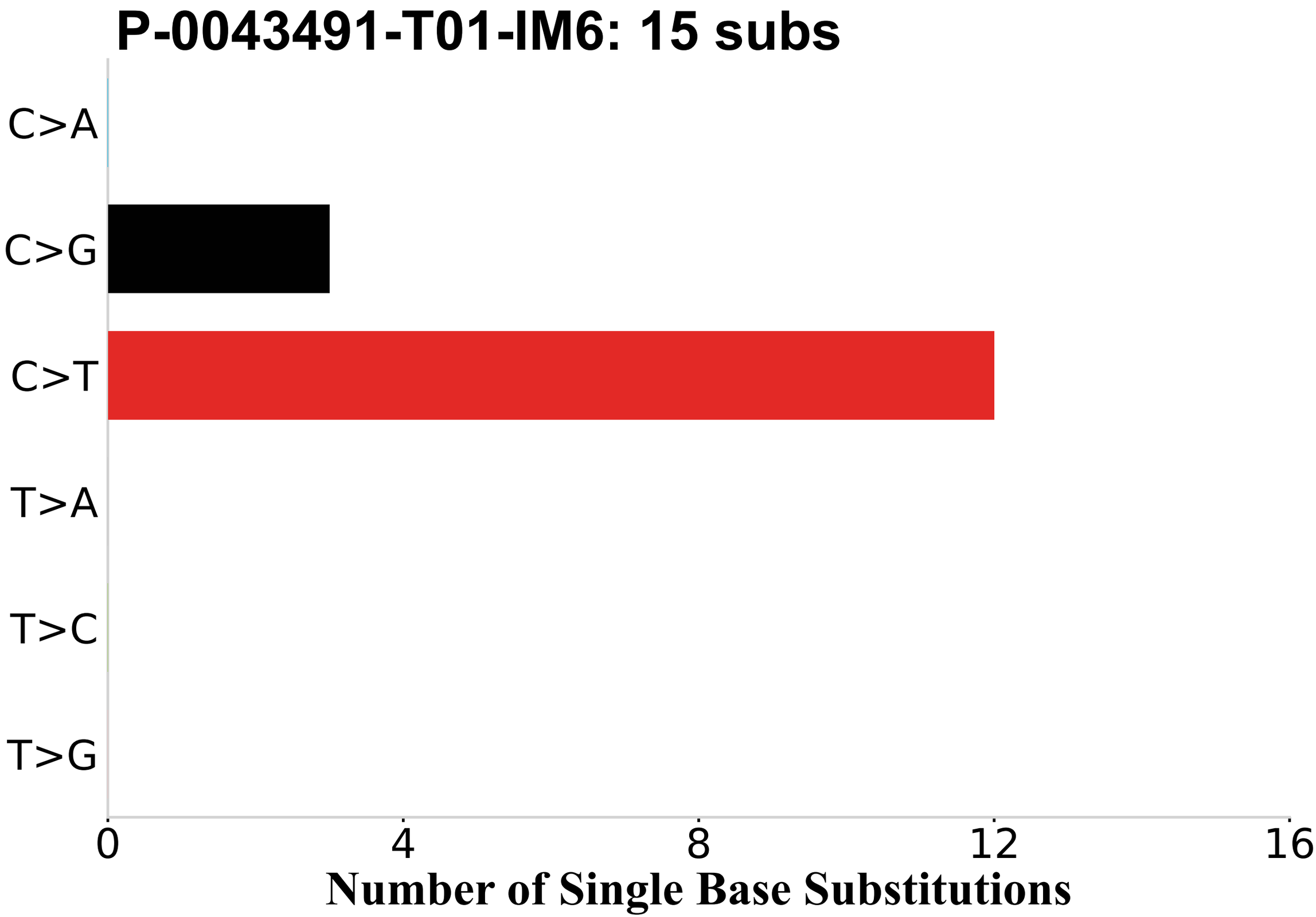
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

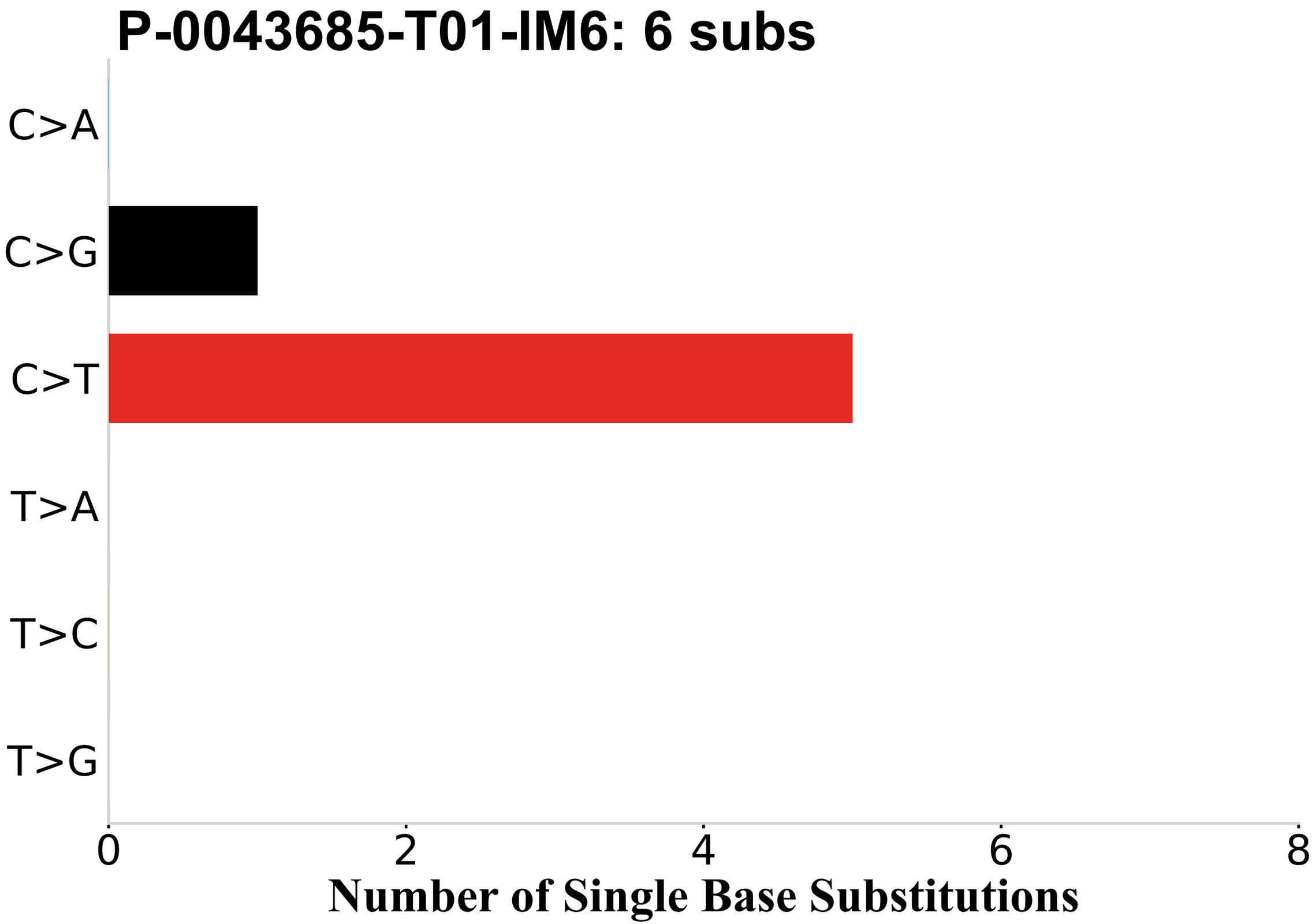

P-0043332-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

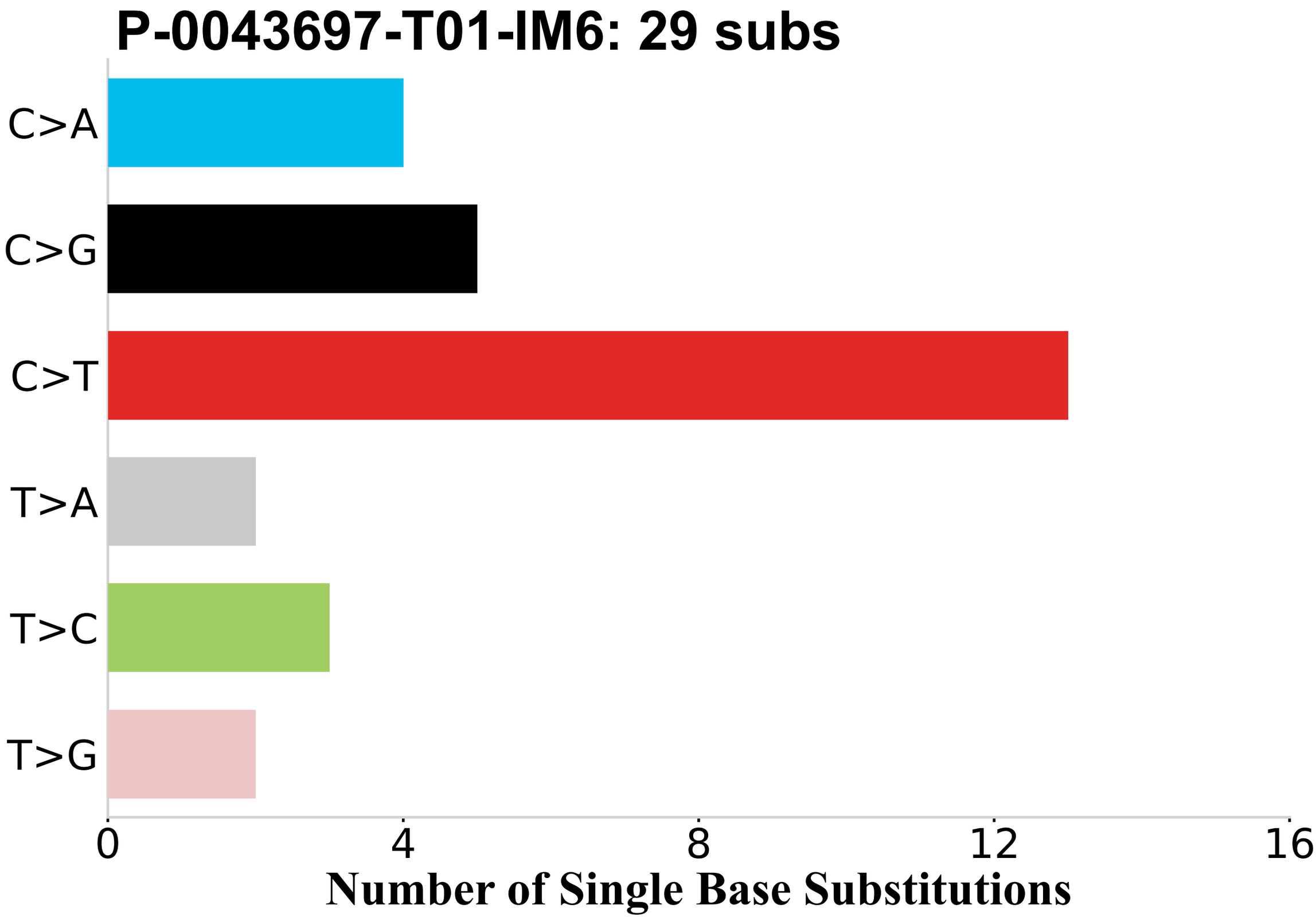

P-0043334-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

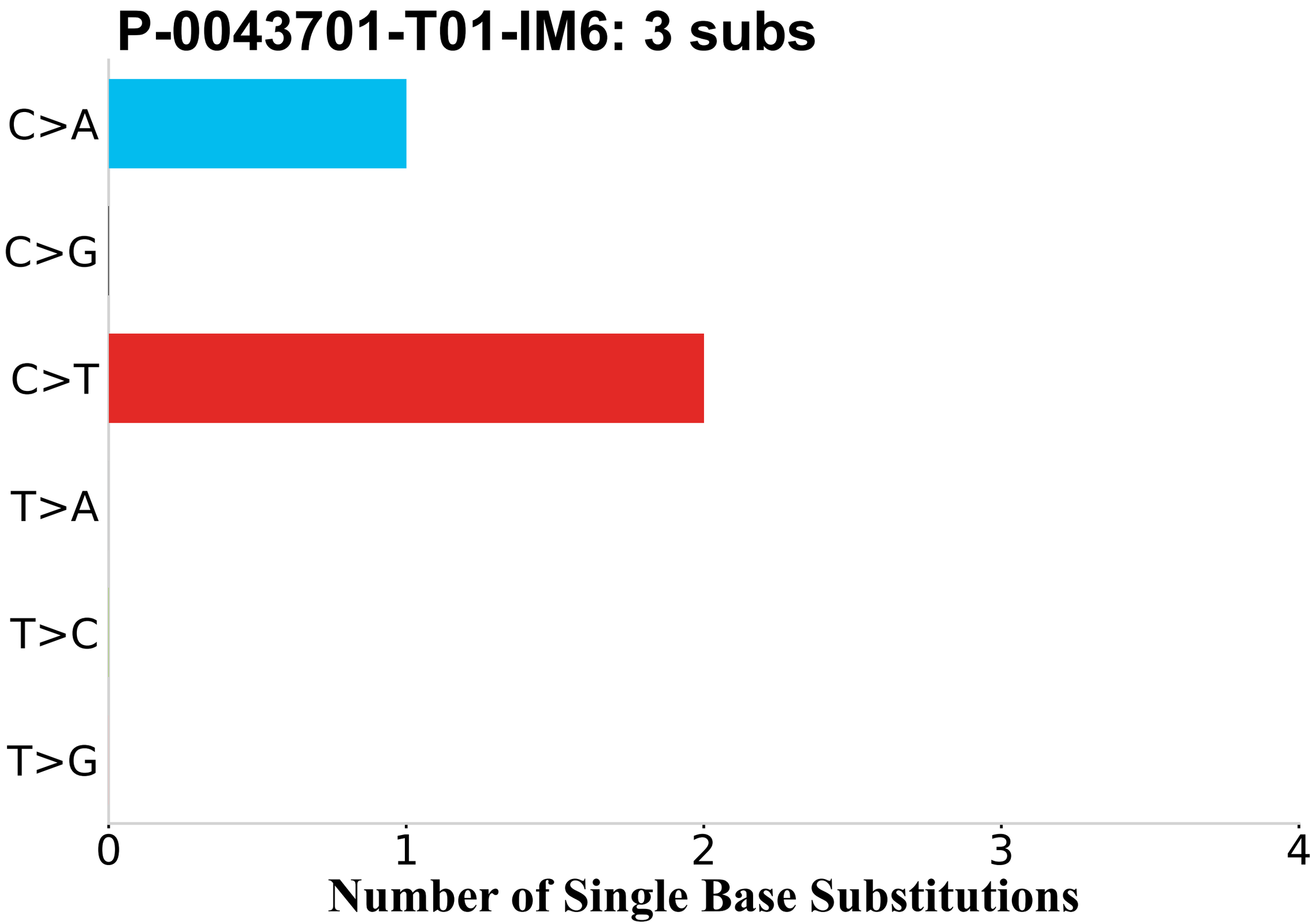

P-0043357-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0043366-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0043491-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0043685-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043697-T01-IM6: 29 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0043701-T01-IM6: 3 subs
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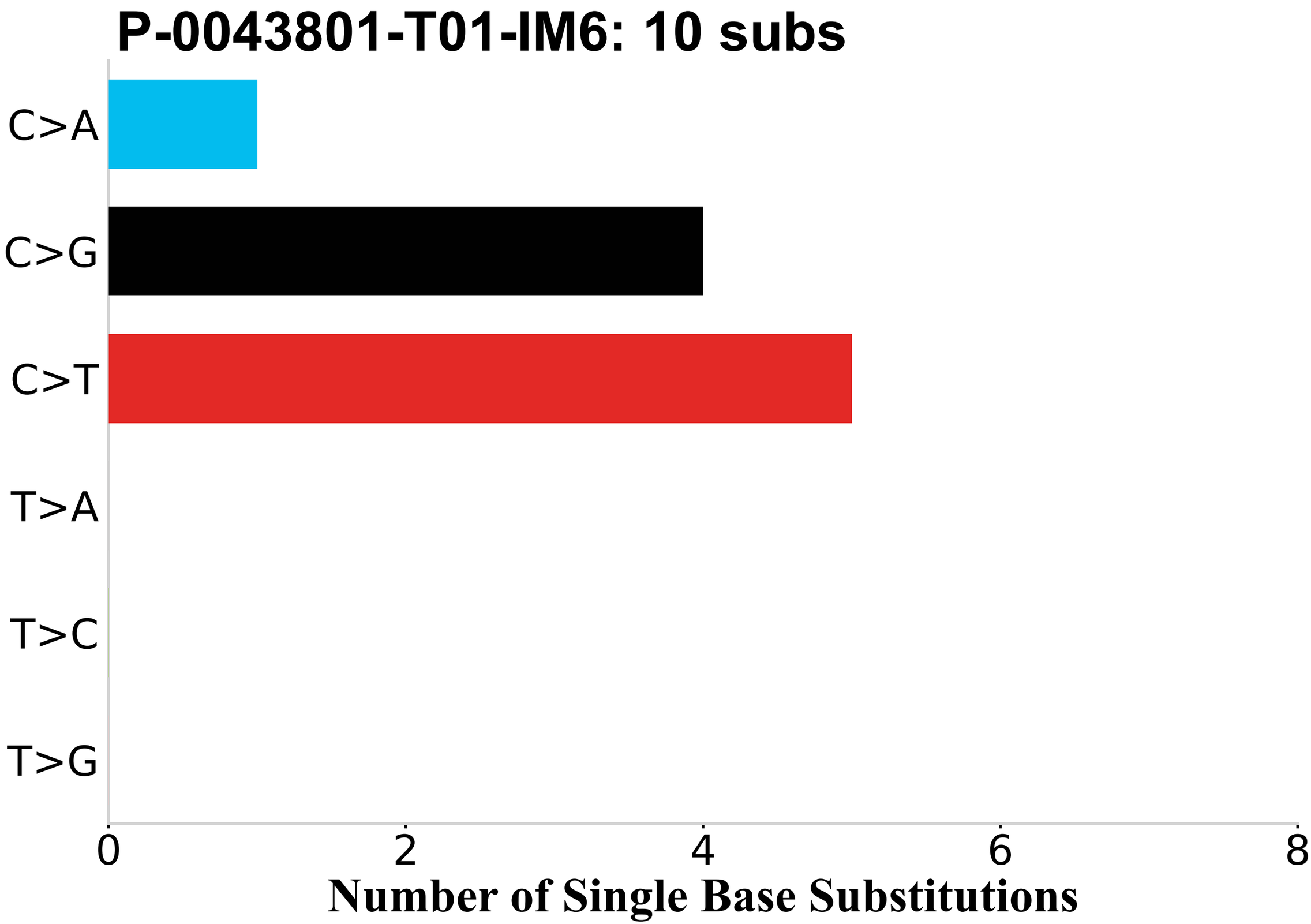
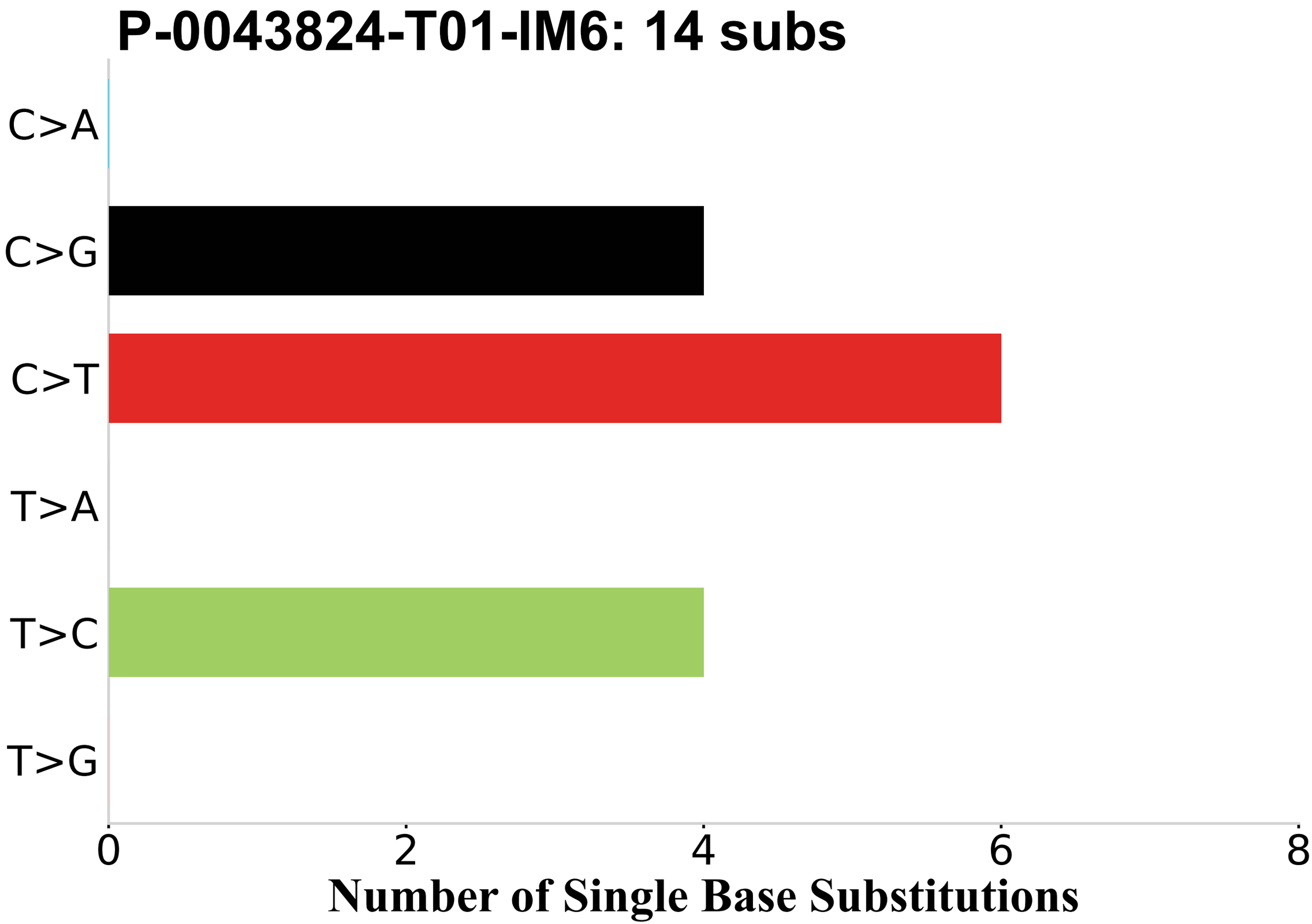
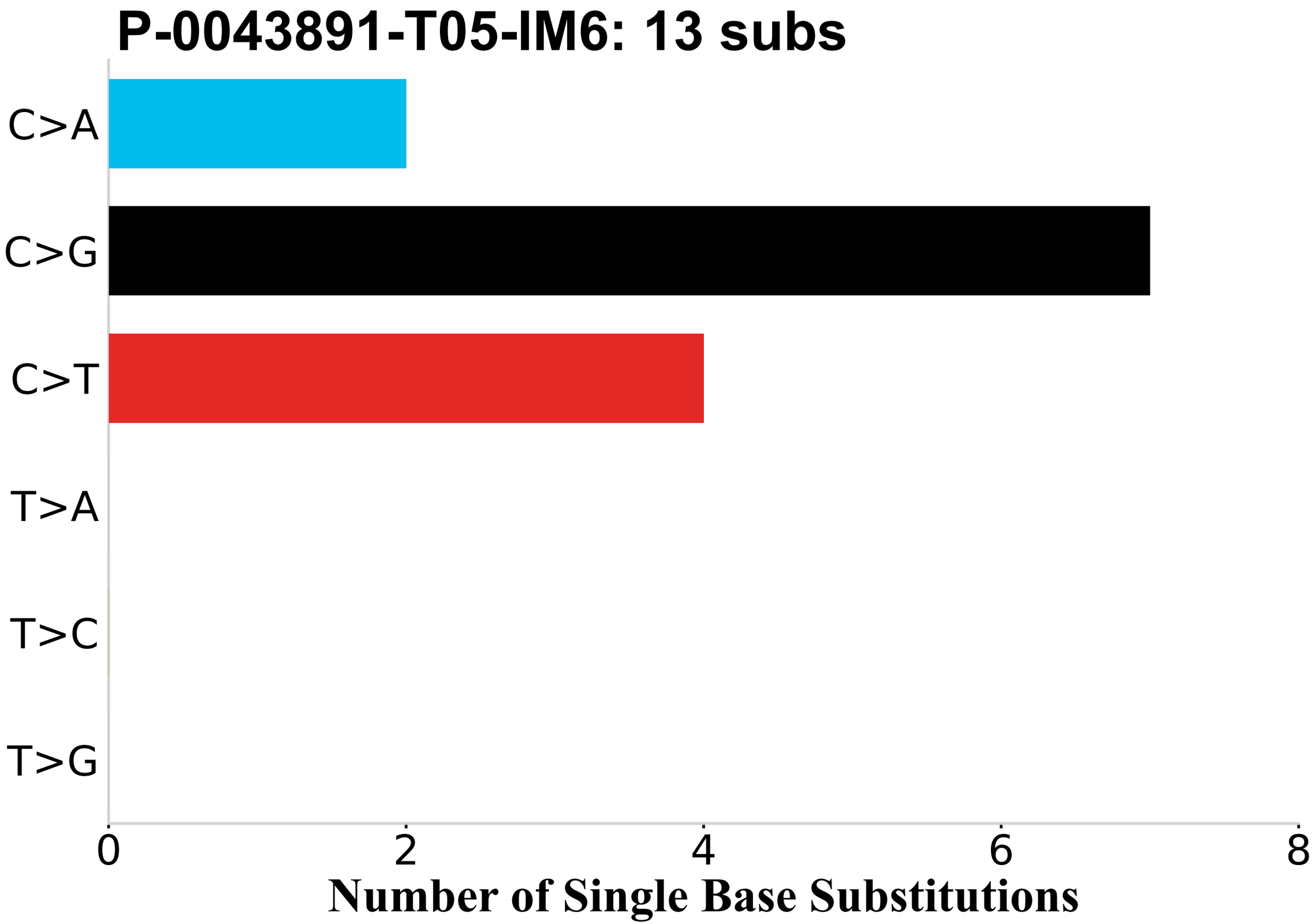
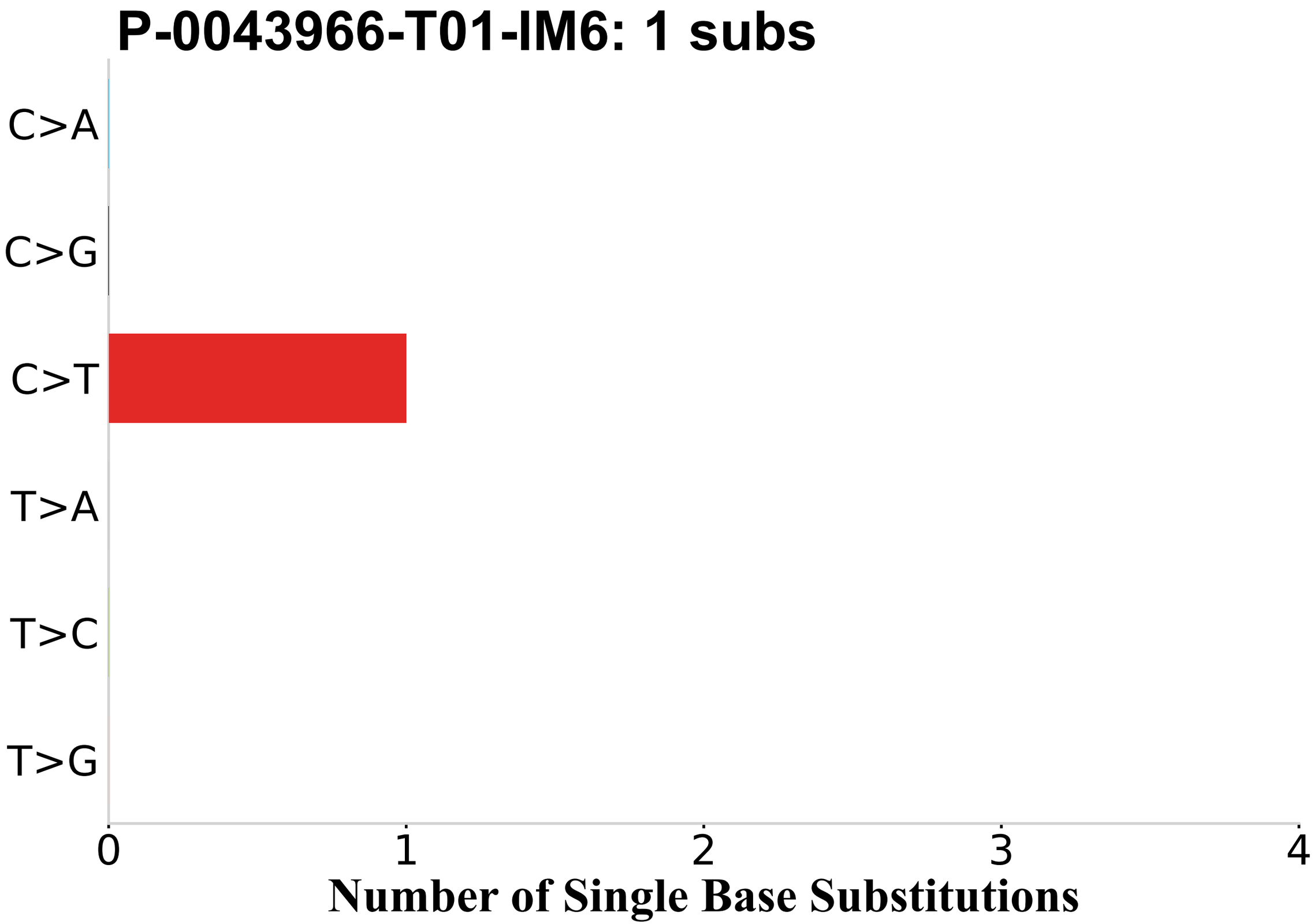
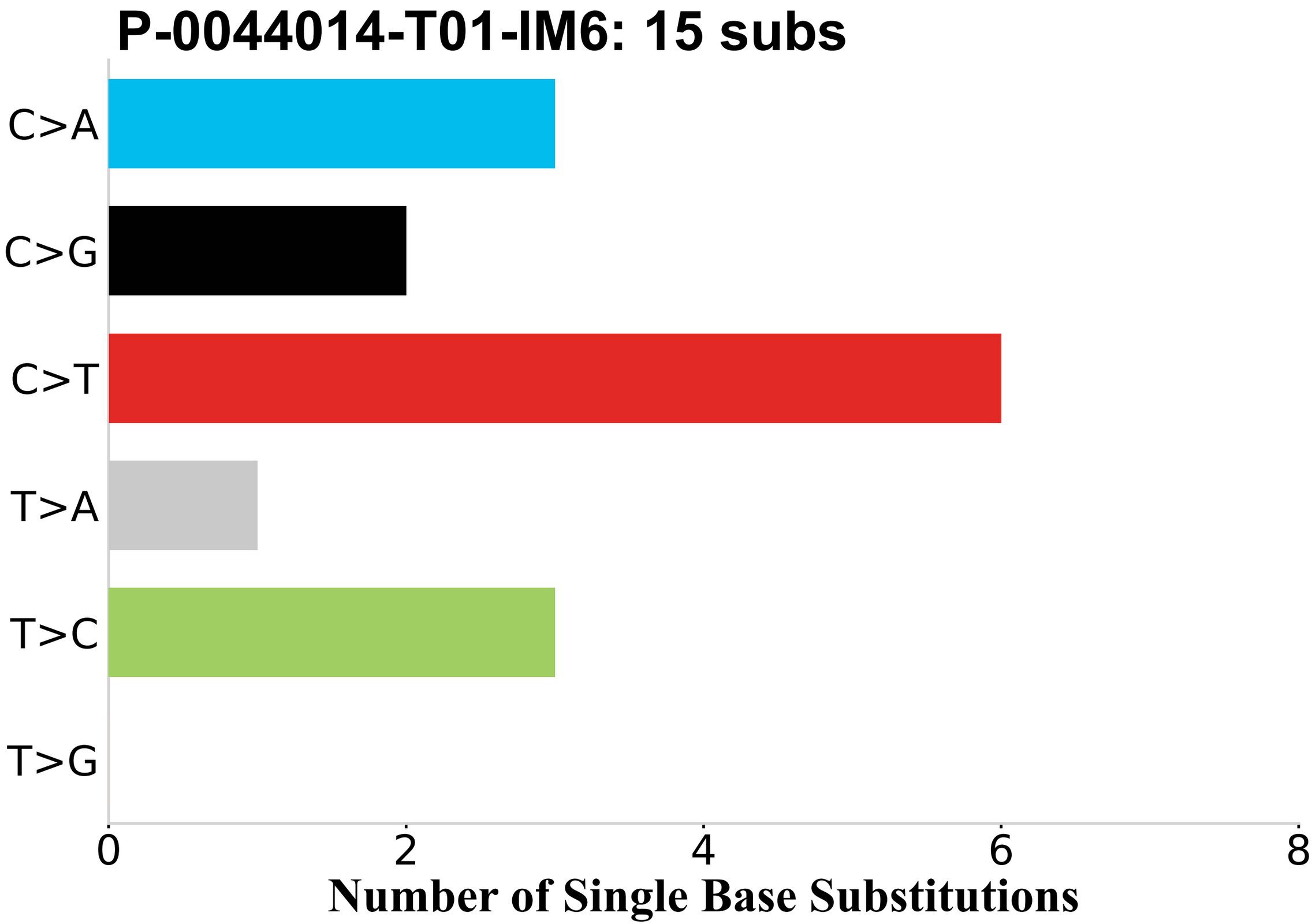
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0043801-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043824-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043891-T05-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0043966-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044014-T01-IM6: 15 subs
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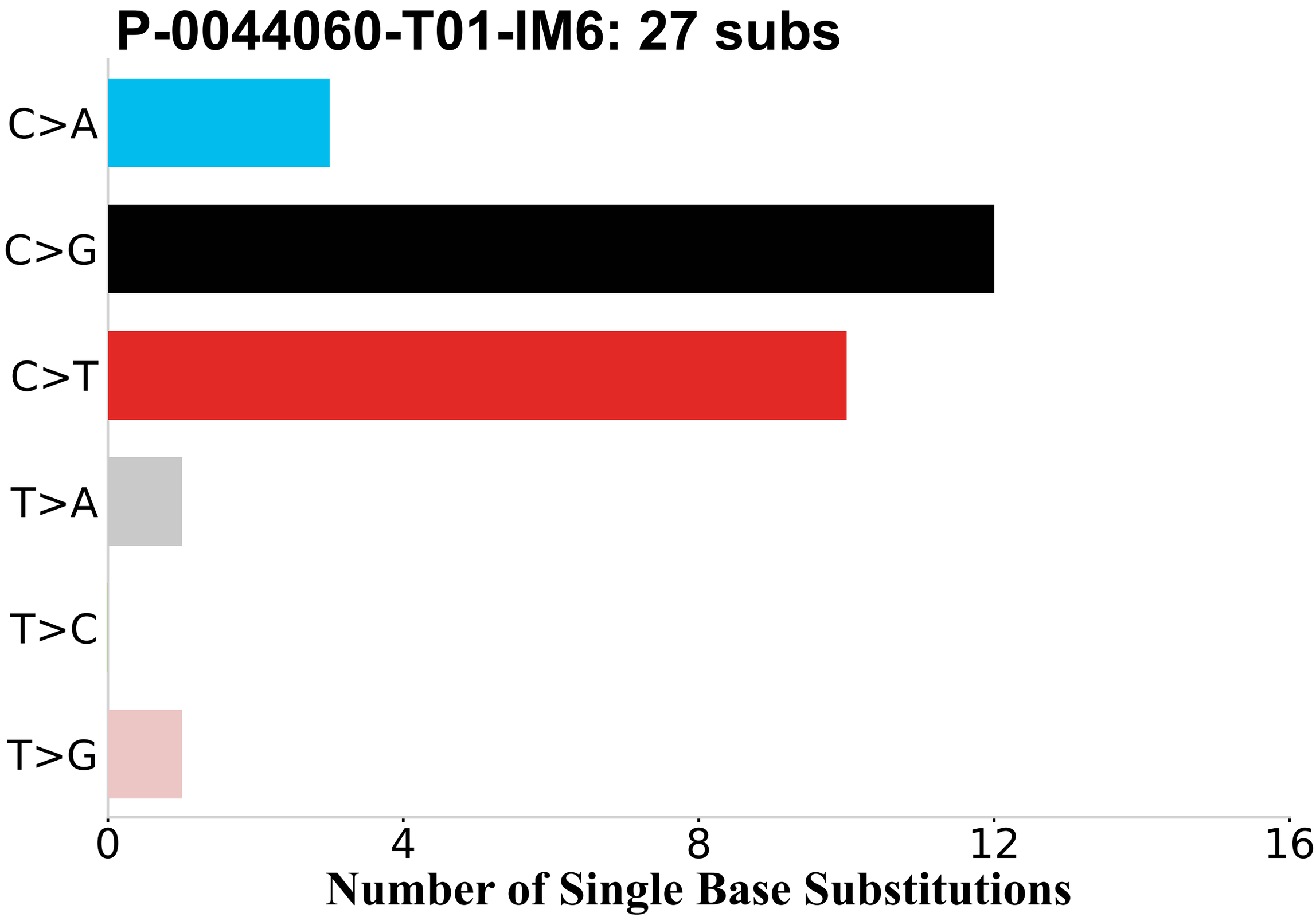
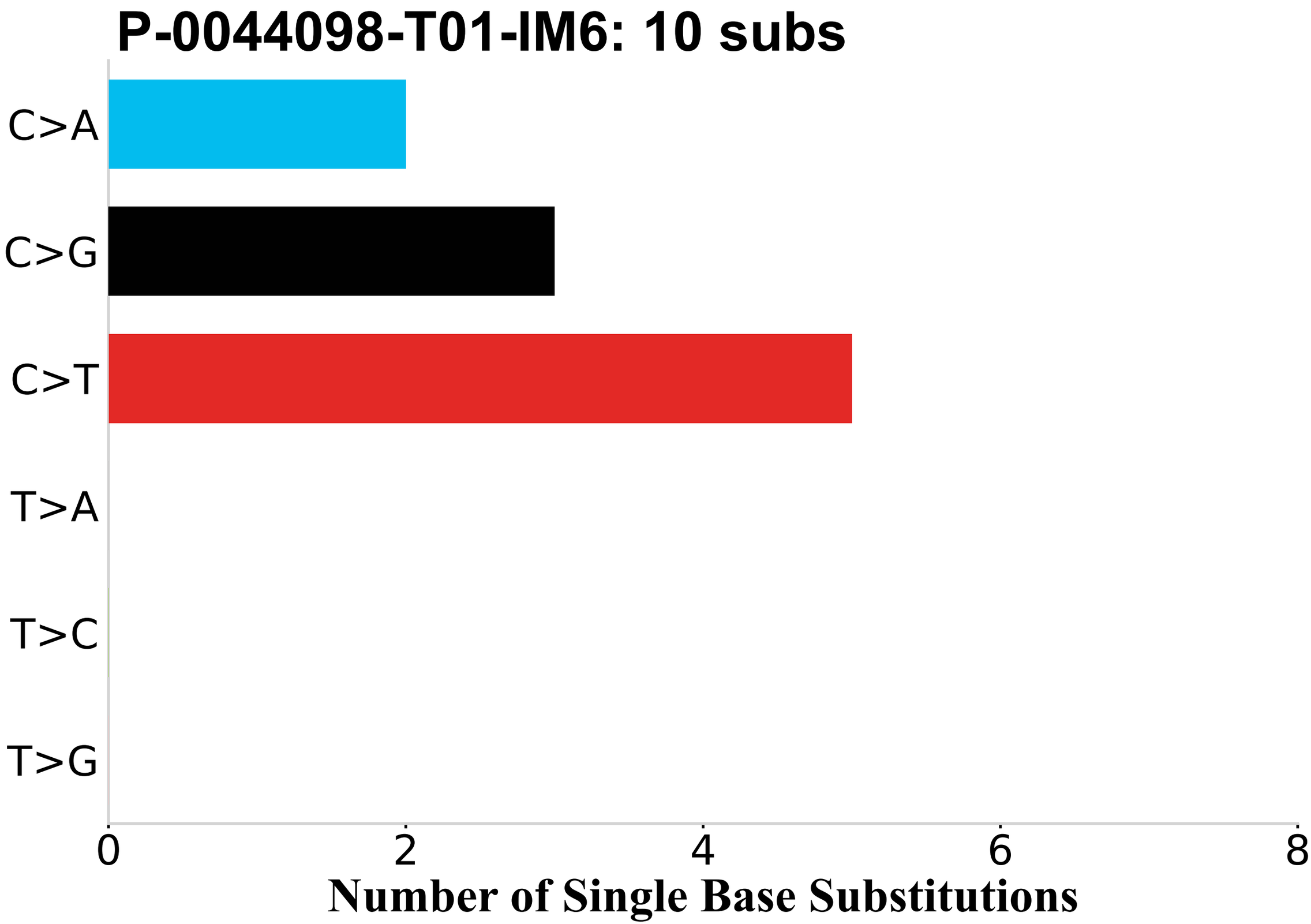
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044060-T01-IM6: 27 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0044098-T01-IM6: 10 subs
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C>G
C>T
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T>C
T>G
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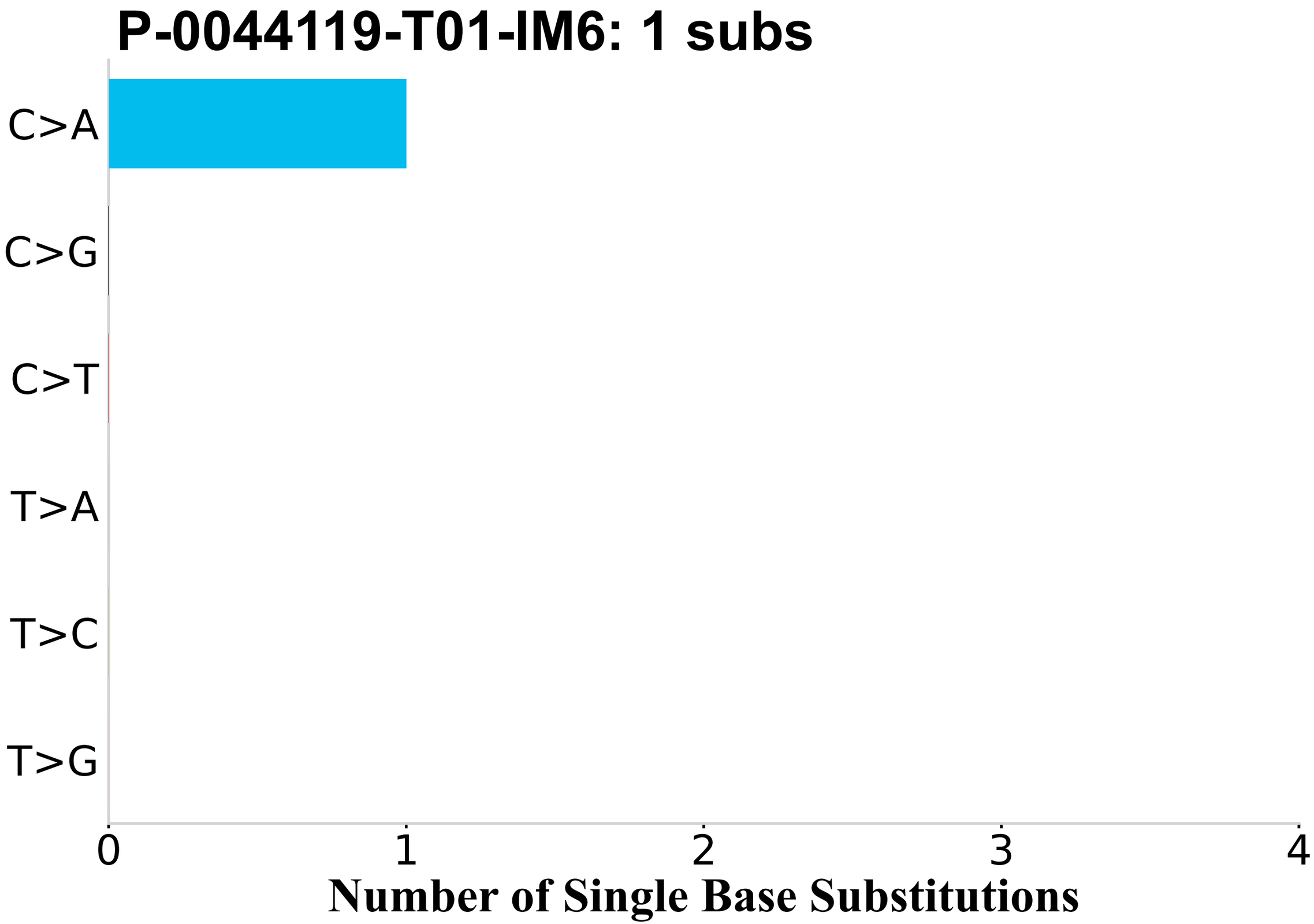
2
4
6
8
Number of Single Base Substitutions


P-0044119-T01-IM6: 1 subs
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C>G
C>T
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T>C
T>G
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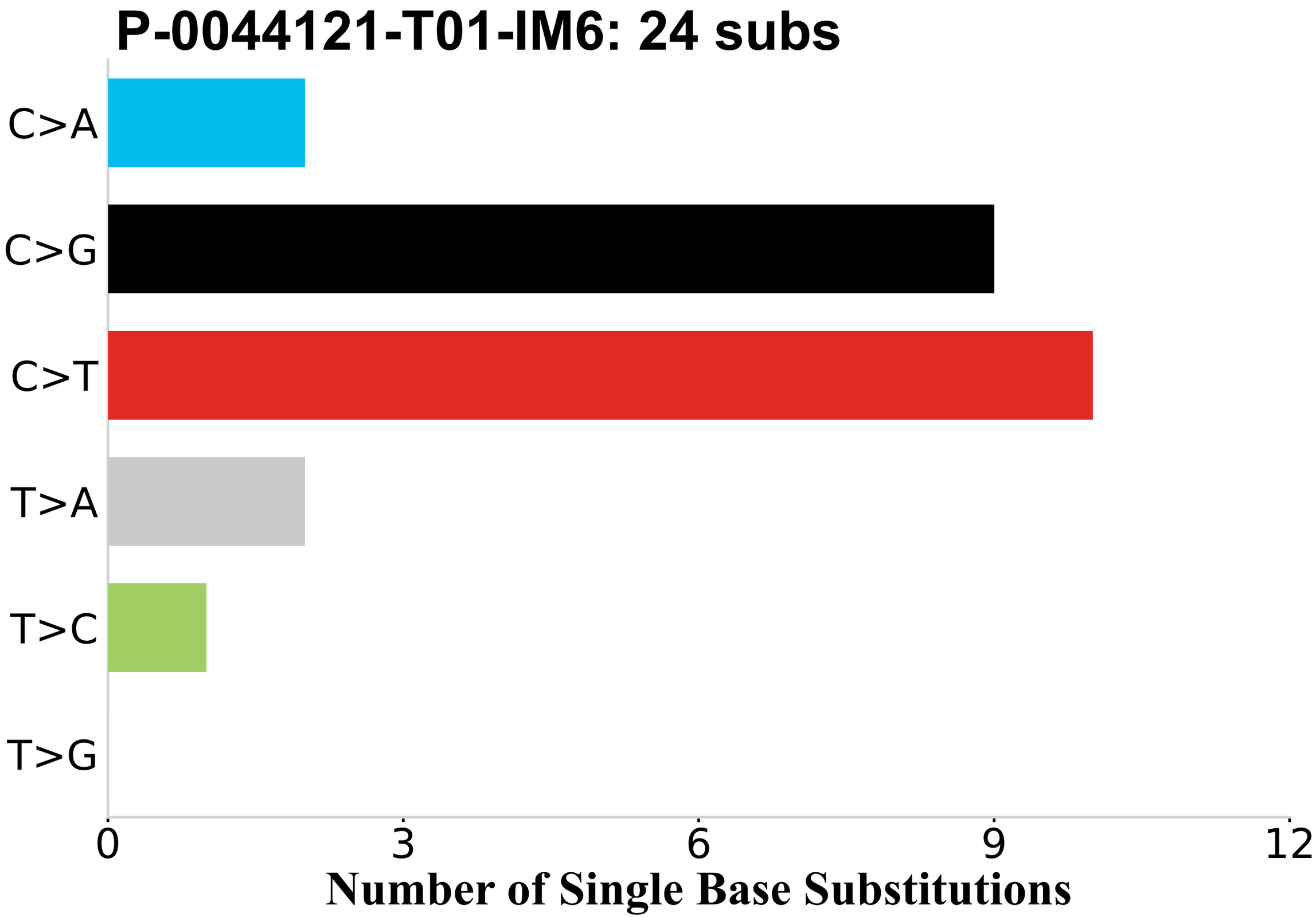
1
2
3
4
Number of Single Base Substitutions


P-0044121-T01-IM6: 24 subs
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C>G
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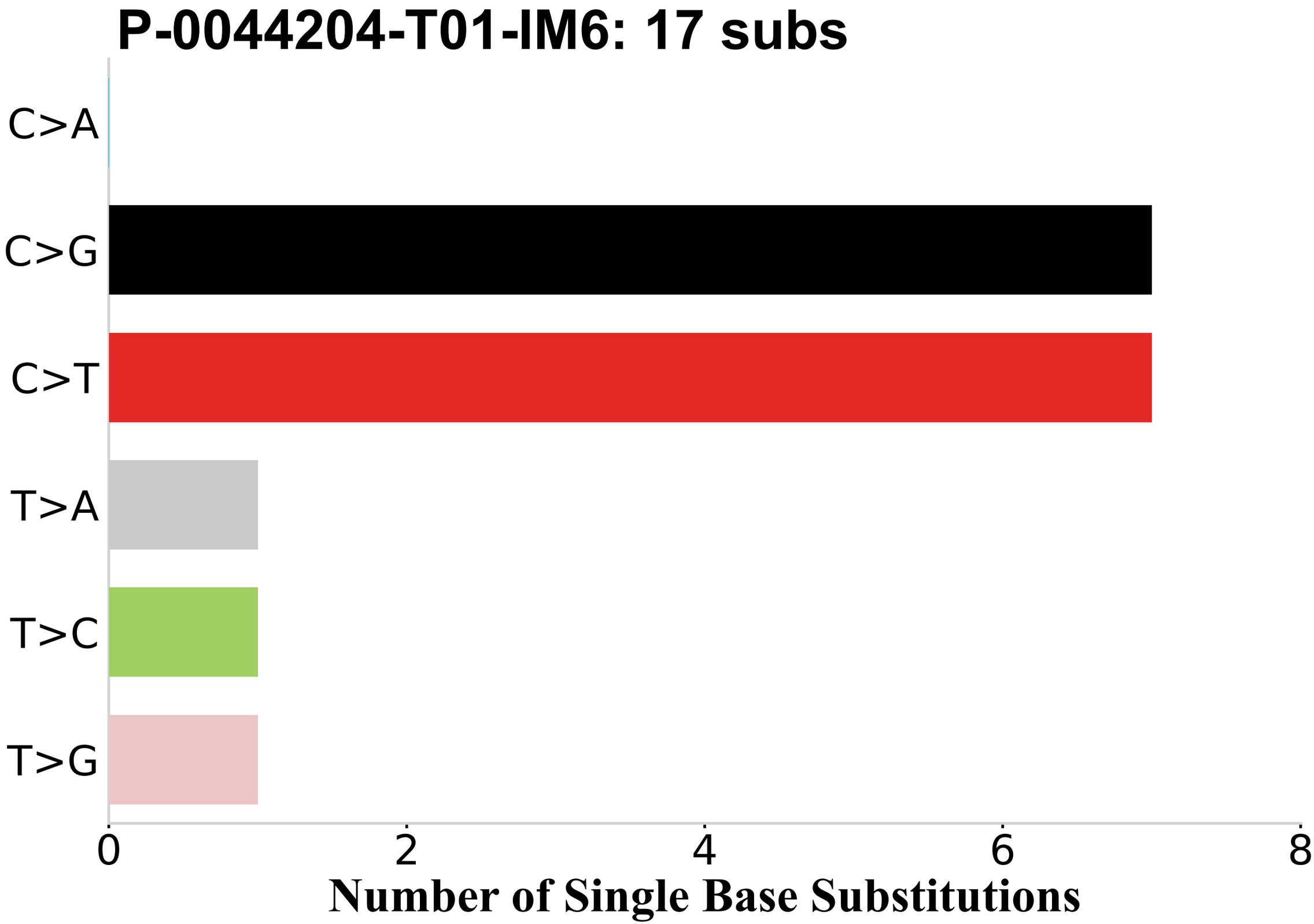
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0044204-T01-IM6: 17 subs
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C>G
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T>C
T>G
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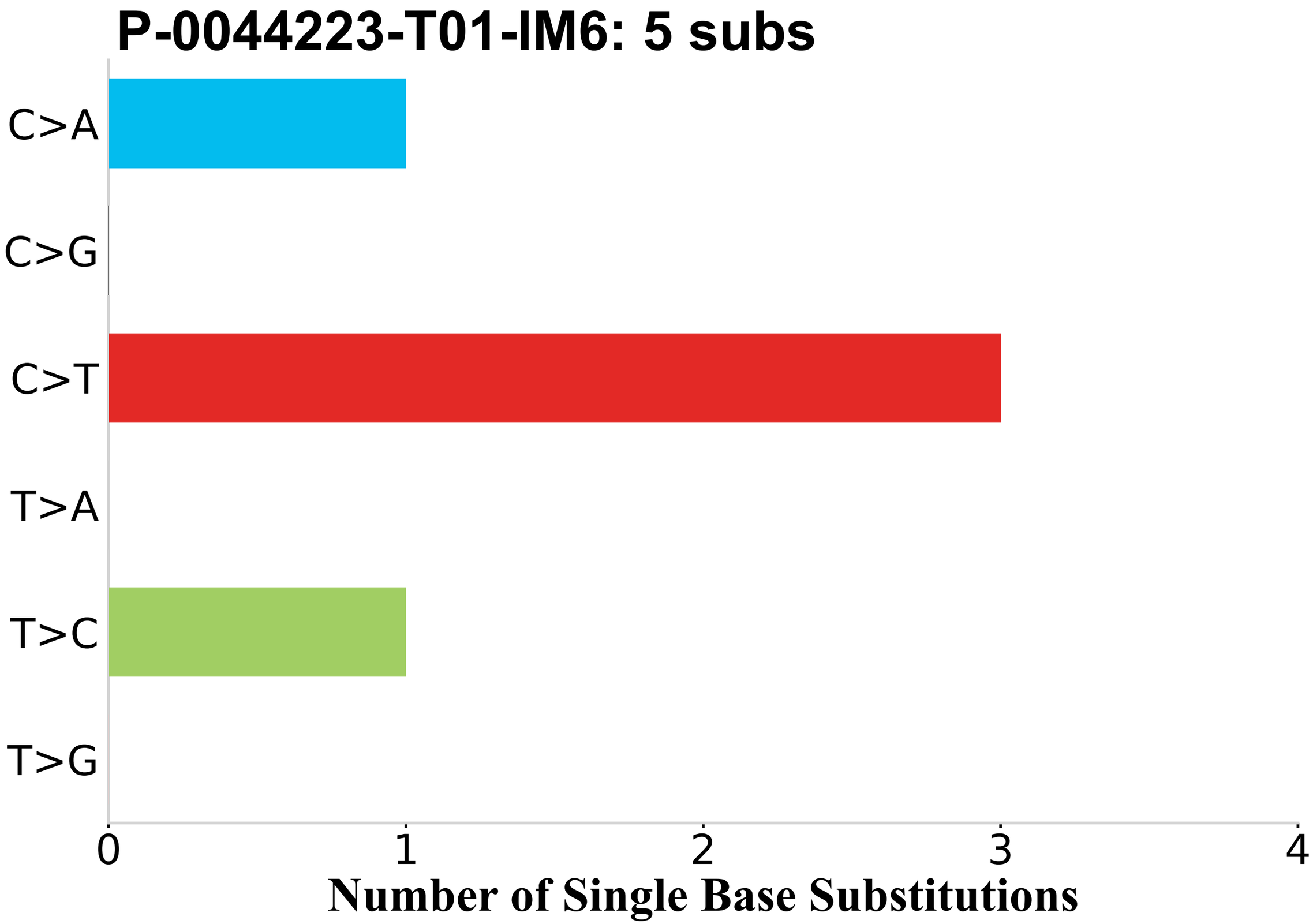
4
6
8
Number of Single Base Substitutions


P-0044223-T01-IM6: 5 subs
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C>G
C>T
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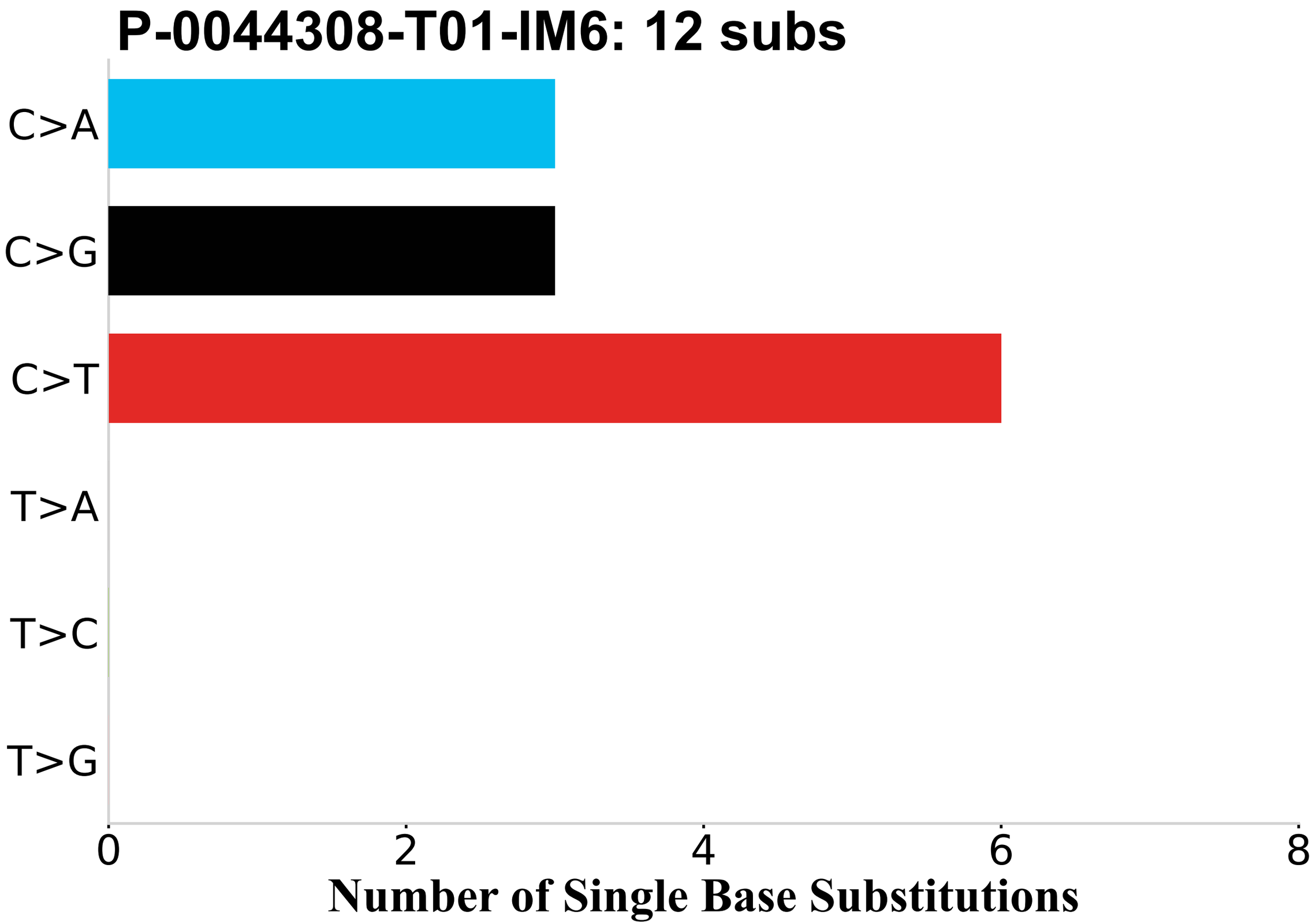
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044308-T01-IM6: 12 subs
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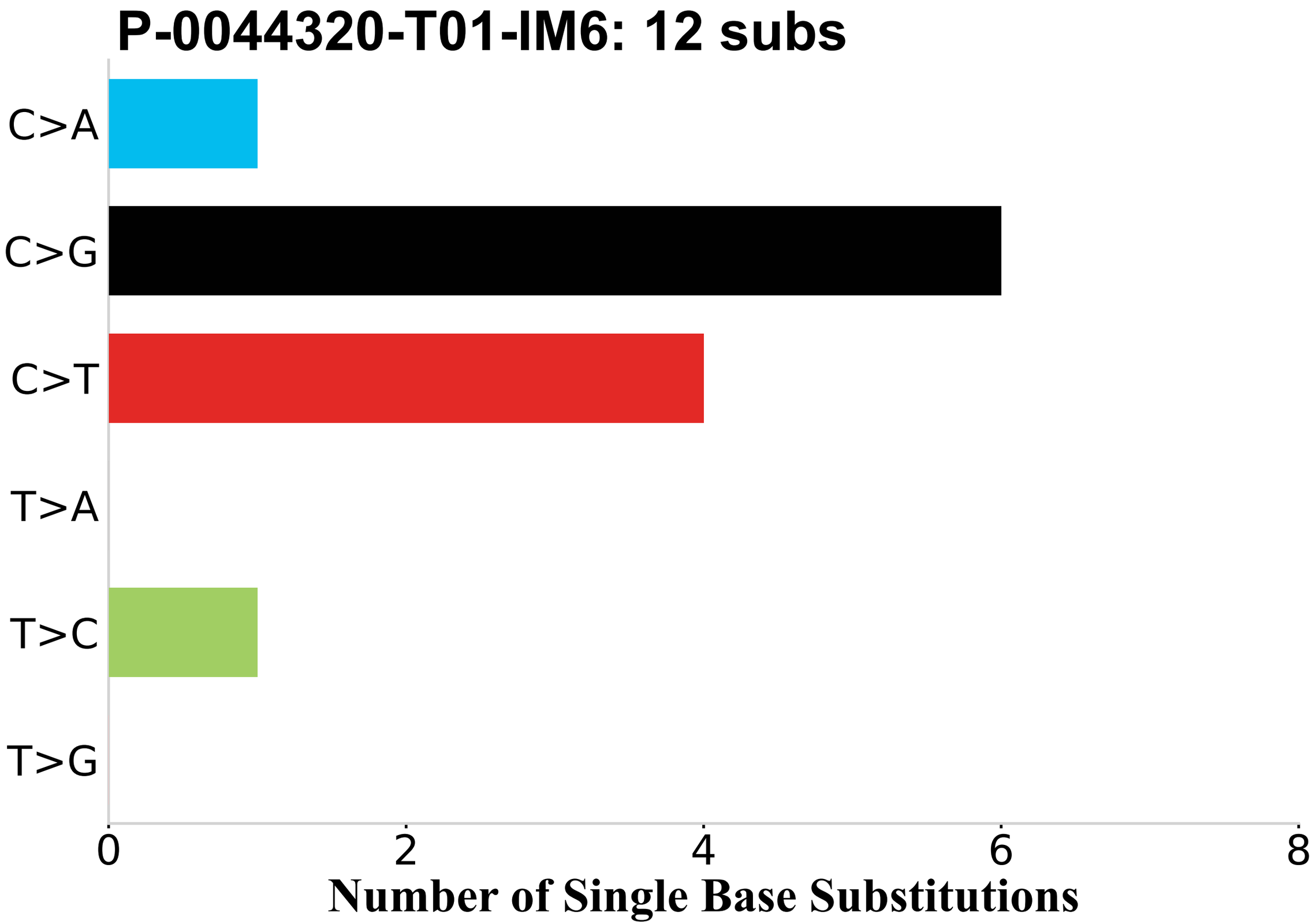
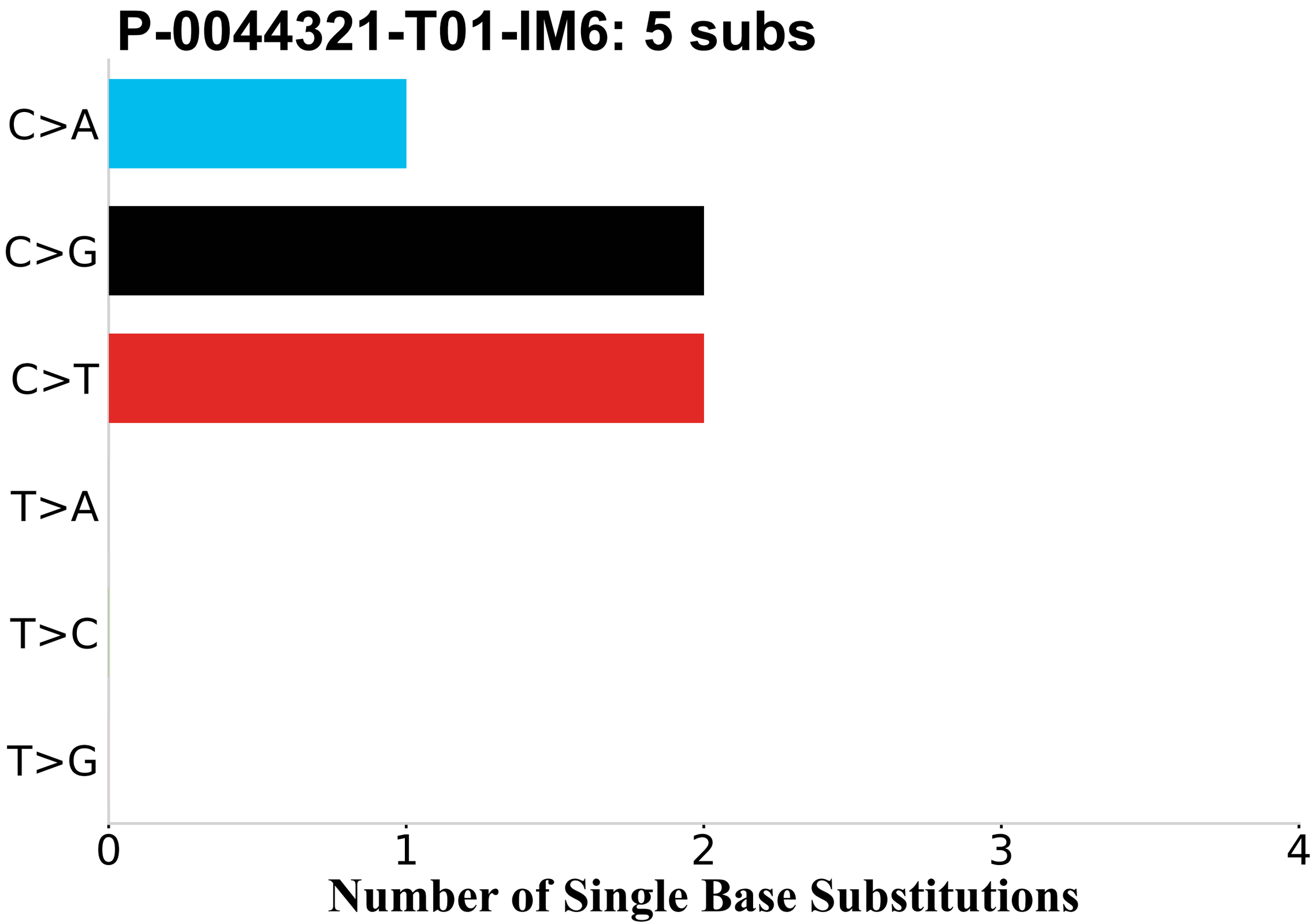
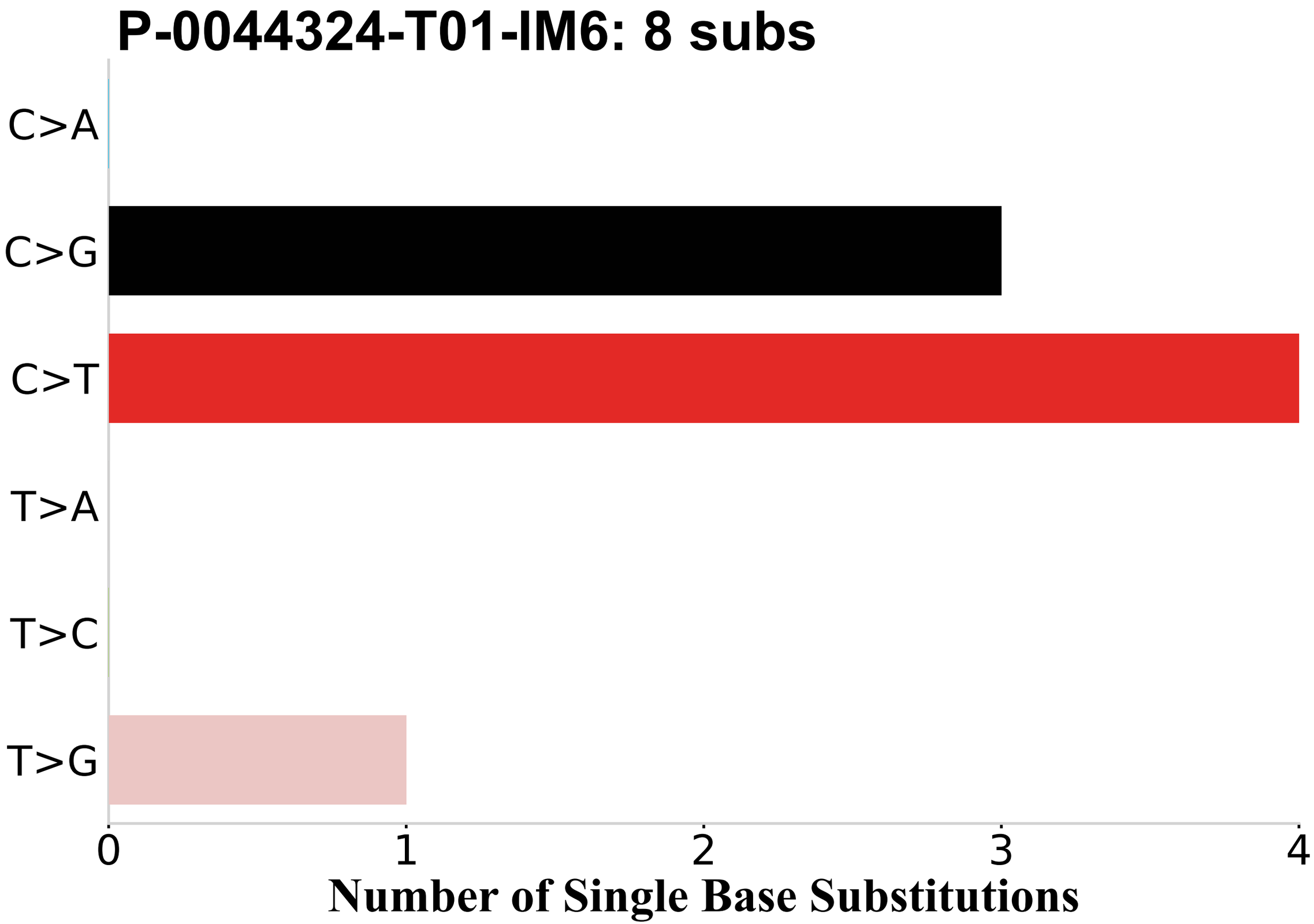
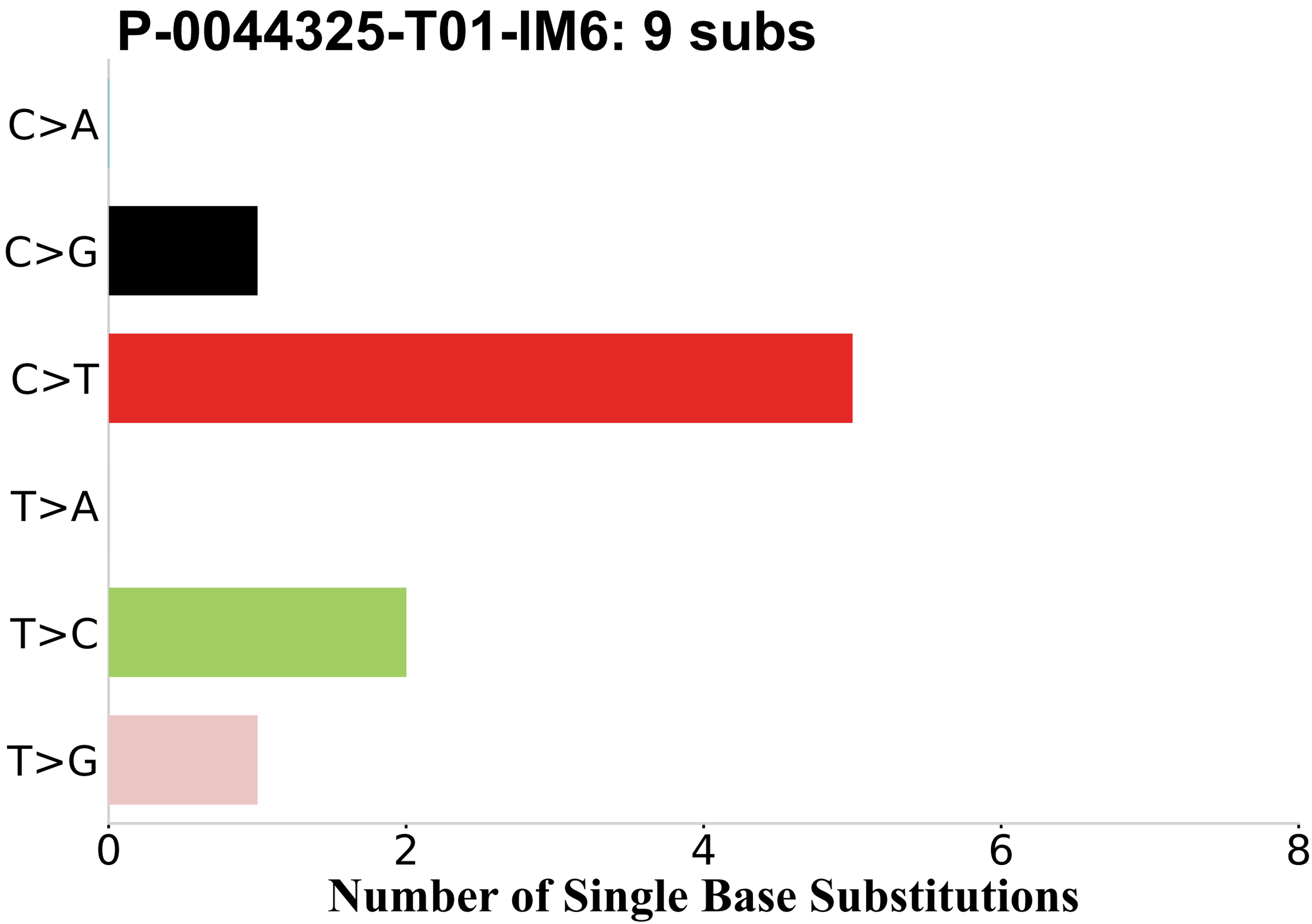
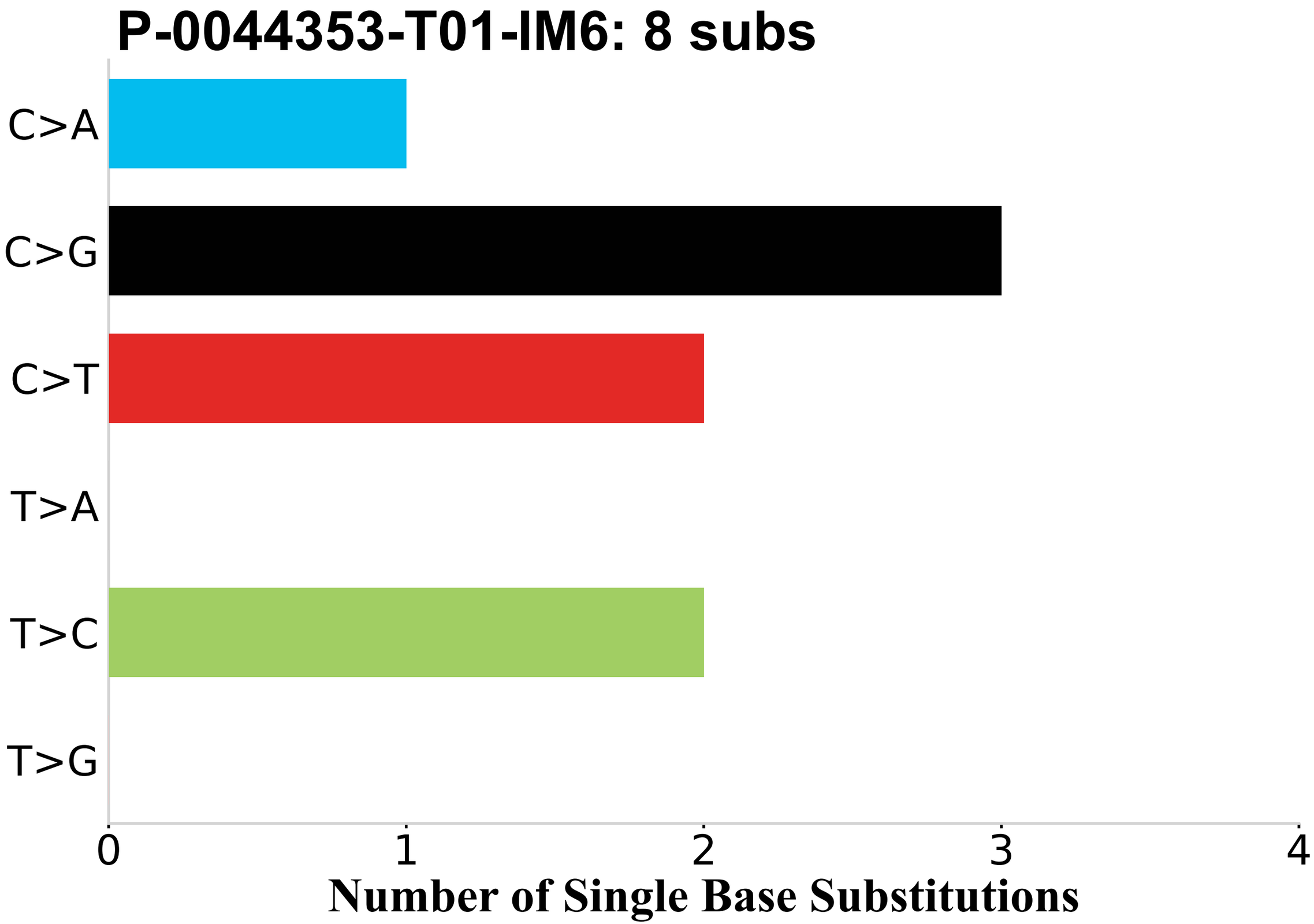
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

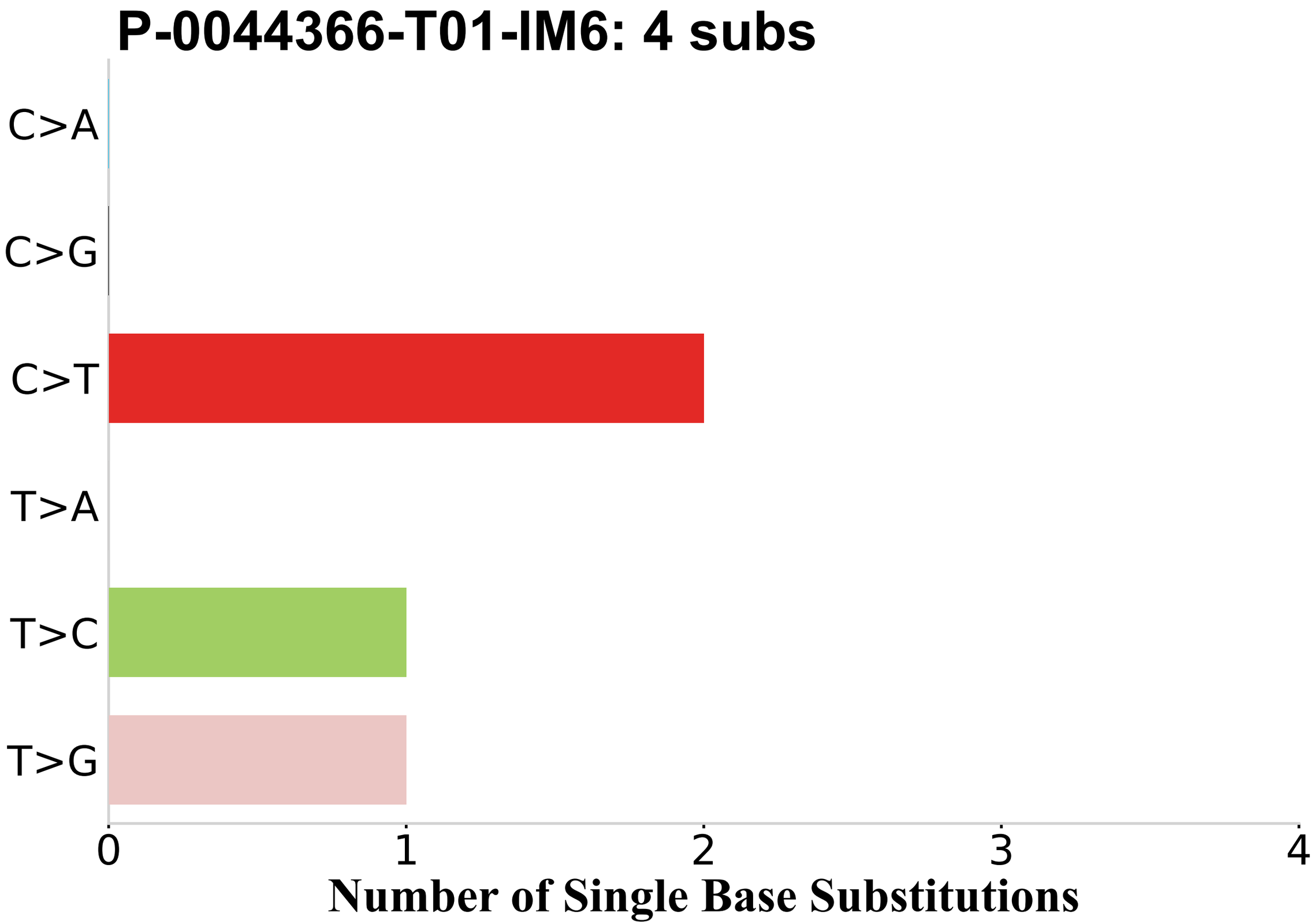

P-0044320-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

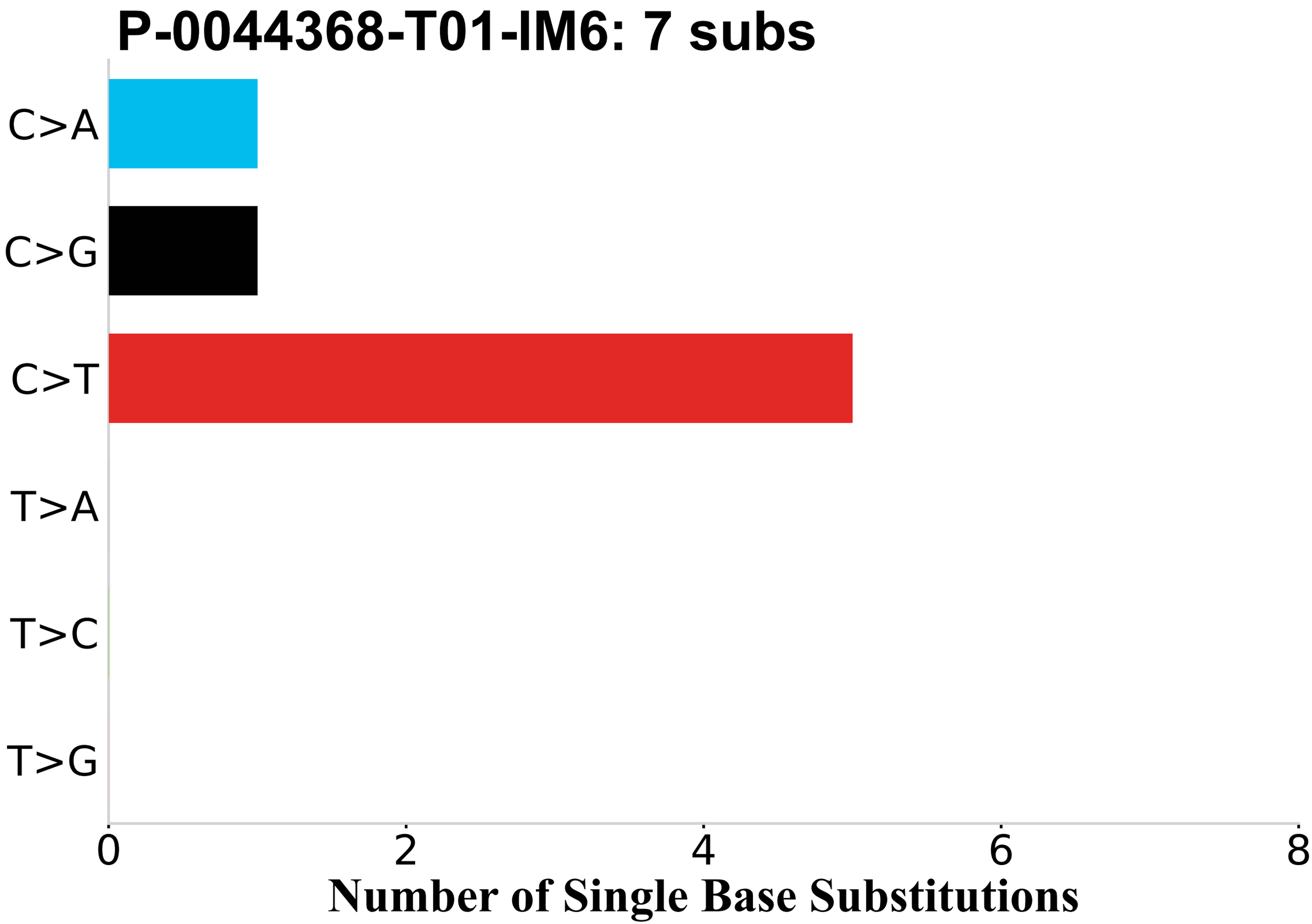

P-0044321-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

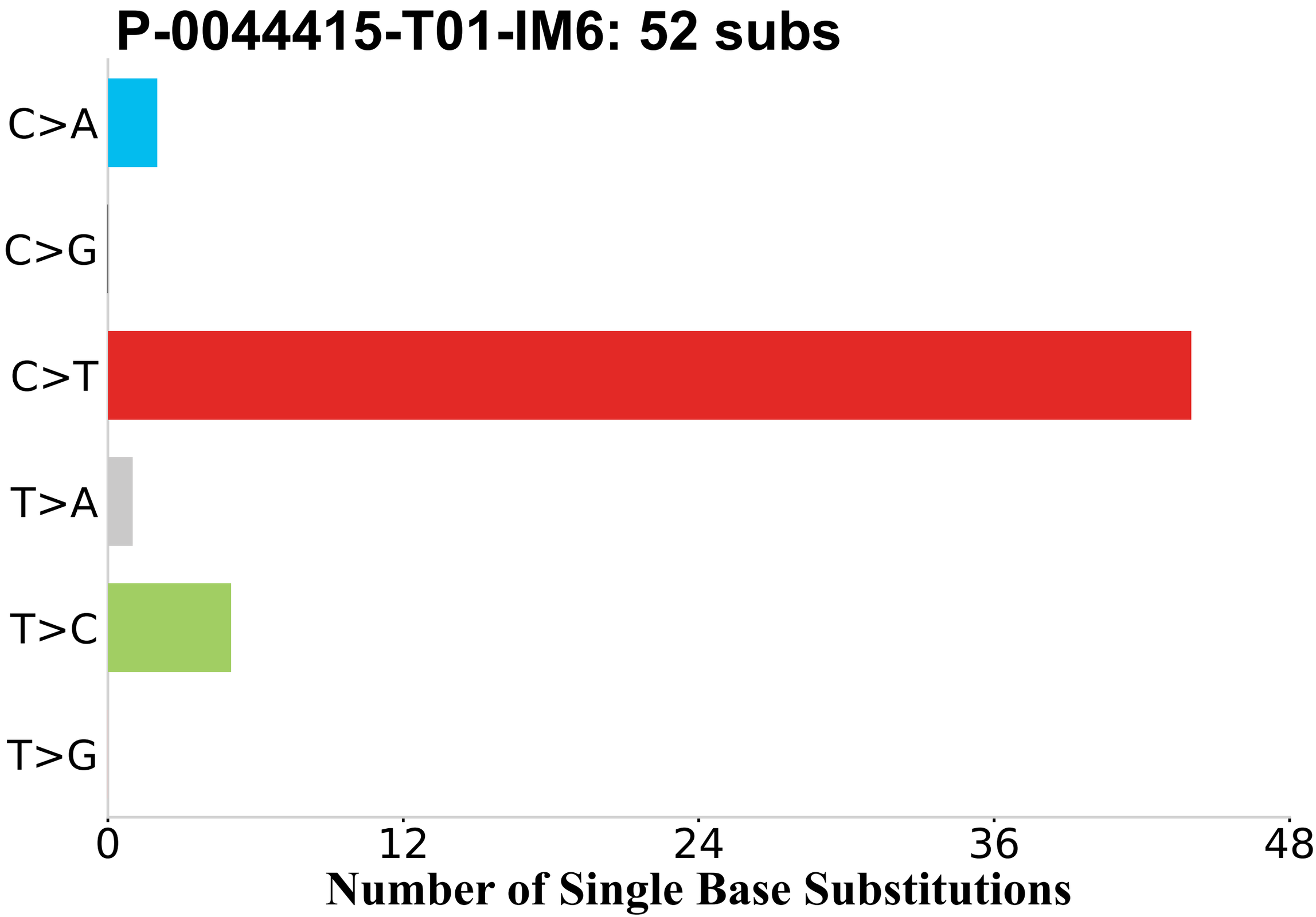

P-0044324-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

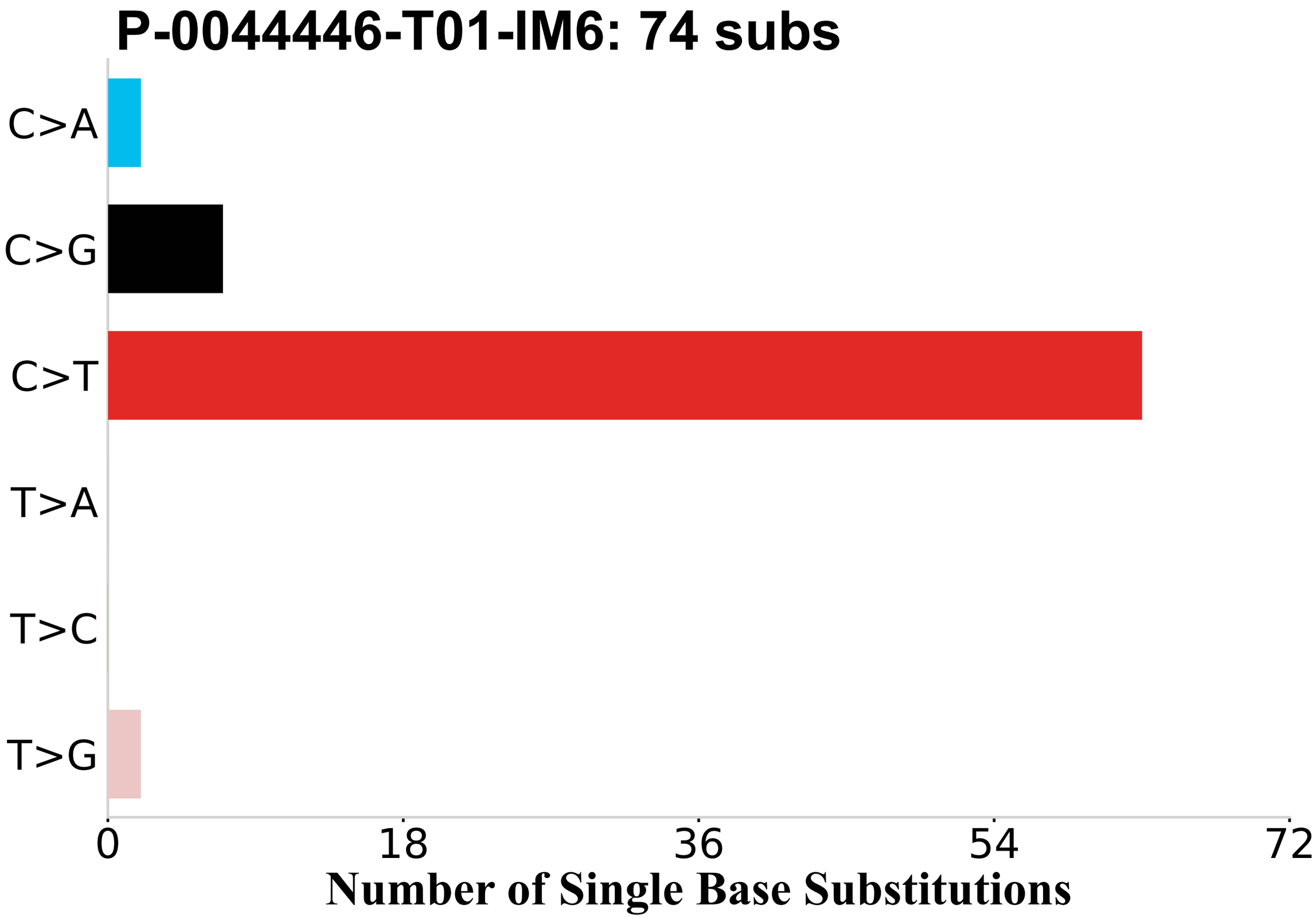

P-0044325-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

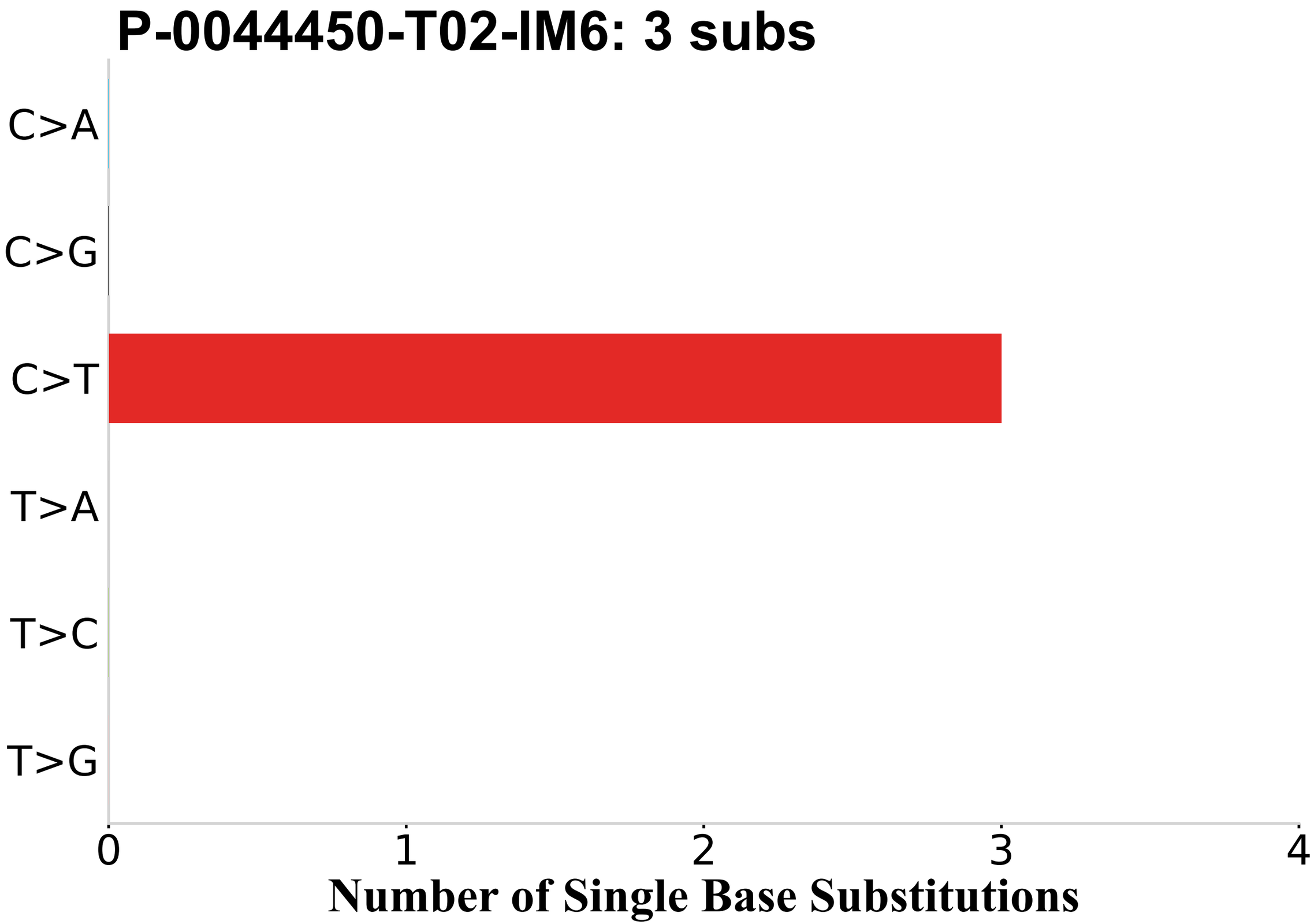

P-0044353-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

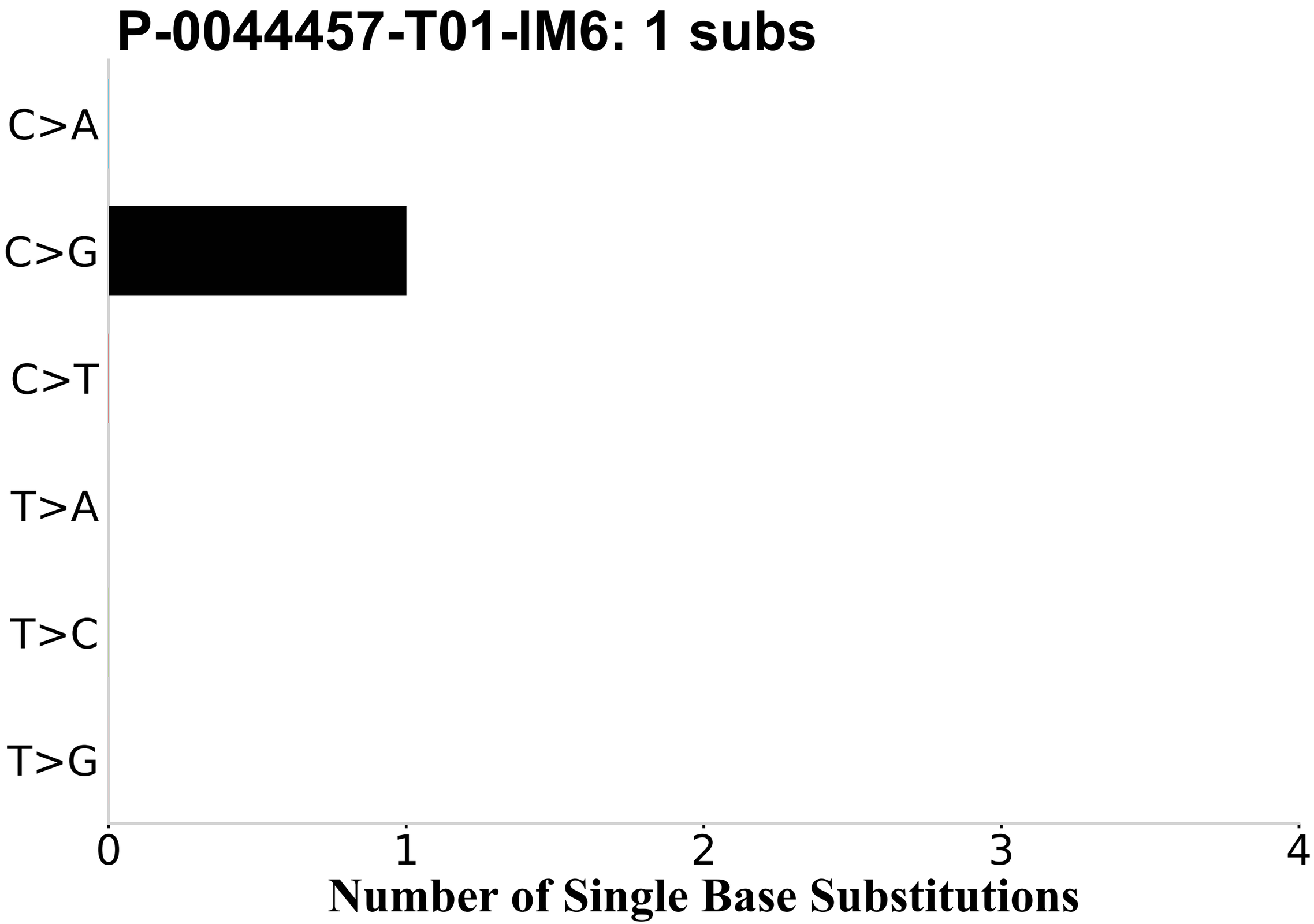

P-0044366-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

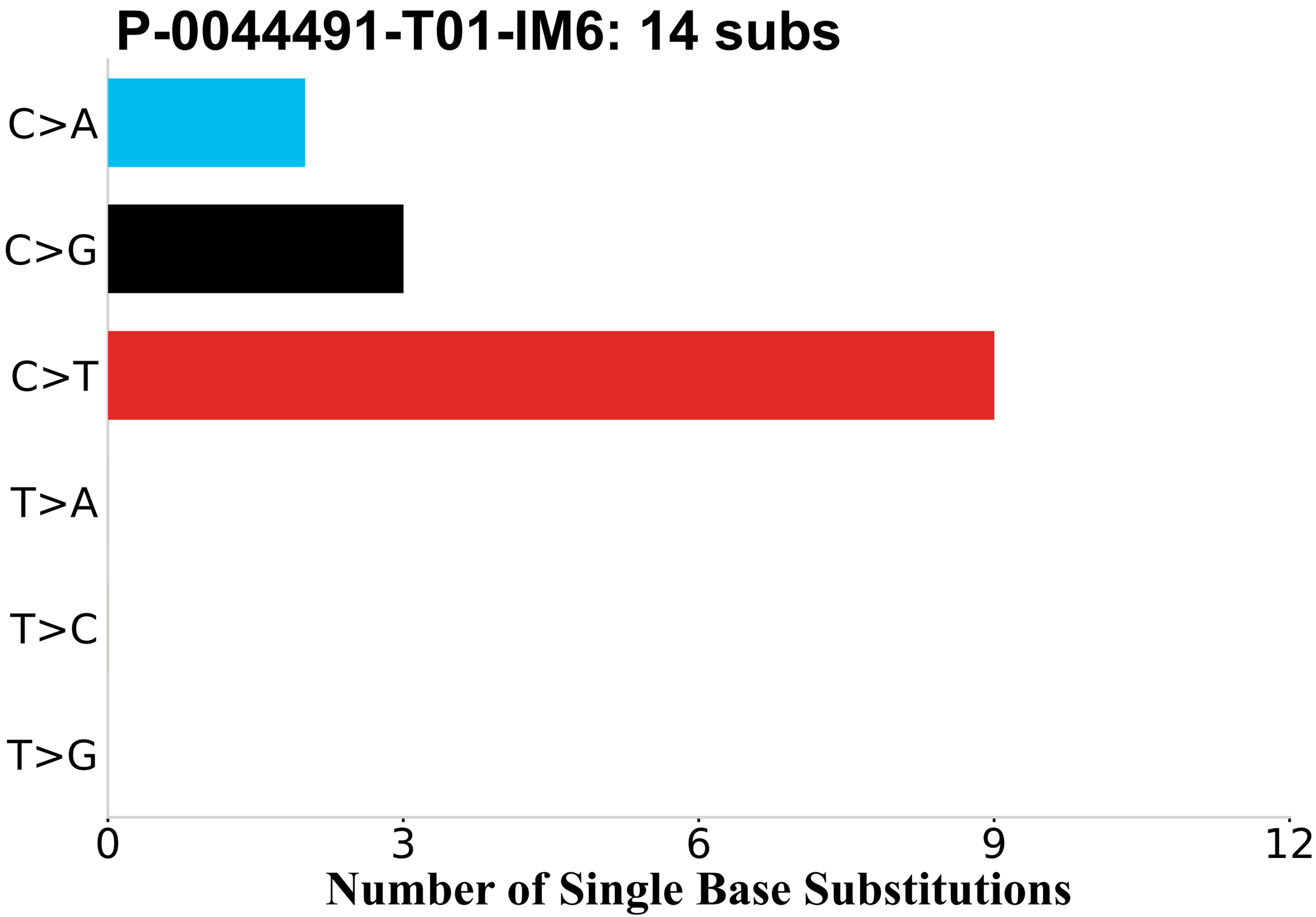

P-0044368-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

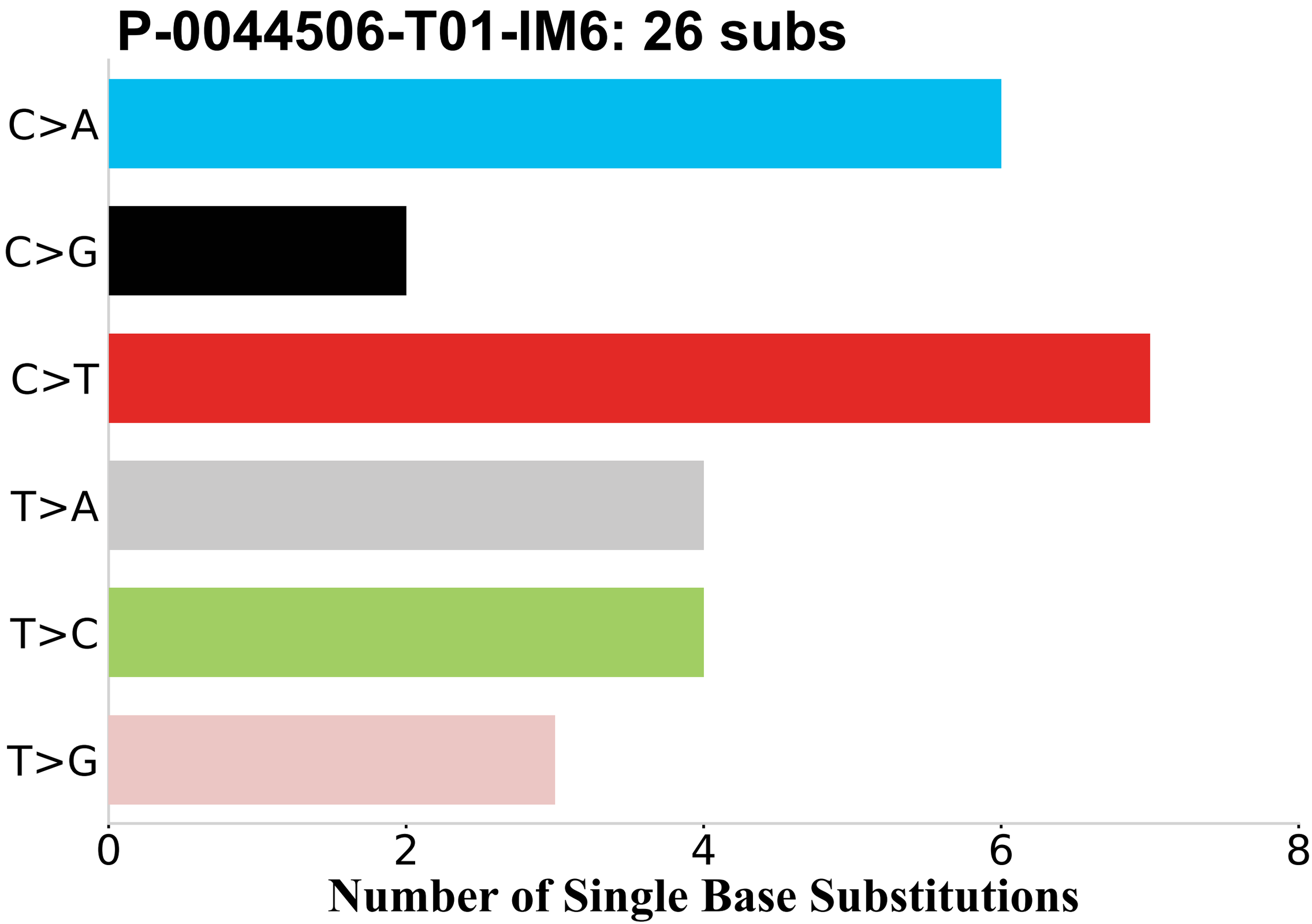

P-0044415-T01-IM6: 52 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
12
24
36
48
Number of Single Base Substitutions

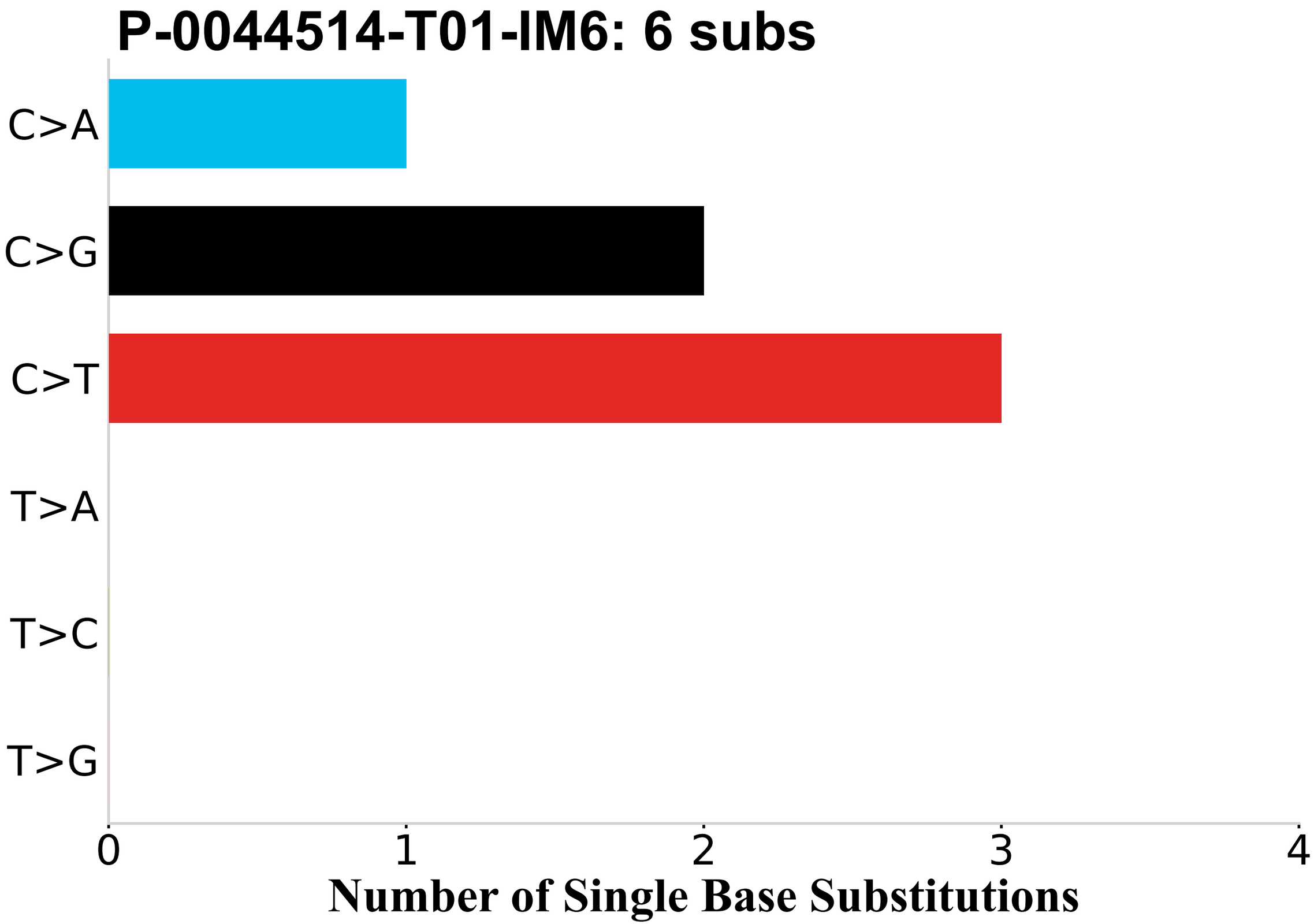

P-0044446-T01-IM6: 74 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
18
36
54
72
Number of Single Base Substitutions


P-0044450-T02-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044457-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044491-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0044506-T01-IM6: 26 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044514-T01-IM6: 6 subs
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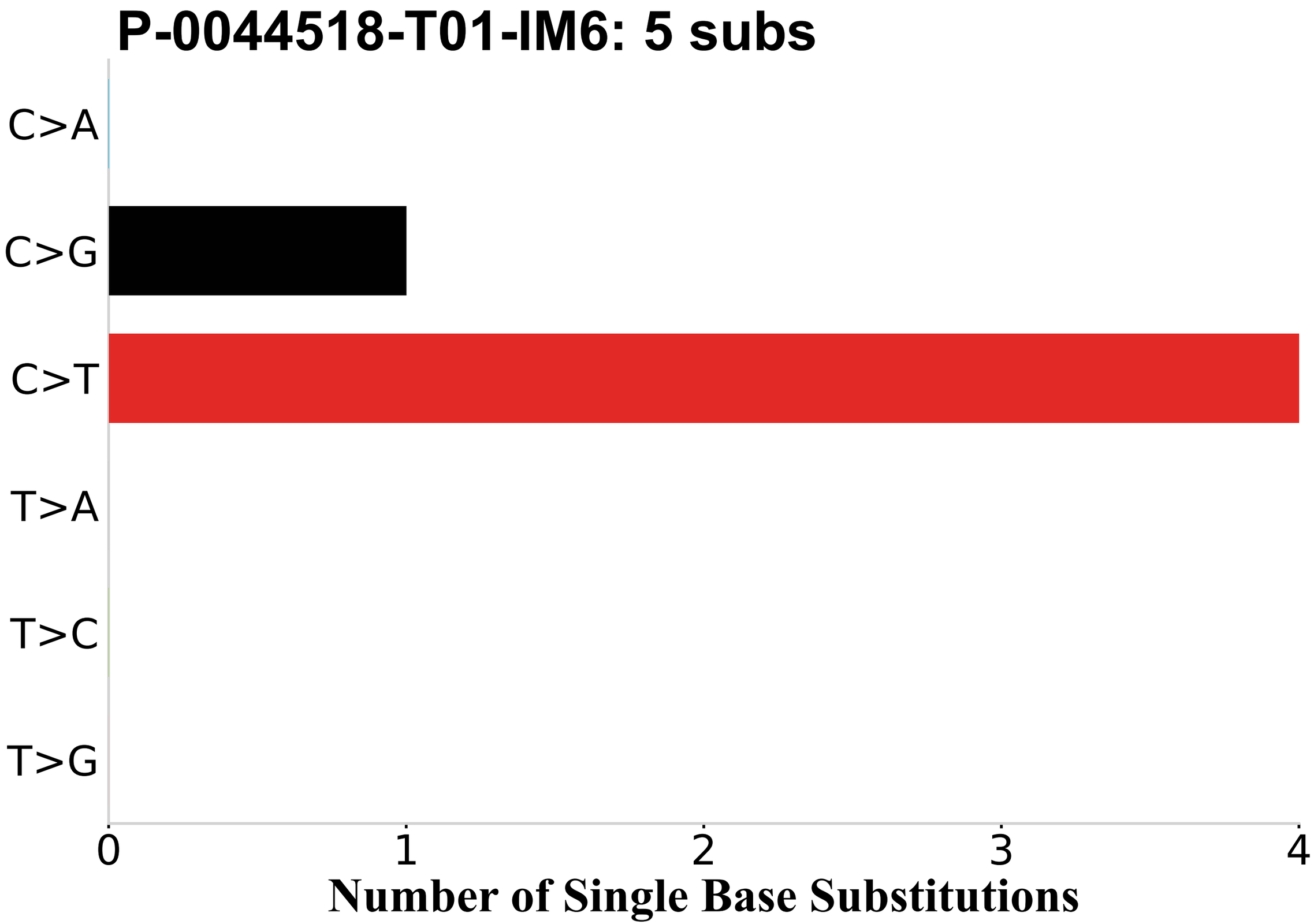
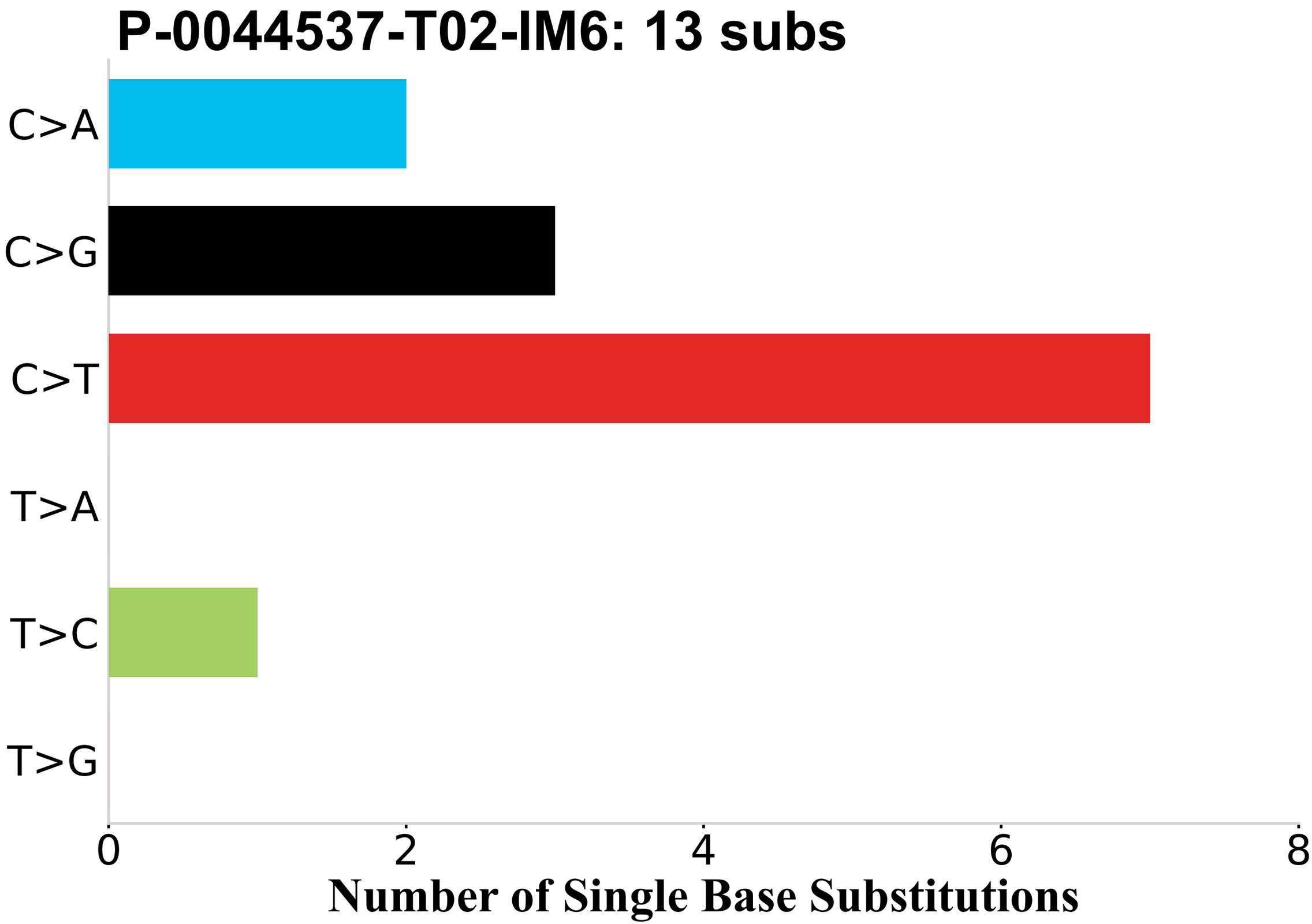
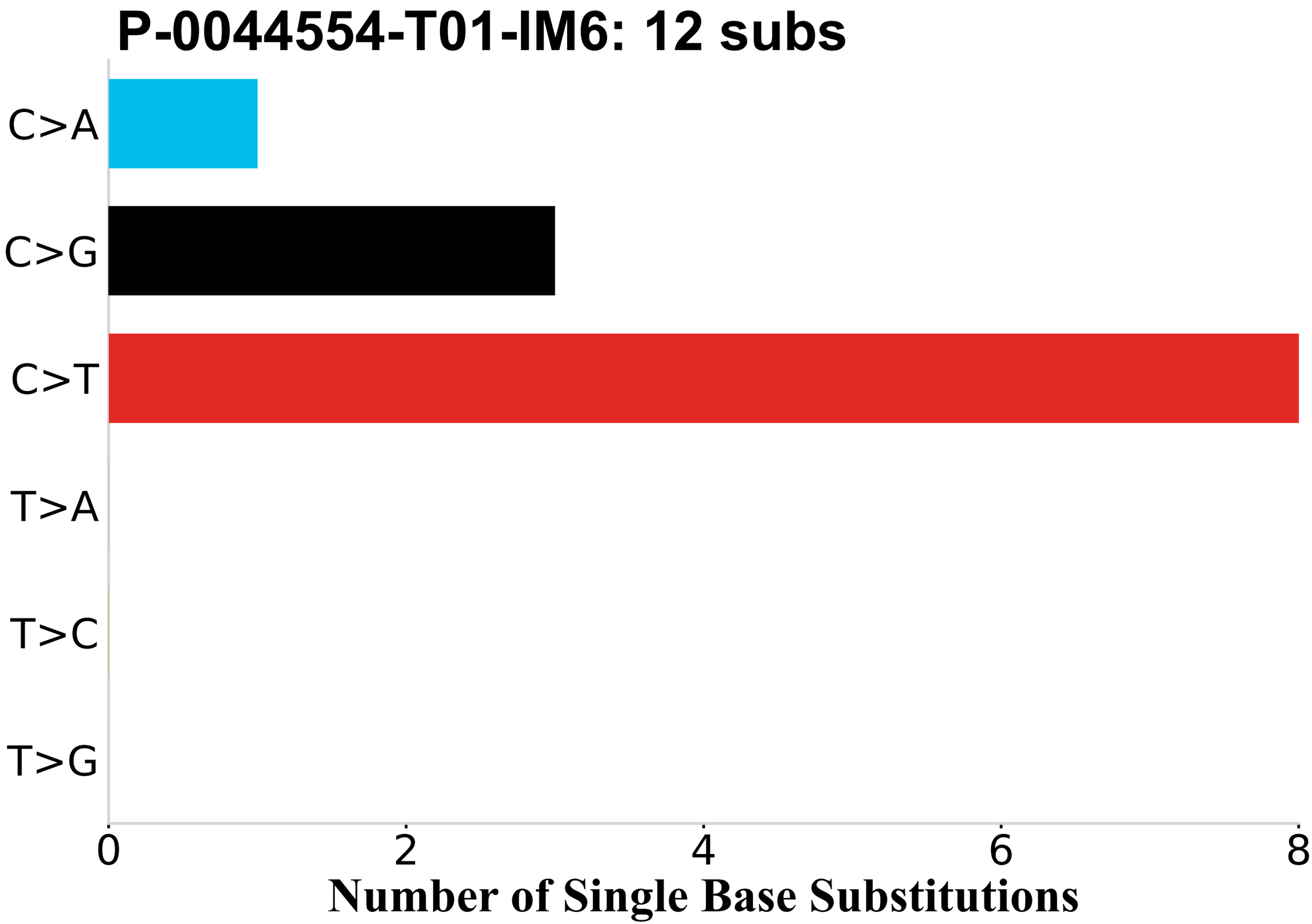
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044518-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044537-T02-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044554-T01-IM6: 12 subs
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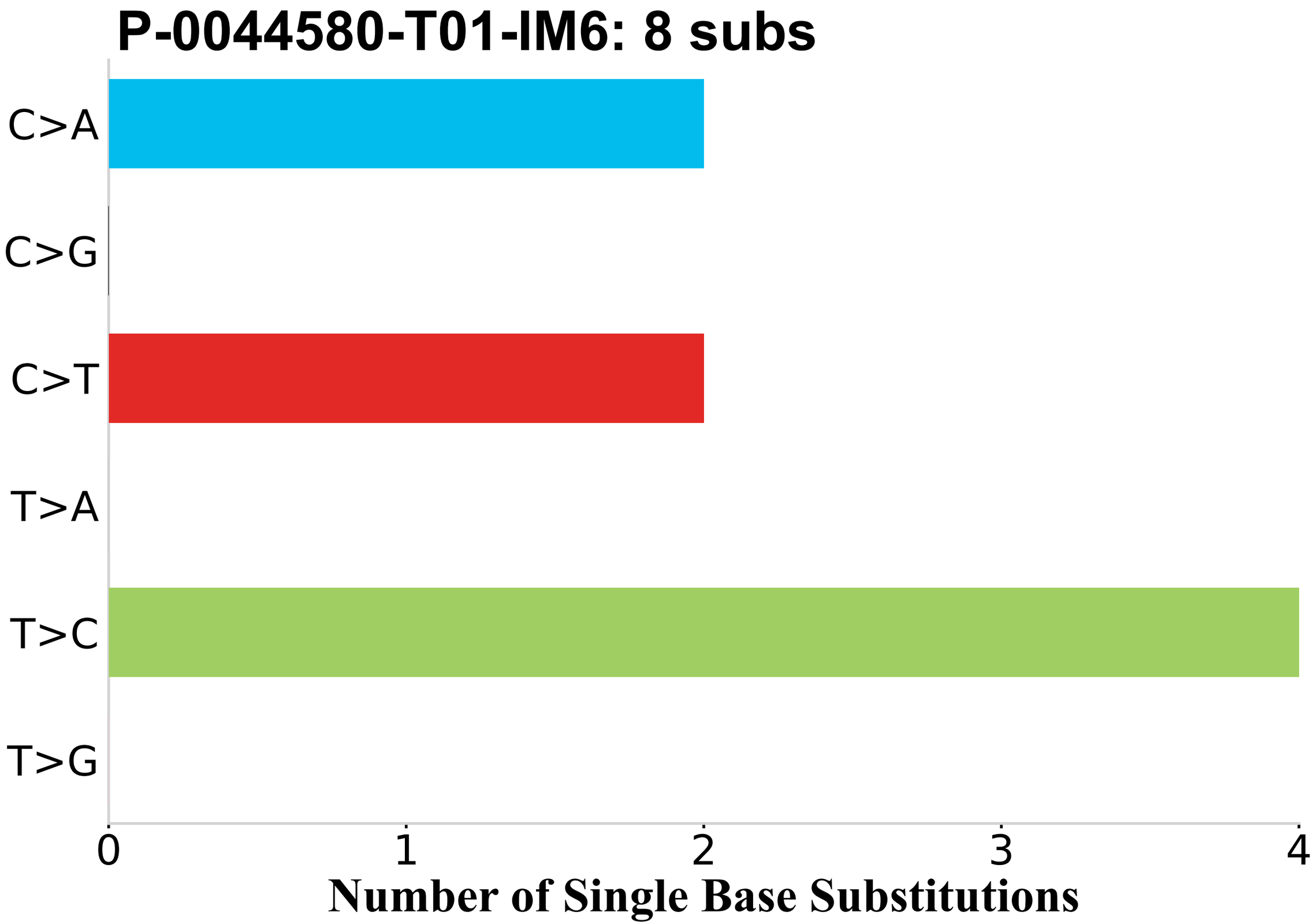
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044580-T01-IM6: 8 subs
C>A
C>G
C>T
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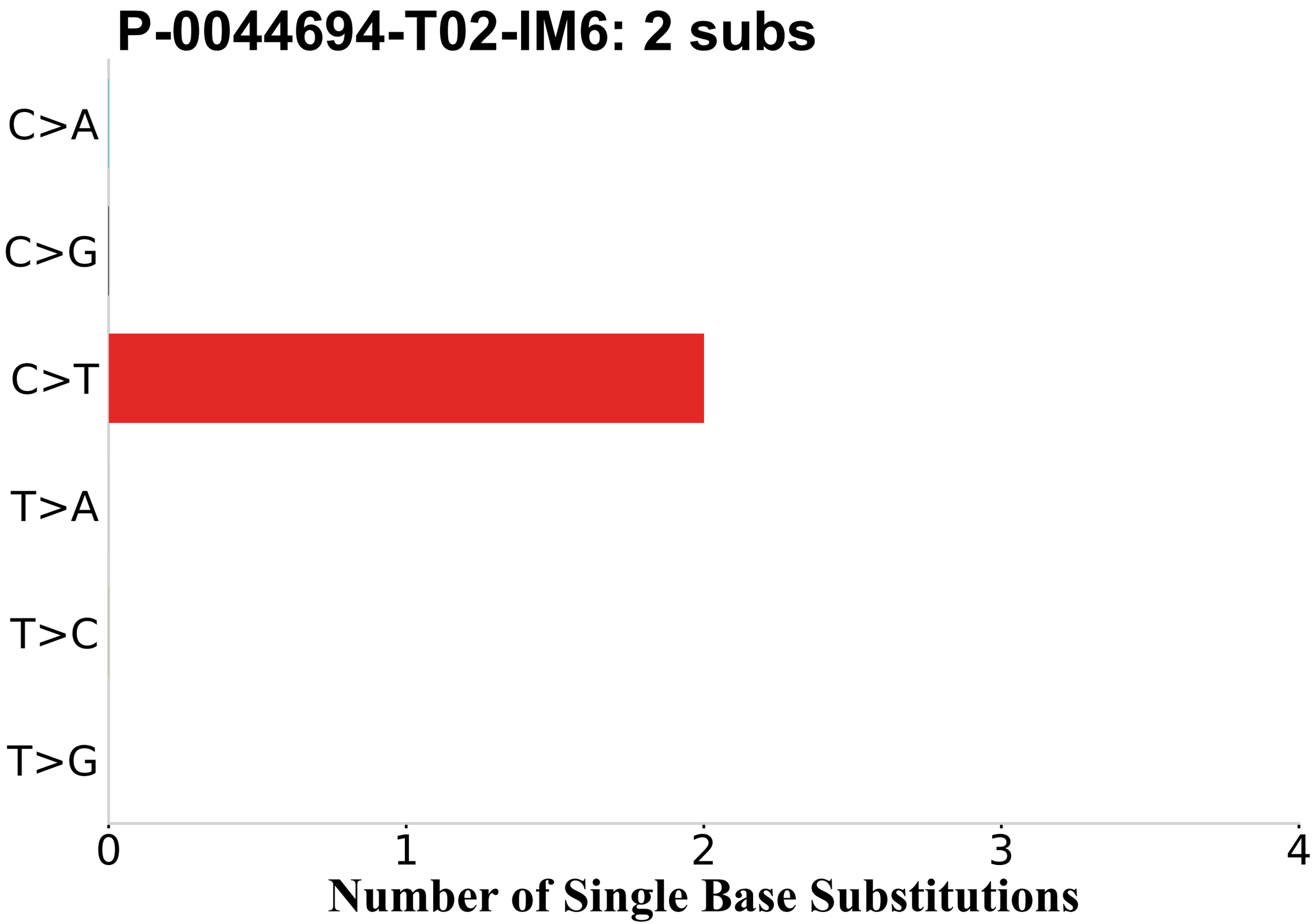
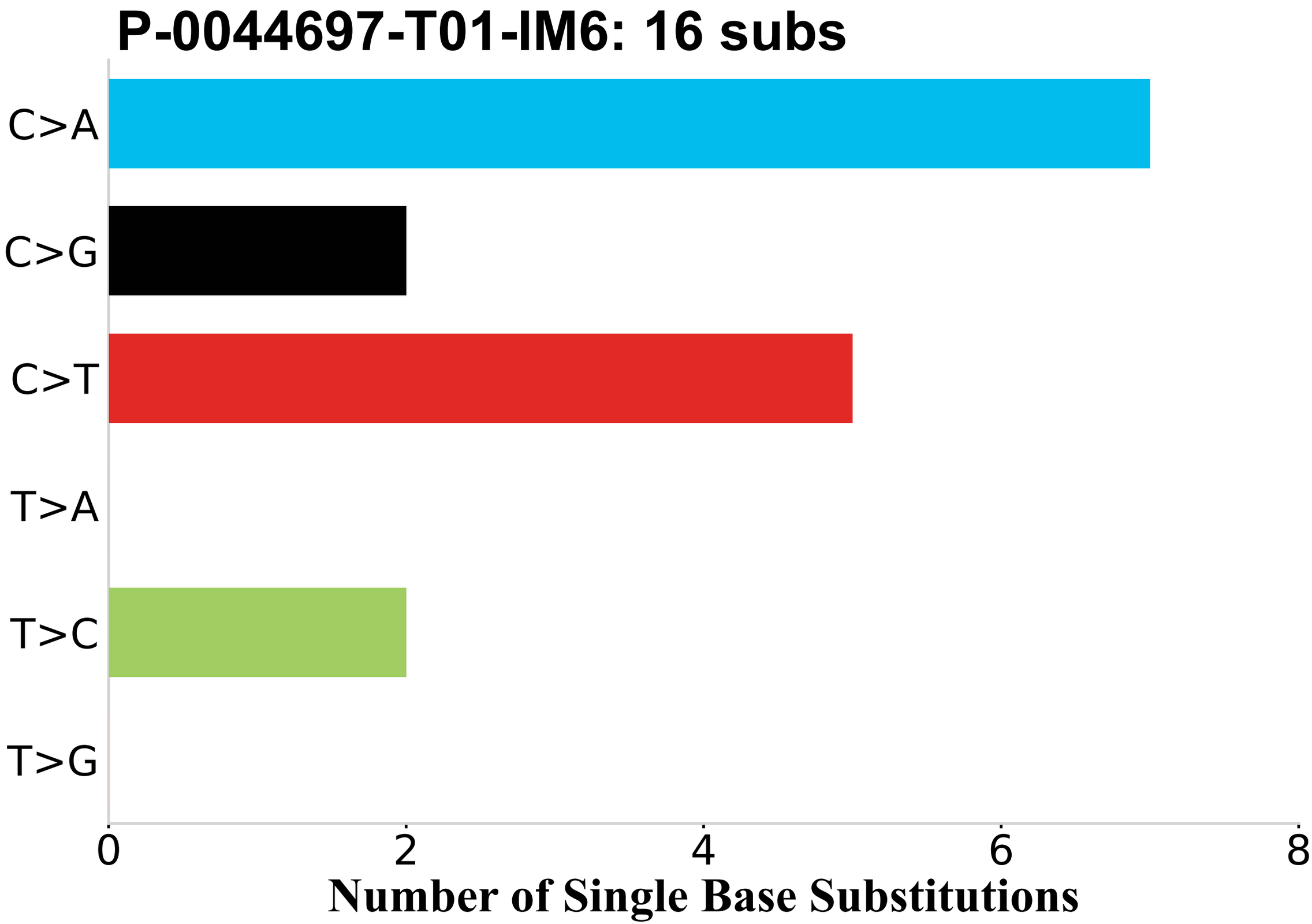
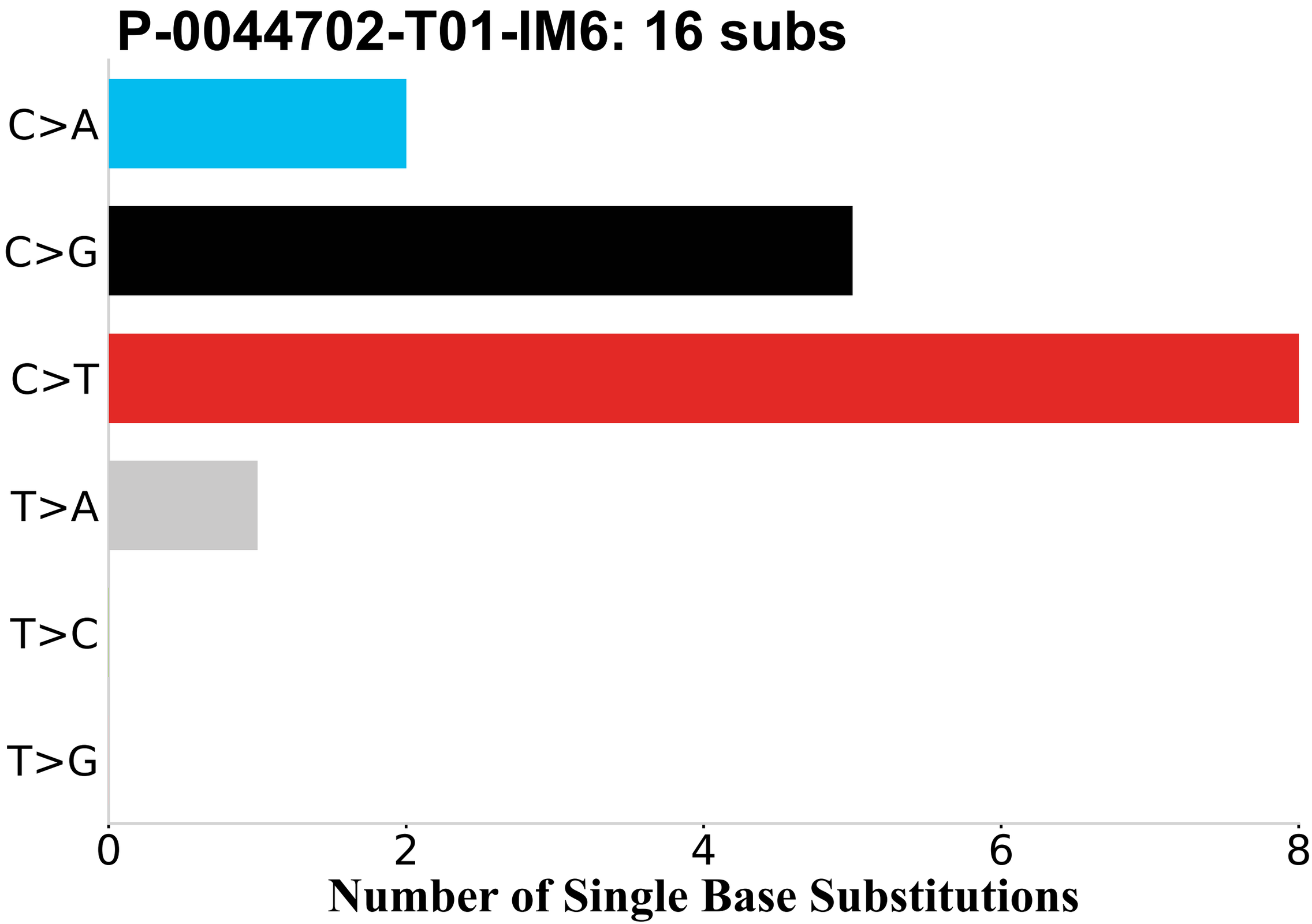
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044694-T02-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044697-T01-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044702-T01-IM6: 16 subs
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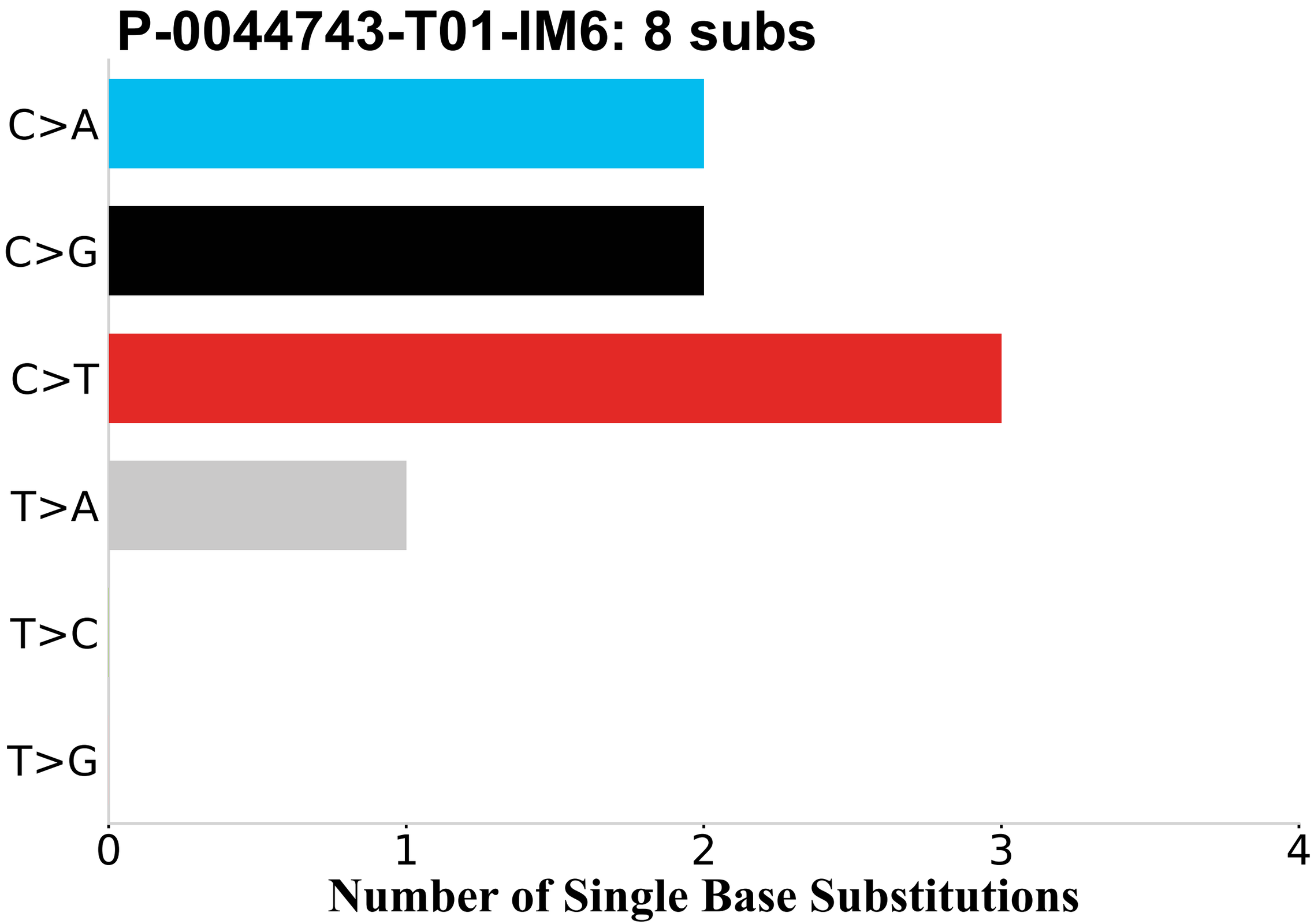
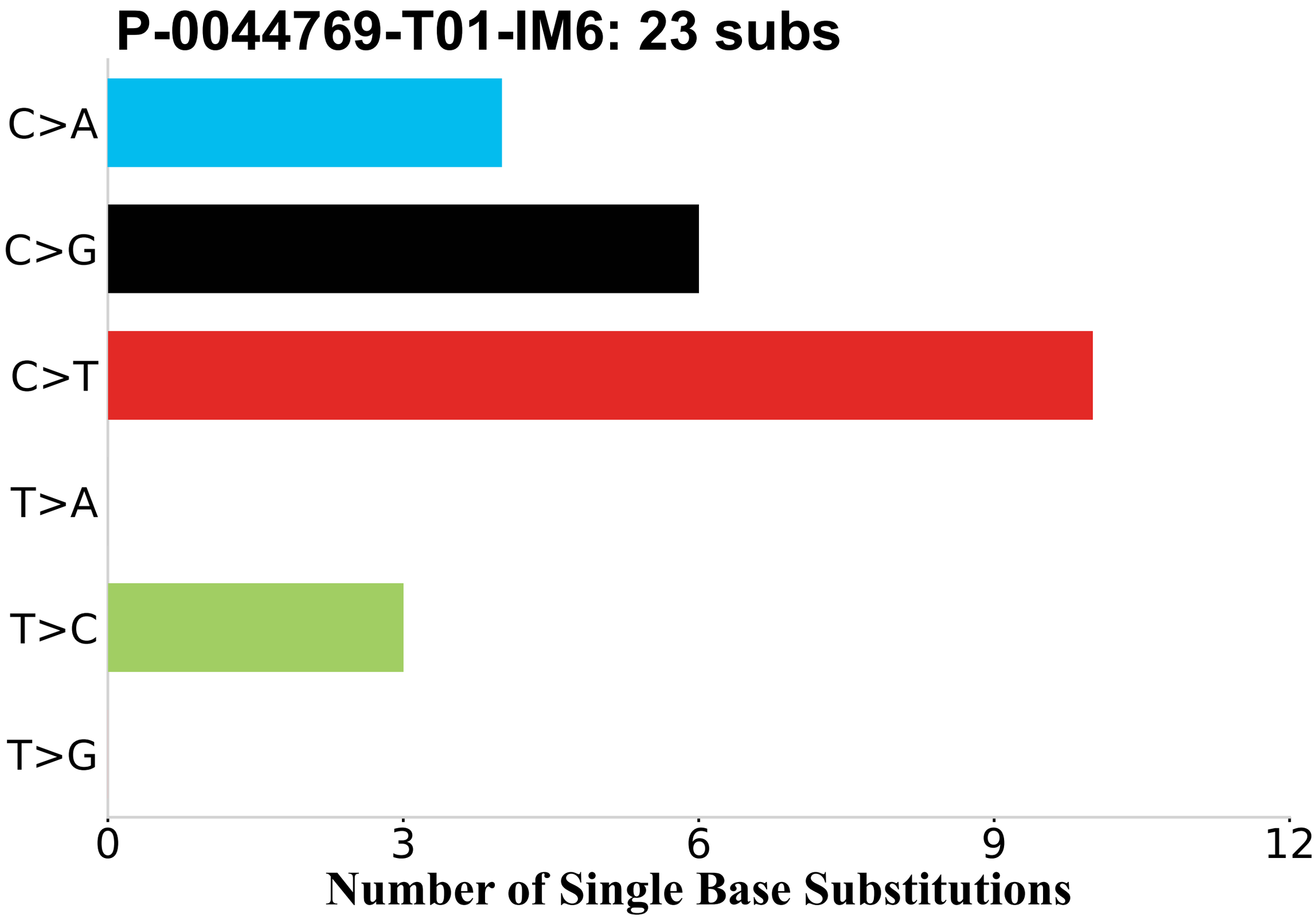
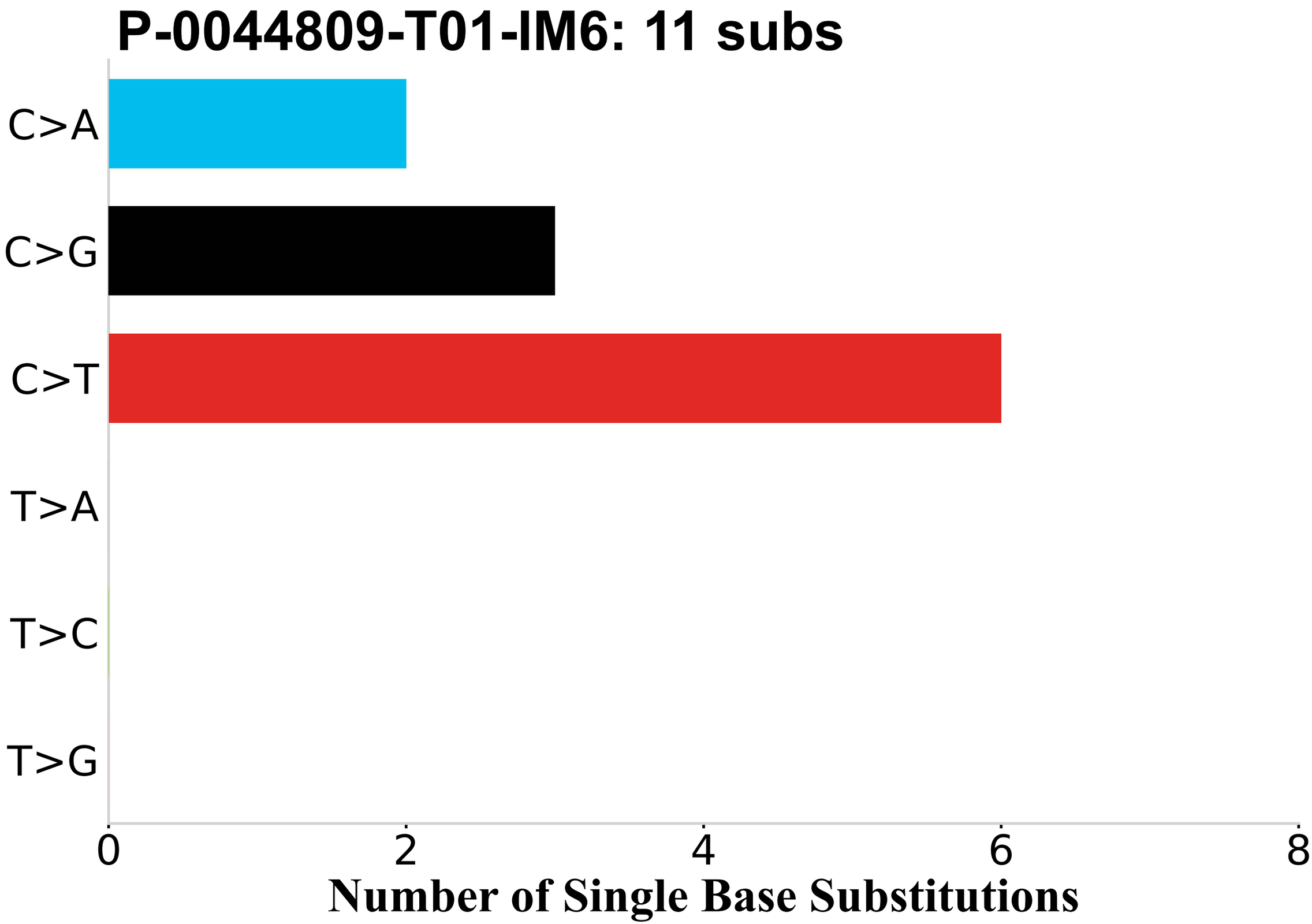
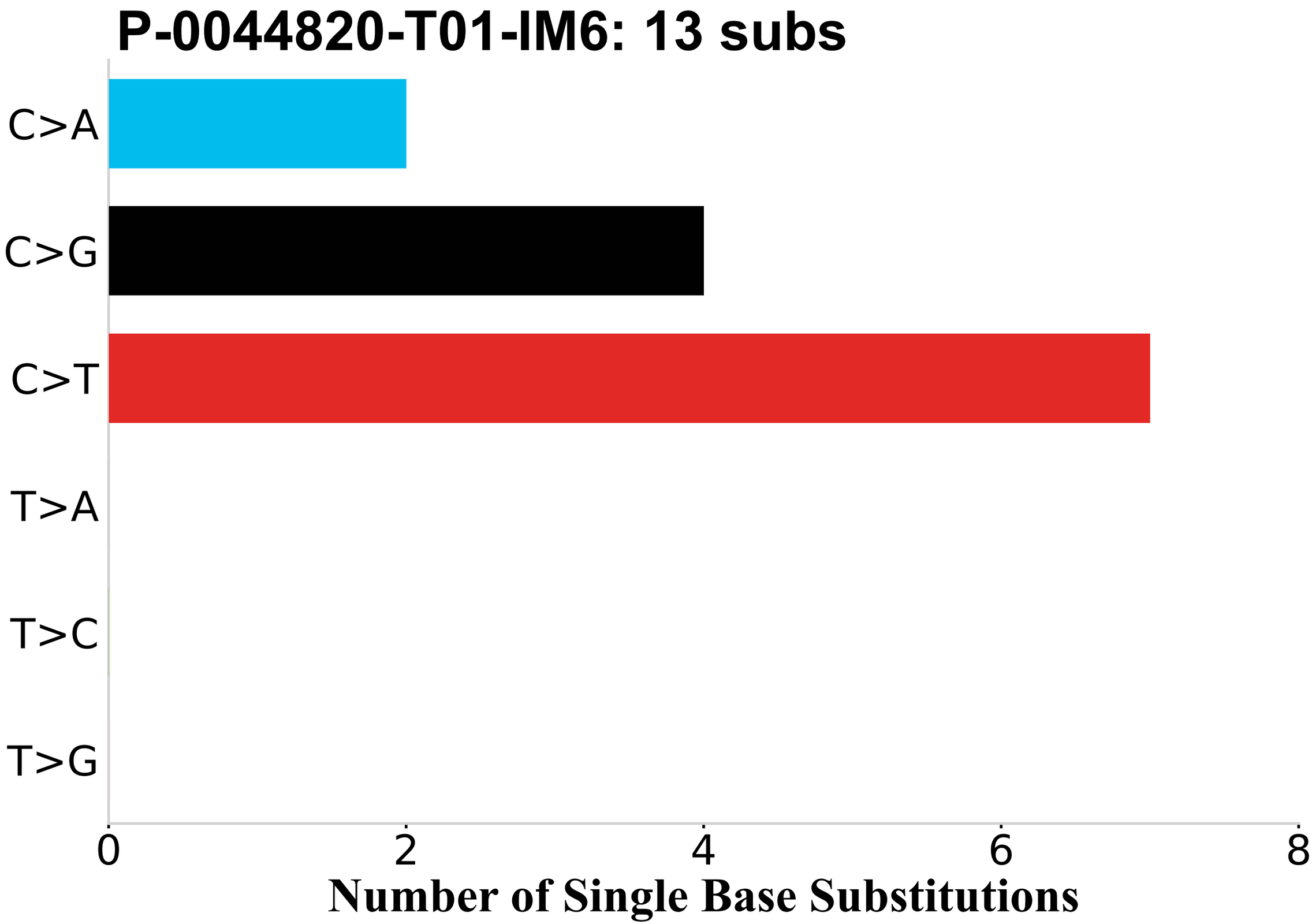
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044743-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044769-T01-IM6: 23 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0044809-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044820-T01-IM6: 13 subs
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C>T
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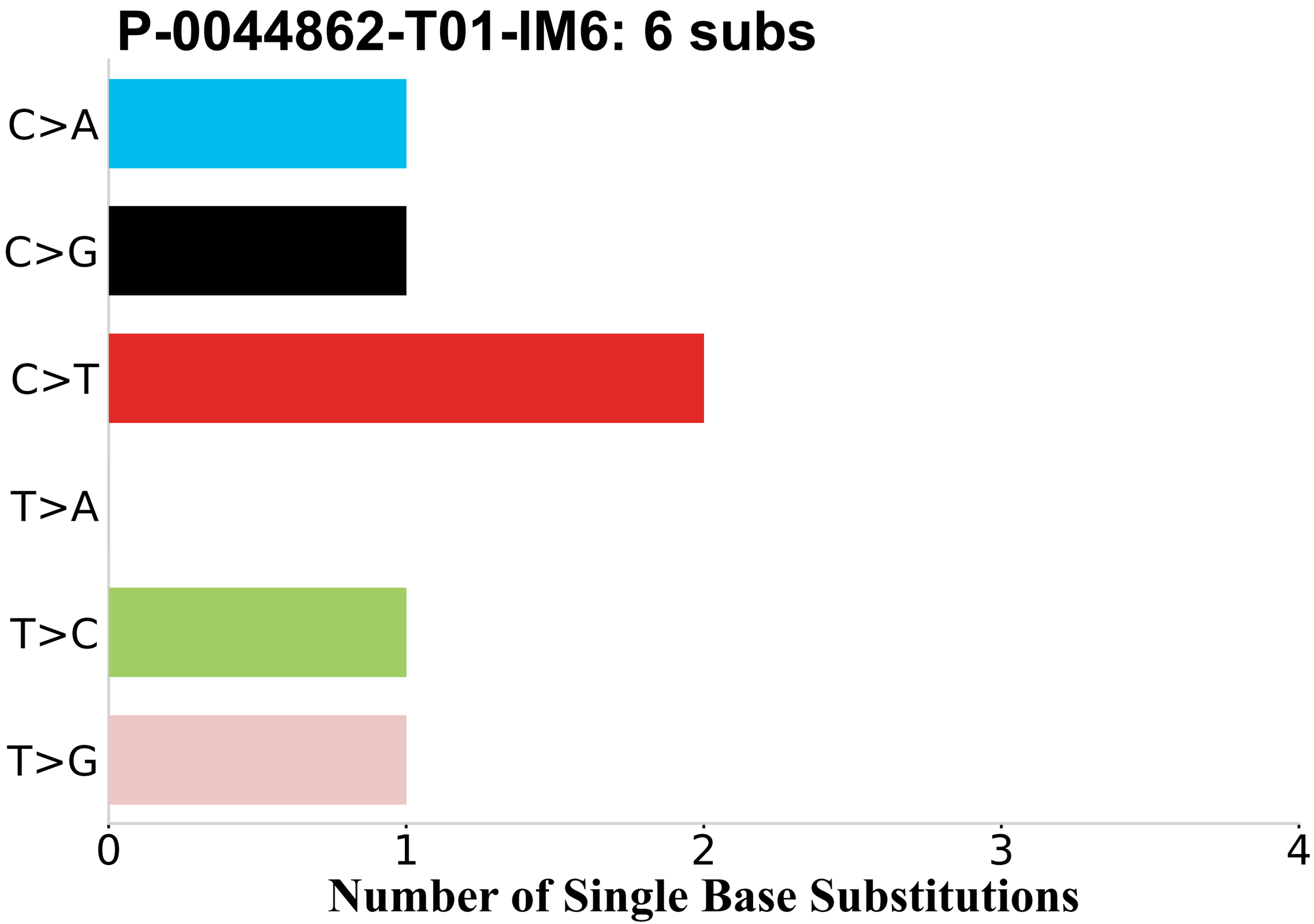
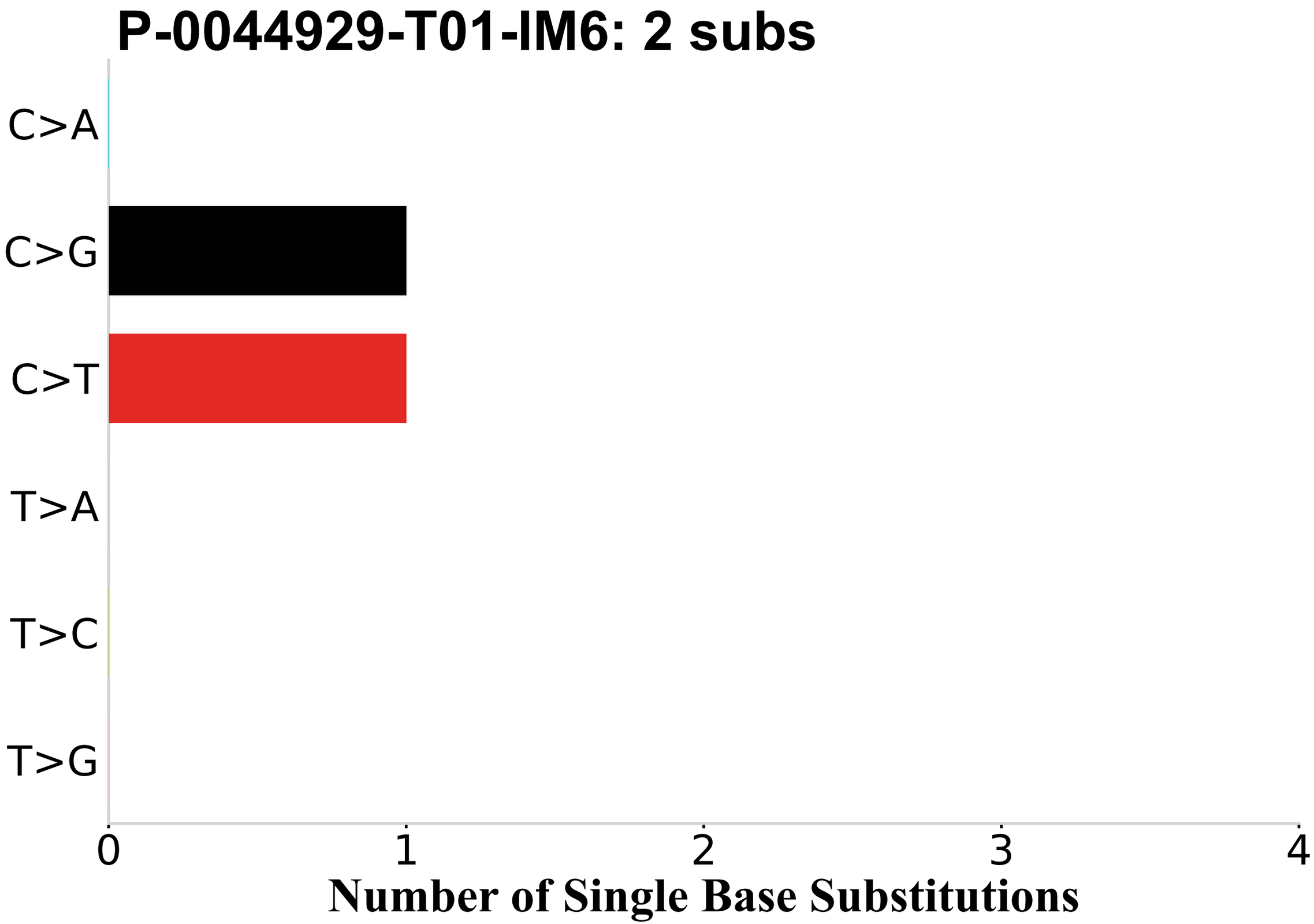
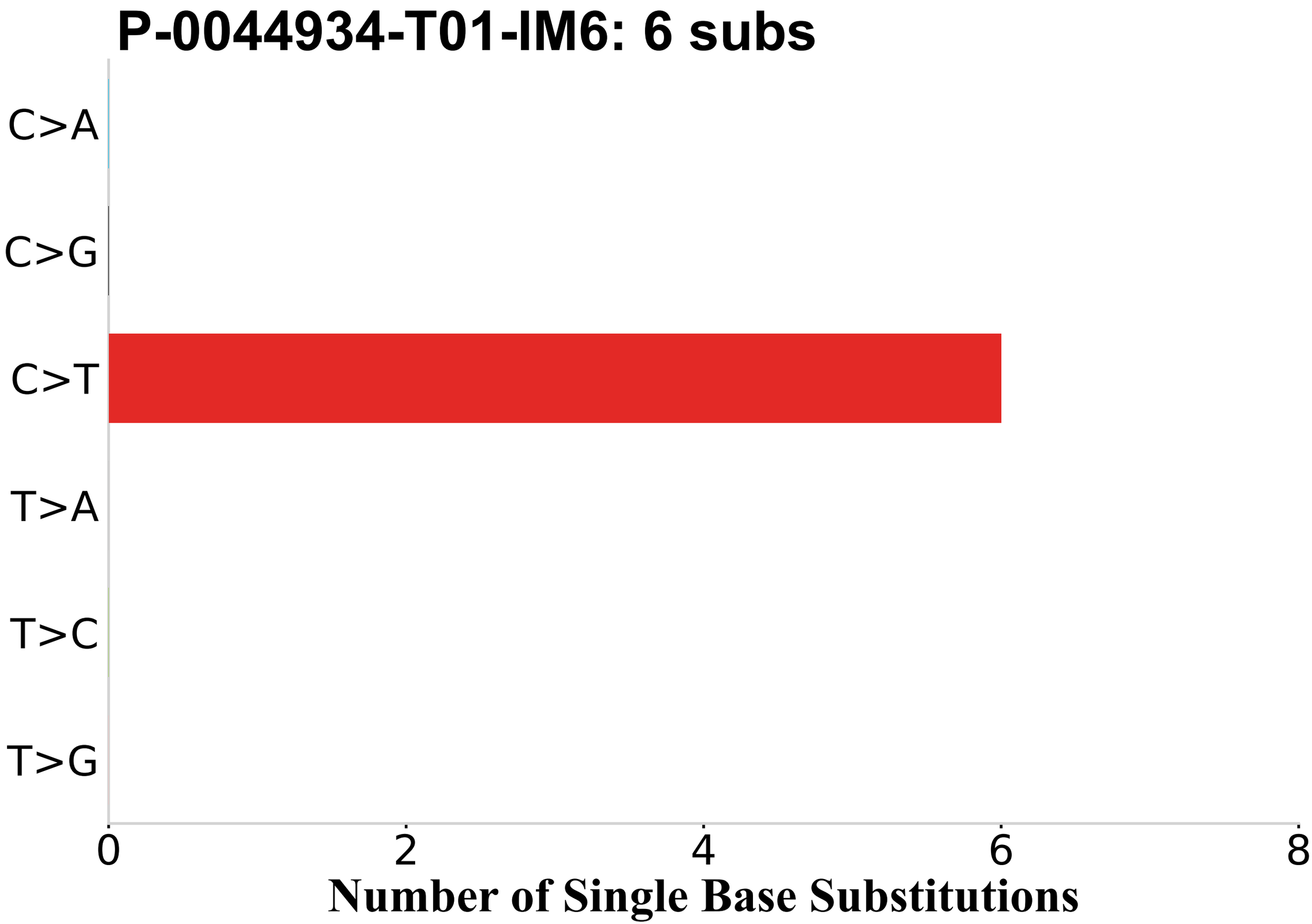
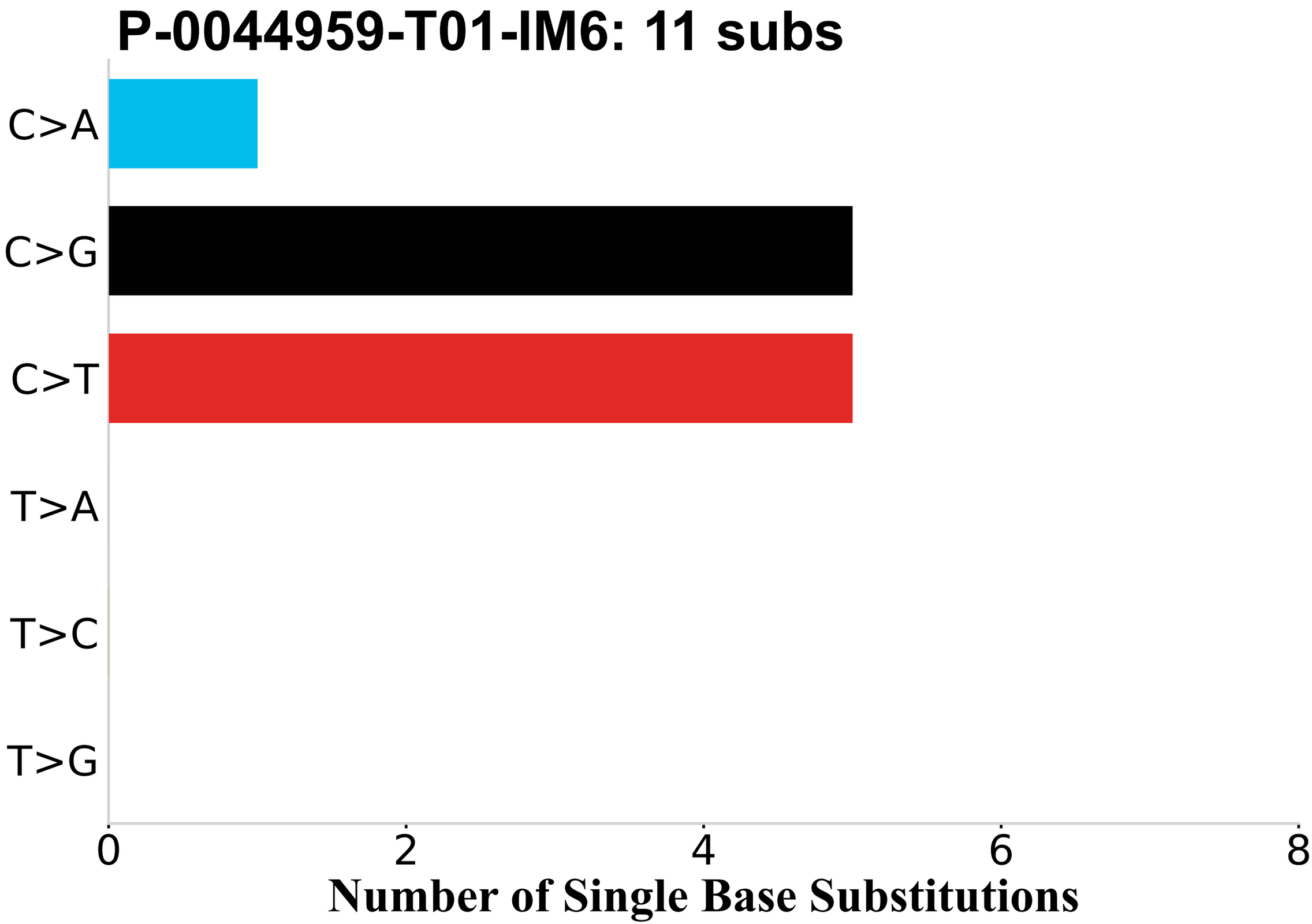
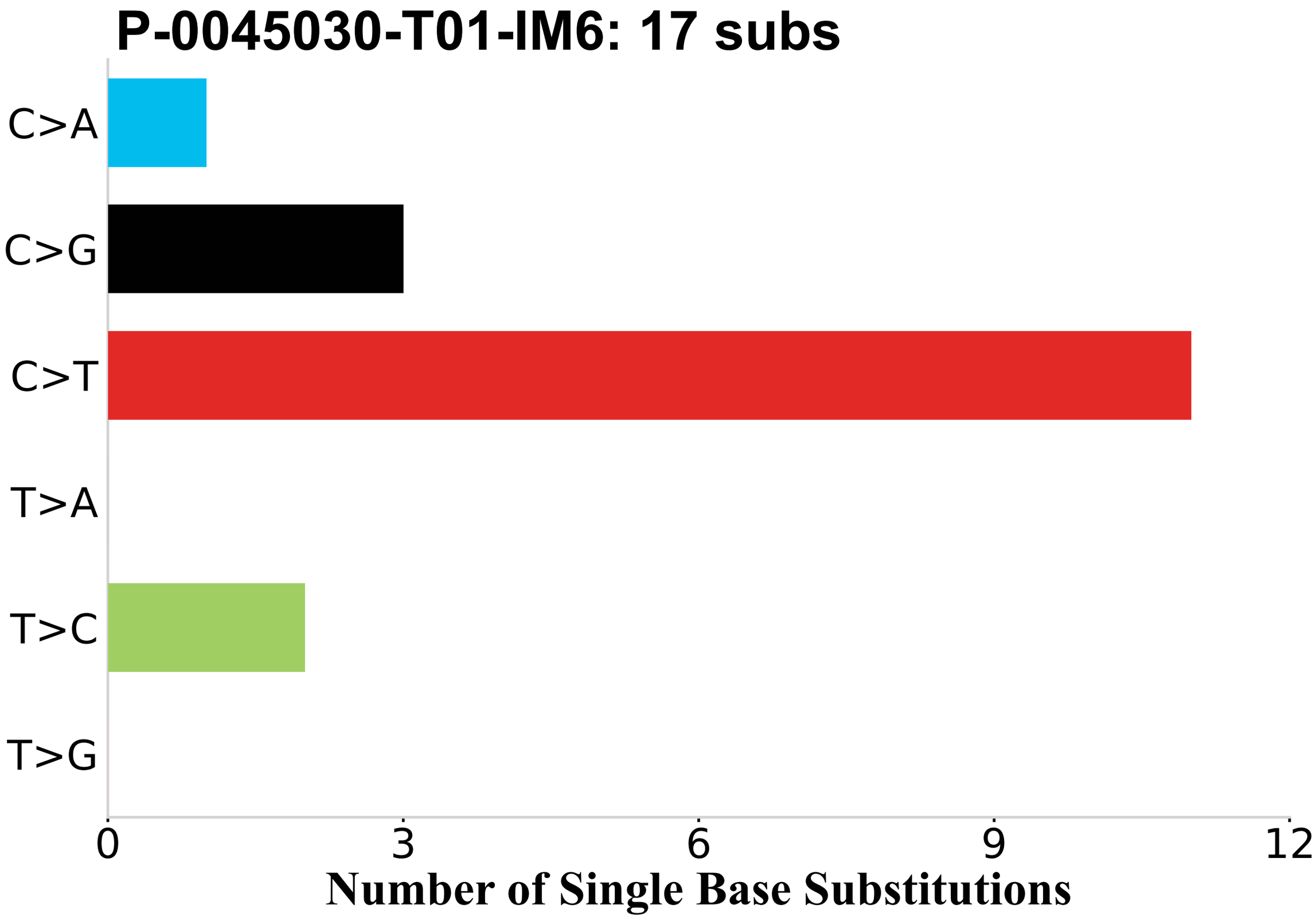
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

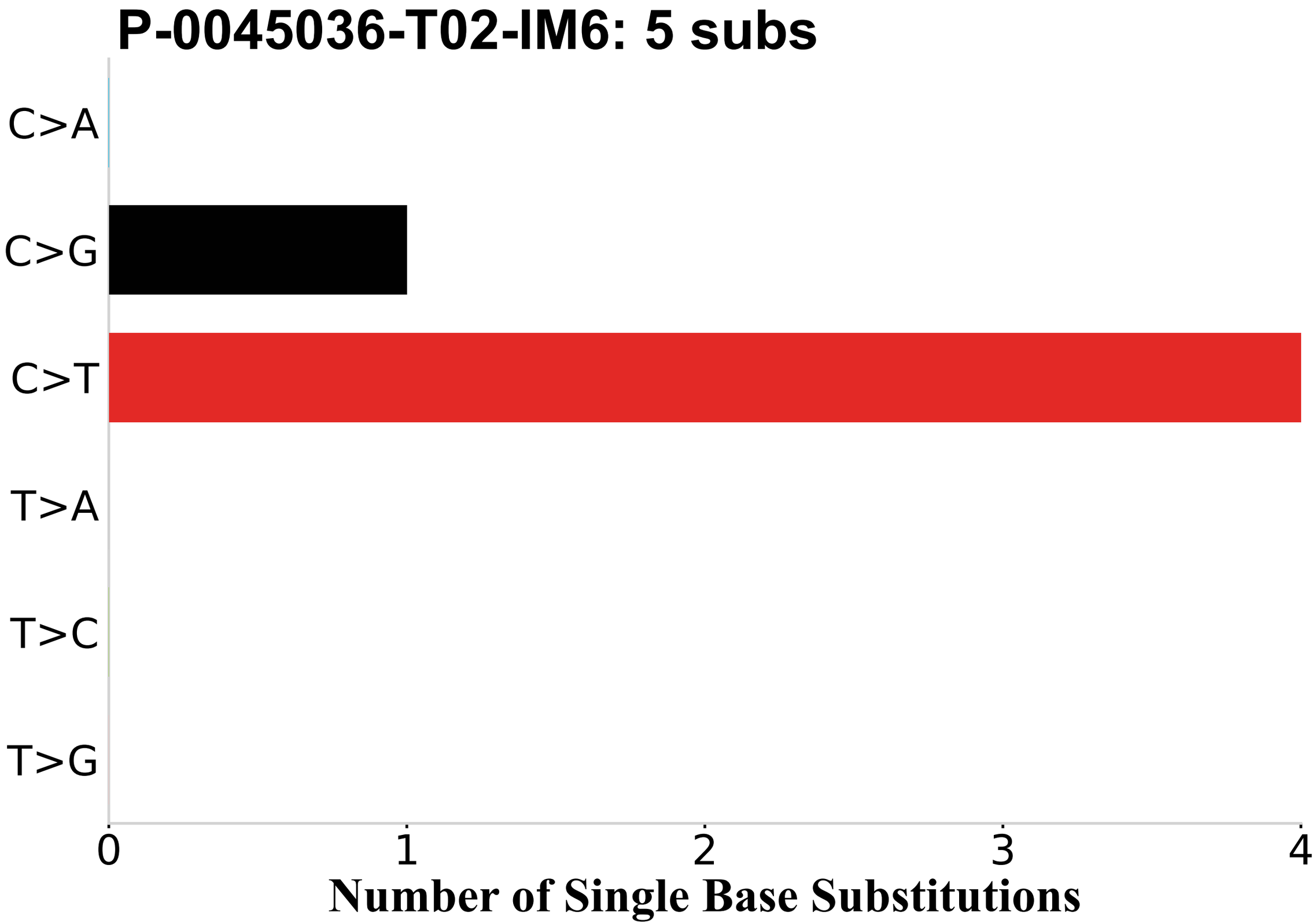

P-0044862-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044929-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0044934-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0044959-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0045030-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0045036-T02-IM6: 5 subs
C>A
C>G
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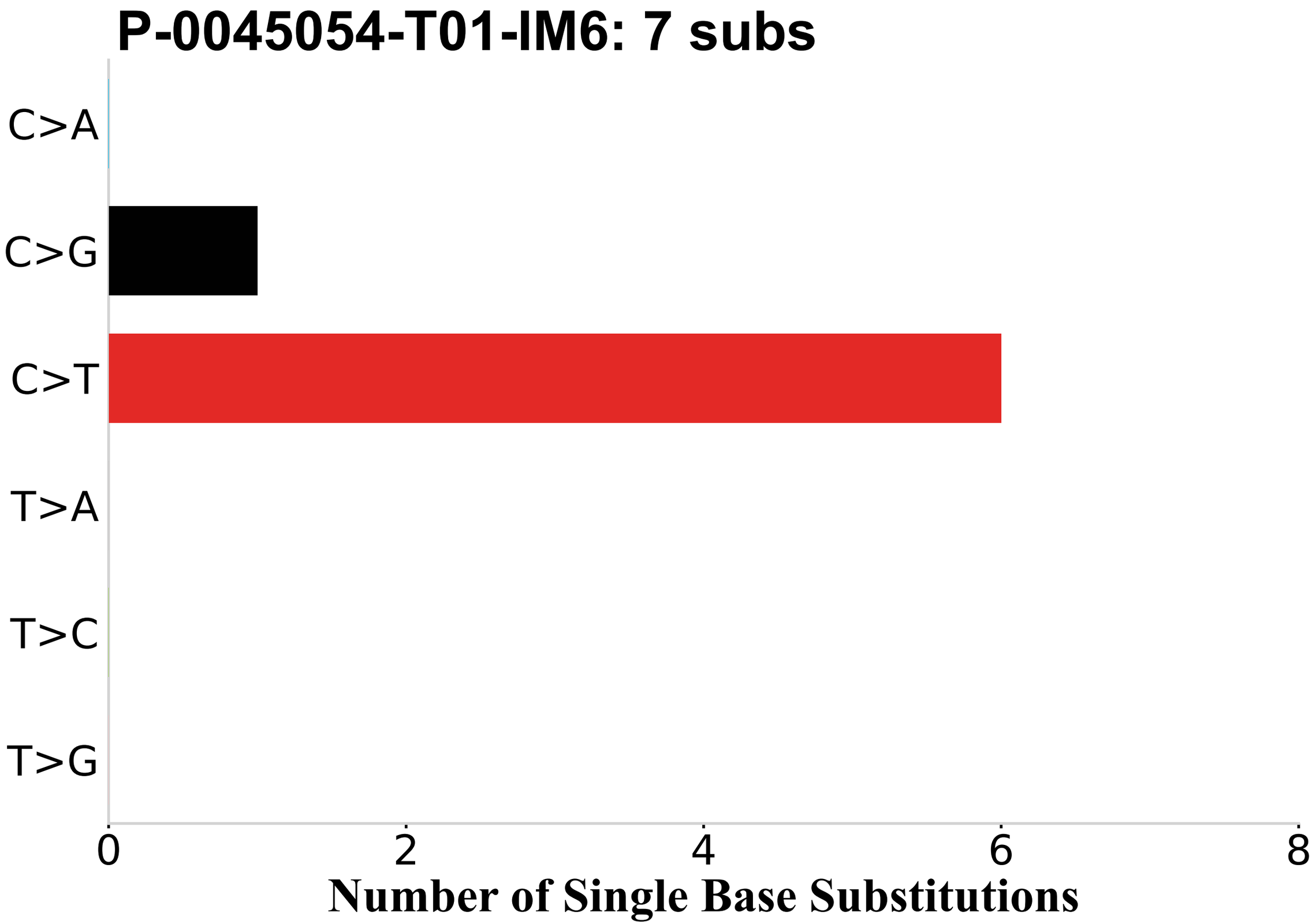
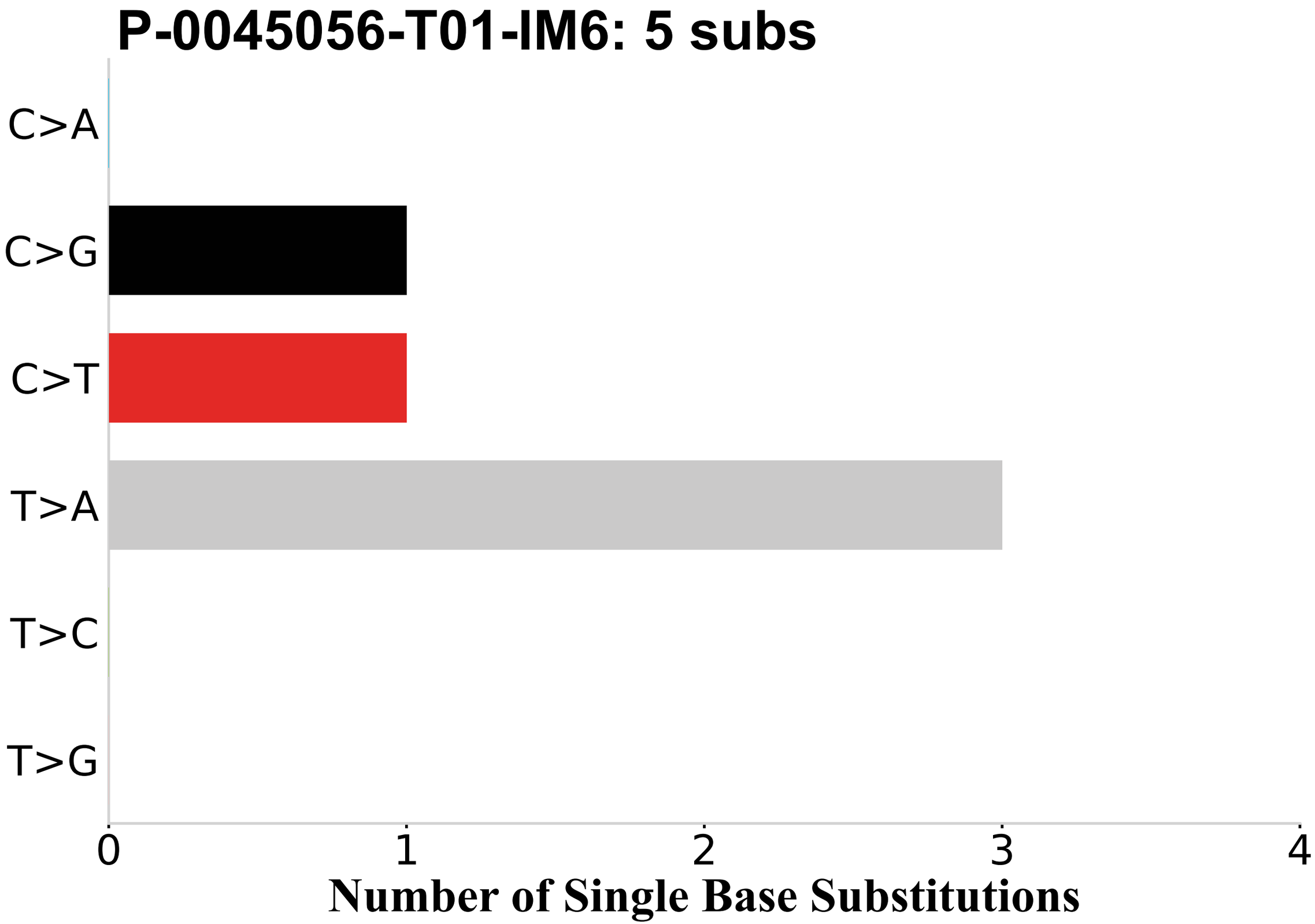
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0045054-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0045056-T01-IM6: 5 subs
C>A
C>G
C>T
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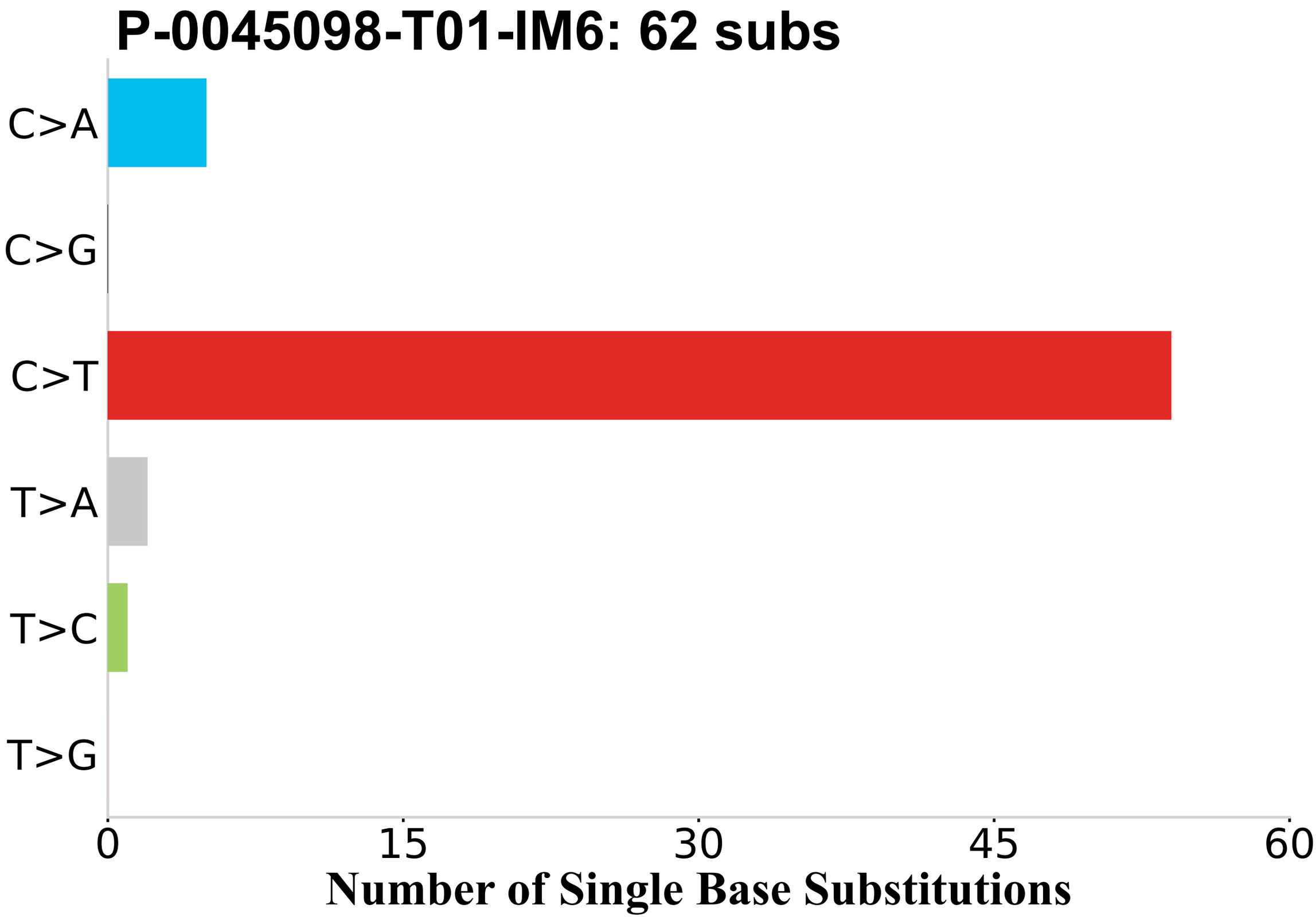
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0045098-T01-IM6: 62 subs
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C>G
C>T
T>A
T>C
T>G
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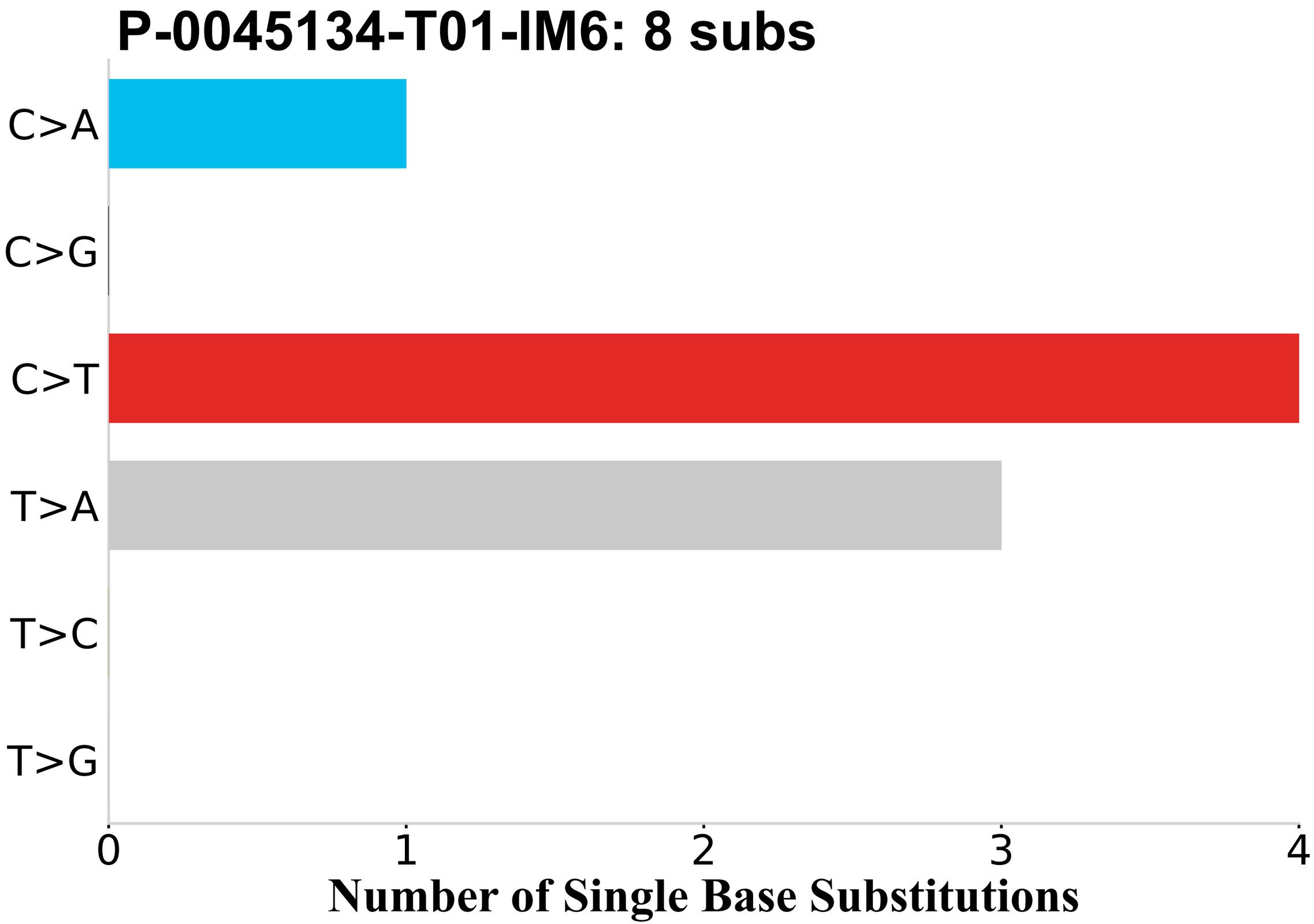
15
30
45
60
Number of Single Base Substitutions


P-0045134-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
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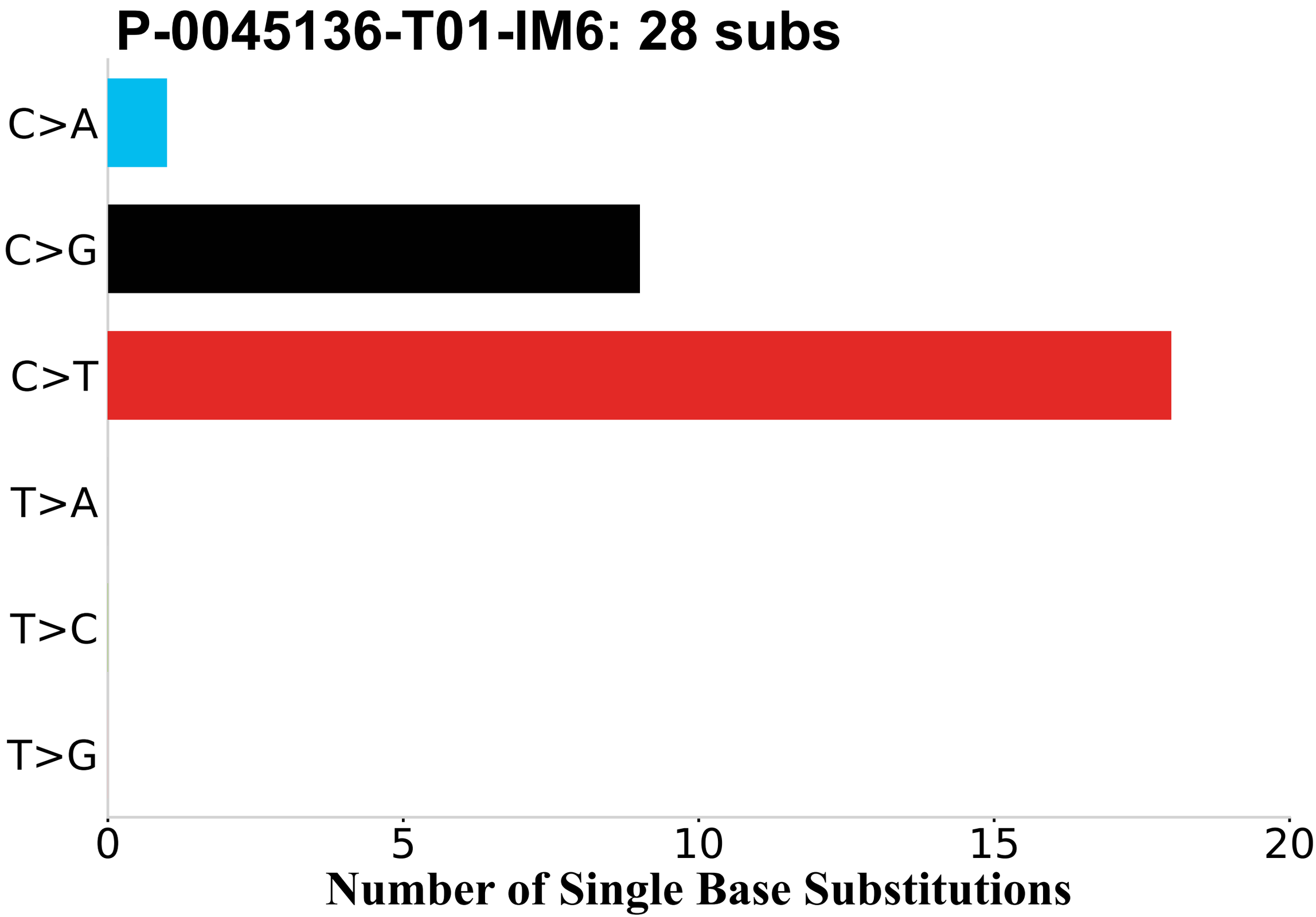
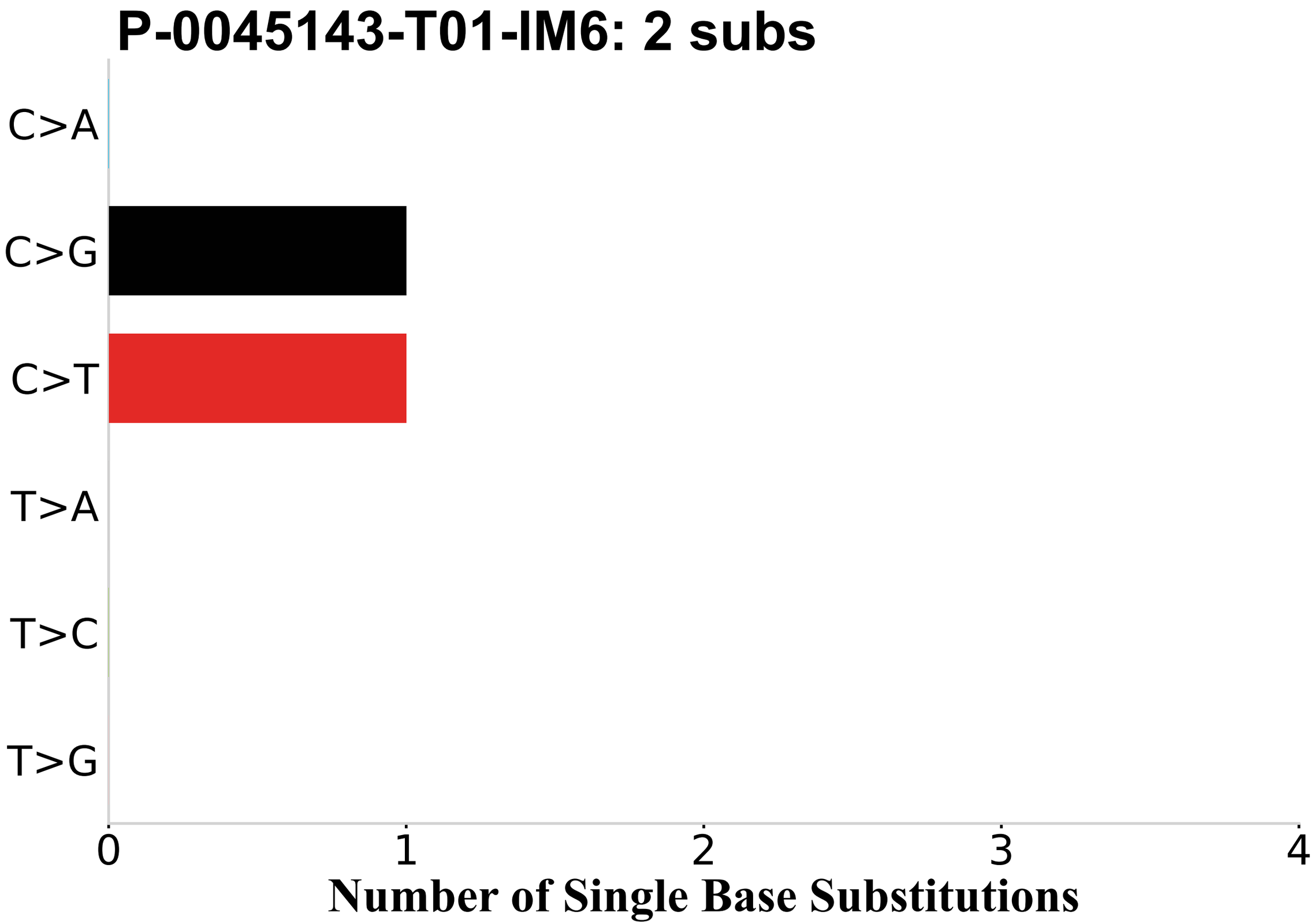
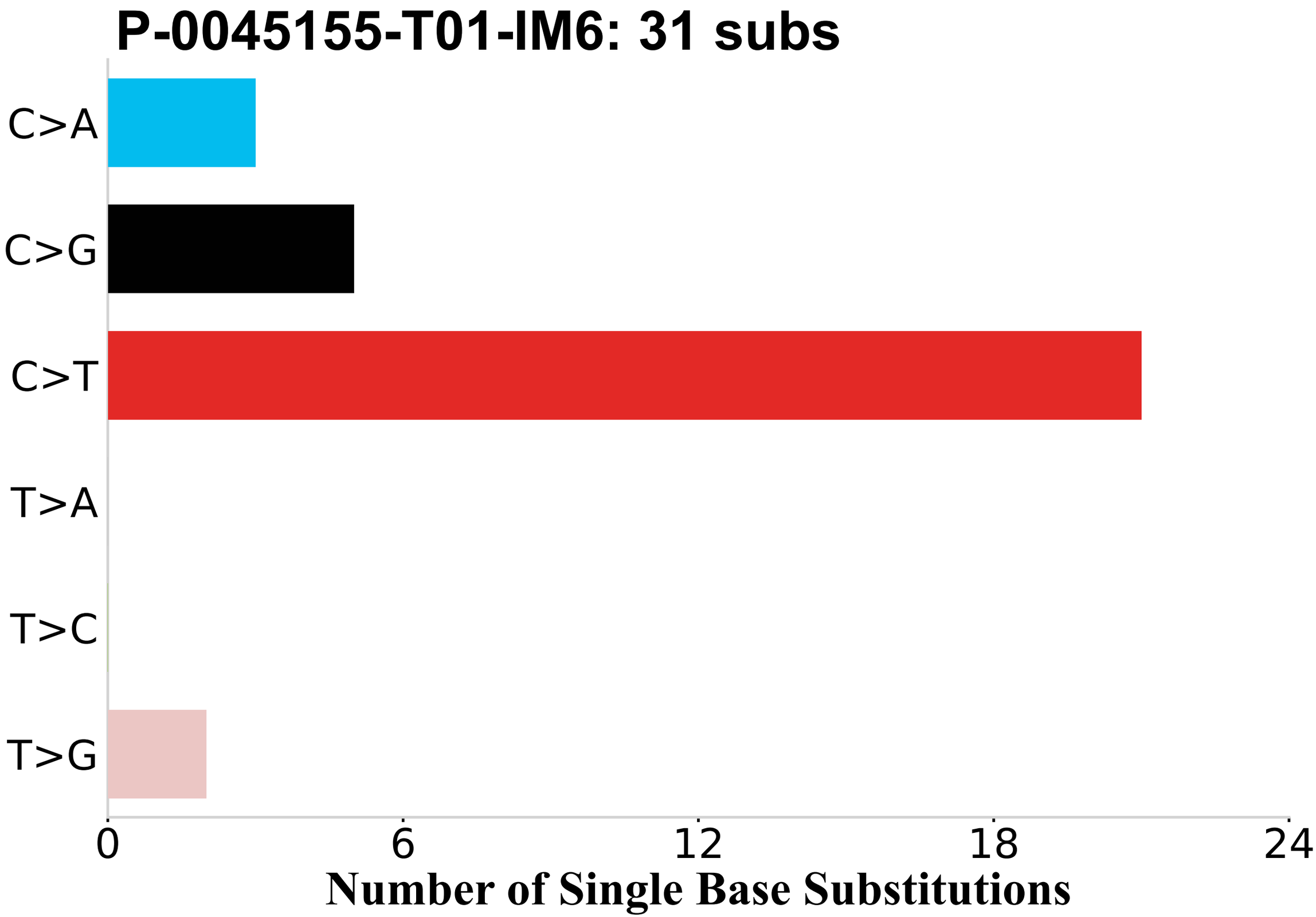
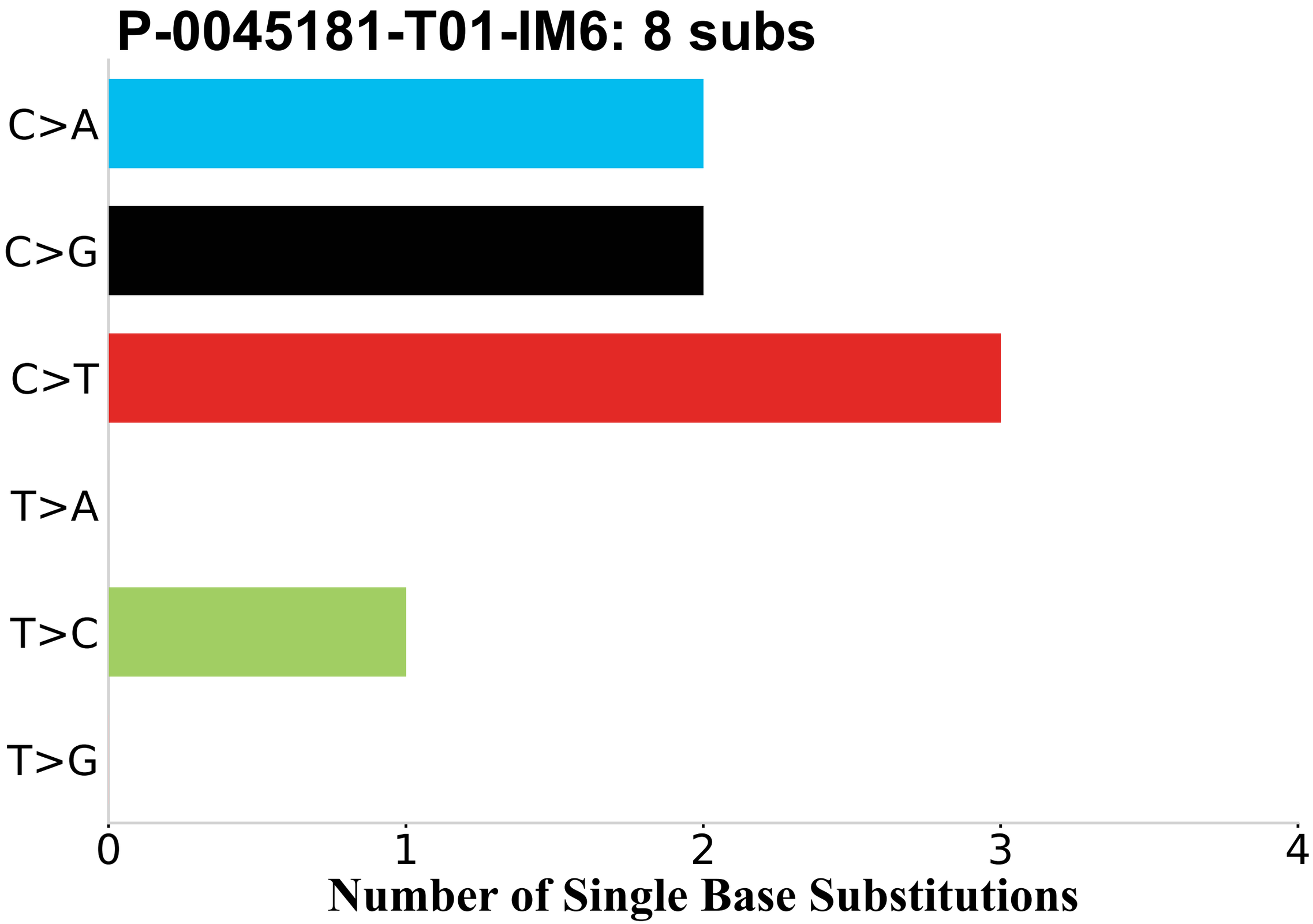
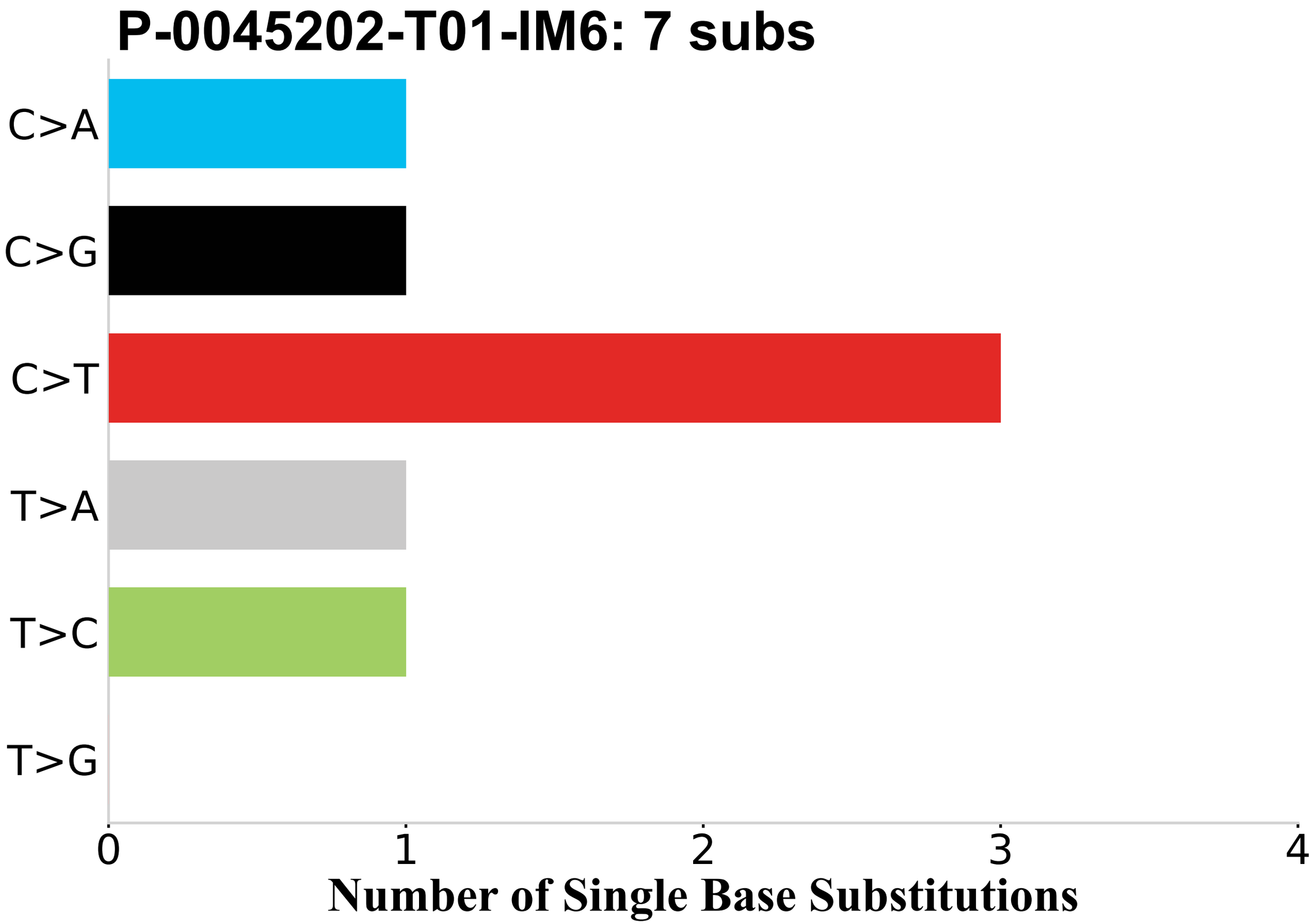
1
2
3
4
Number of Single Base Substitutions

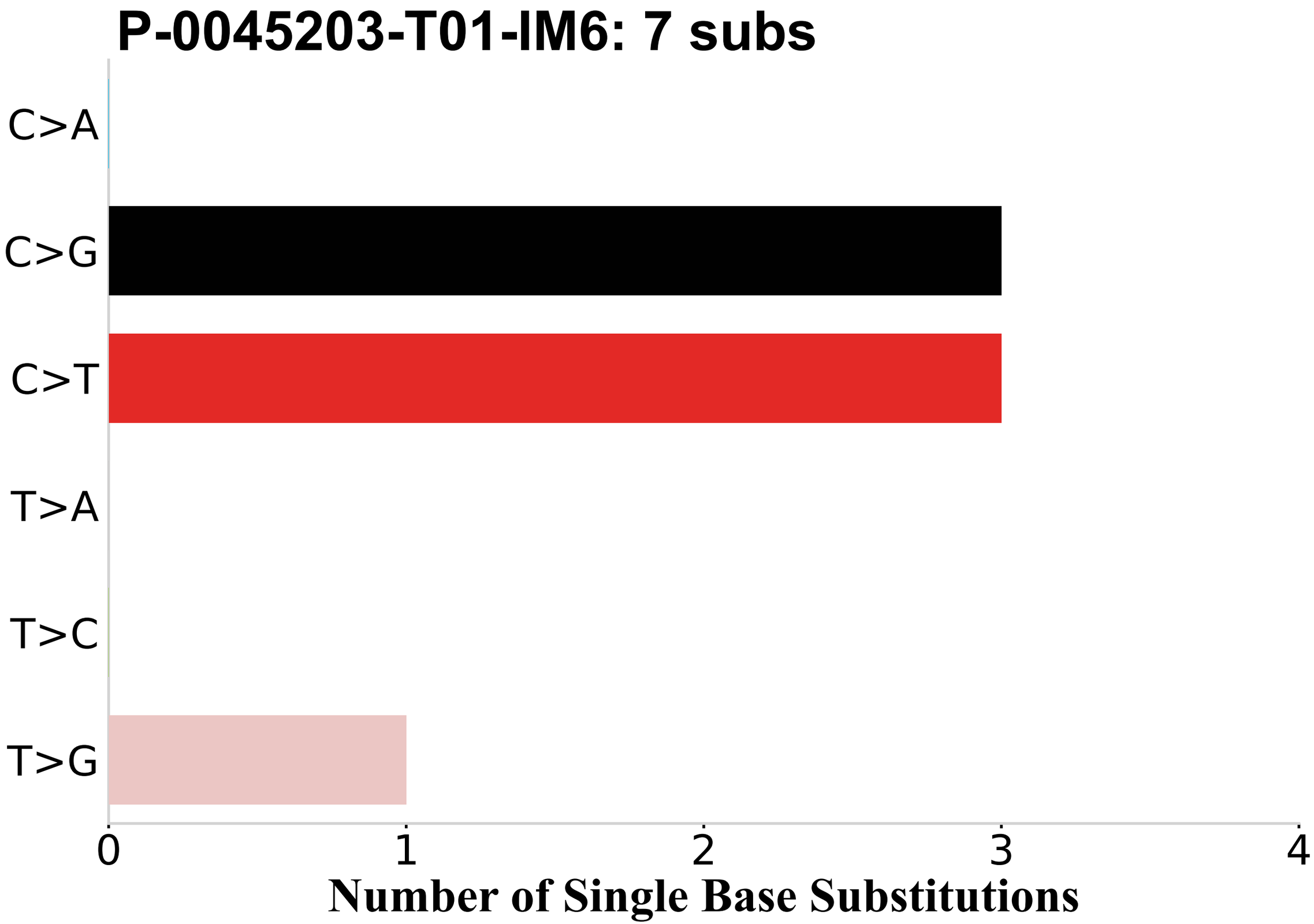

P-0045136-T01-IM6: 28 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

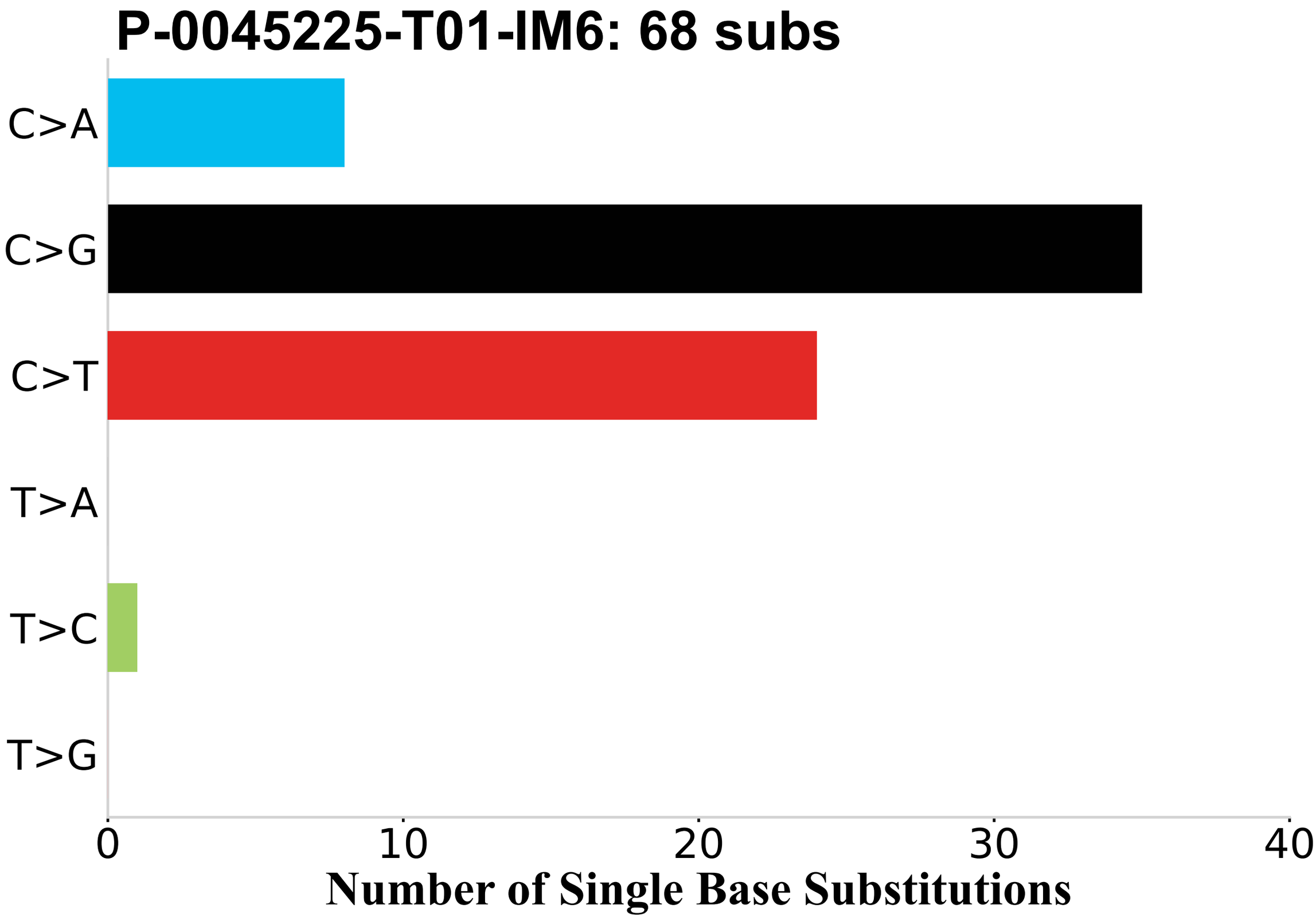

P-0045143-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0045155-T01-IM6: 31 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions

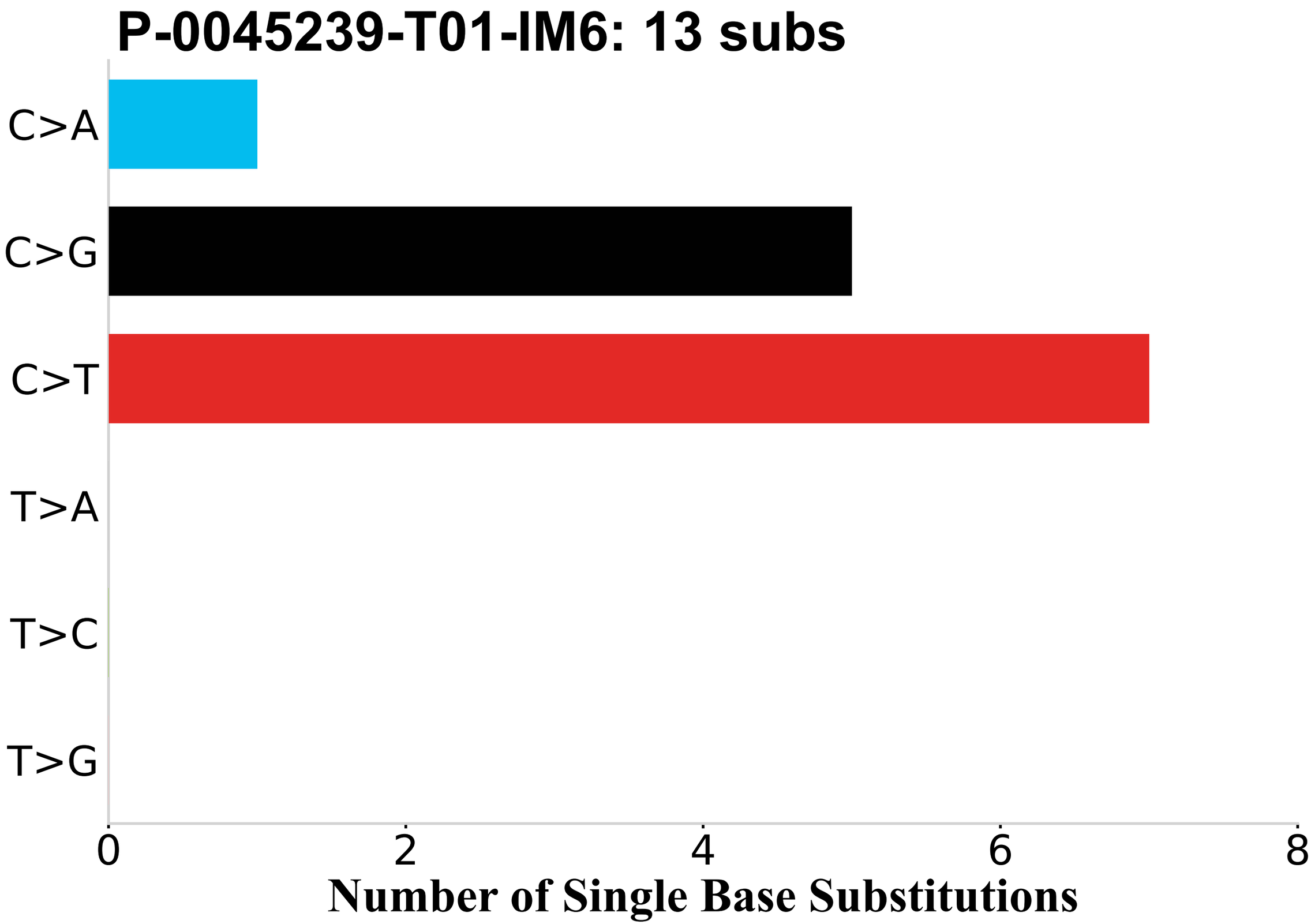

P-0045181-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

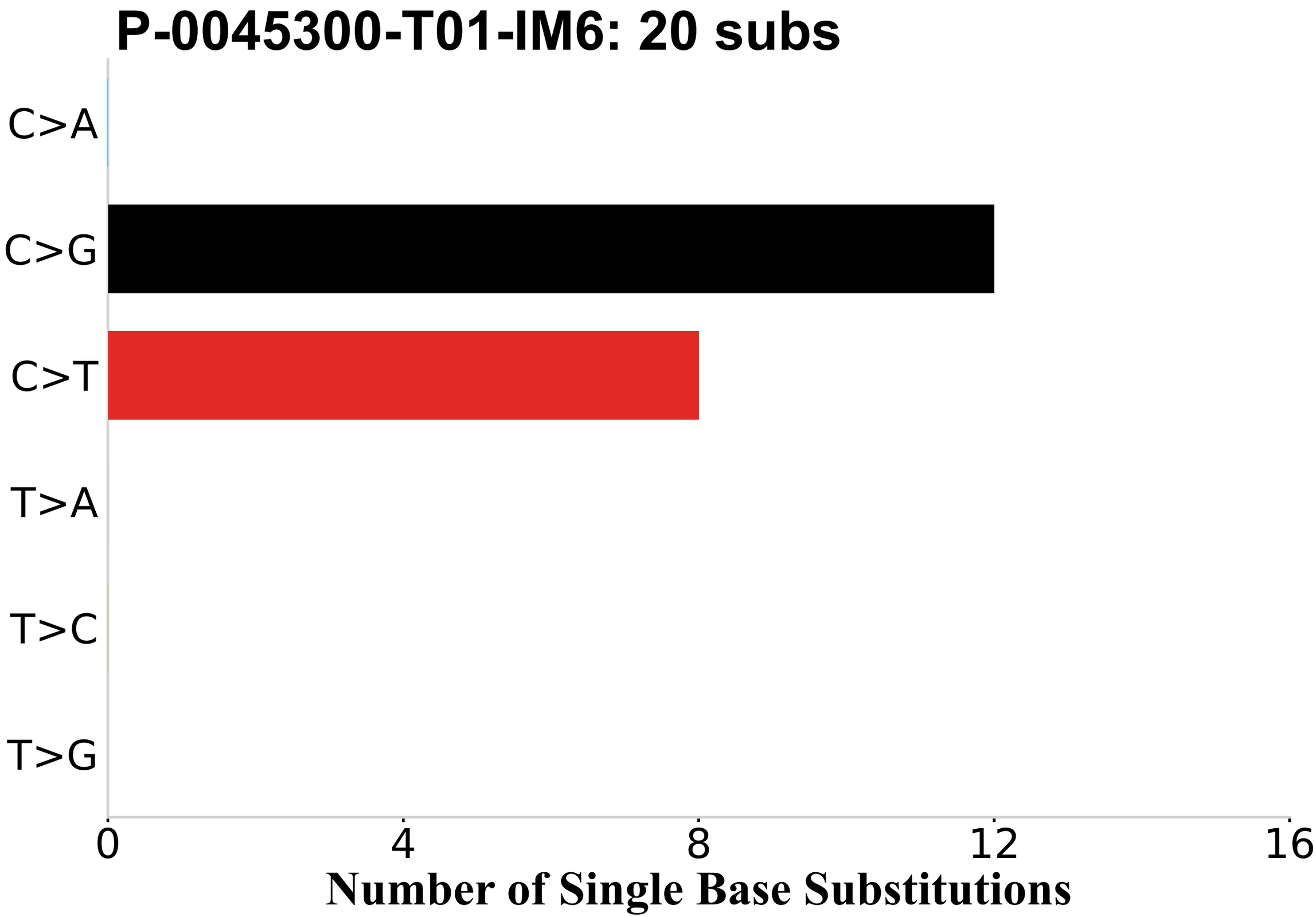

P-0045202-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

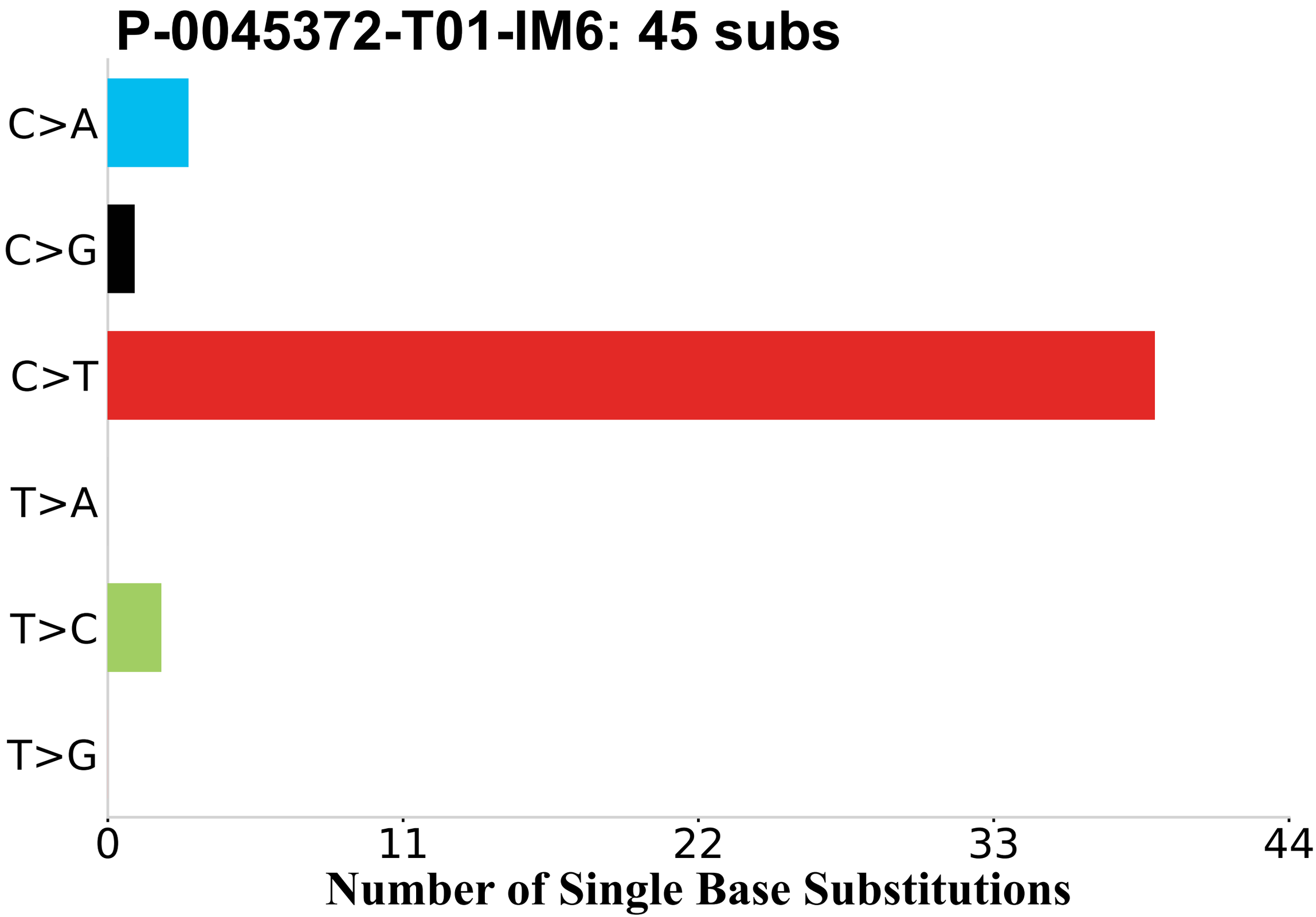

P-0045203-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

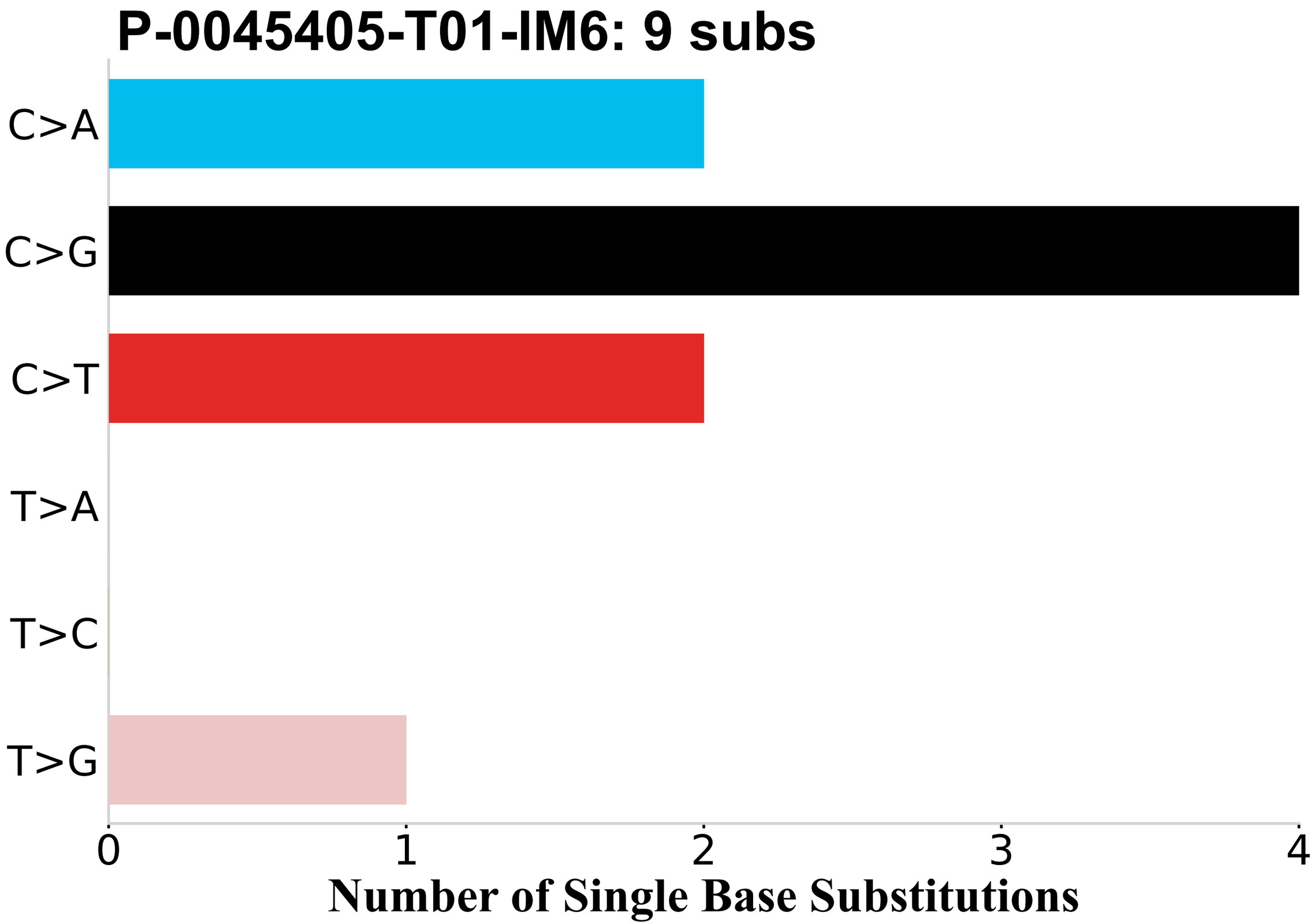

P-0045225-T01-IM6: 68 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
10
20
30
40
Number of Single Base Substitutions

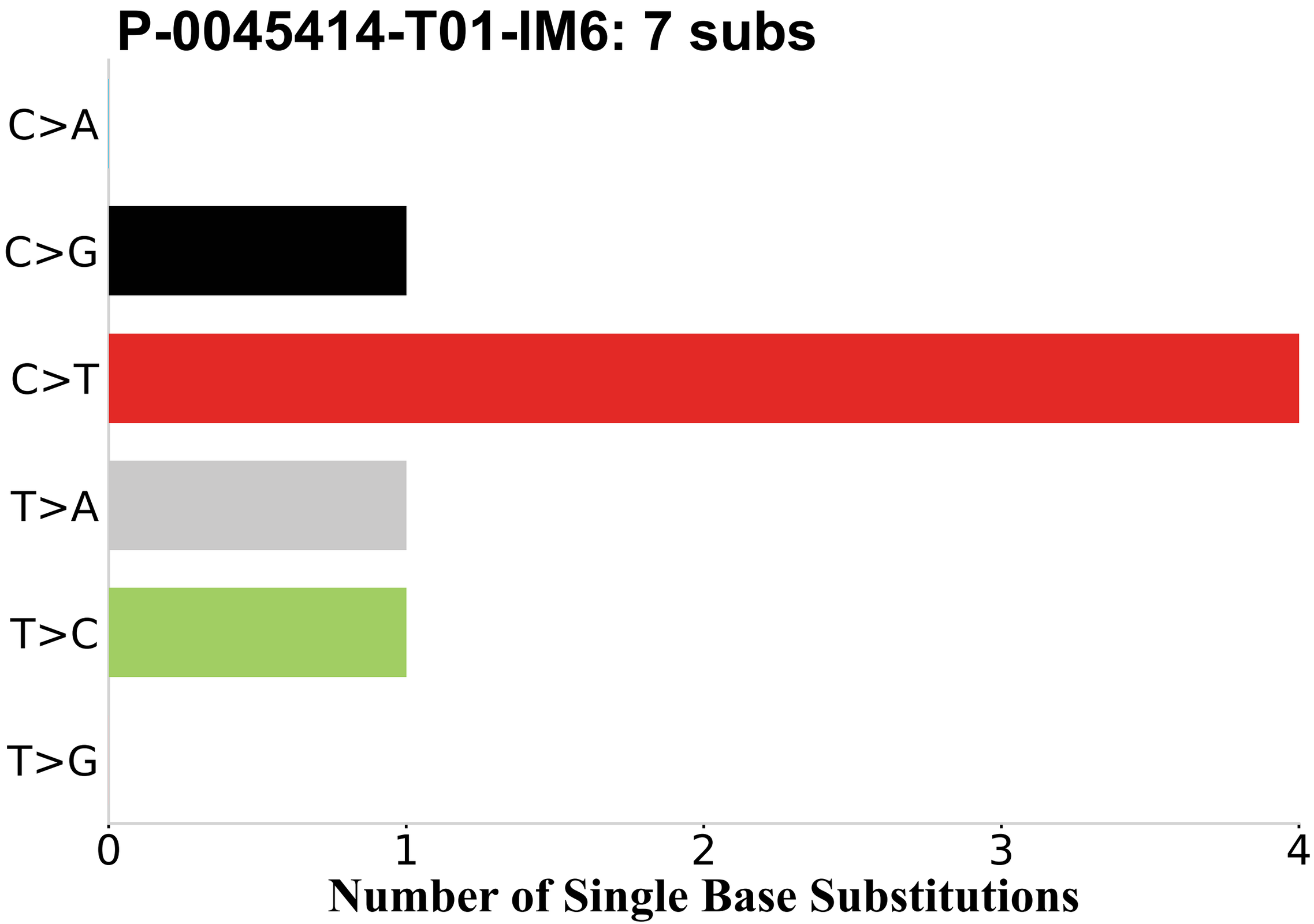
P-0045235-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

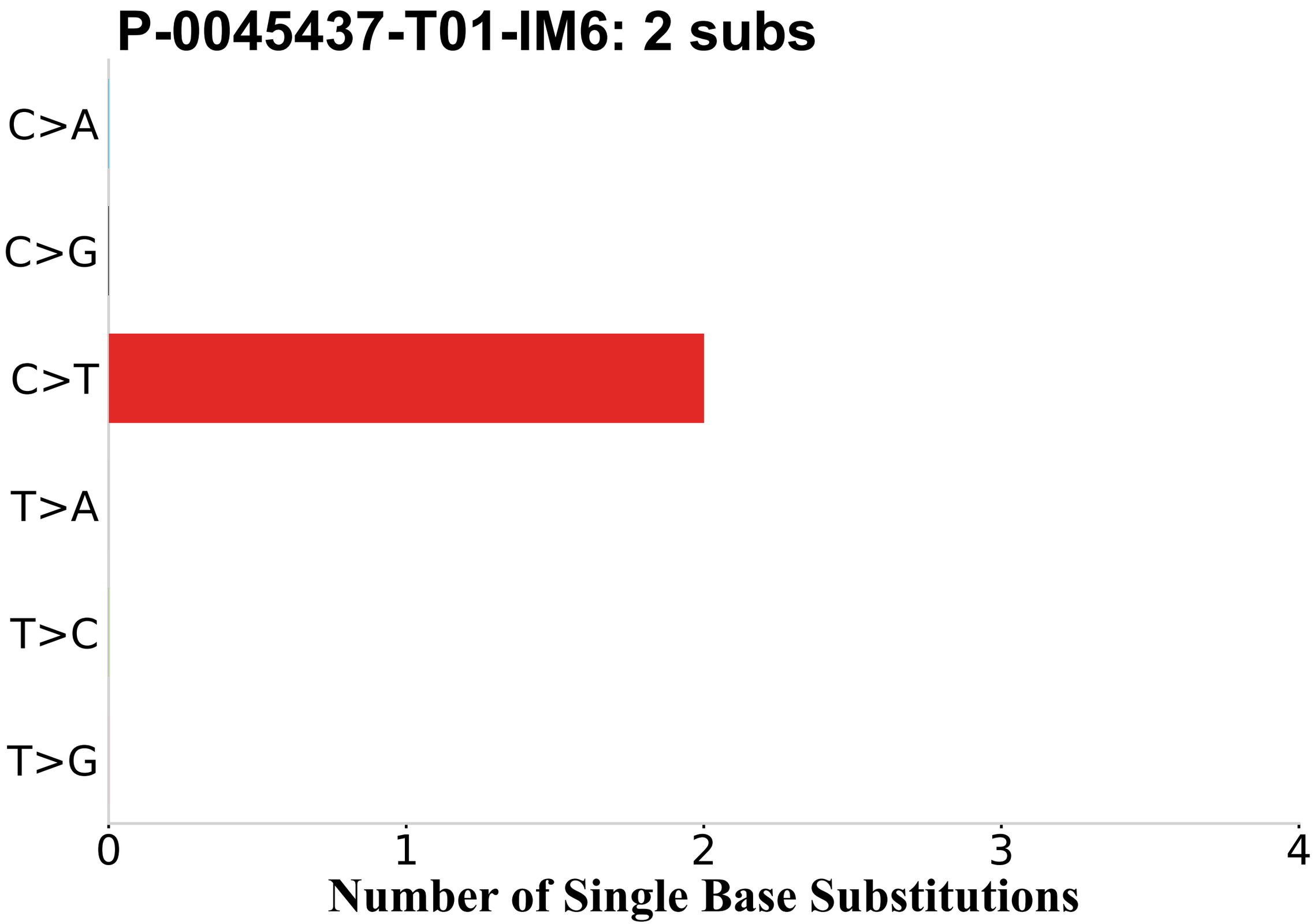

P-0045239-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

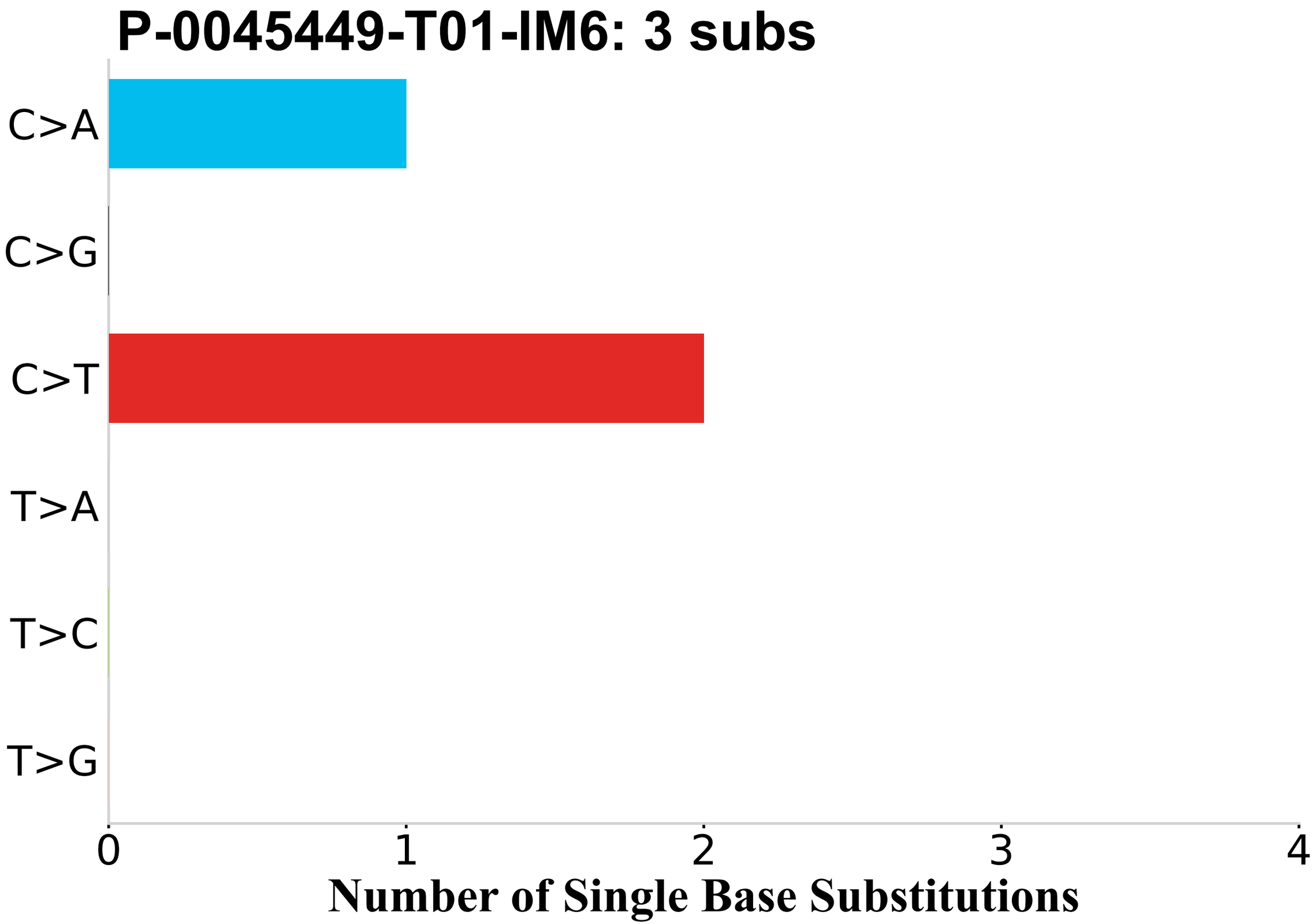

P-0045300-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

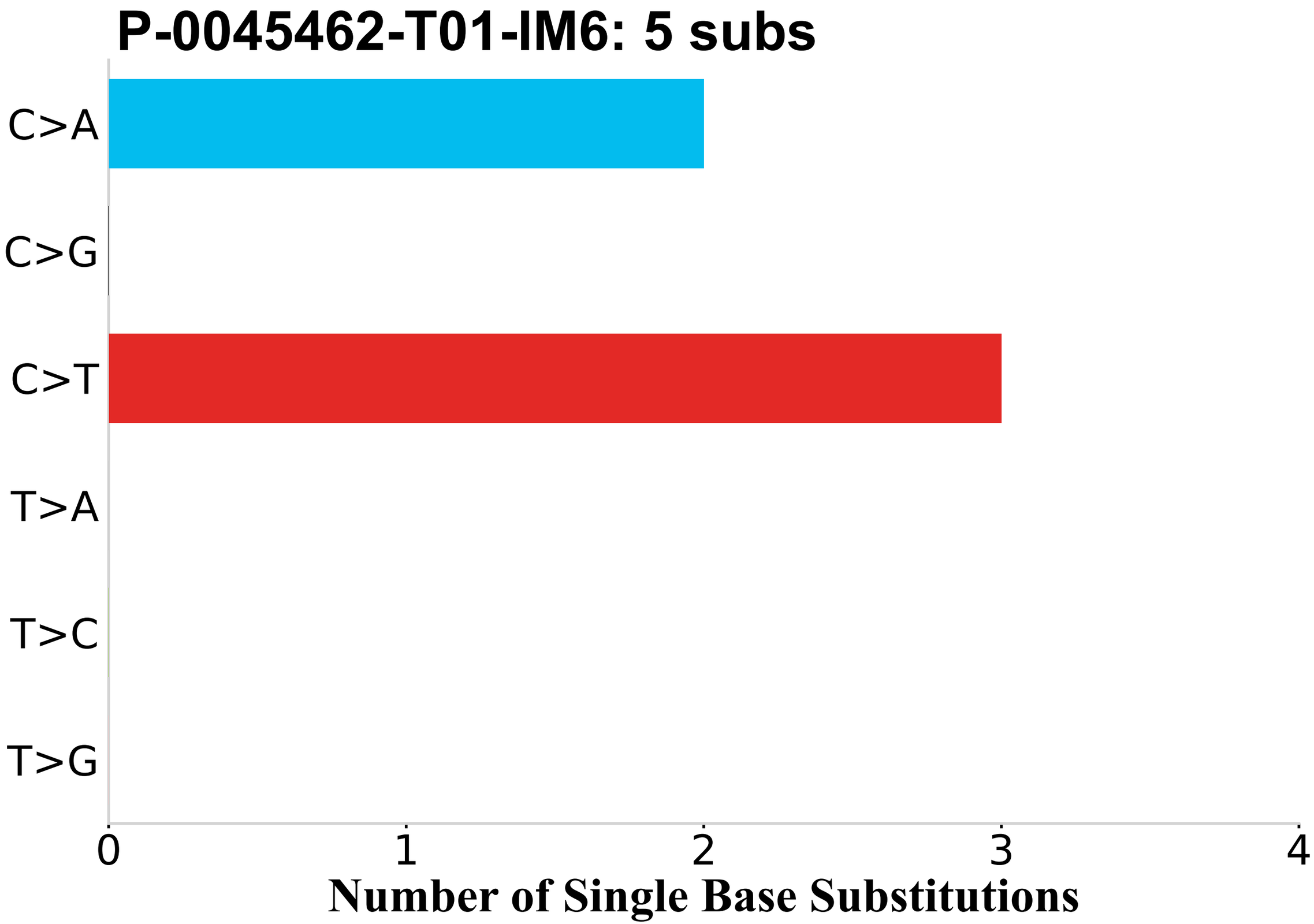

P-0045372-T01-IM6: 45 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
11
22
33
44
Number of Single Base Substitutions

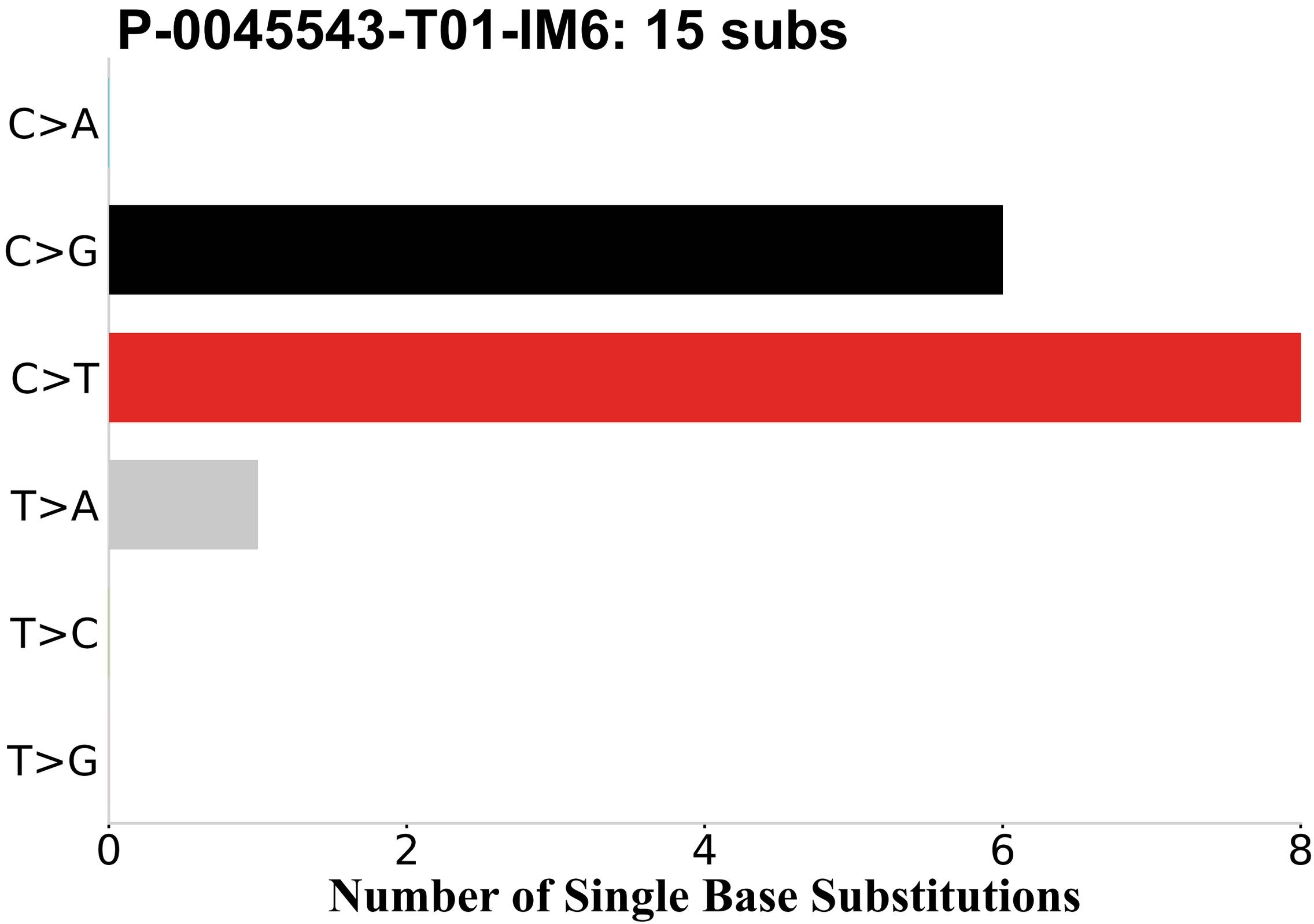

P-0045405-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

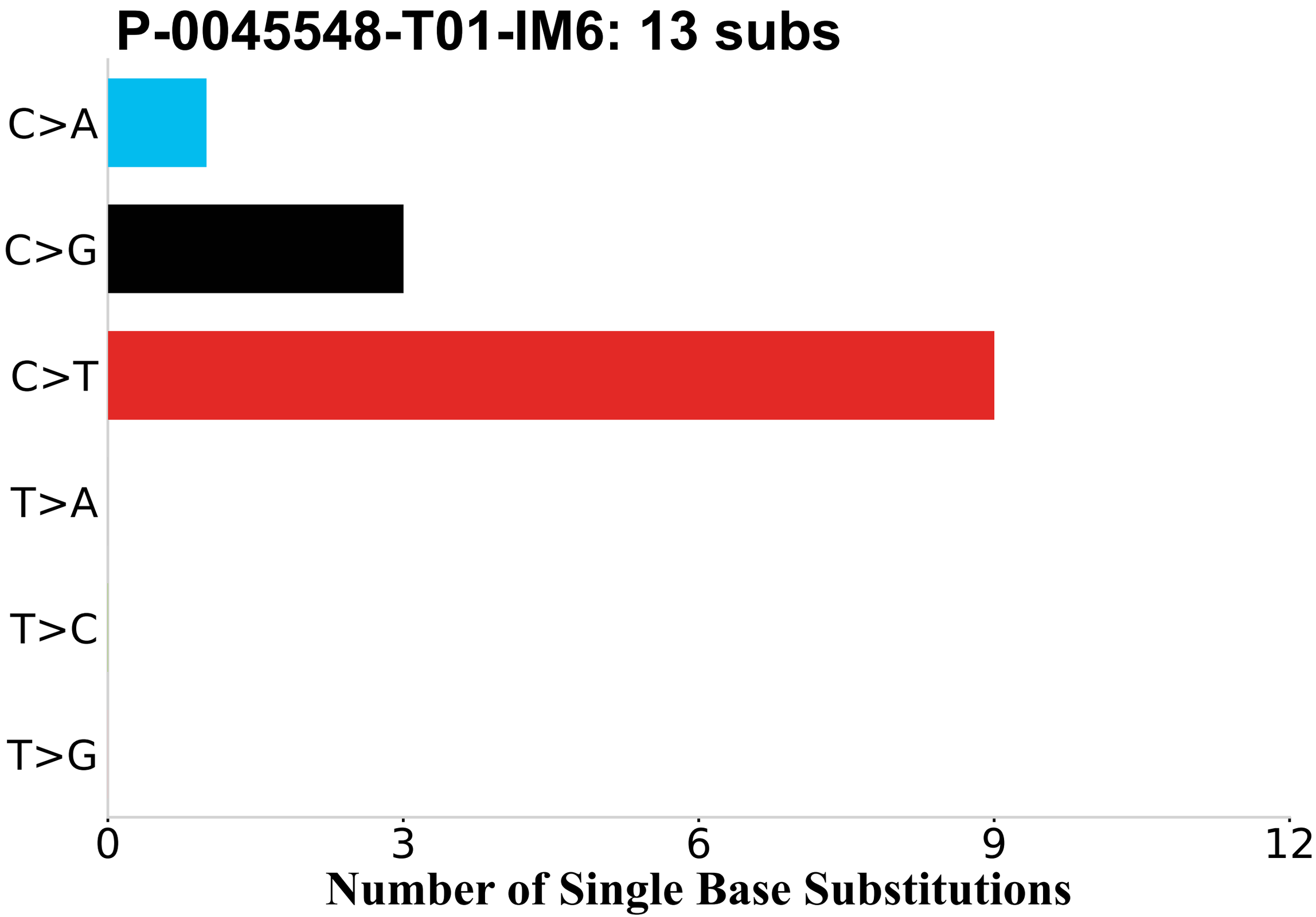

P-0045414-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

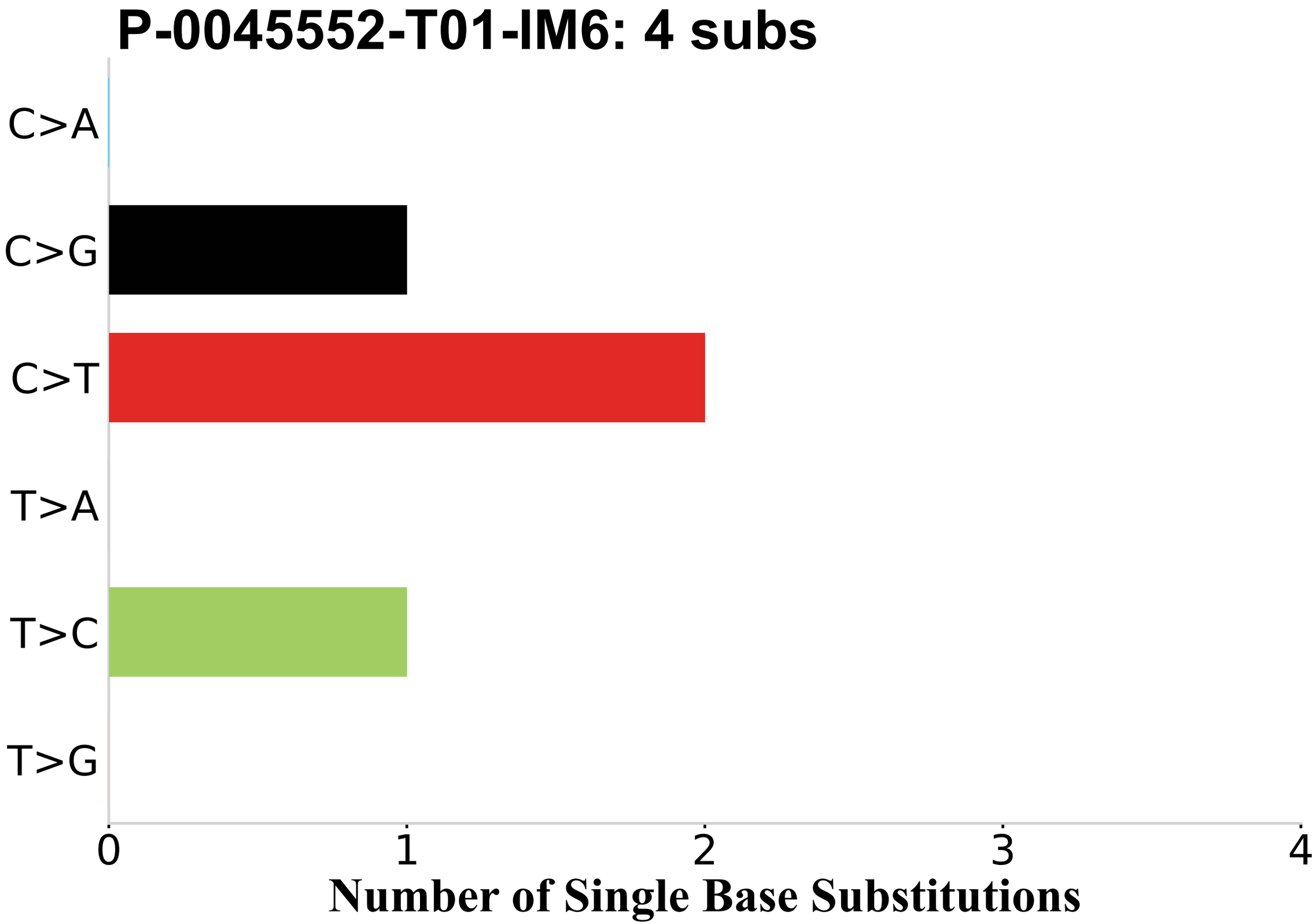

P-0045437-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

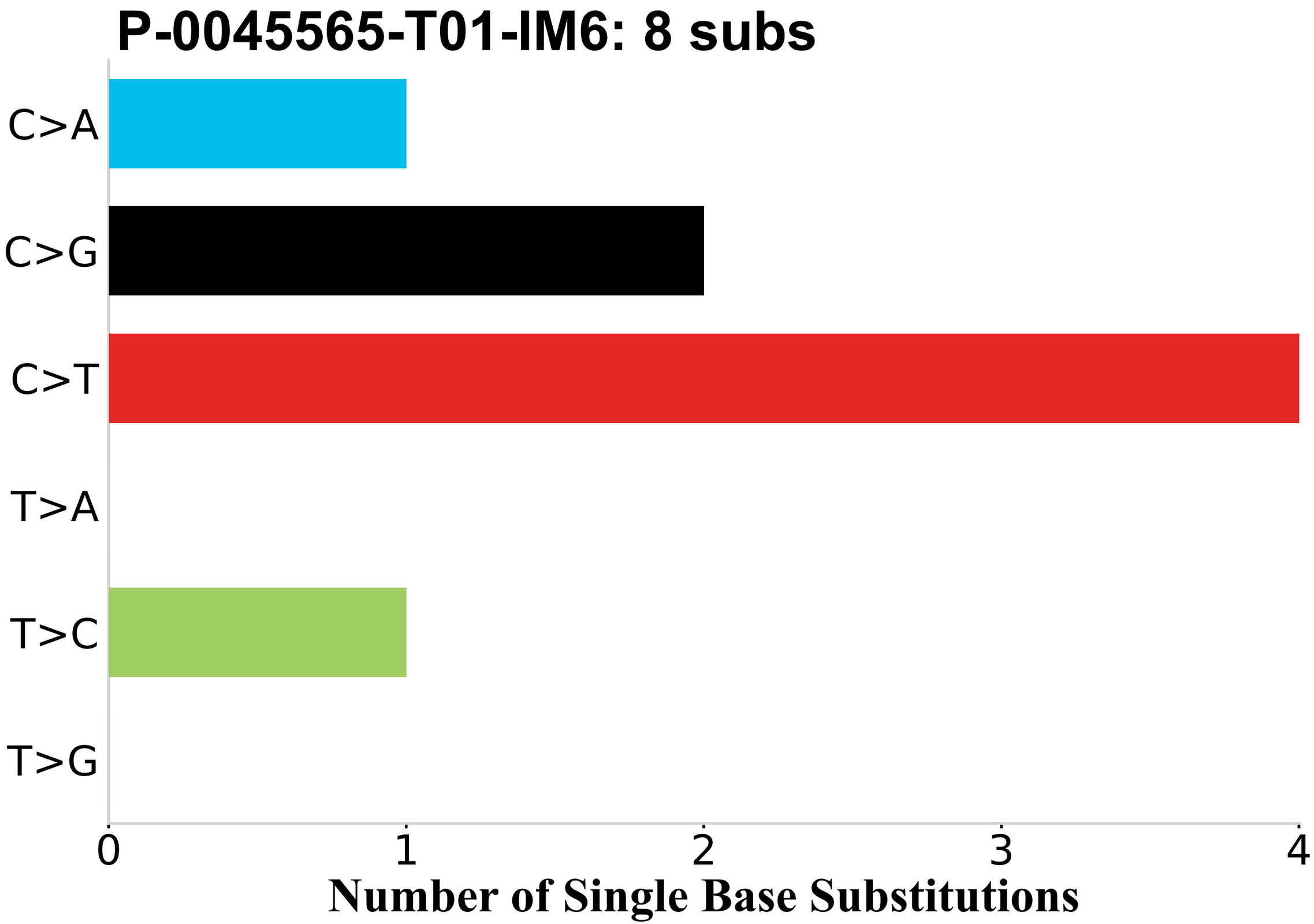

P-0045449-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

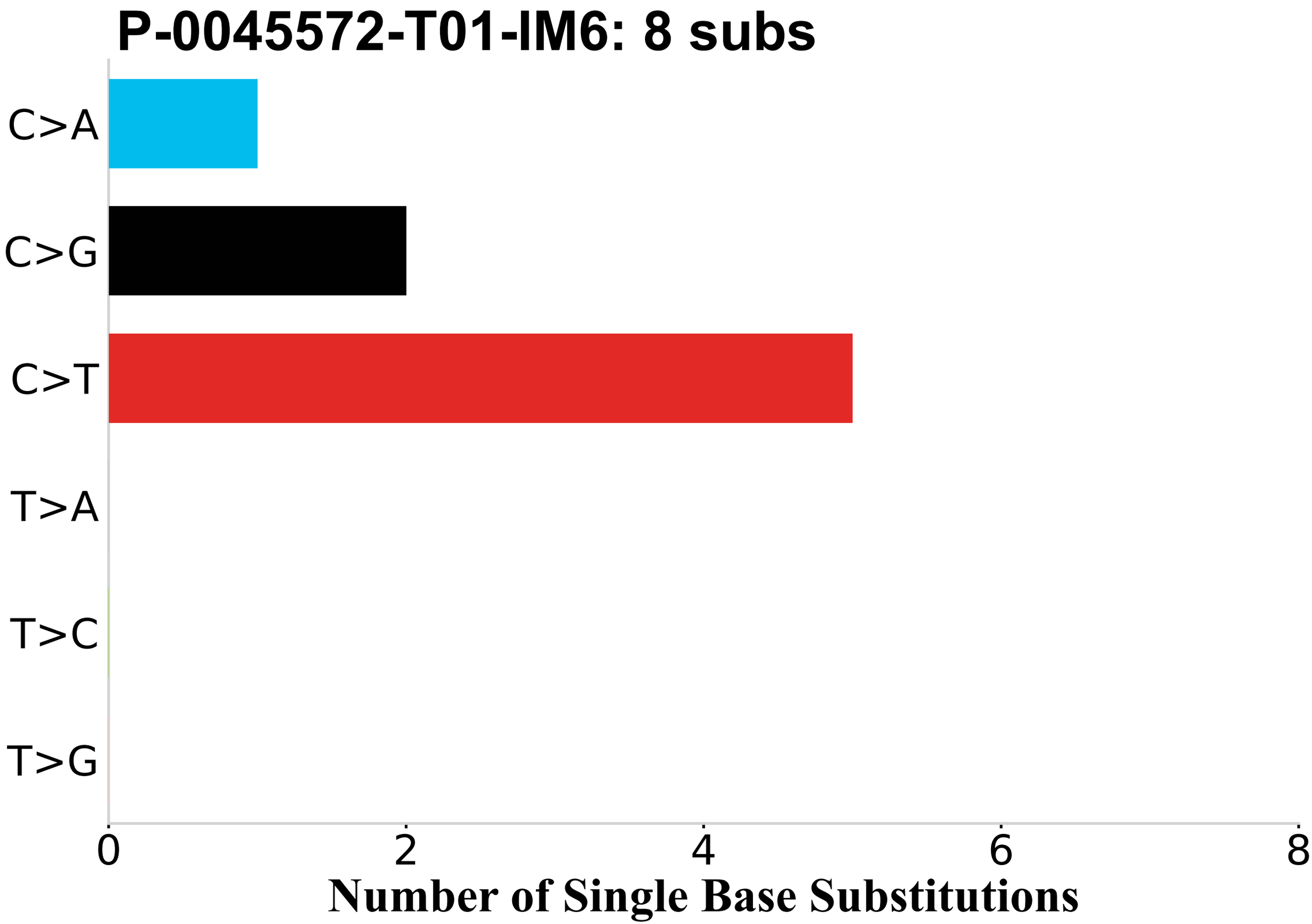

P-0045462-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

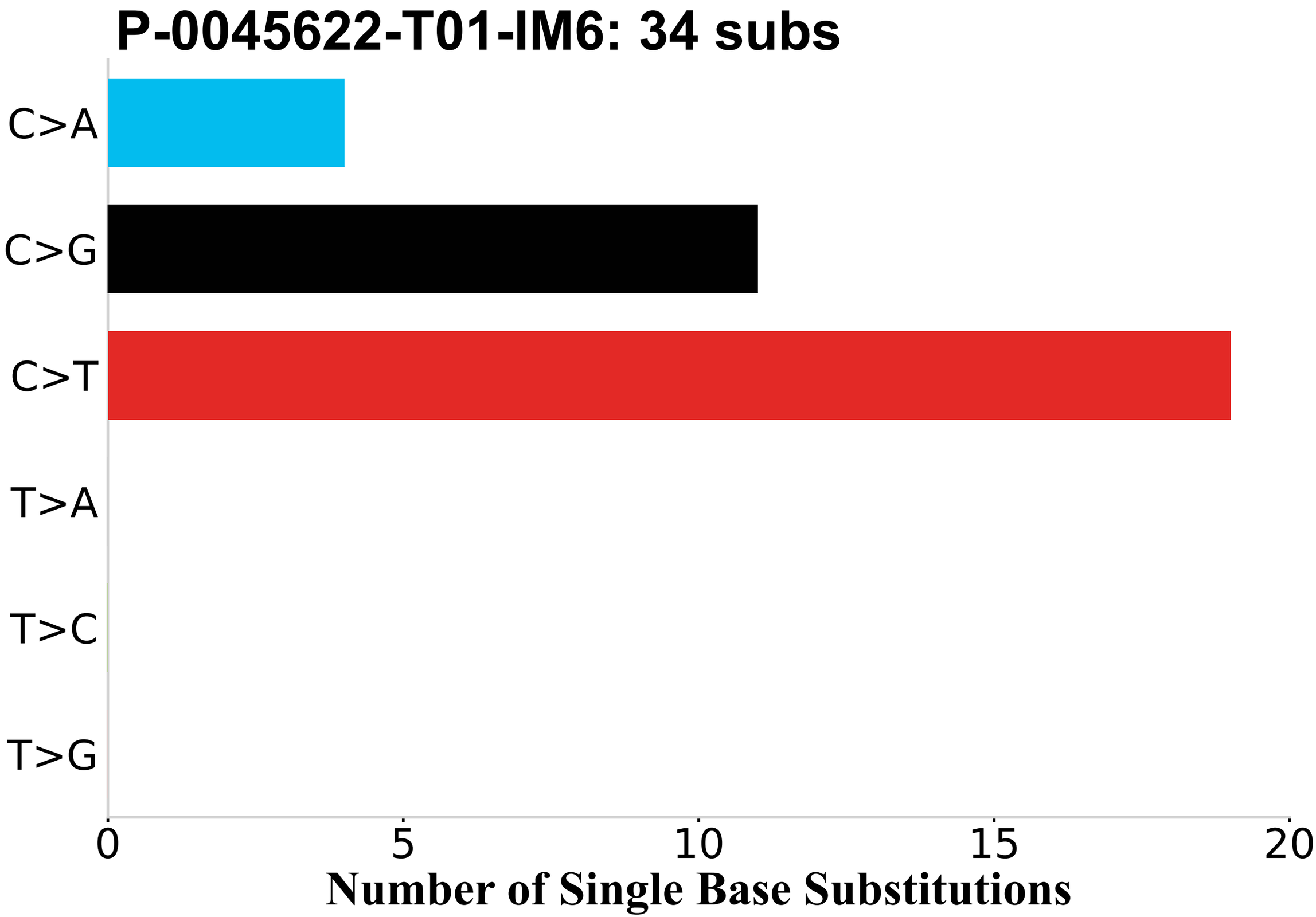

P-0045543-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

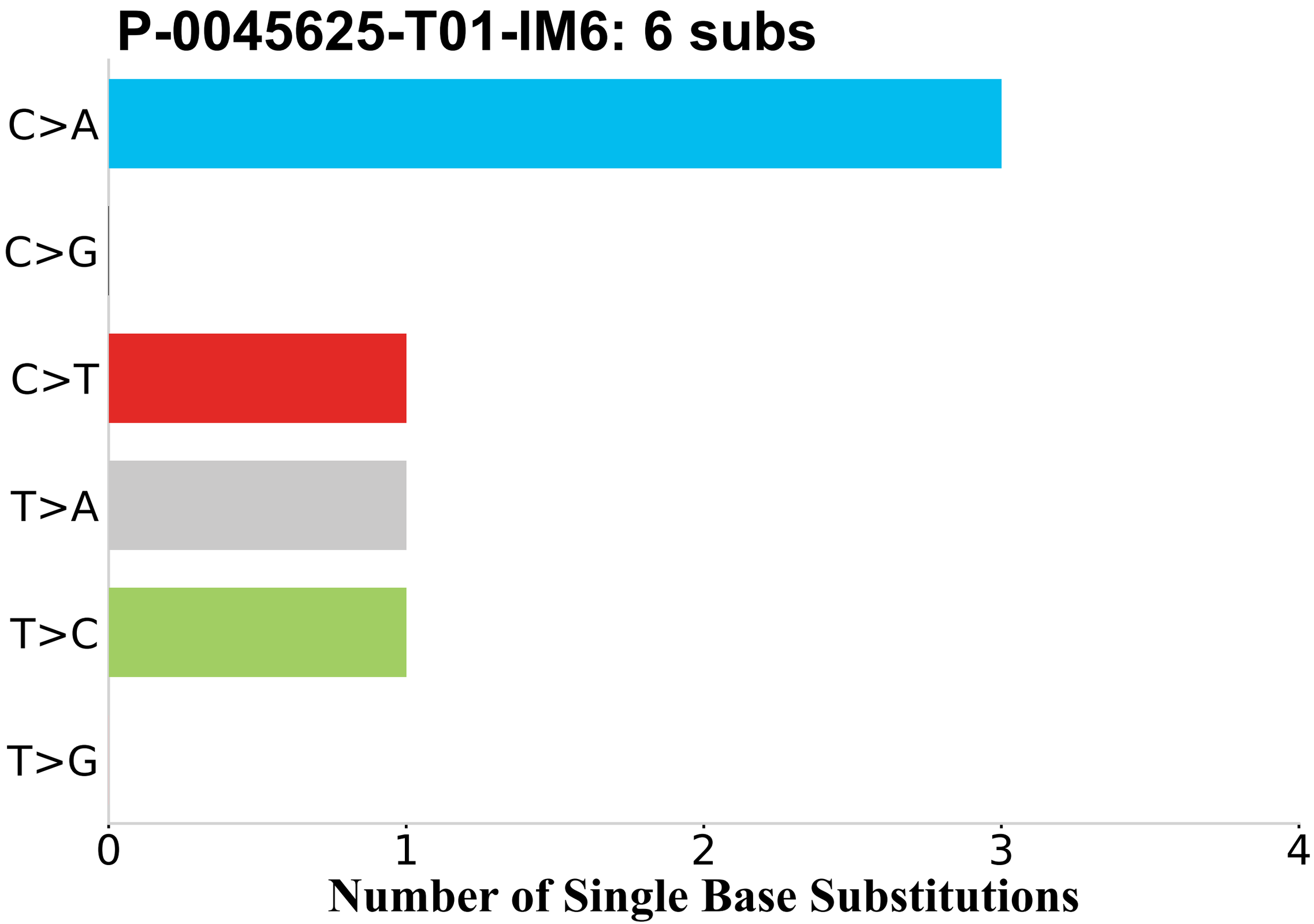

P-0045548-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

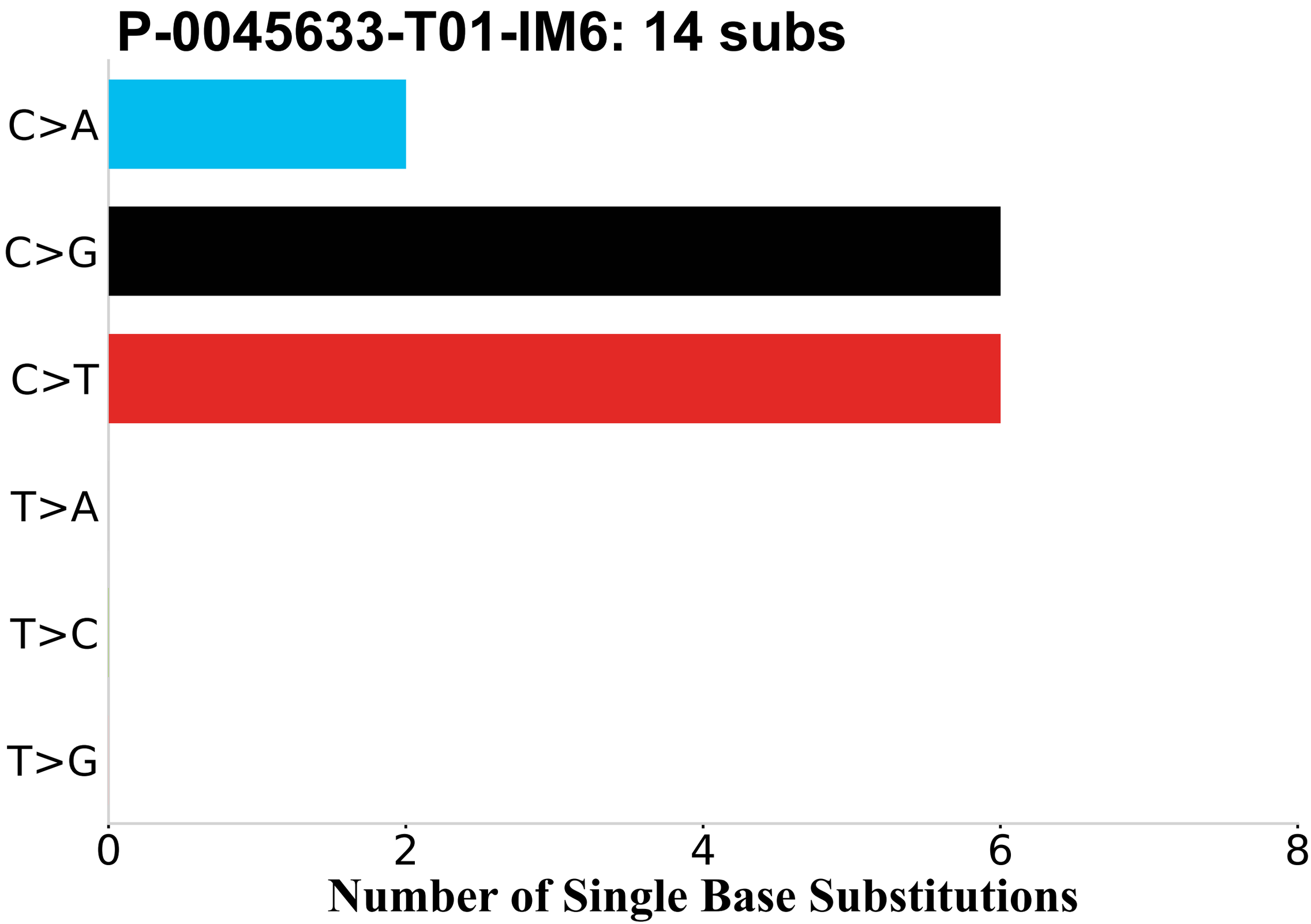

P-0045552-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

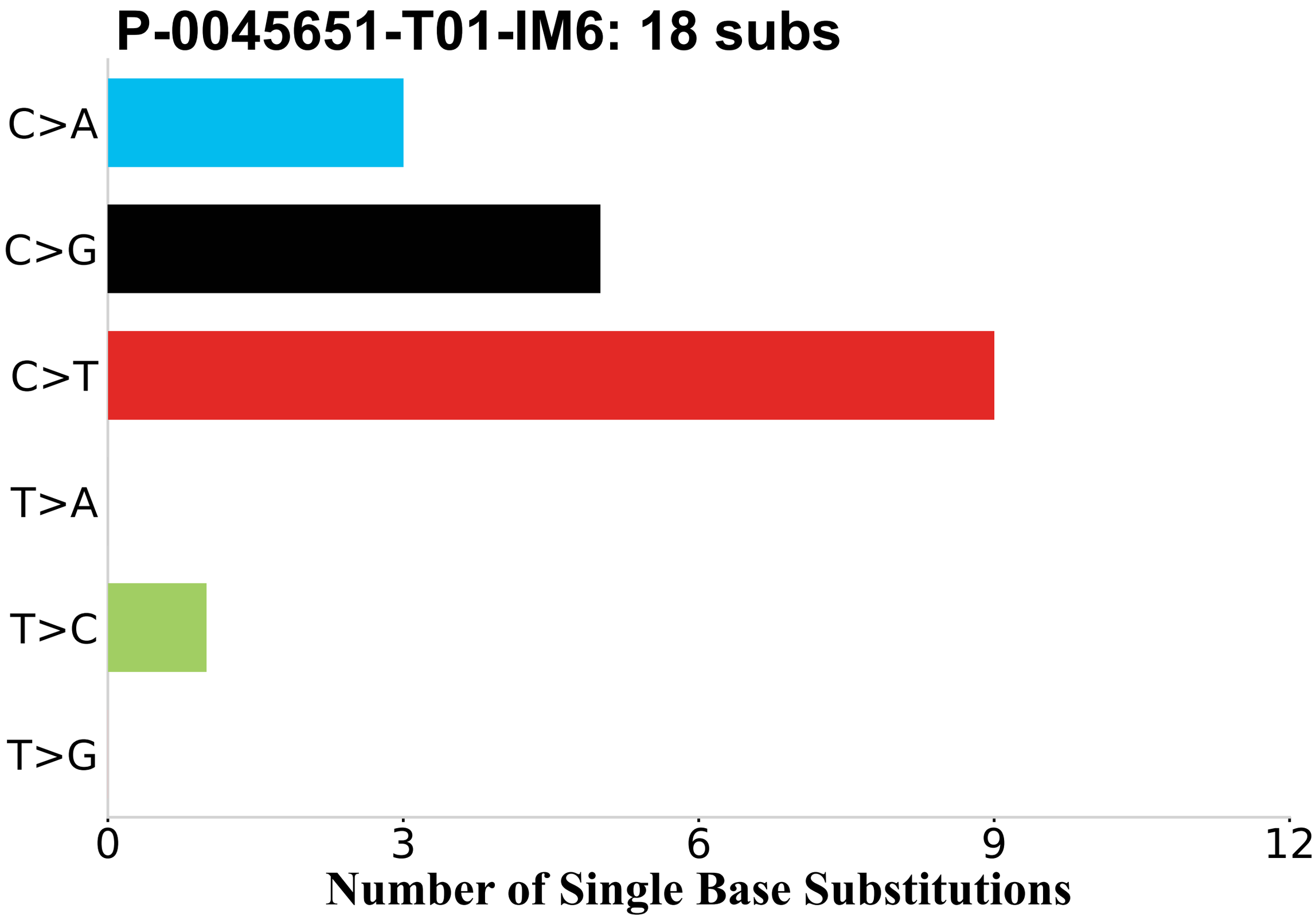

P-0045565-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

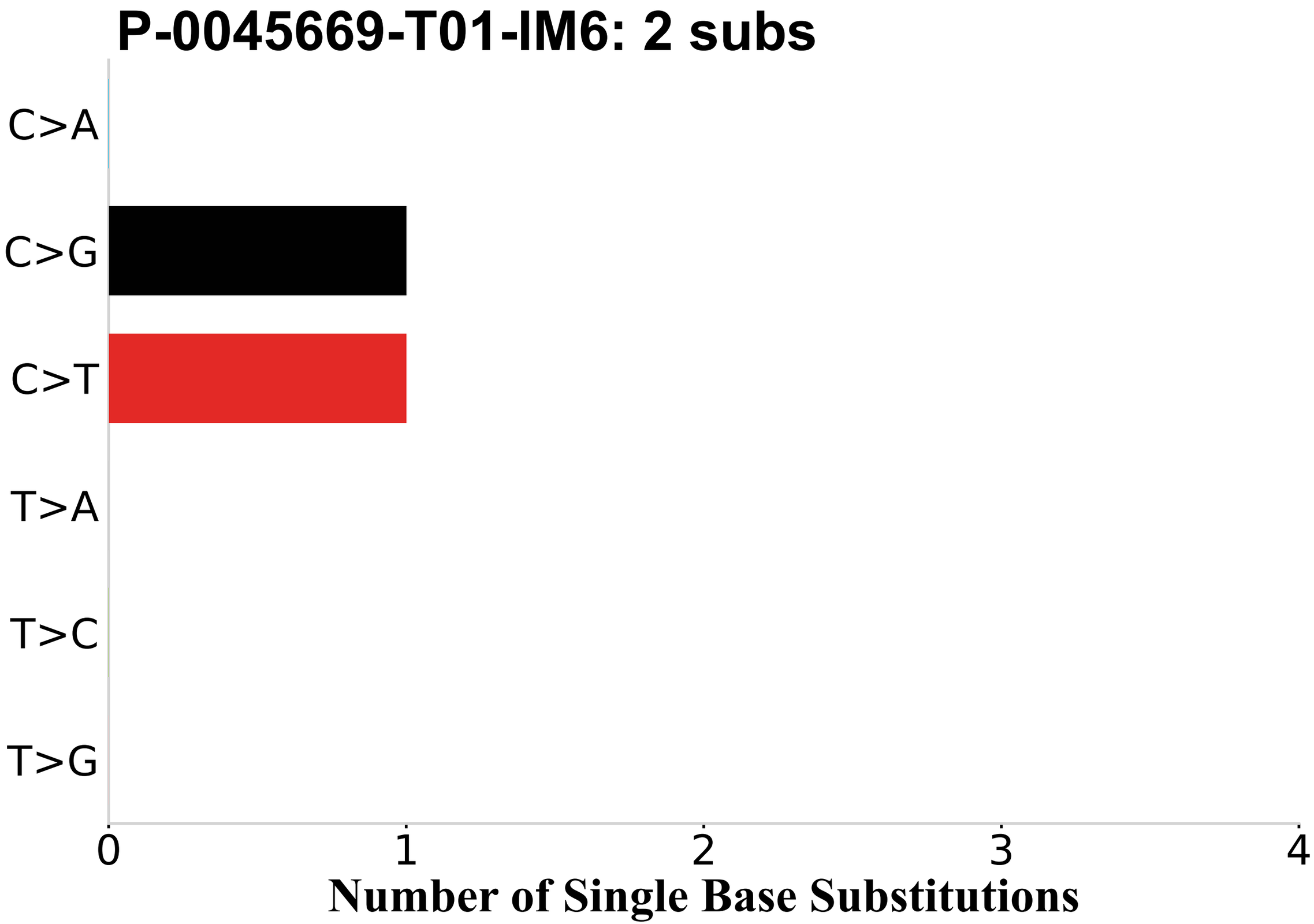

P-0045572-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

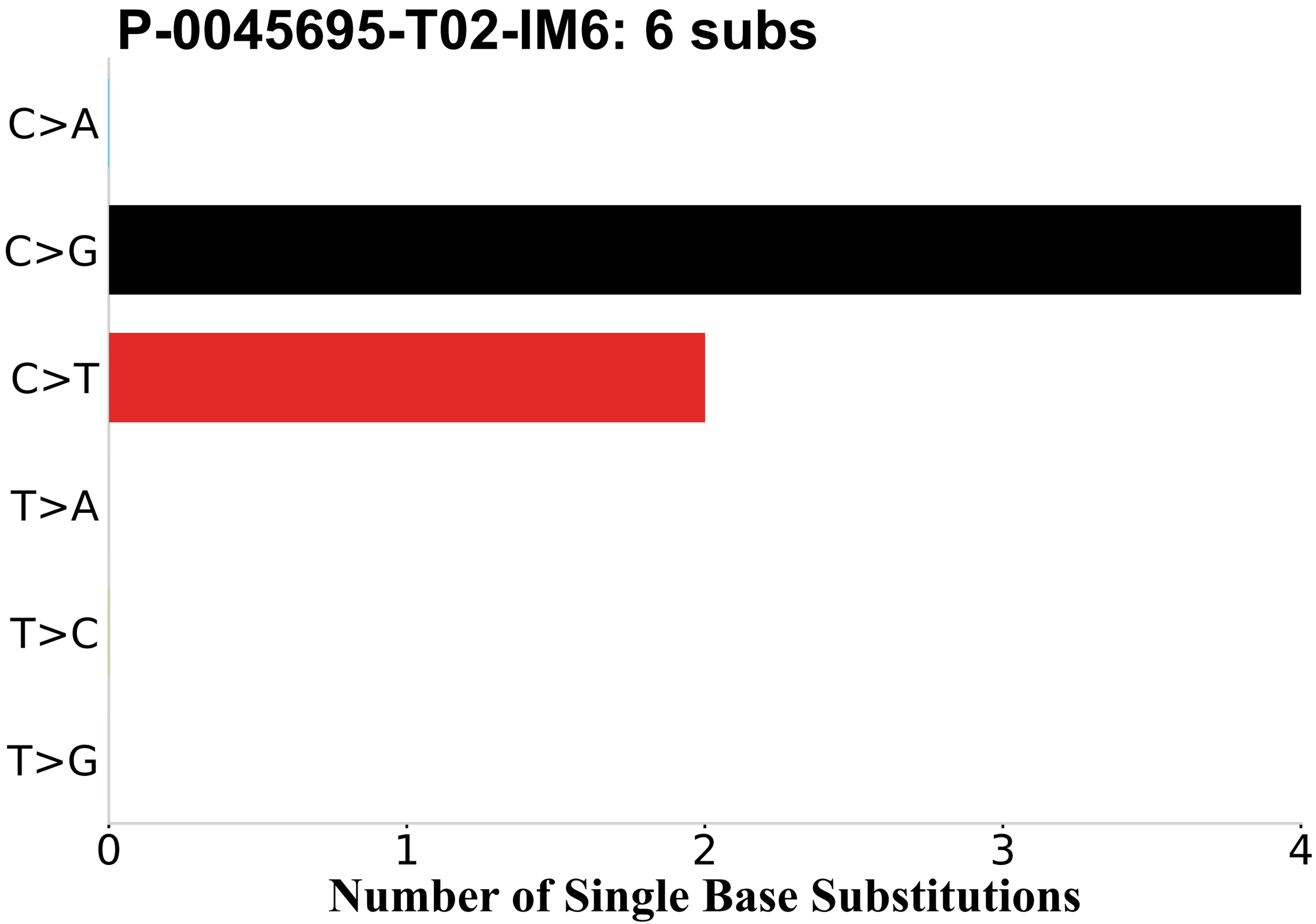

P-0045622-T01-IM6: 34 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

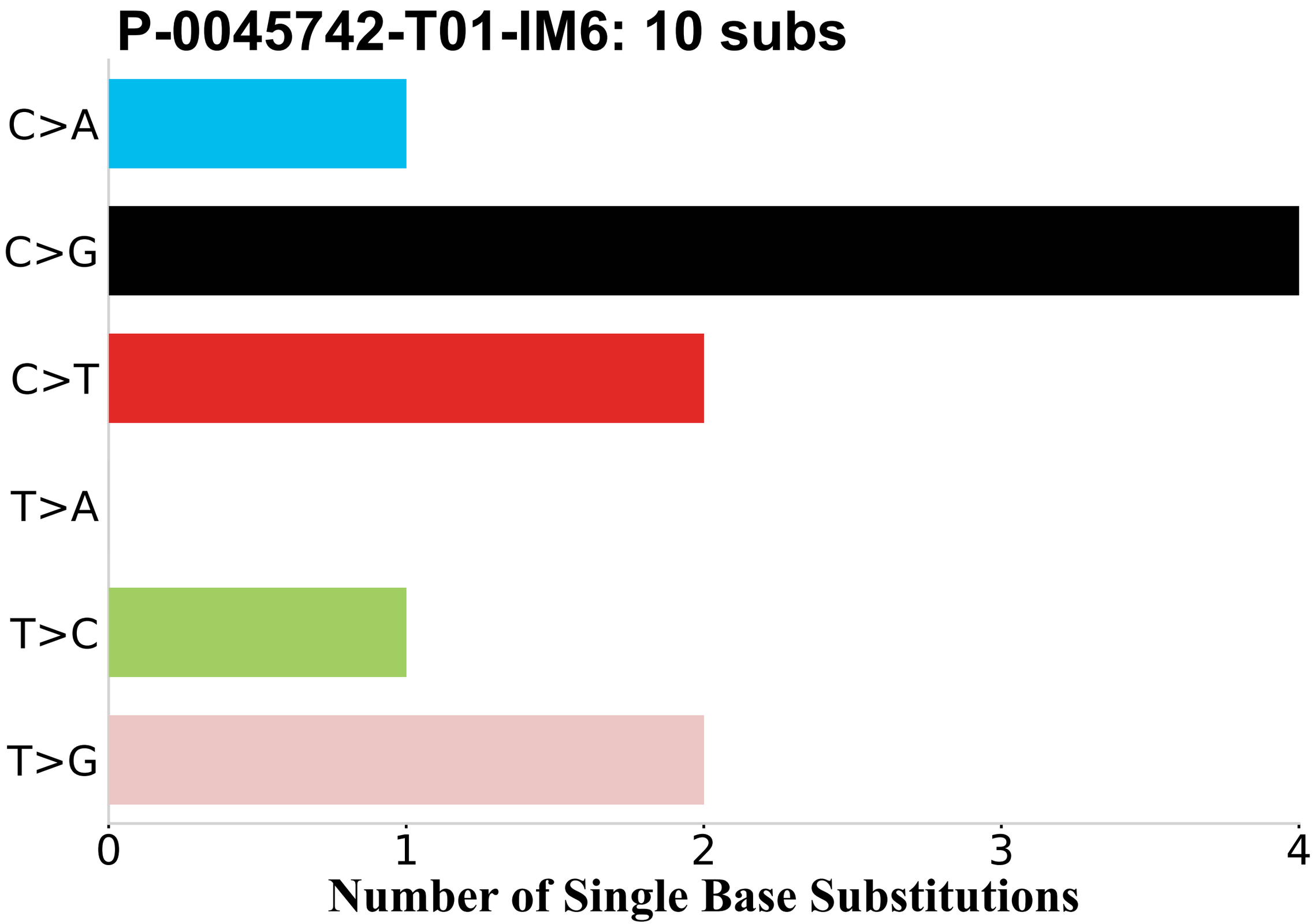

P-0045625-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

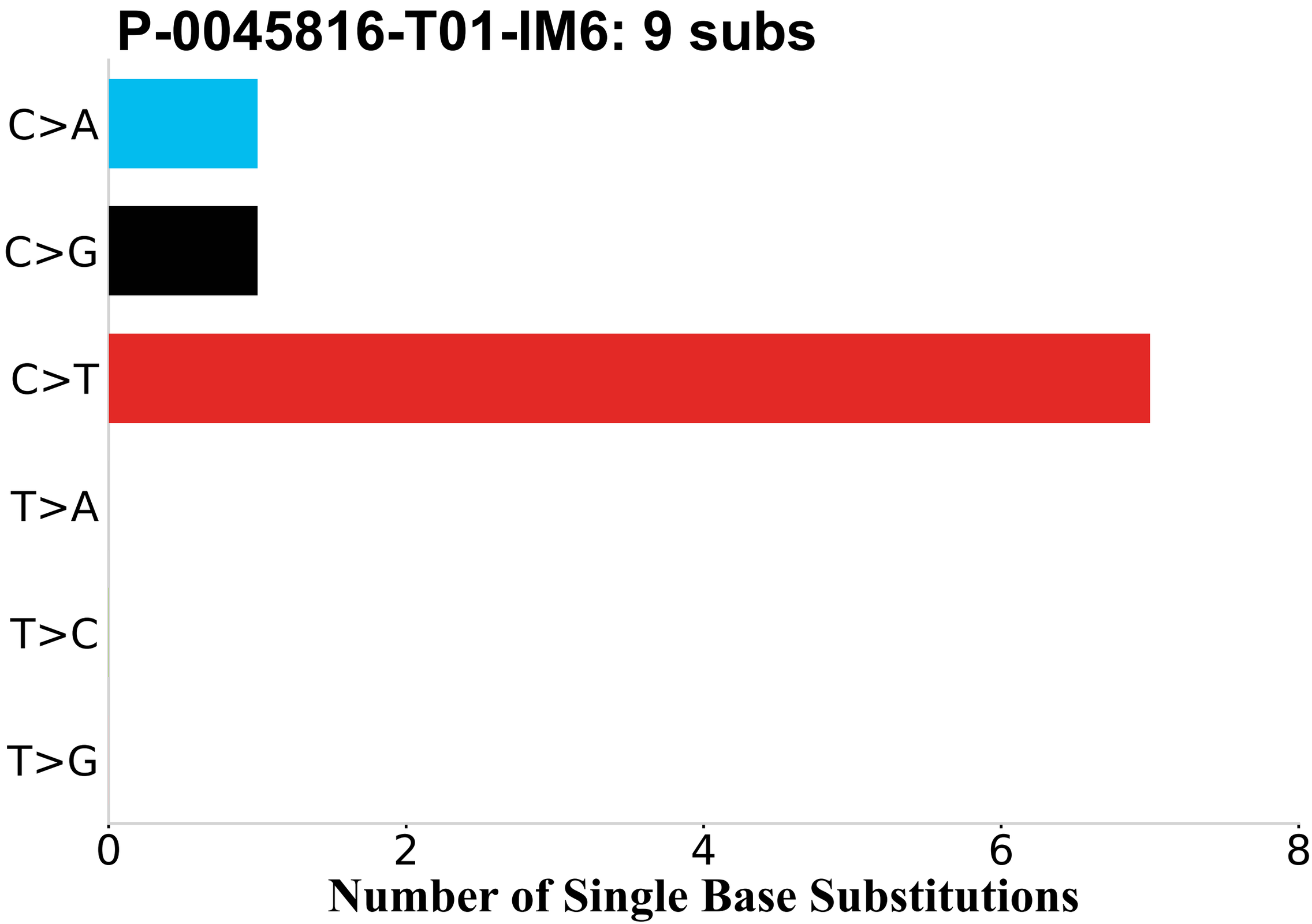

P-0045633-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

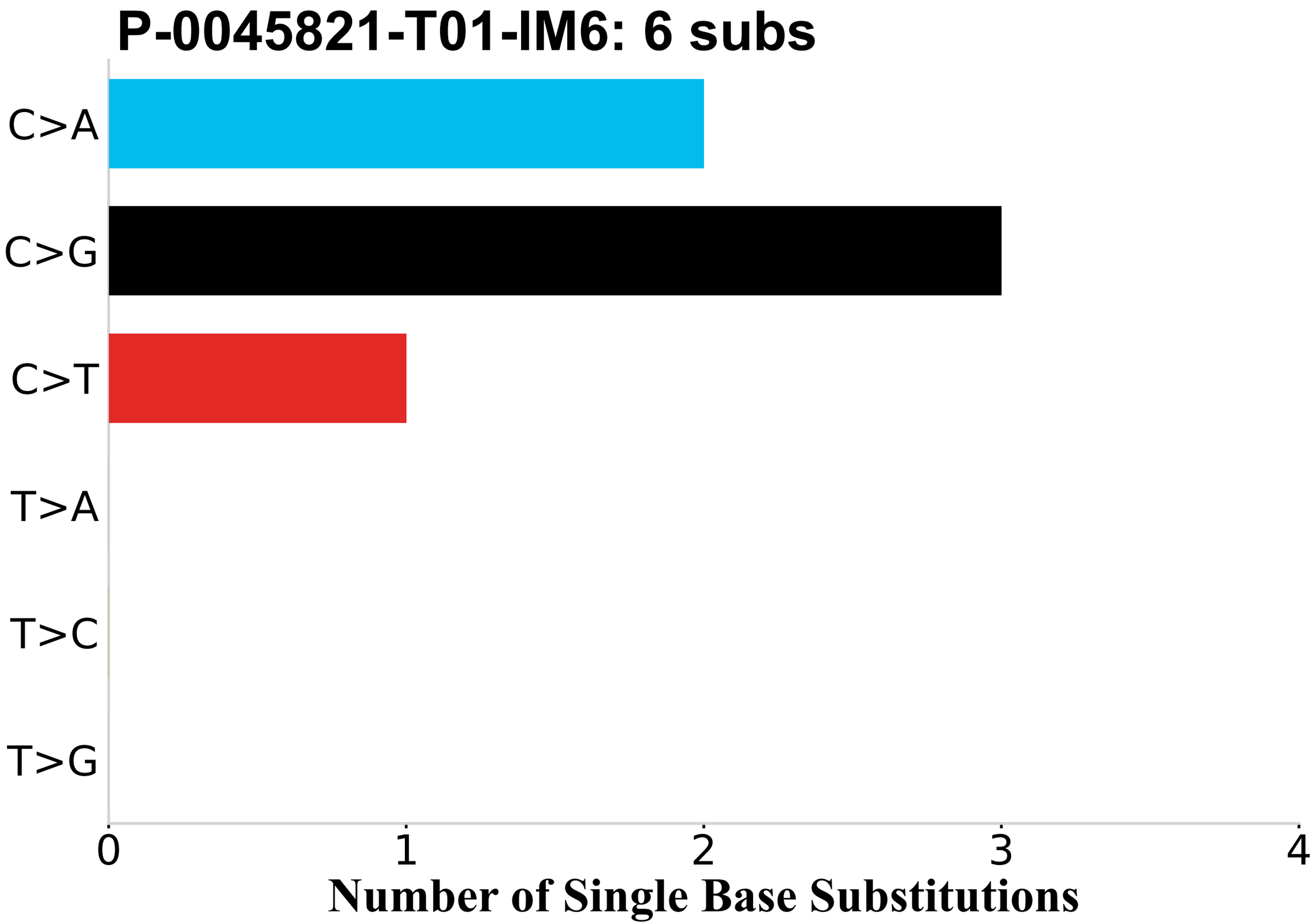

P-0045651-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

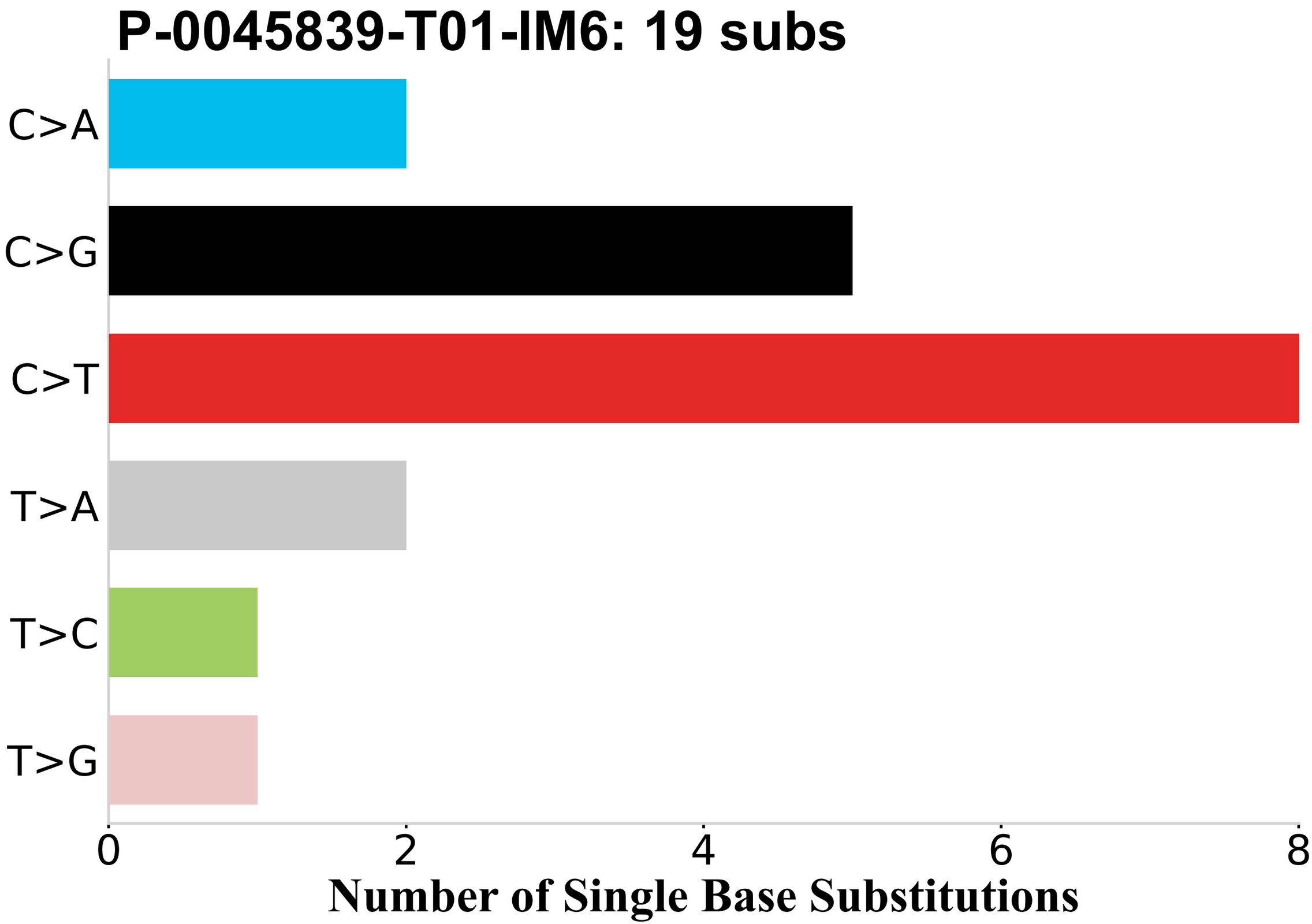

P-0045669-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

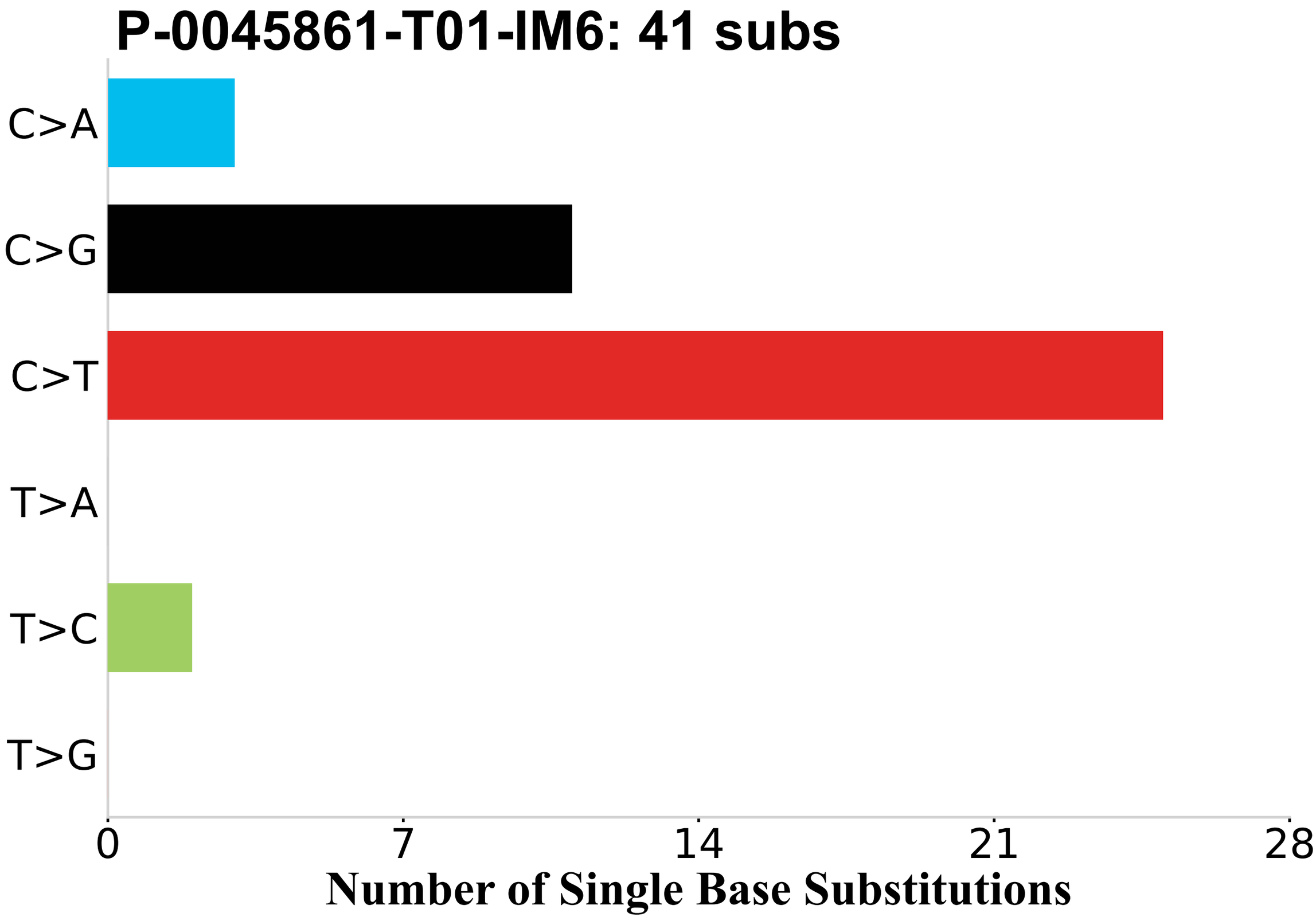

P-0045695-T02-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

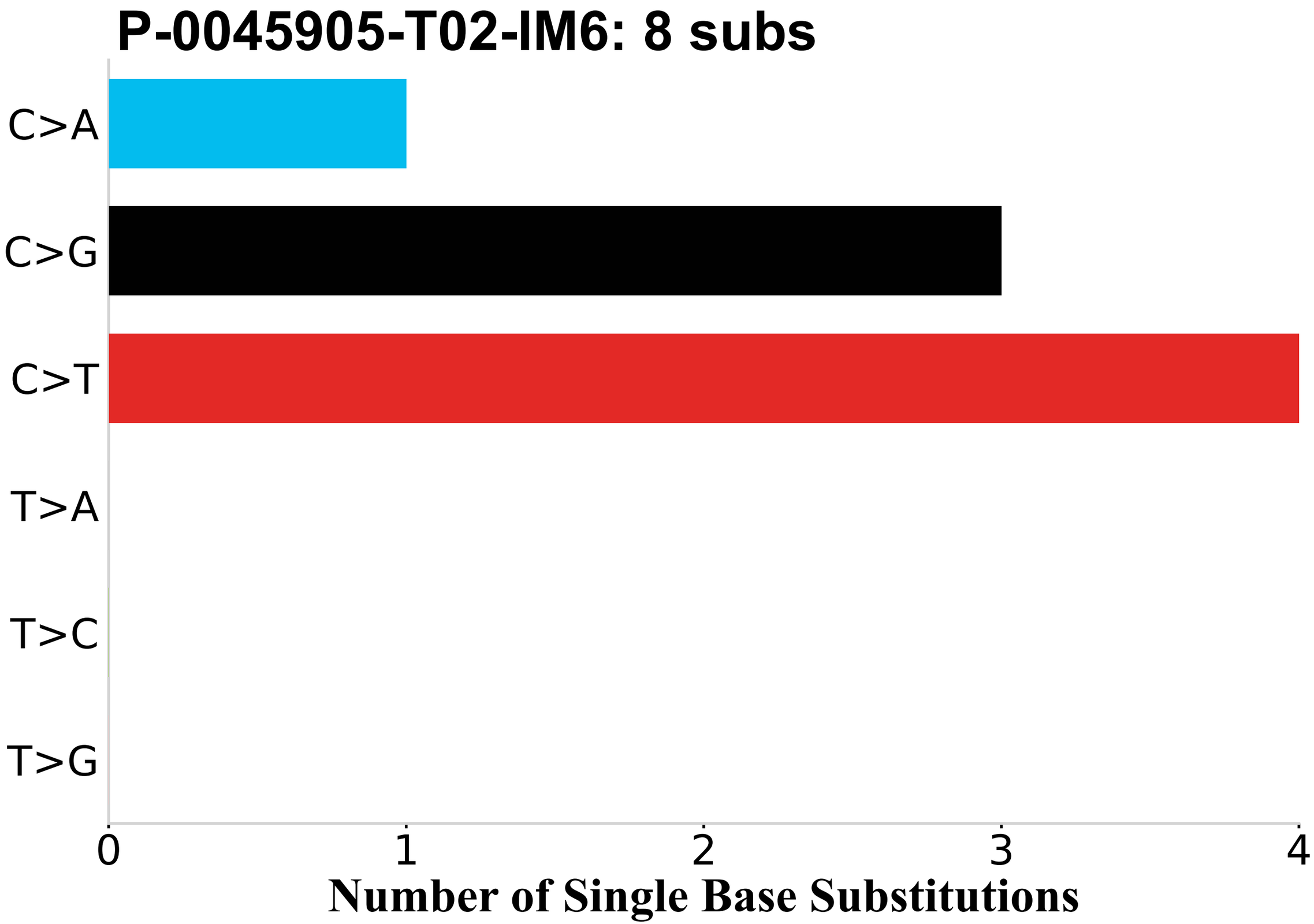

P-0045742-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

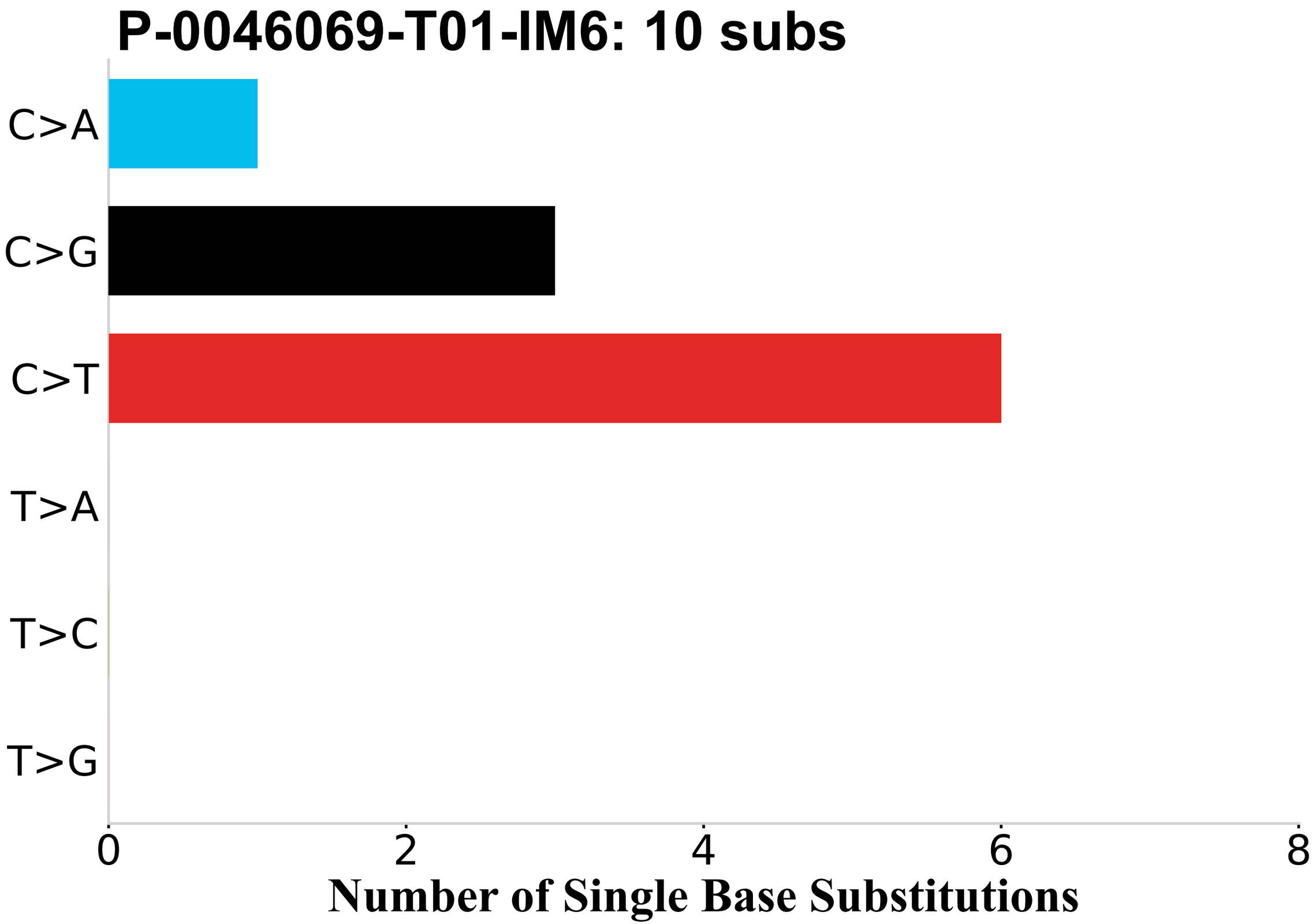

P-0045816-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

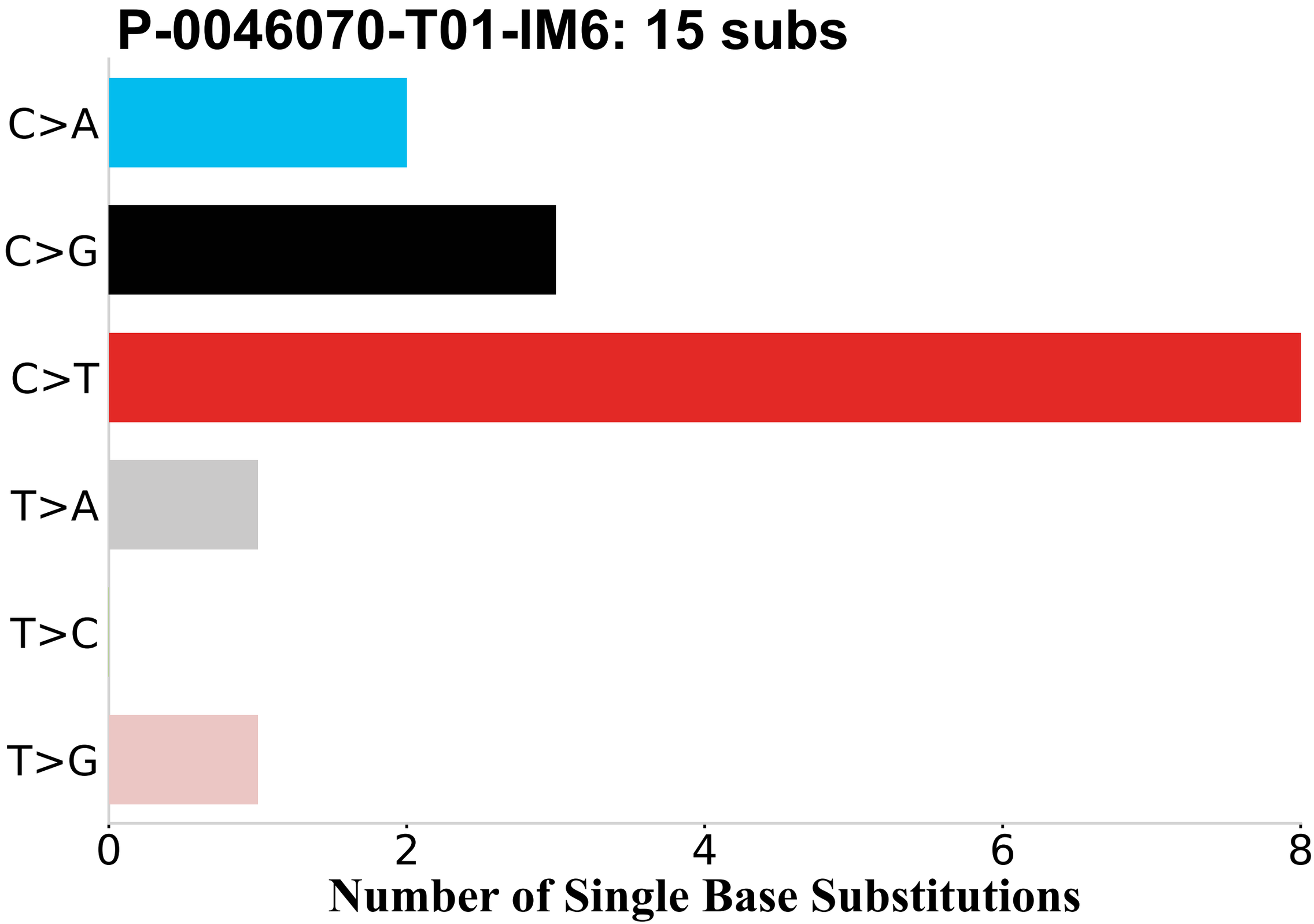

P-0045821-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

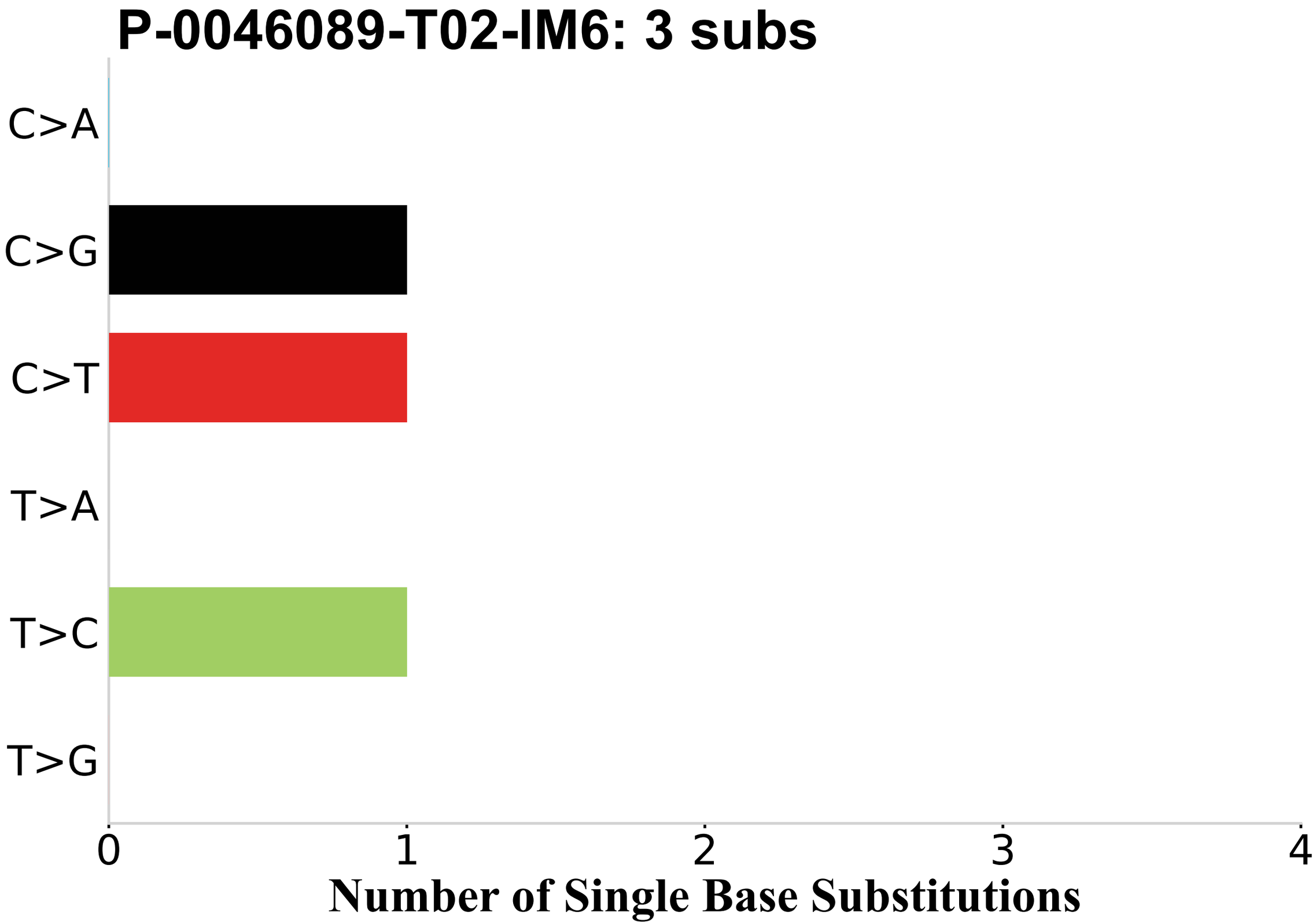

P-0045839-T01-IM6: 19 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

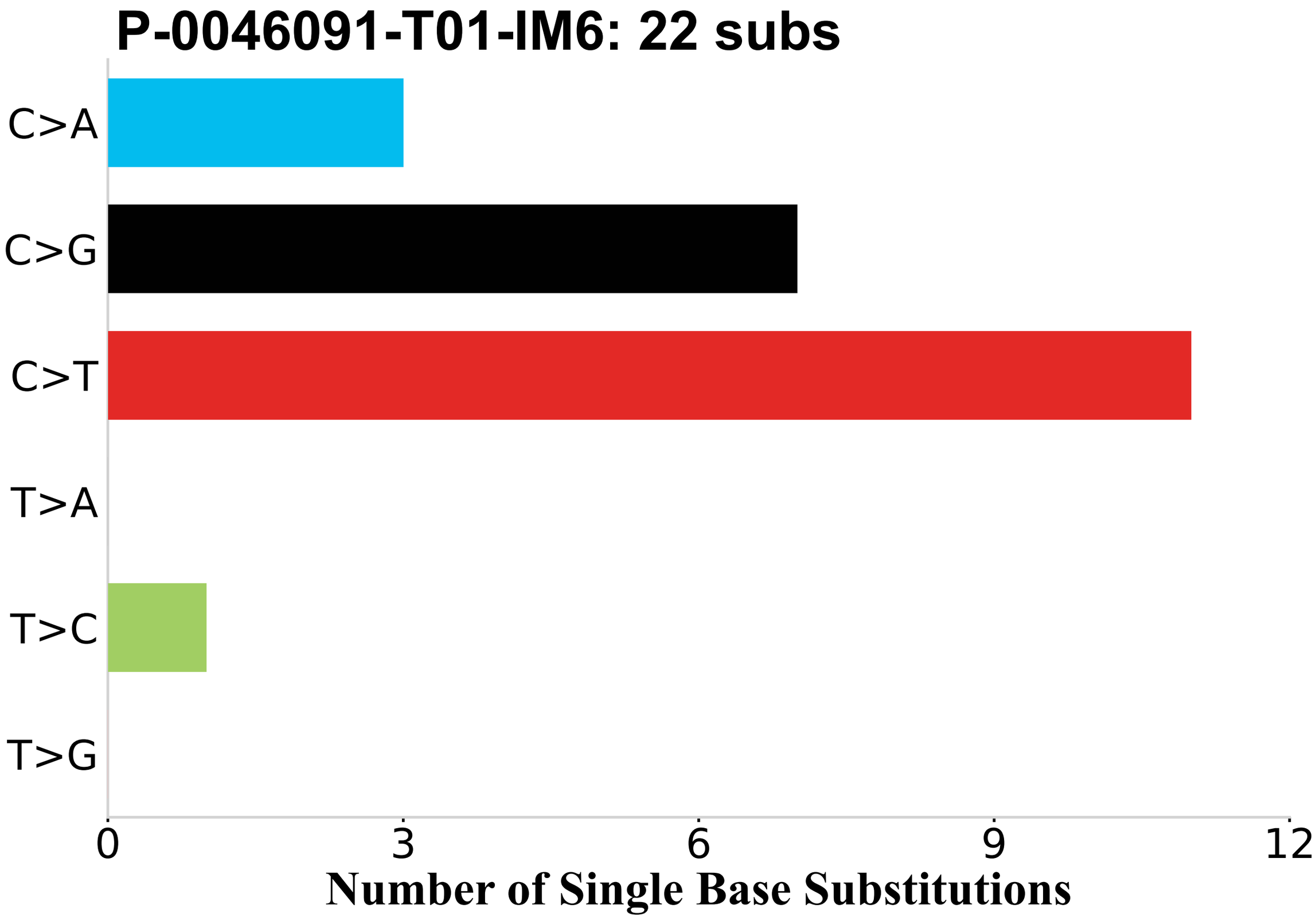

P-0045861-T01-IM6: 41 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions

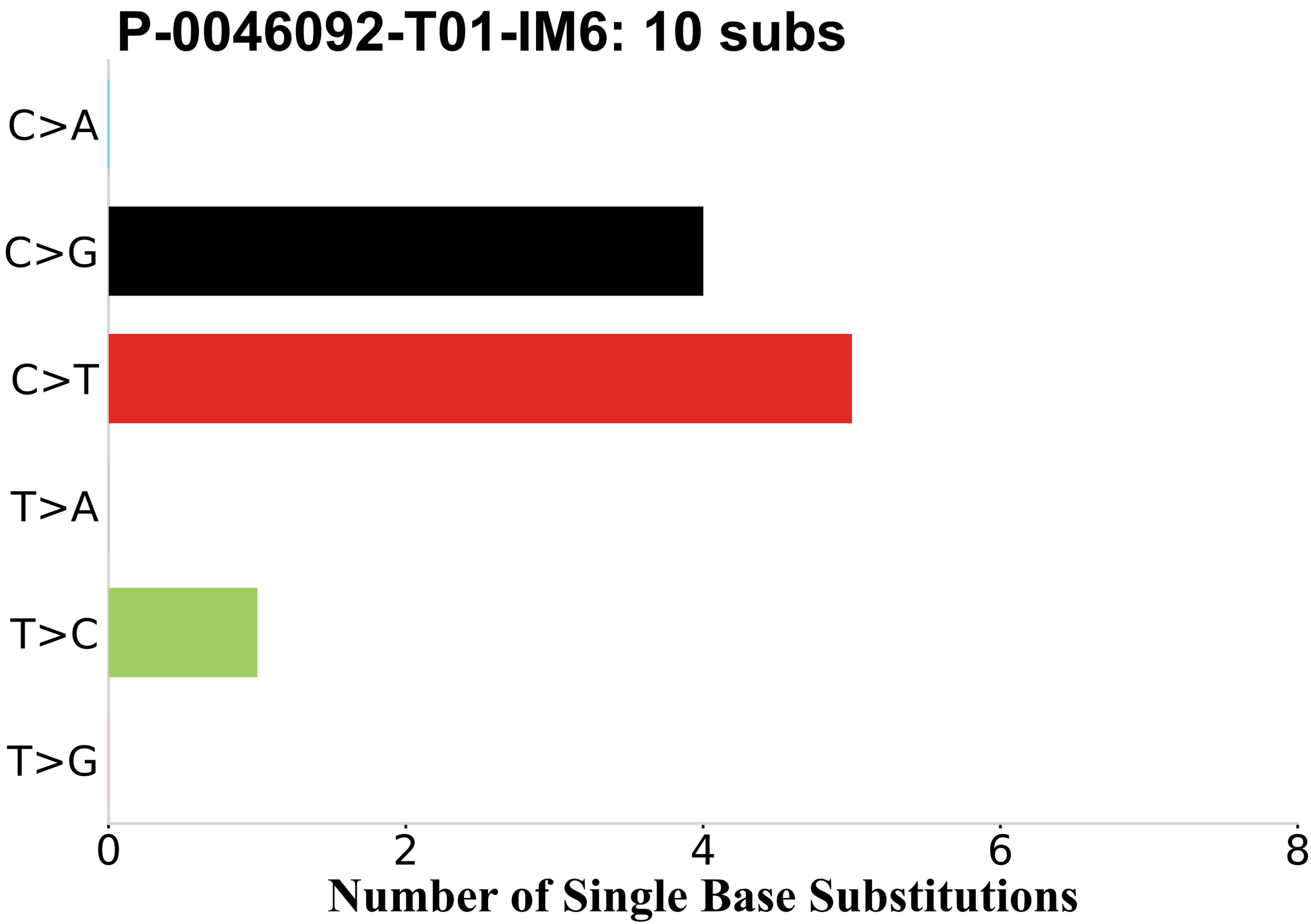

P-0045905-T02-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

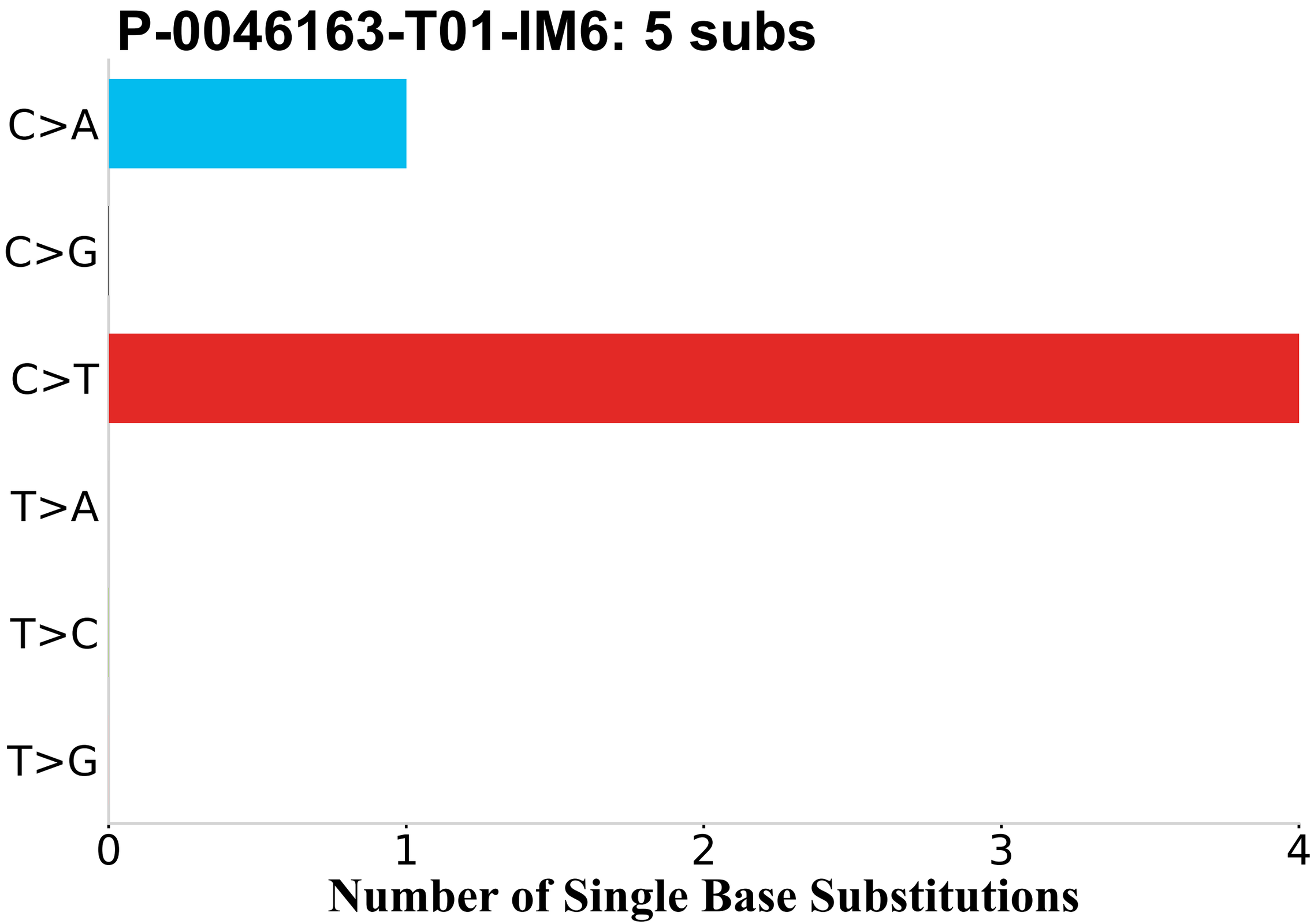

P-0046069-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

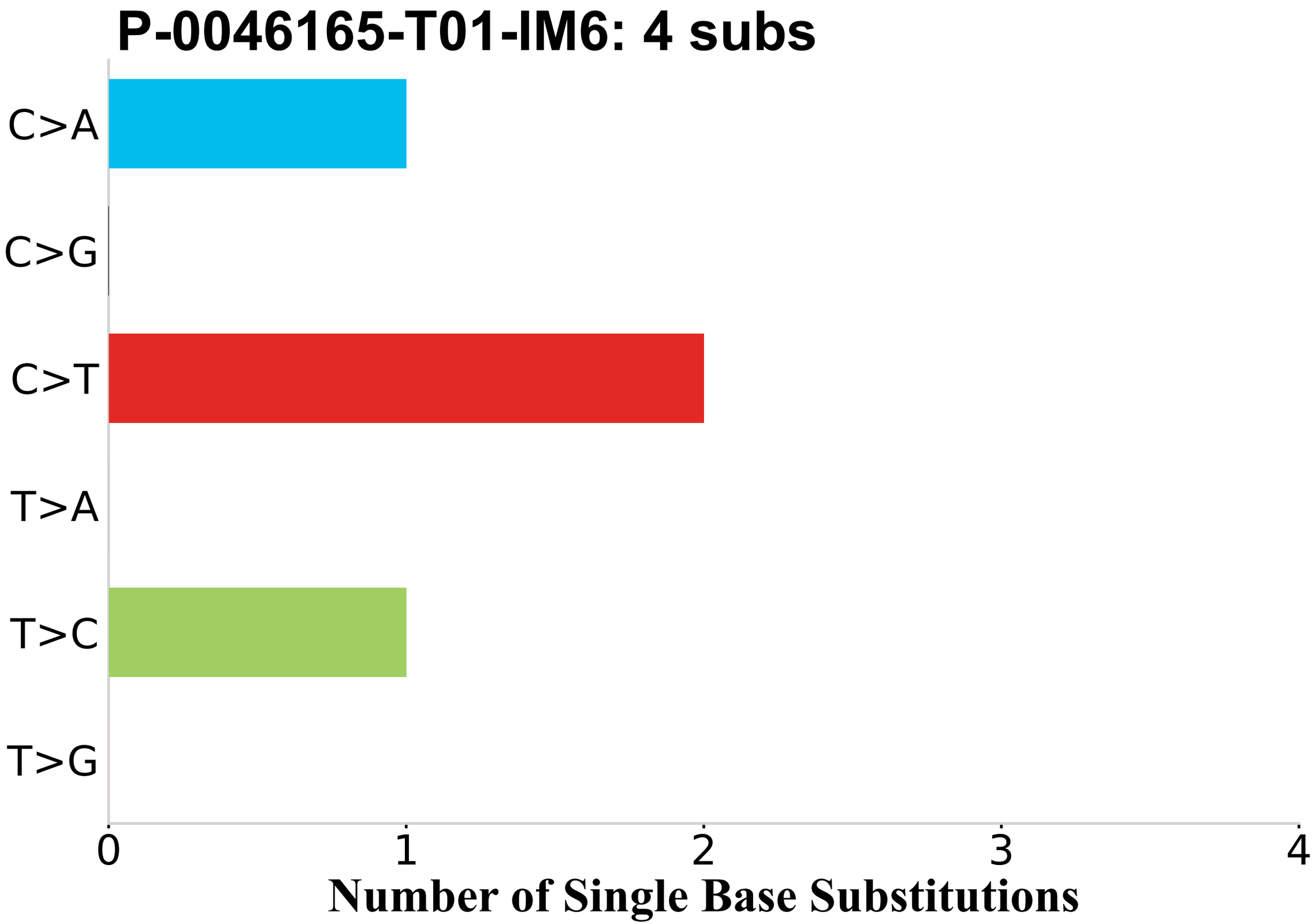

P-0046070-T01-IM6: 15 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

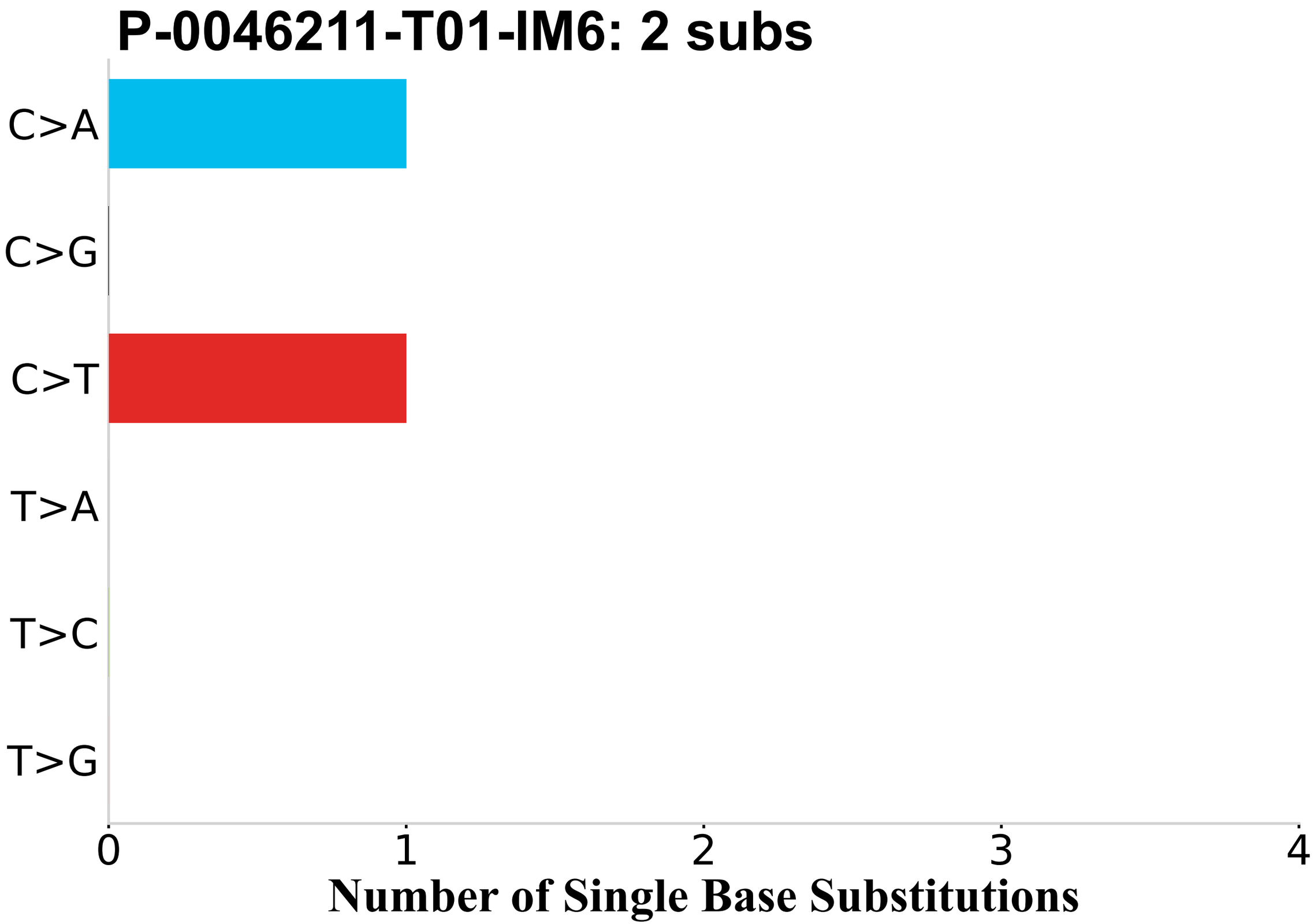

P-0046089-T02-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

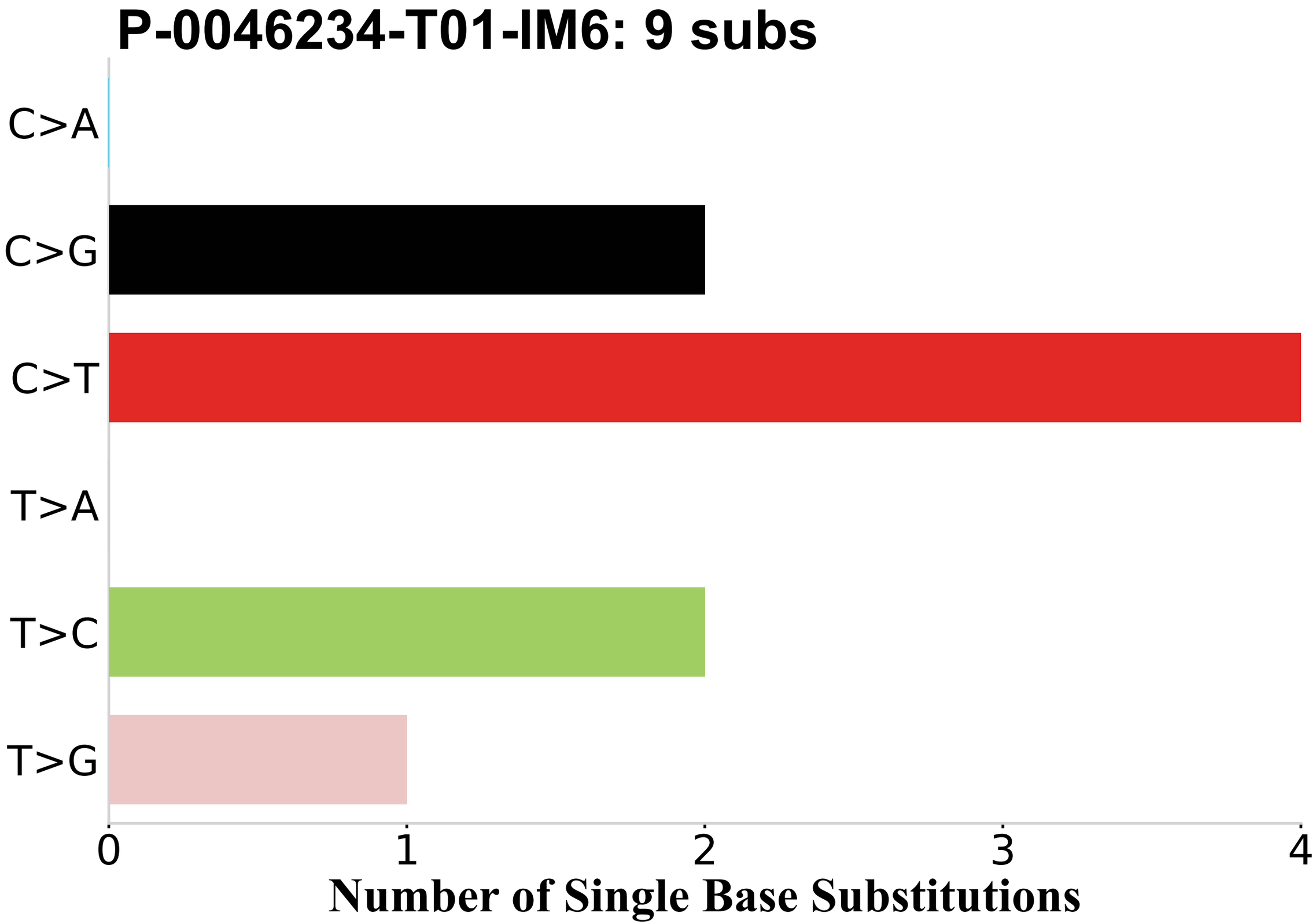

P-0046091-T01-IM6: 22 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

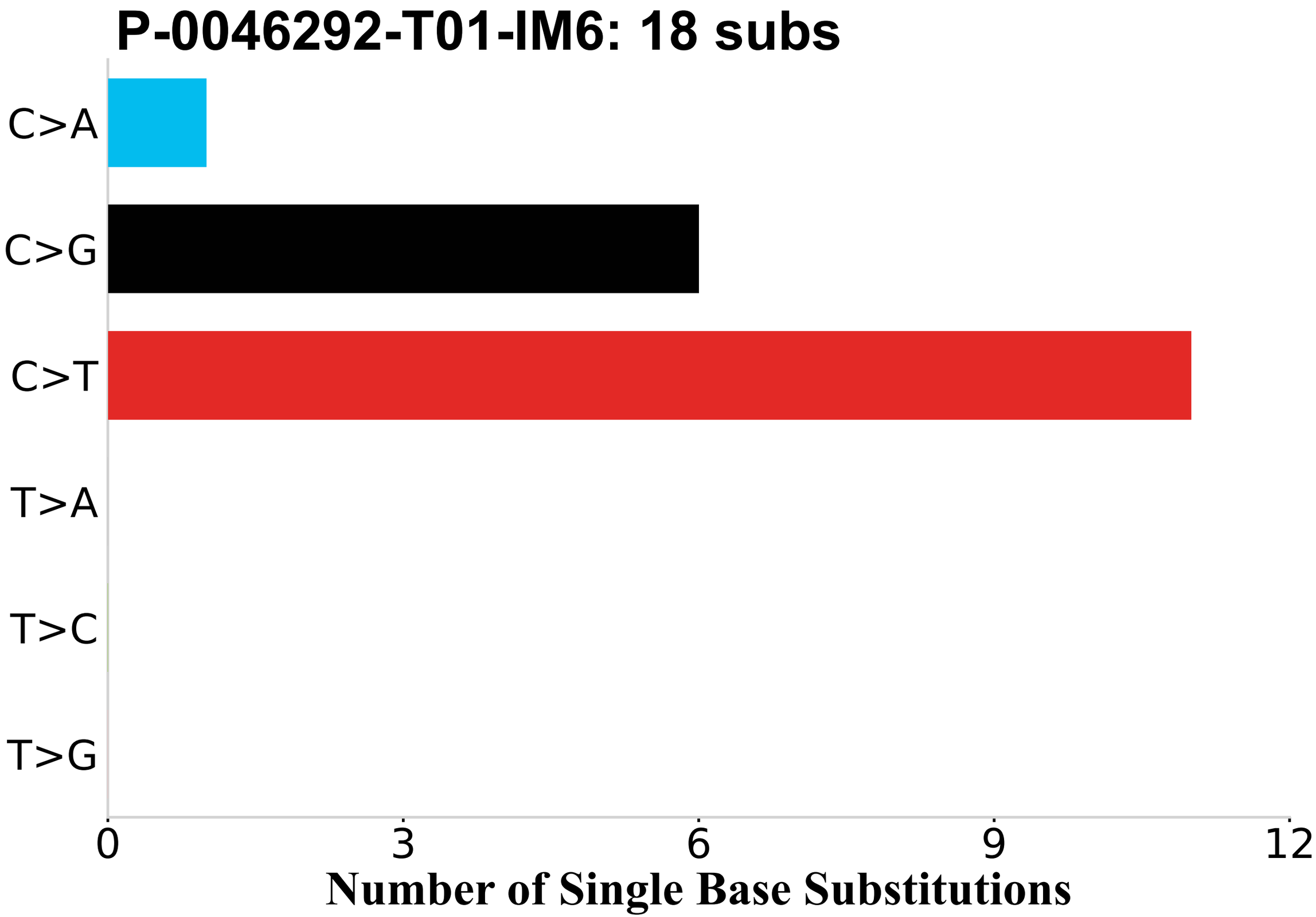

P-0046092-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

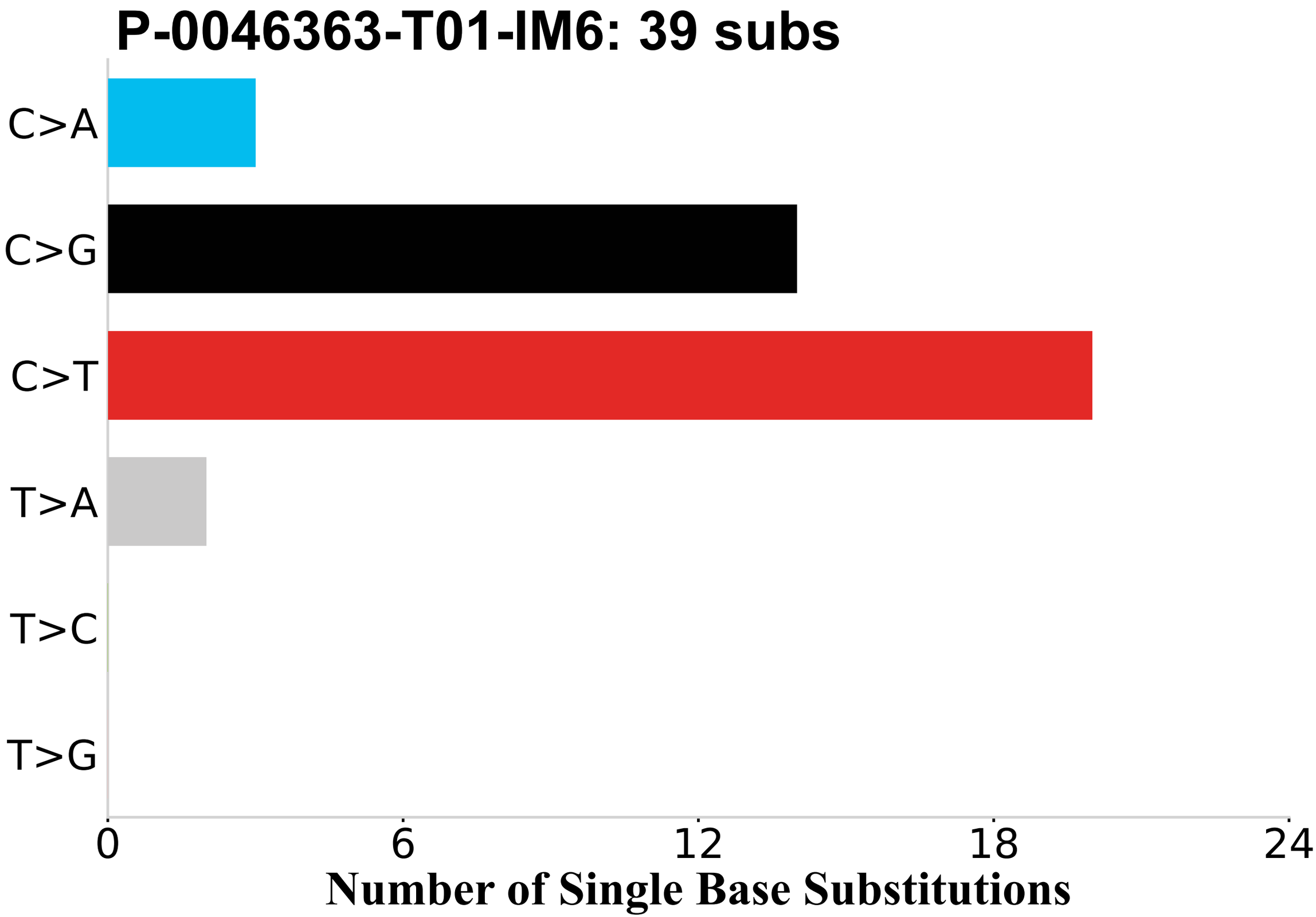

P-0046163-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

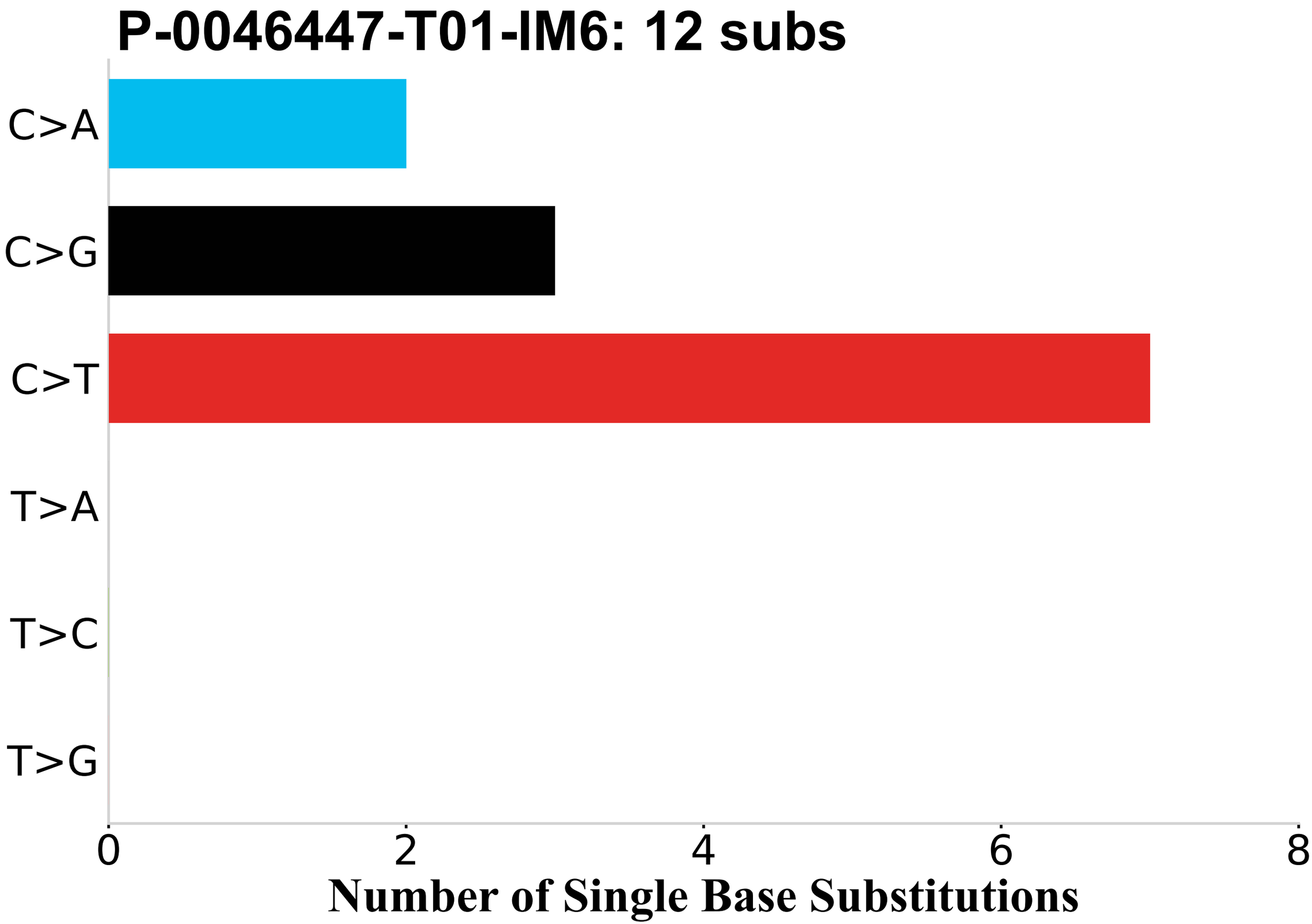

P-0046165-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

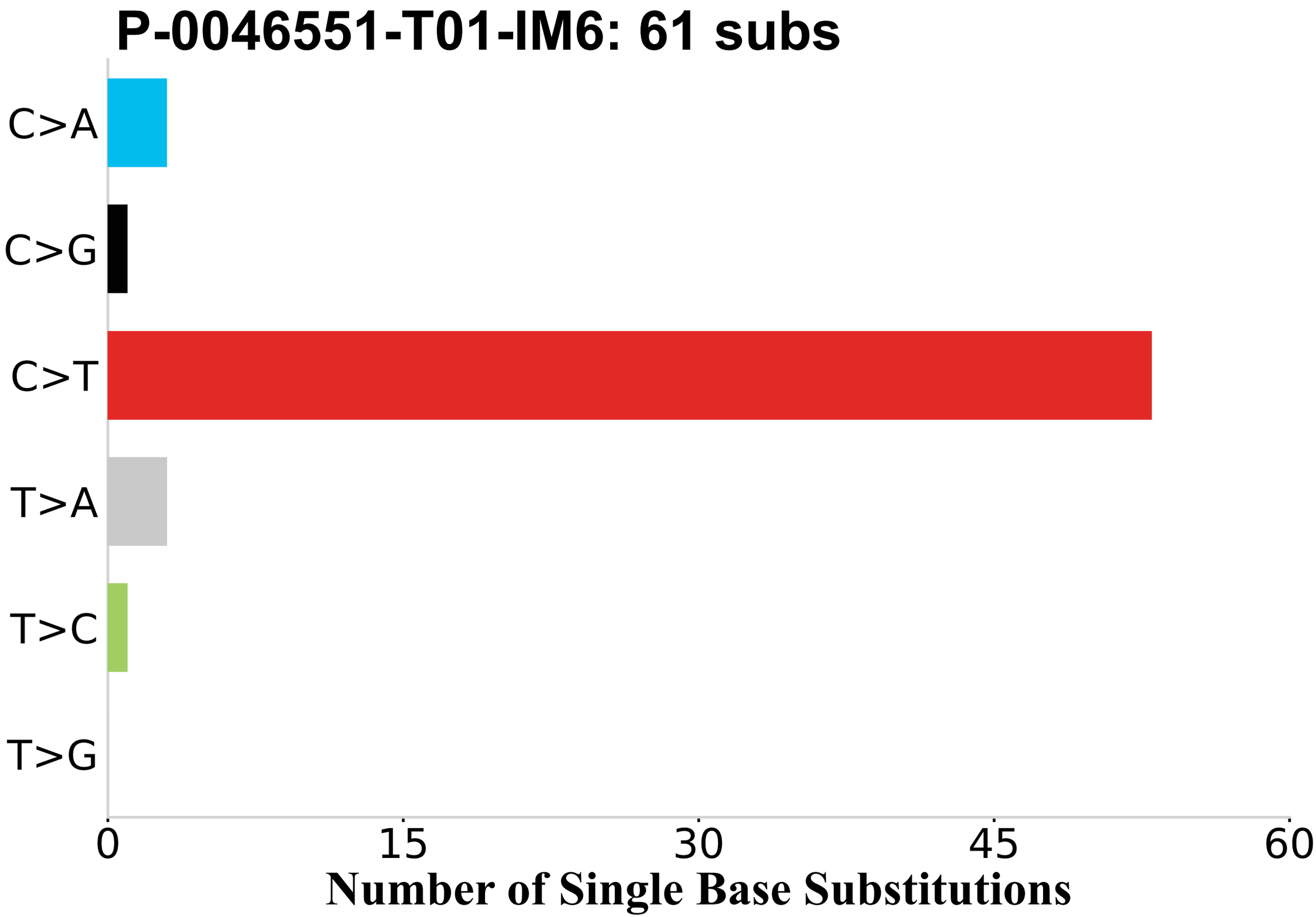

P-0046211-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

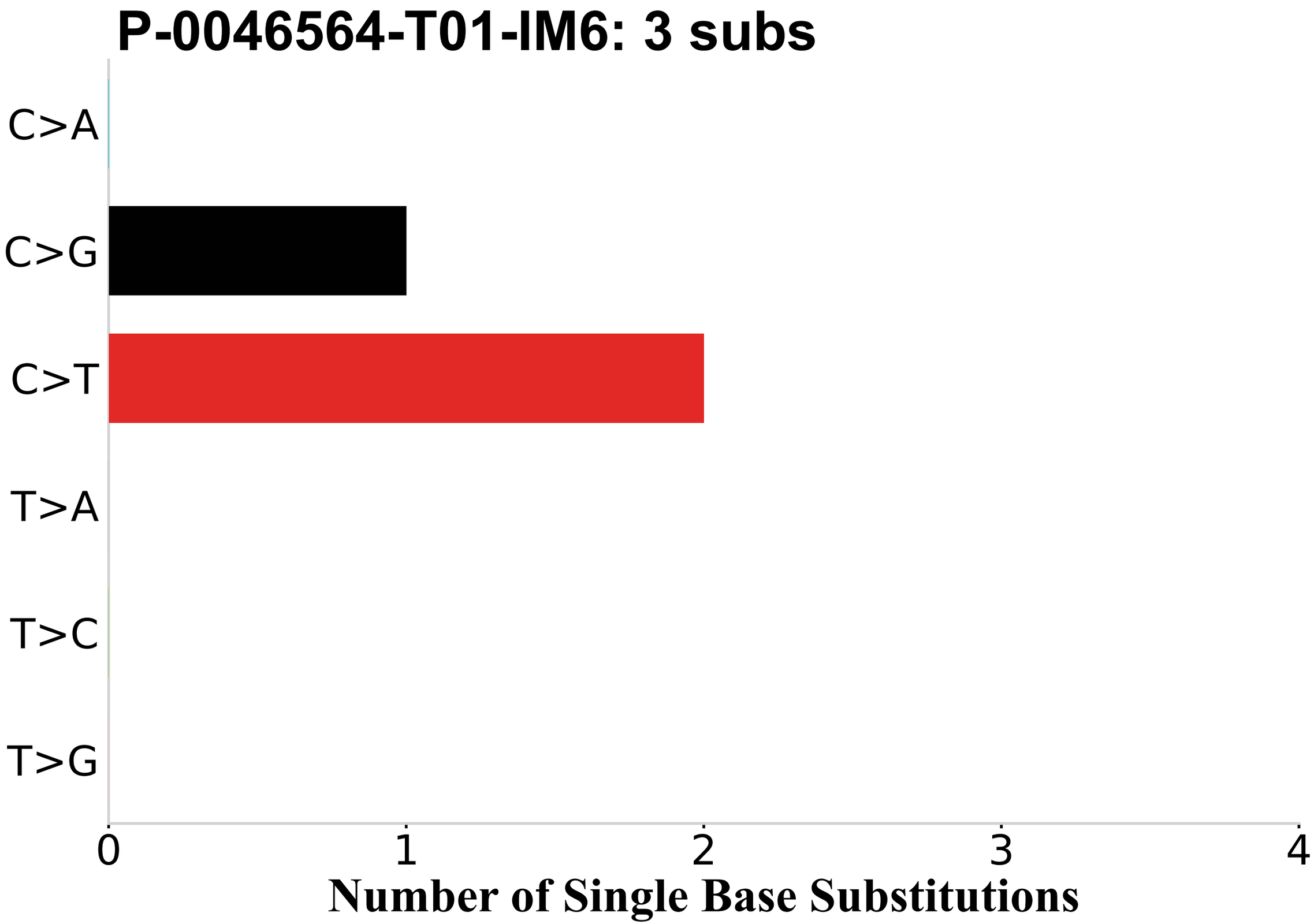

P-0046234-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

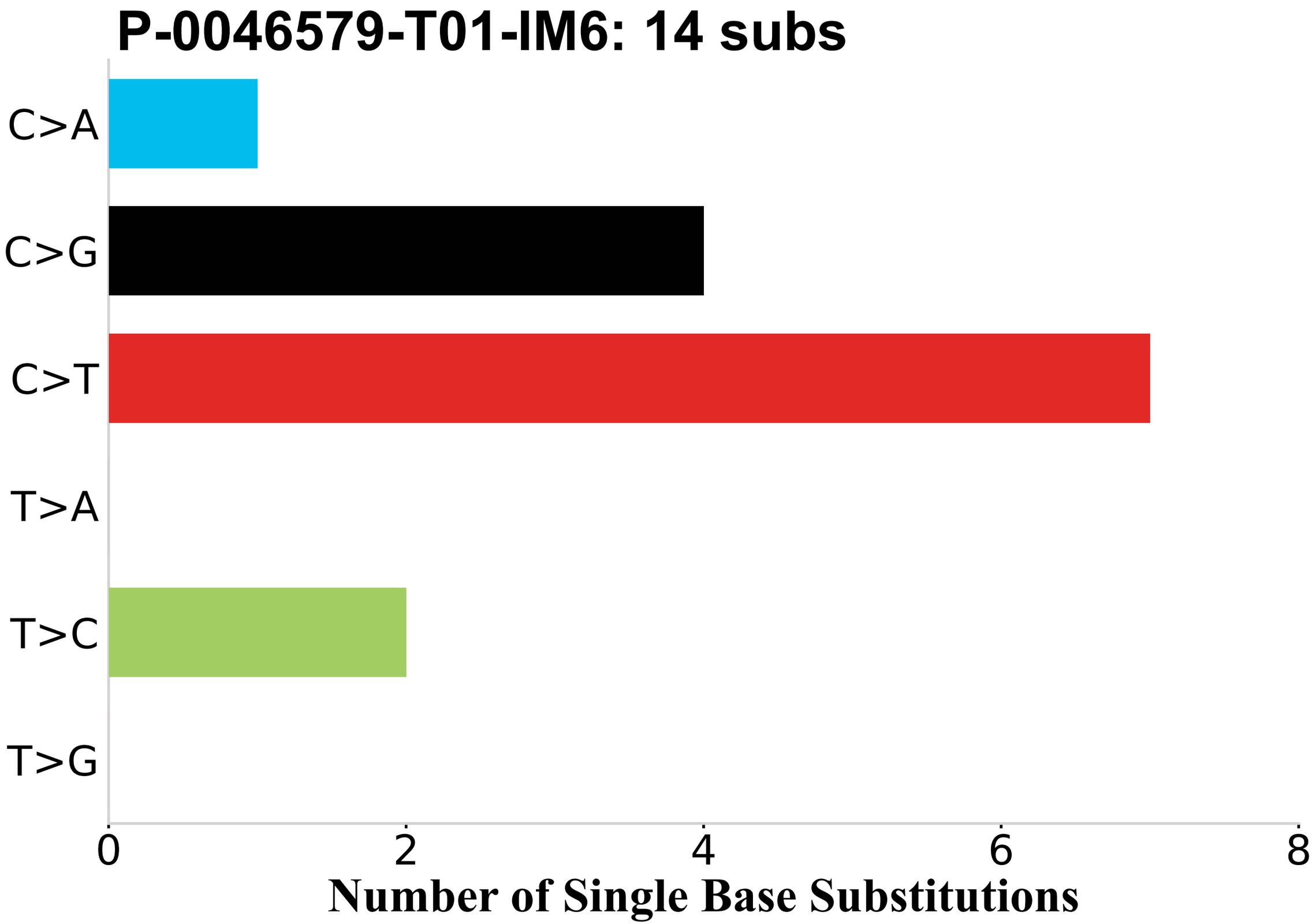

P-0046292-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

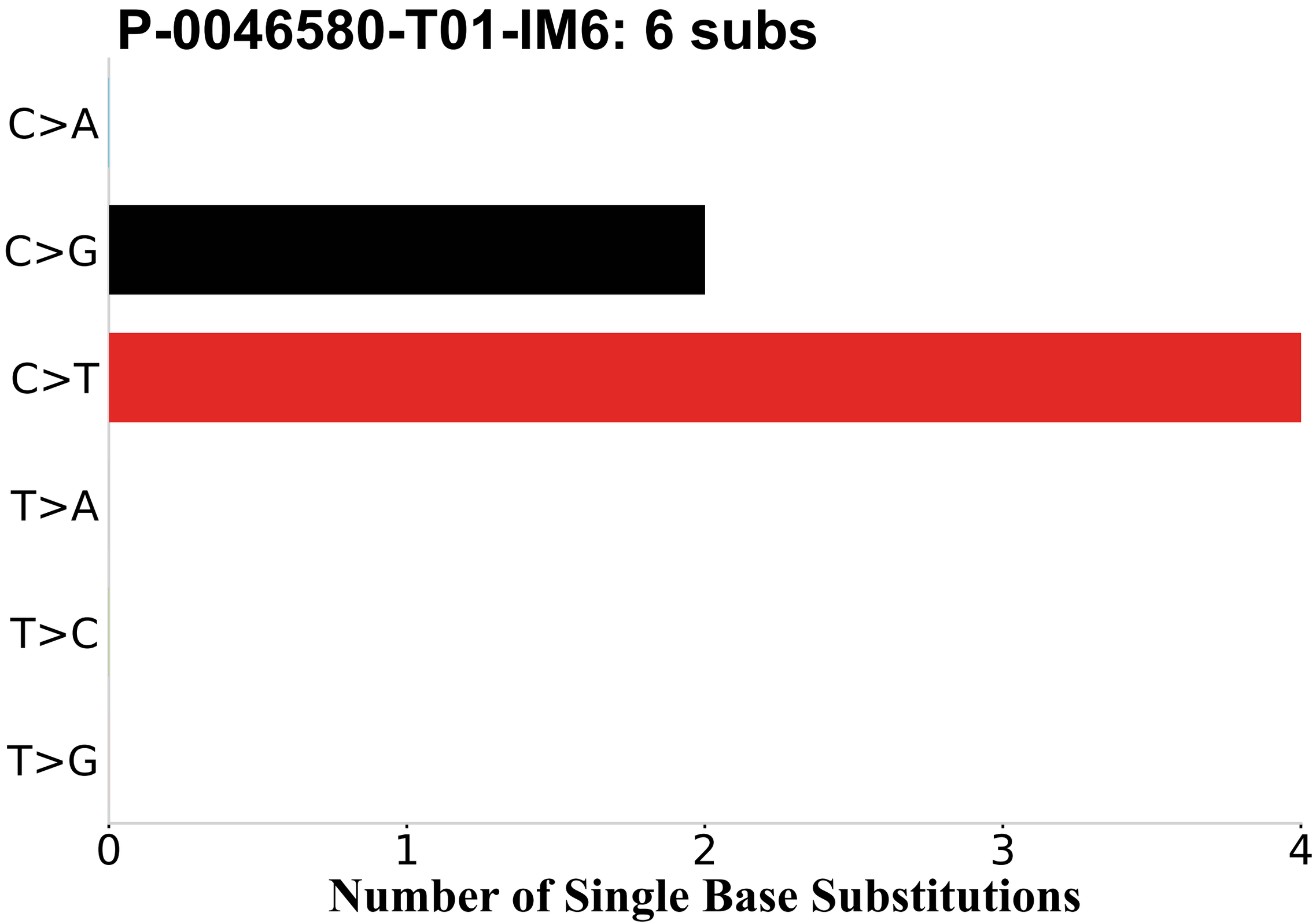

P-0046363-T01-IM6: 39 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
6
12
18
24
Number of Single Base Substitutions

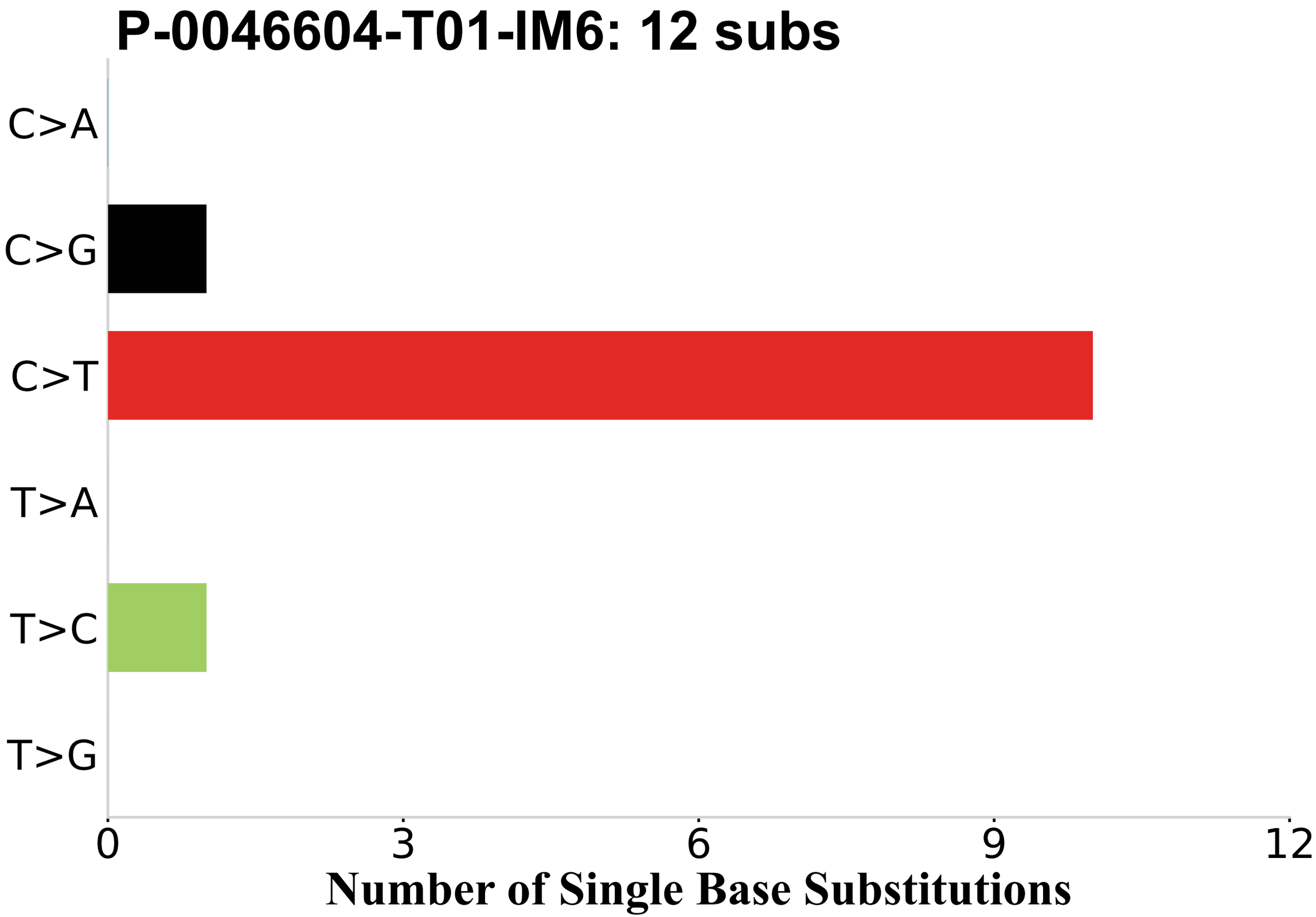

P-0046447-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

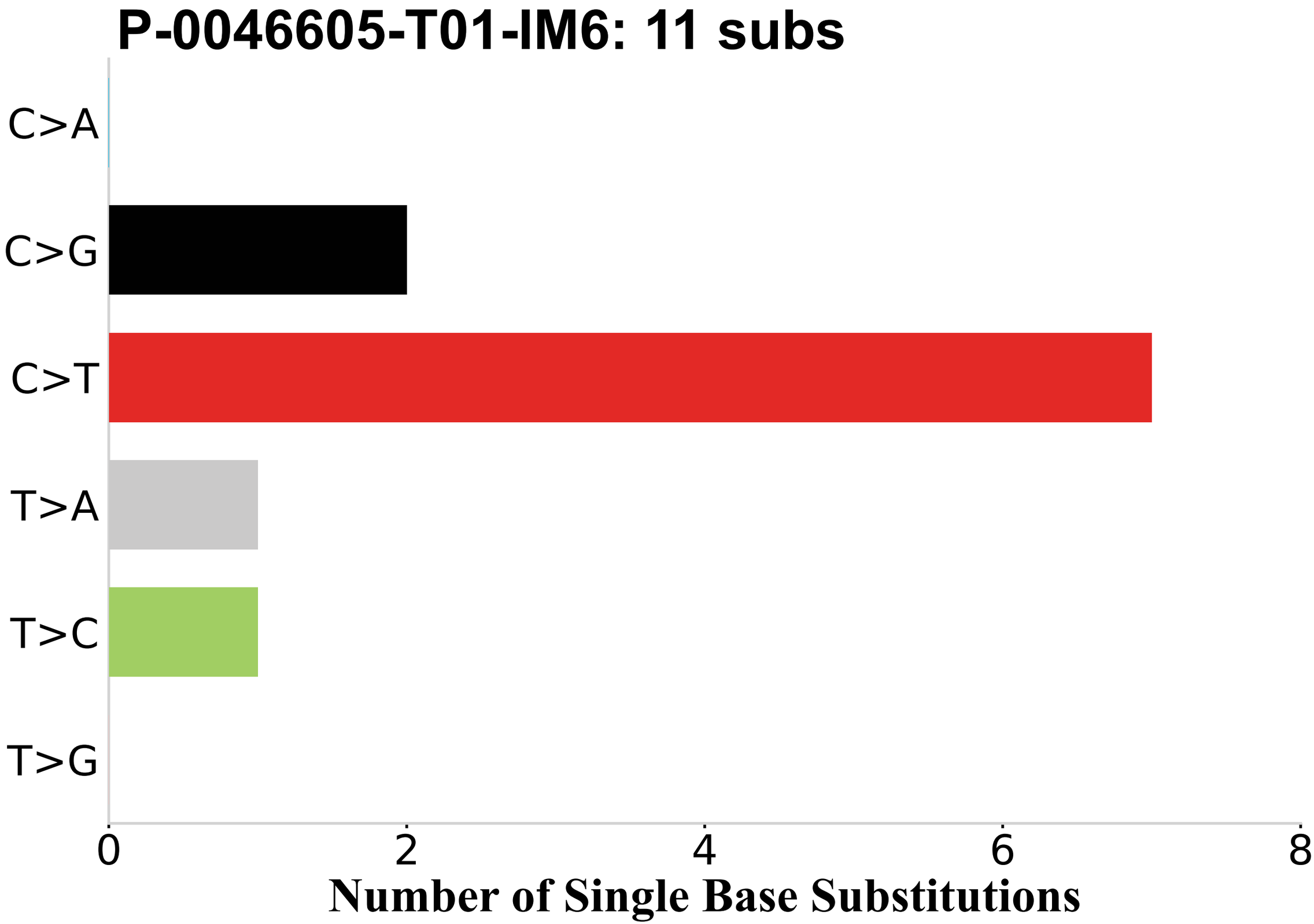

P-0046551-T01-IM6: 61 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
15
30
45
60
Number of Single Base Substitutions

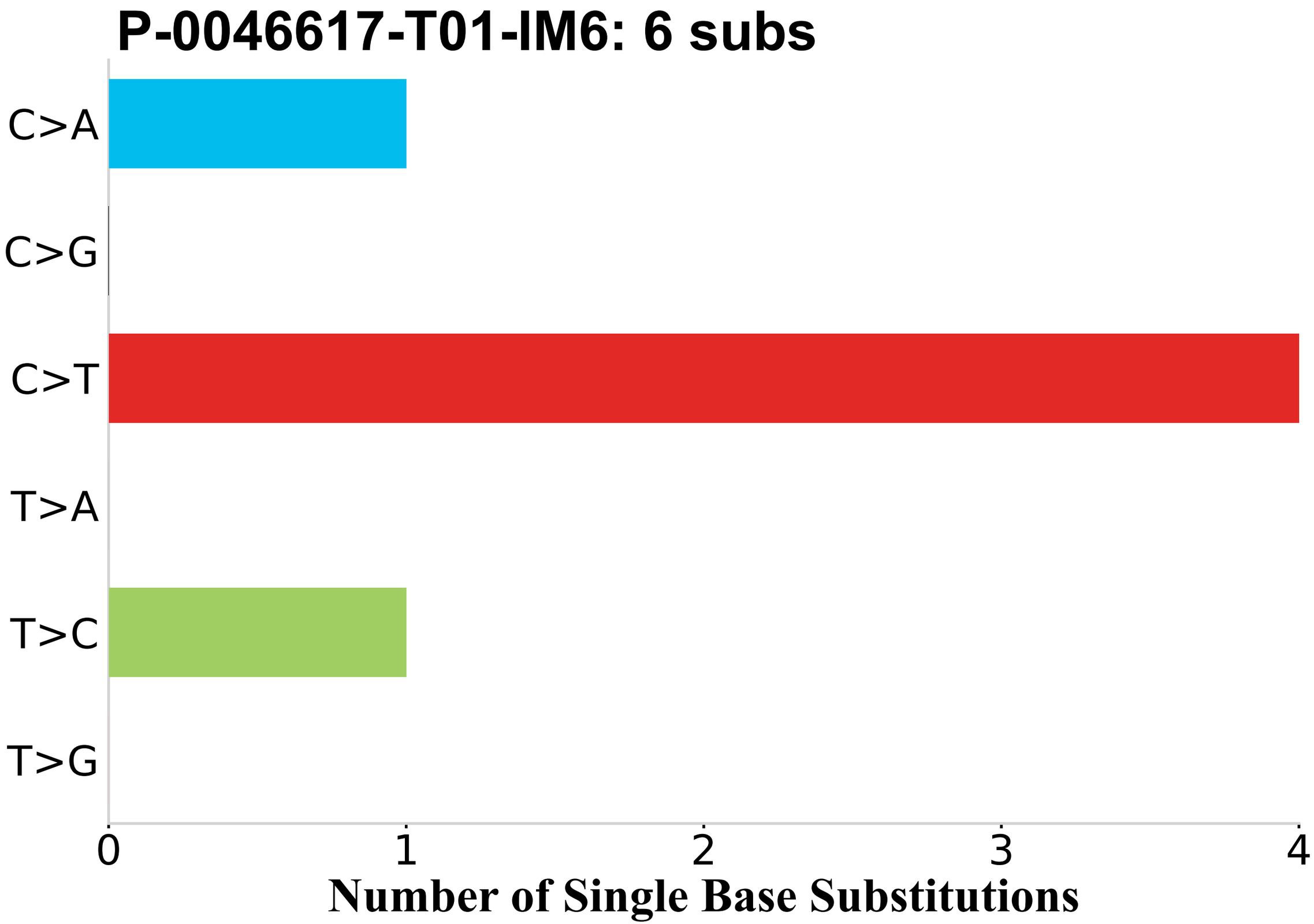

P-0046564-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

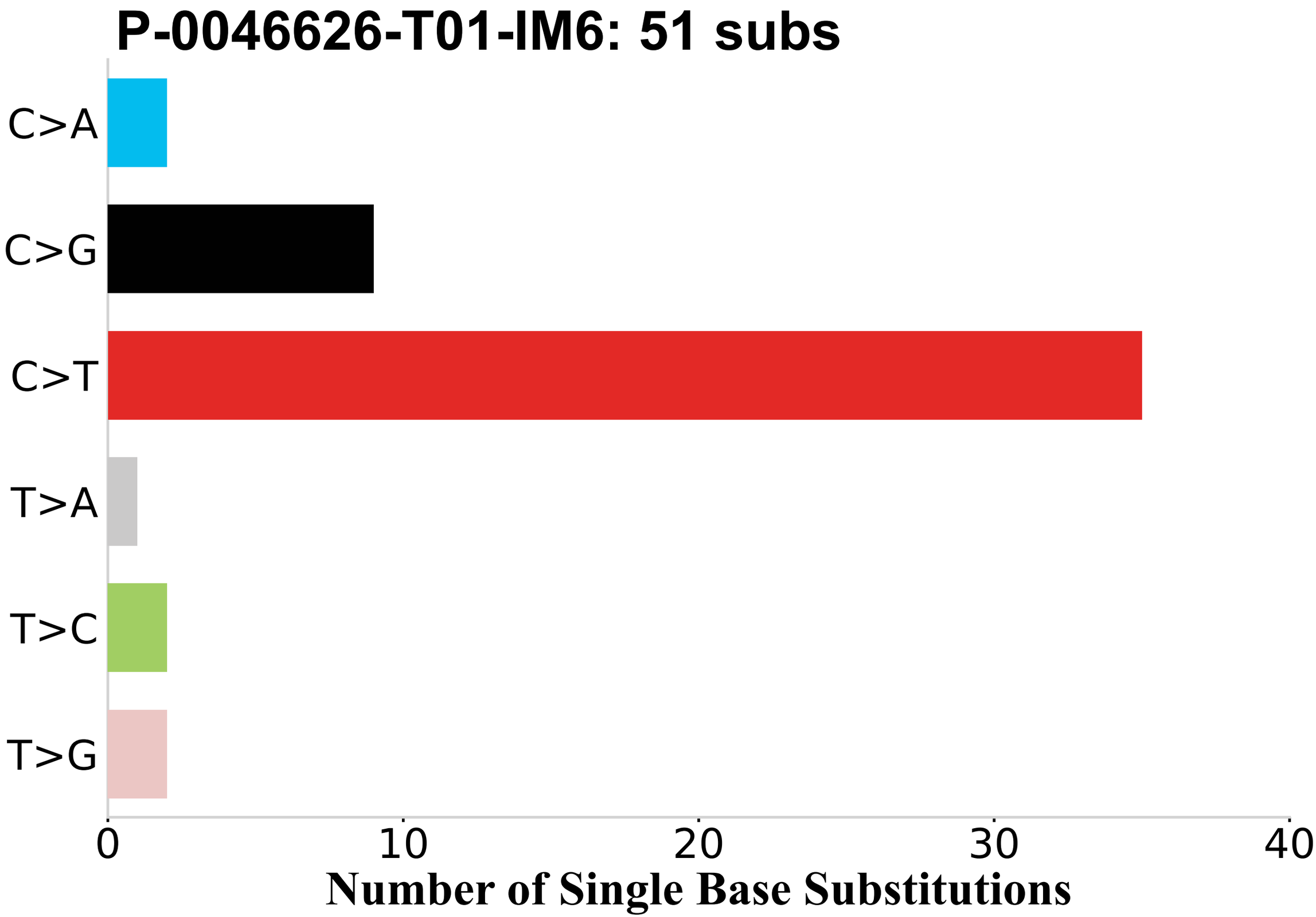

P-0046579-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

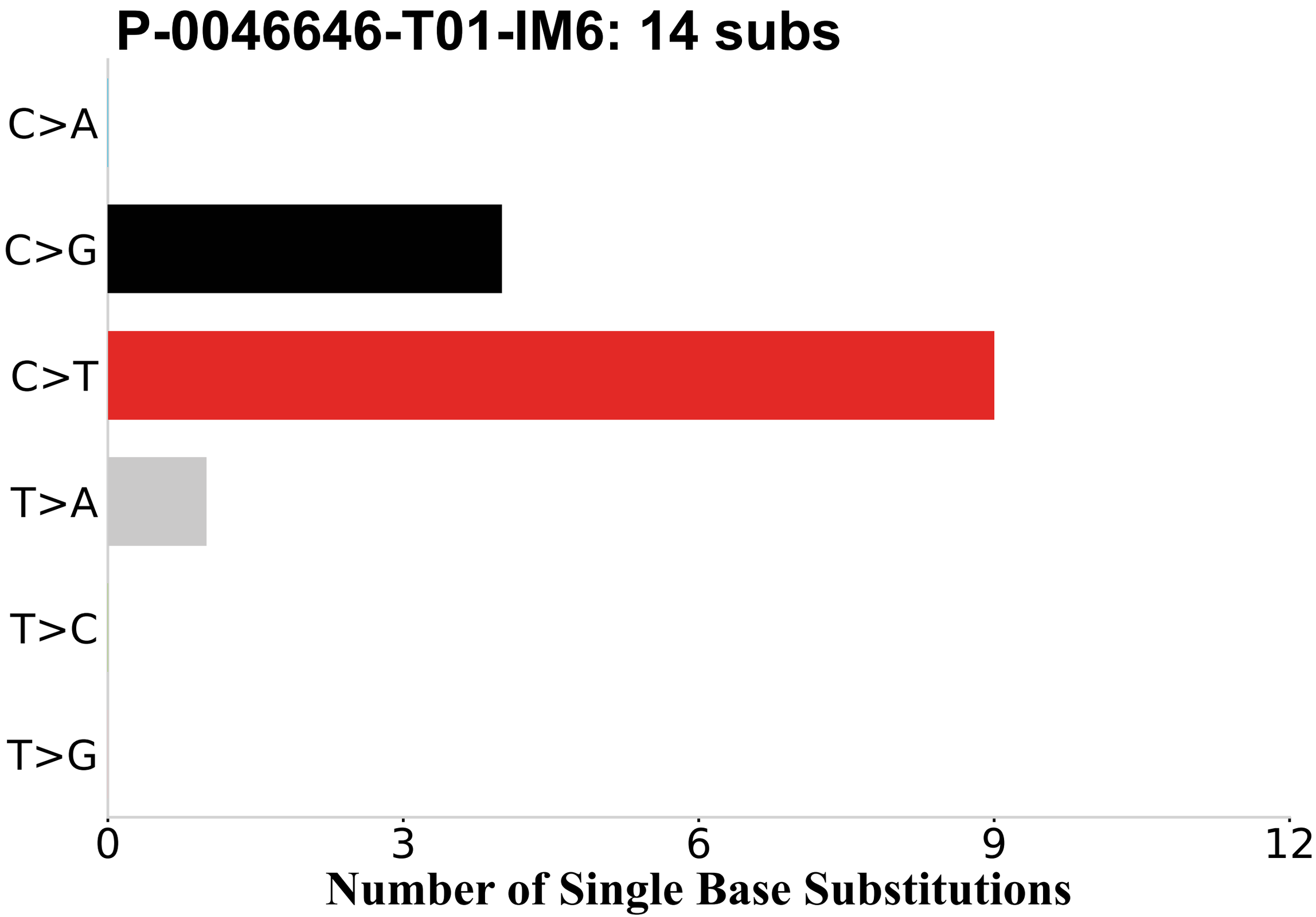

P-0046580-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

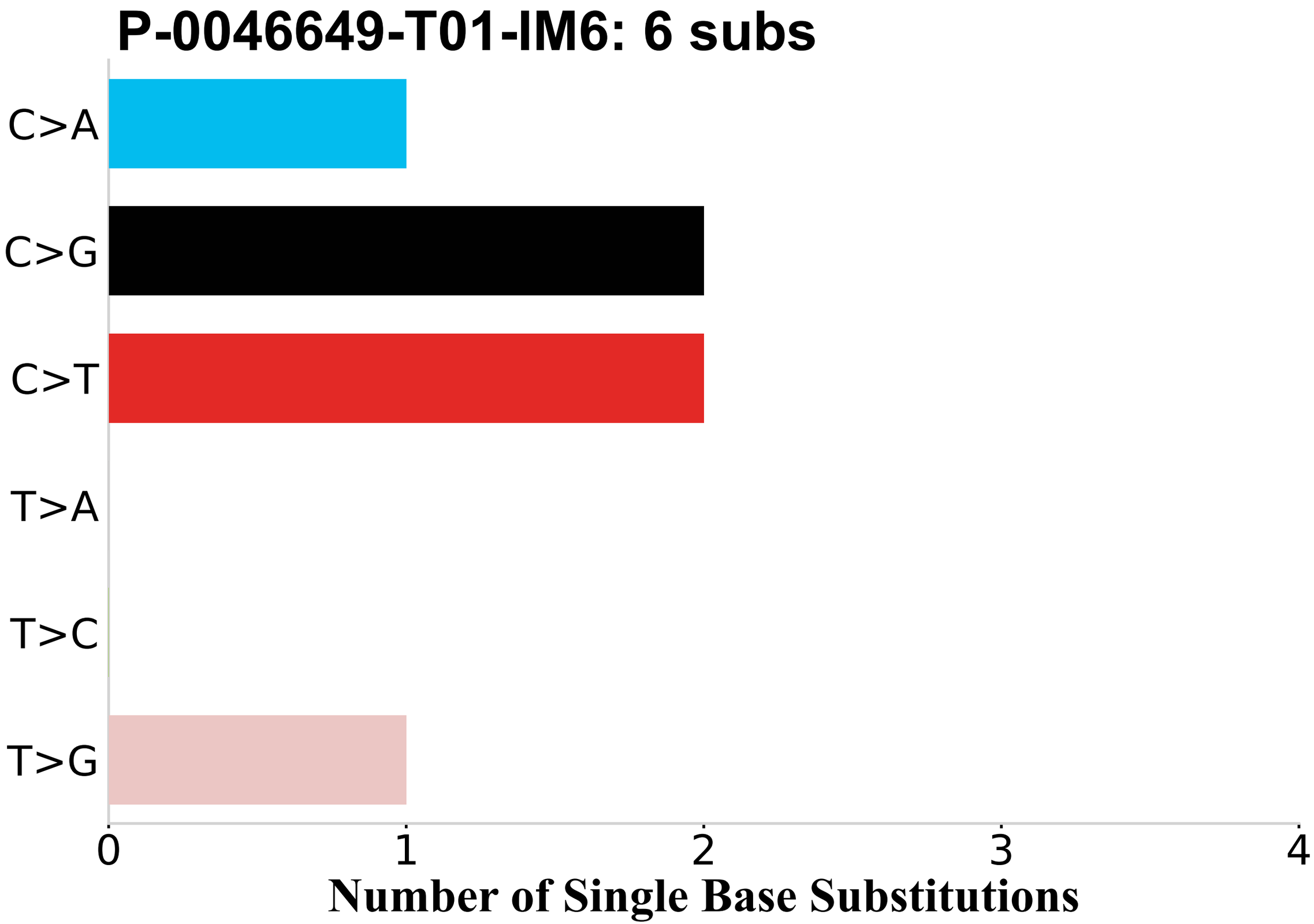

P-0046604-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

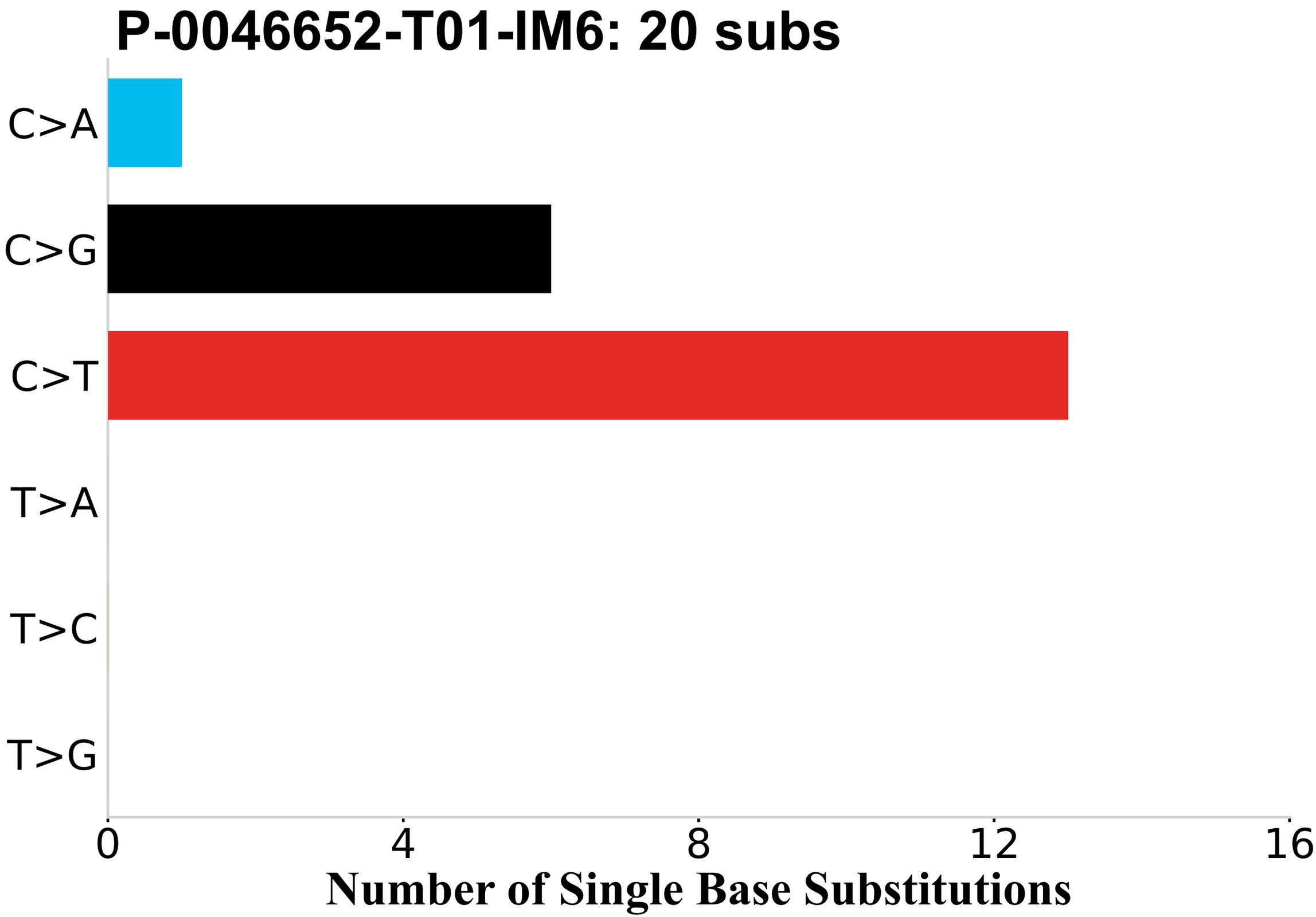

P-0046605-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

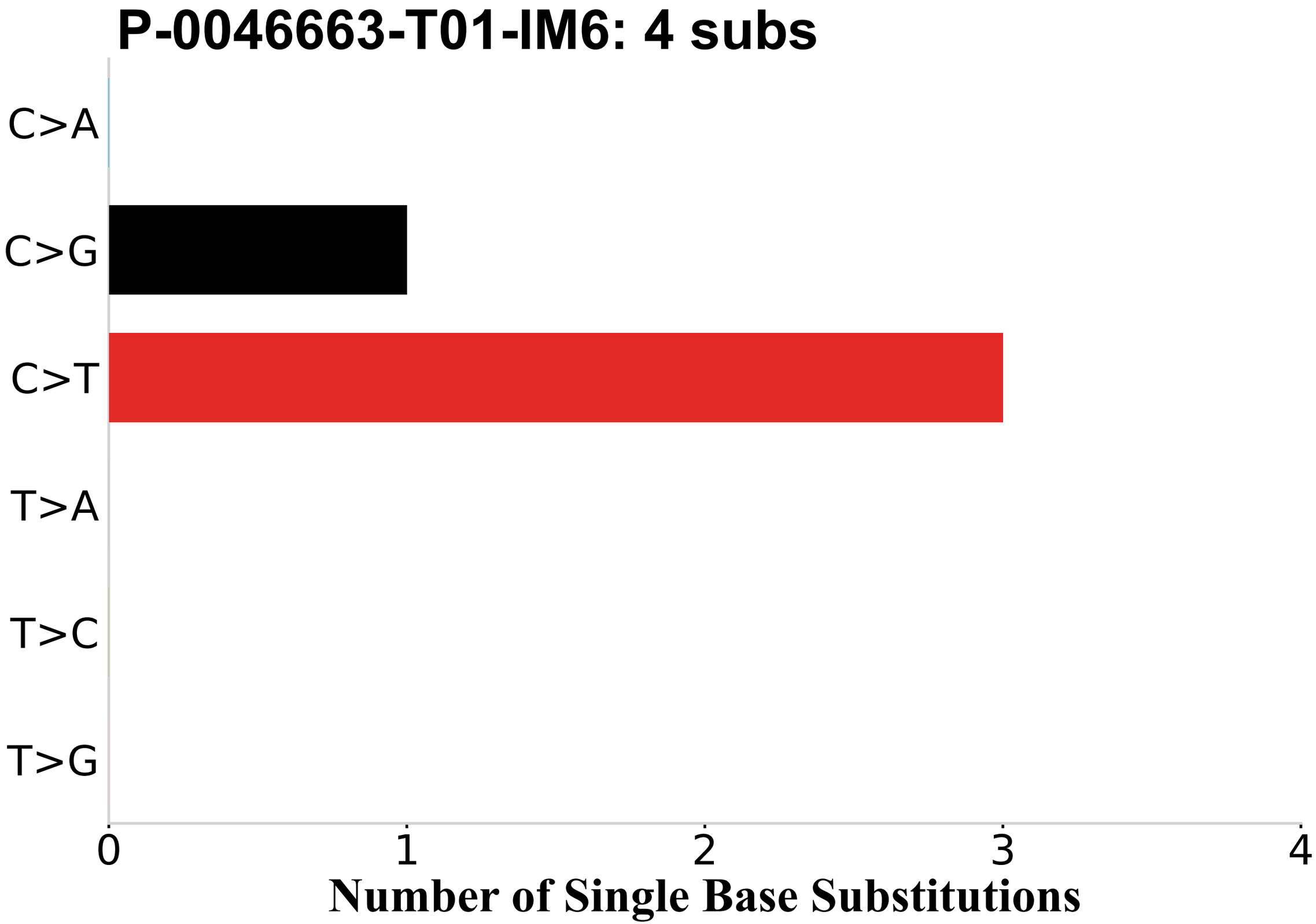

P-0046617-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

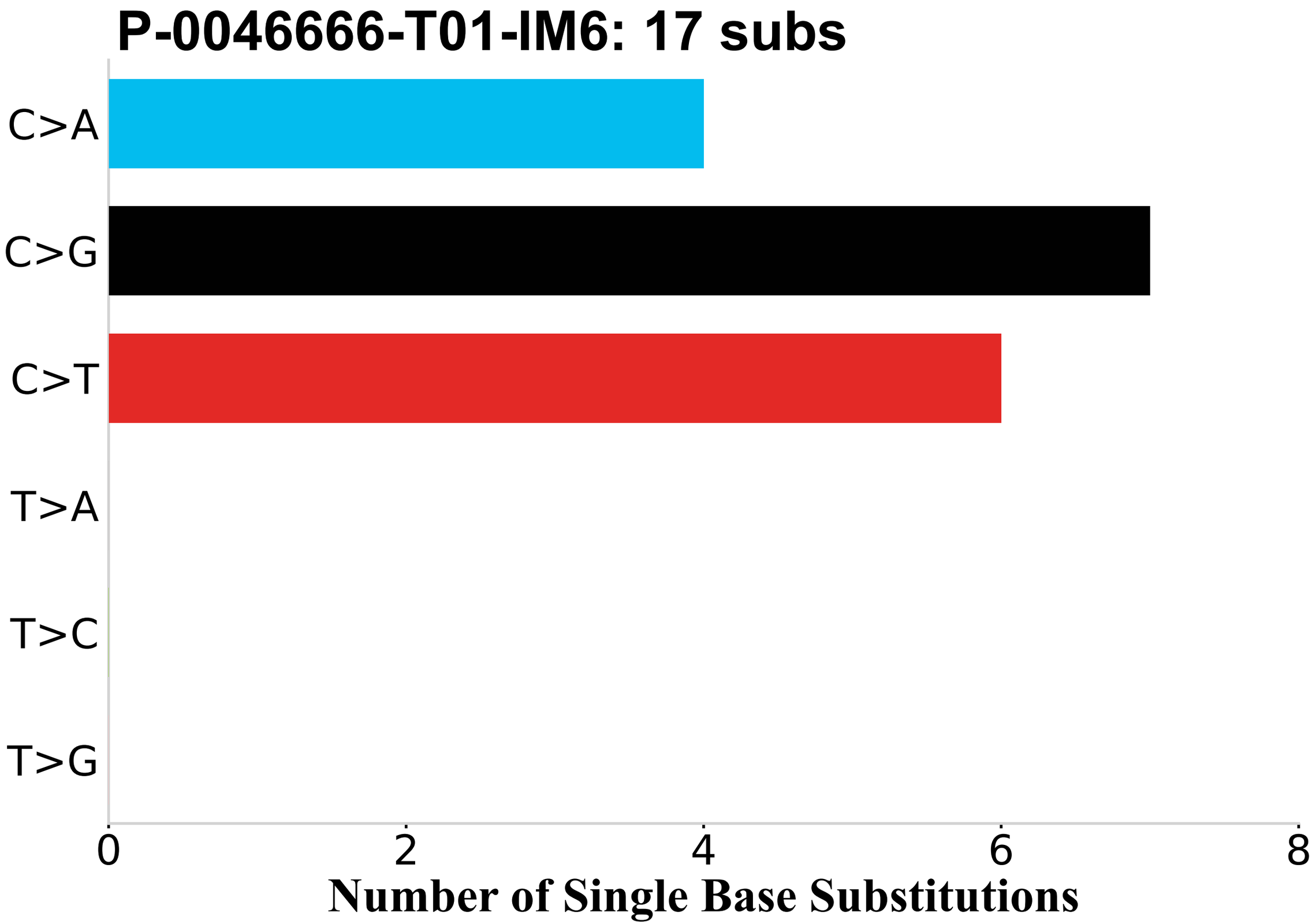

P-0046626-T01-IM6: 51 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
10
20
30
40
Number of Single Base Substitutions

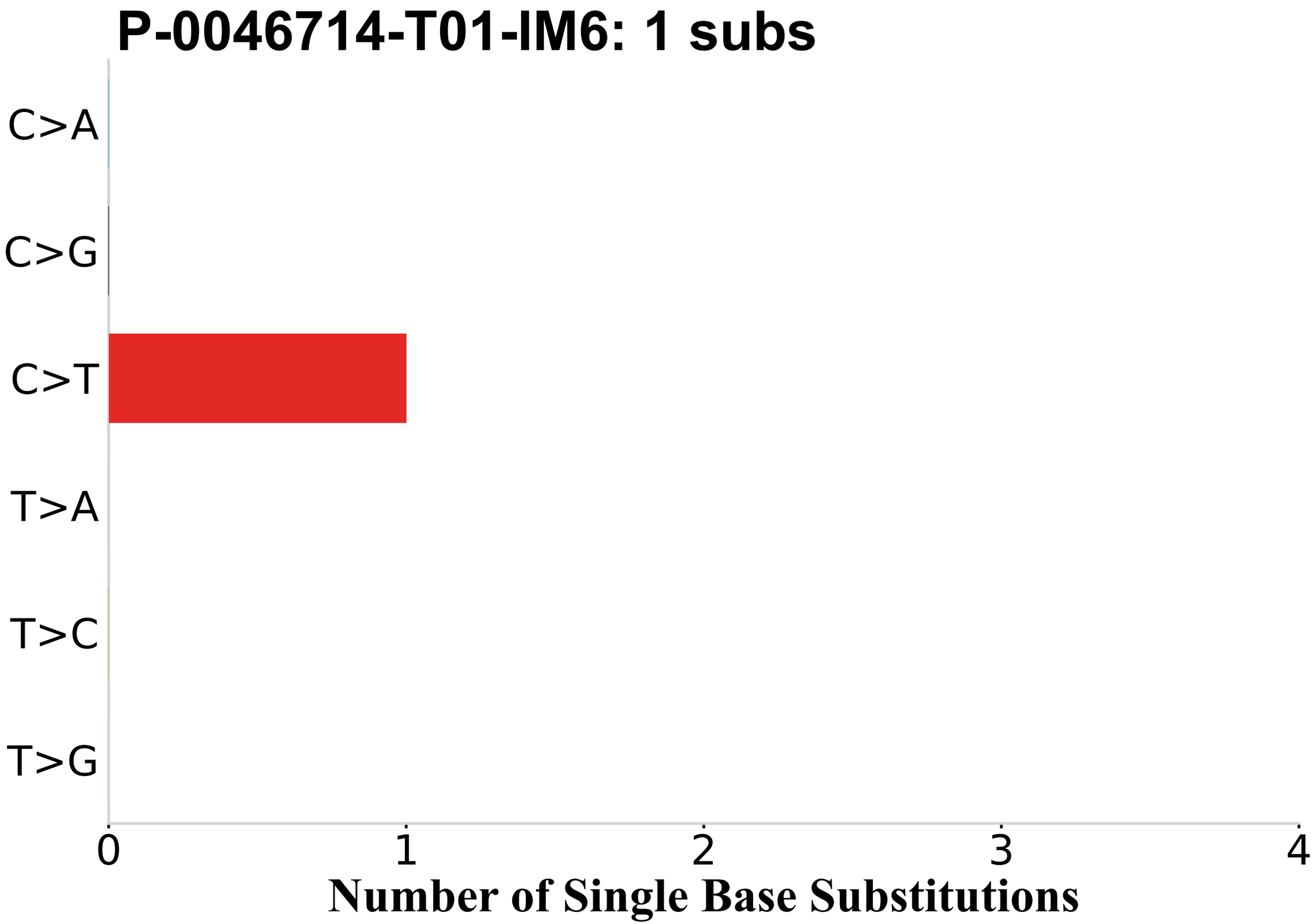

P-0046646-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

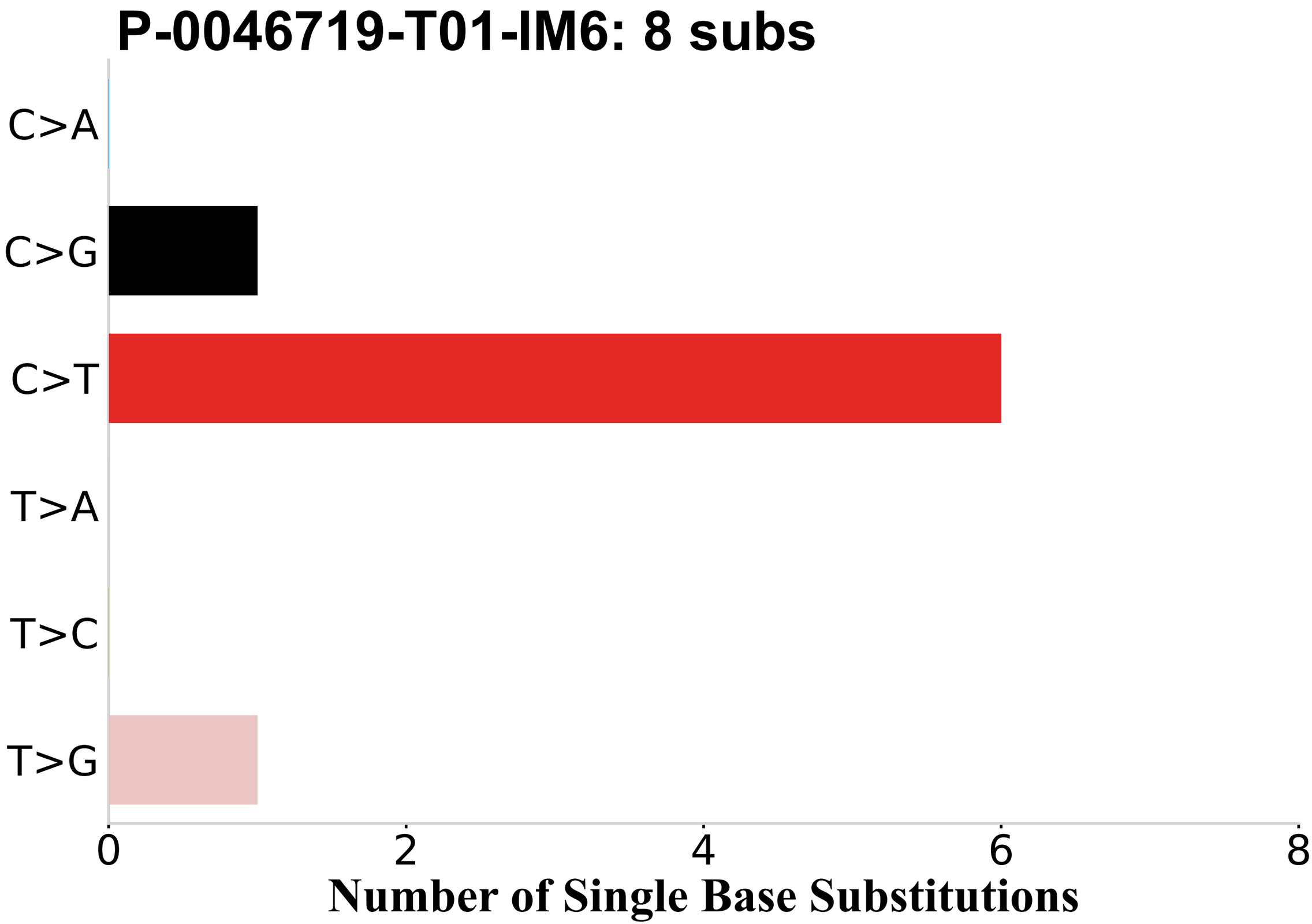

P-0046649-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0046652-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

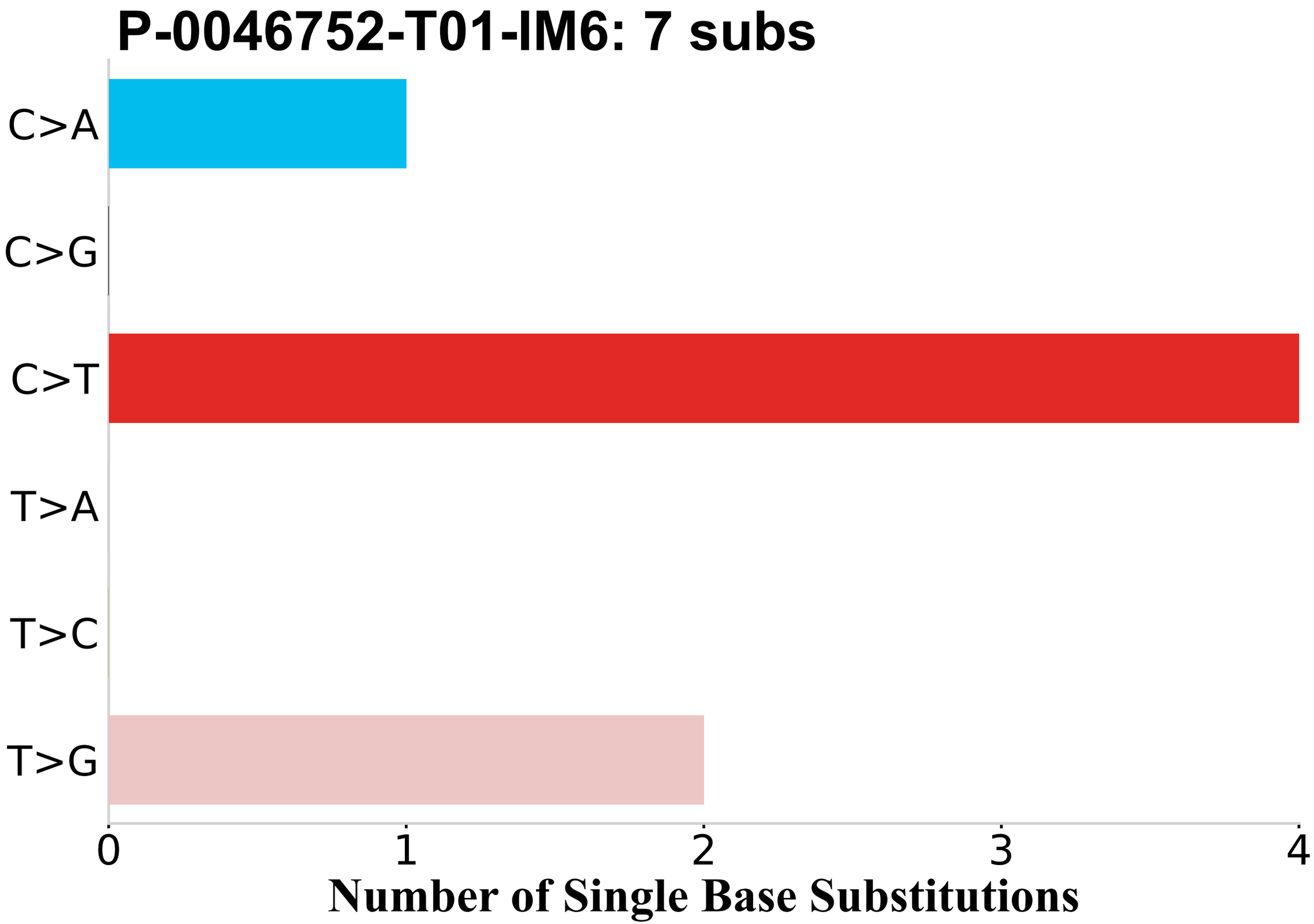

P-0046663-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

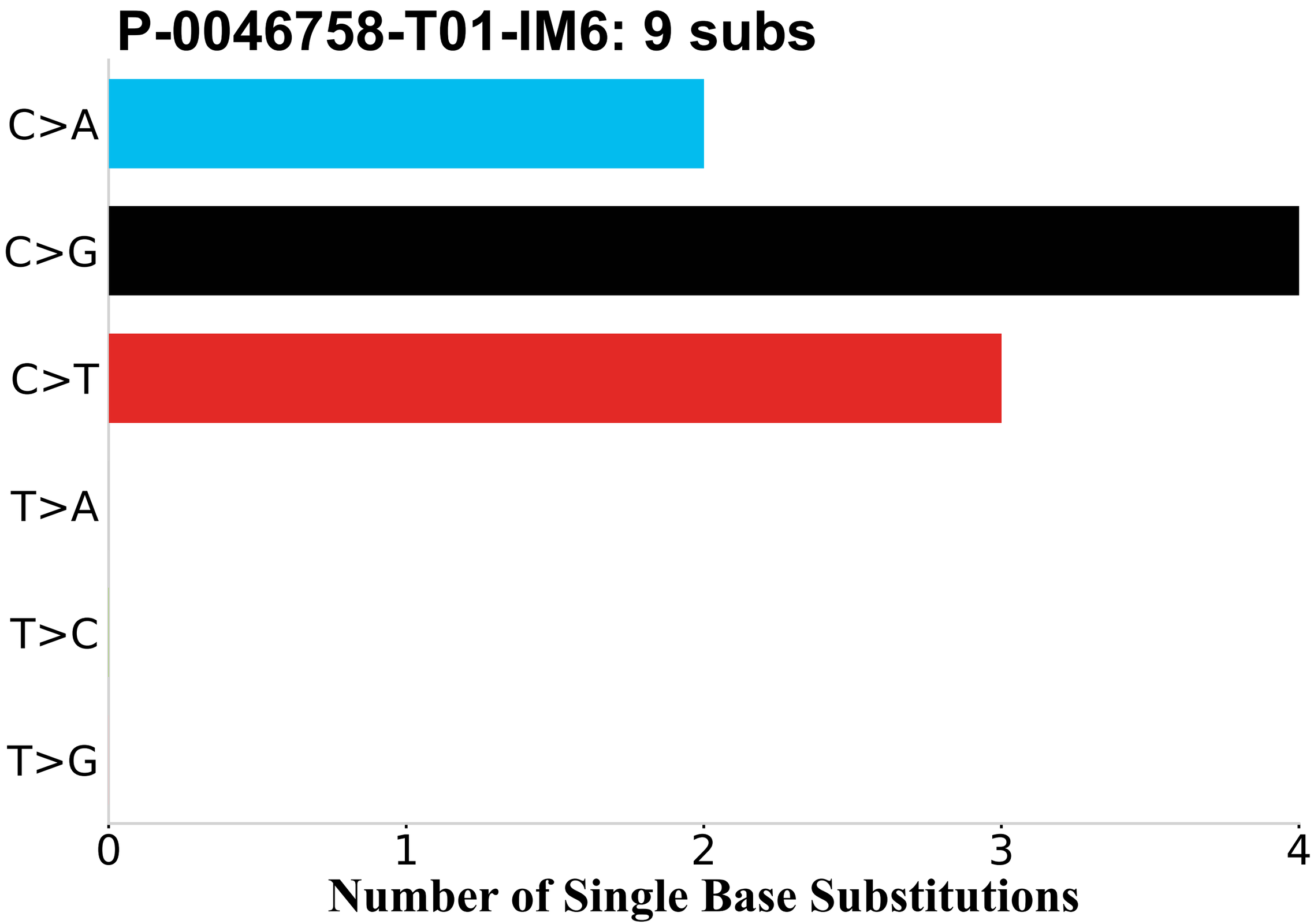

P-0046666-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

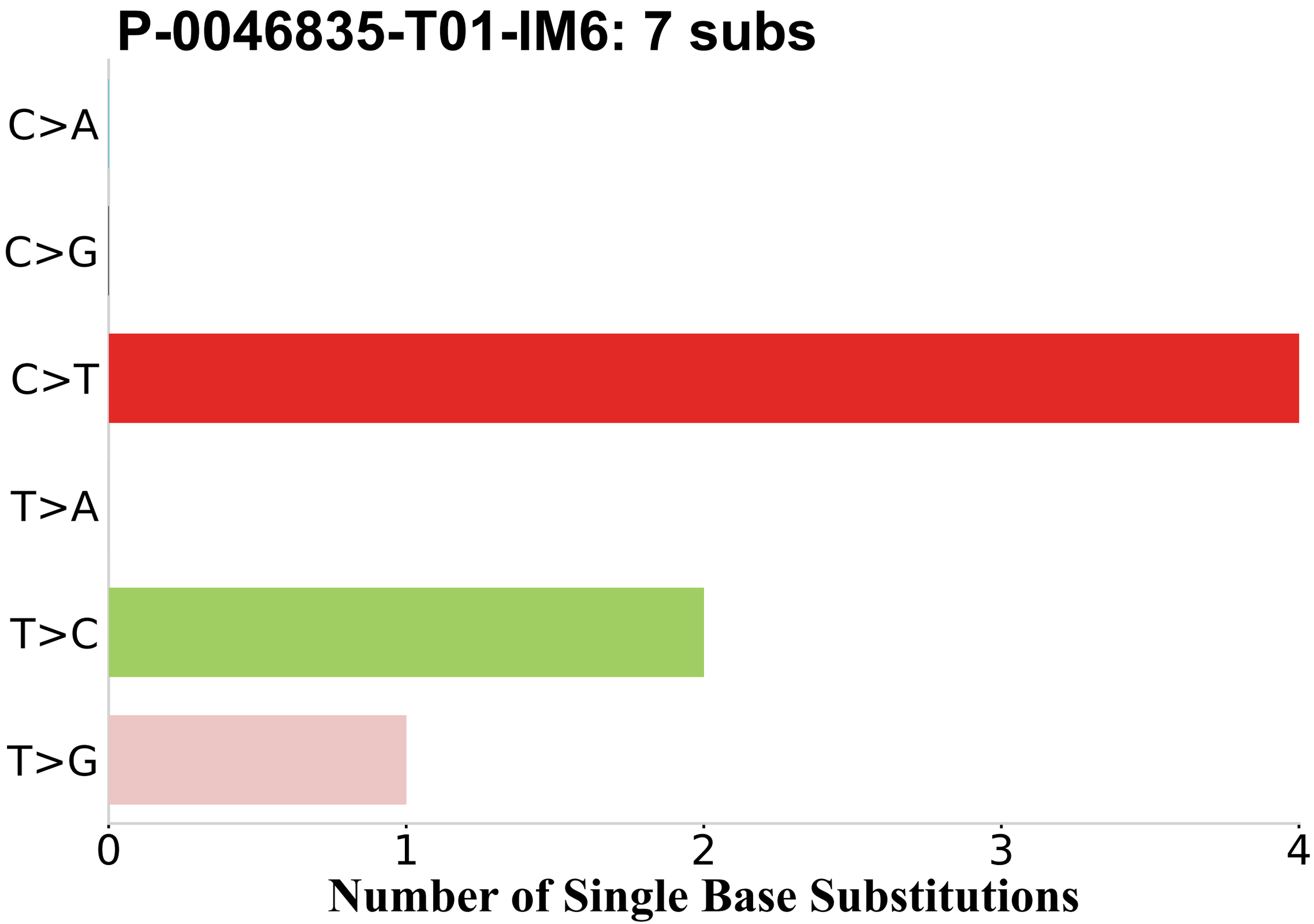

P-0046714-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

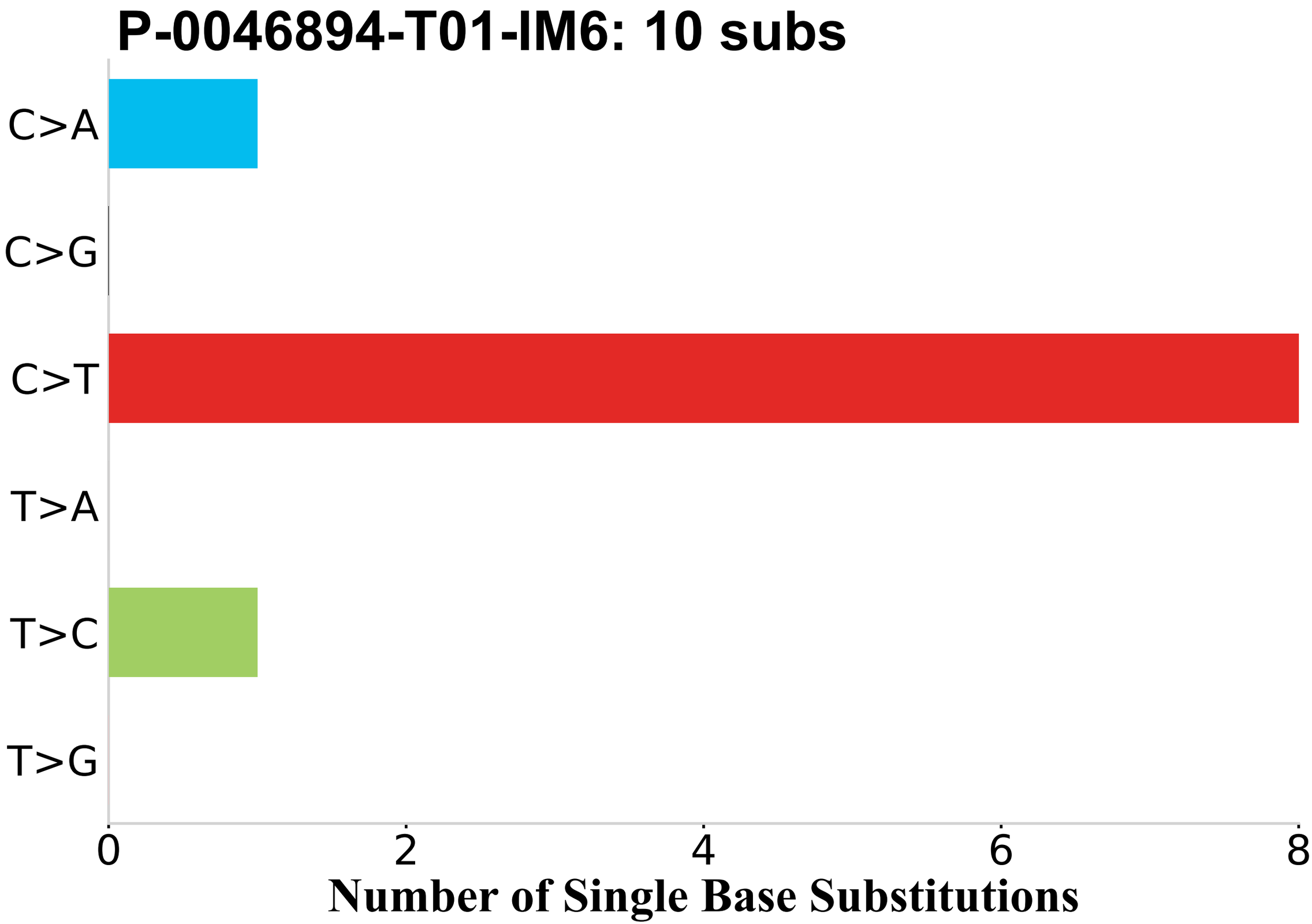

P-0046719-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

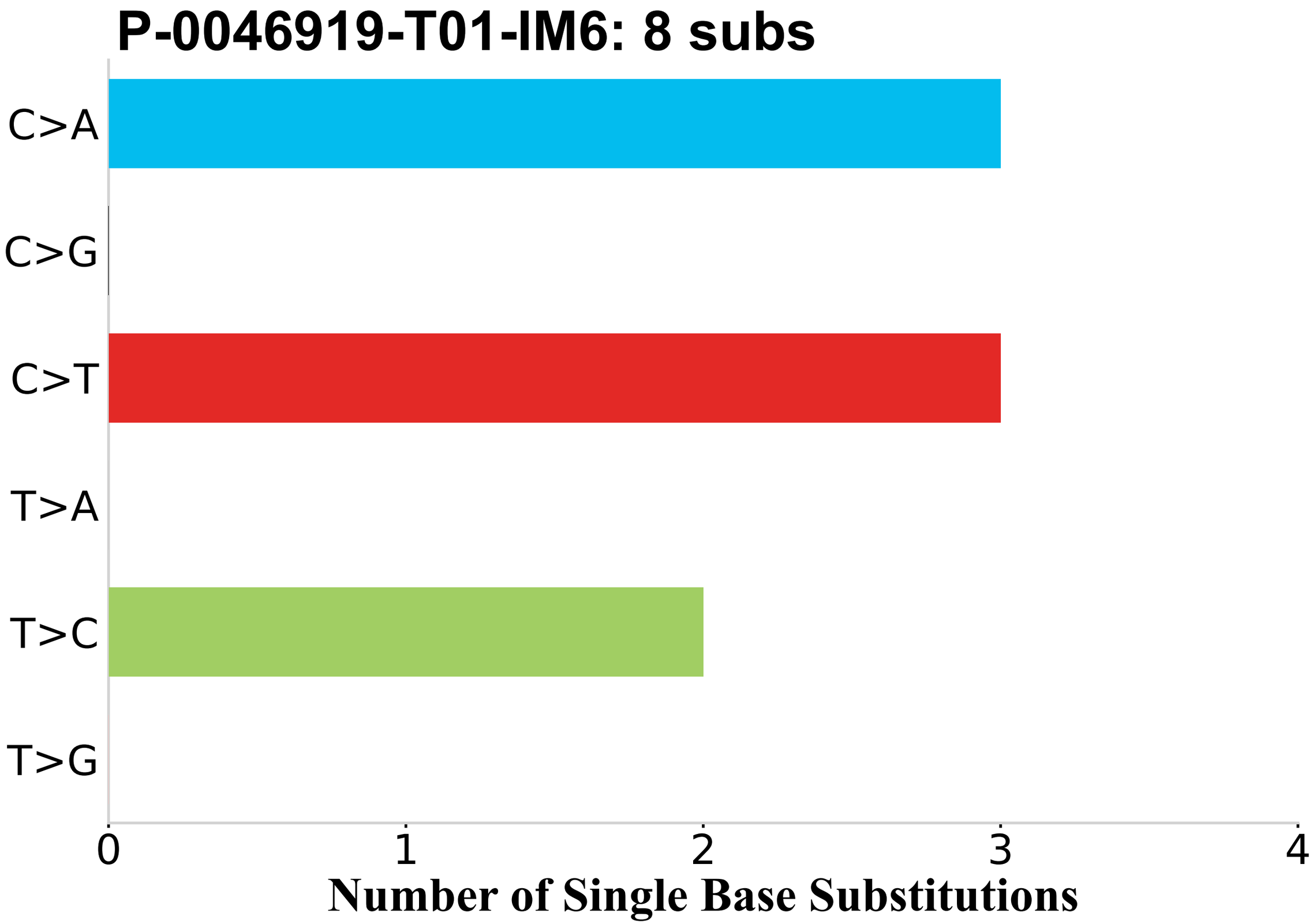
P-0046732-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

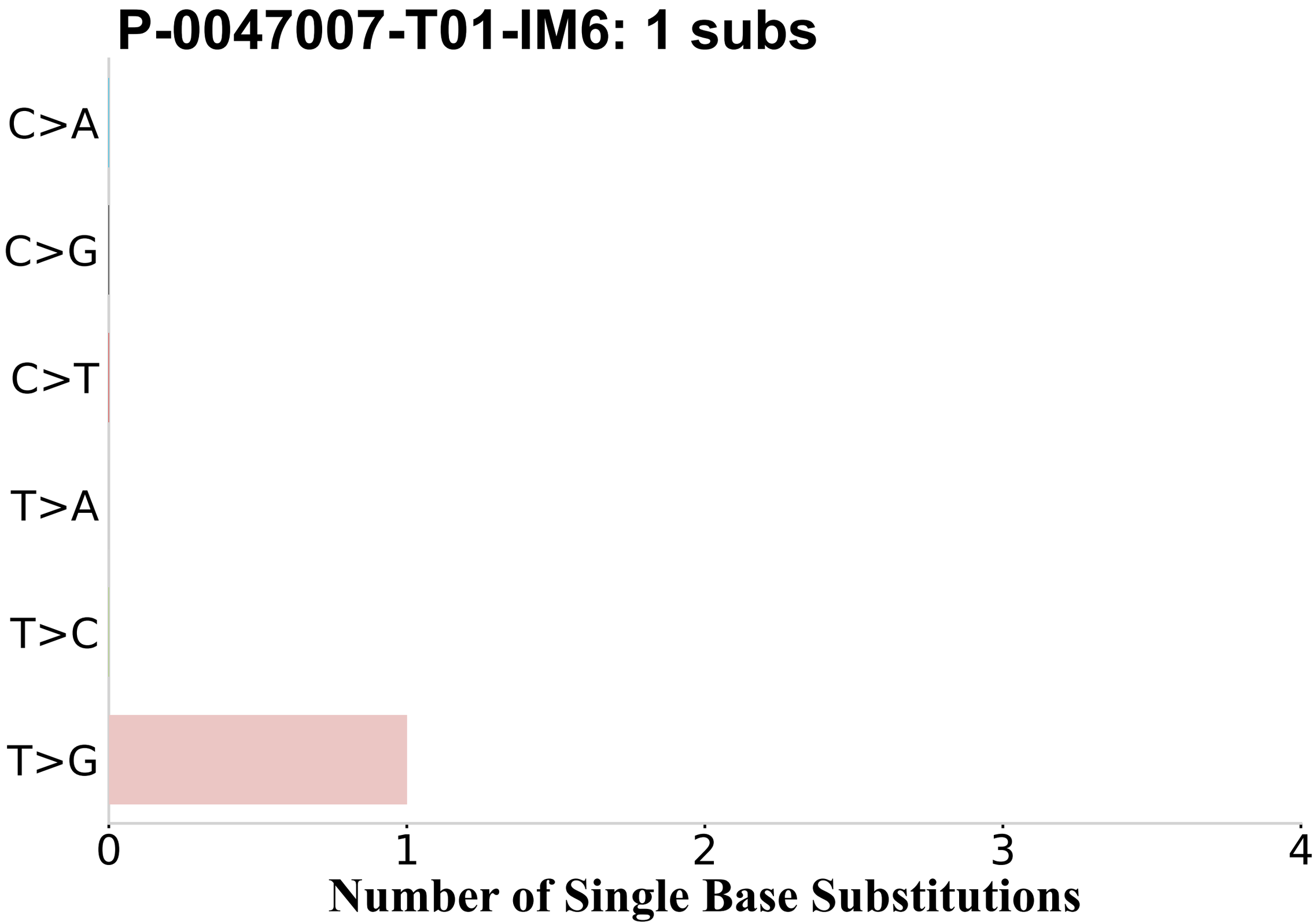

P-0046752-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

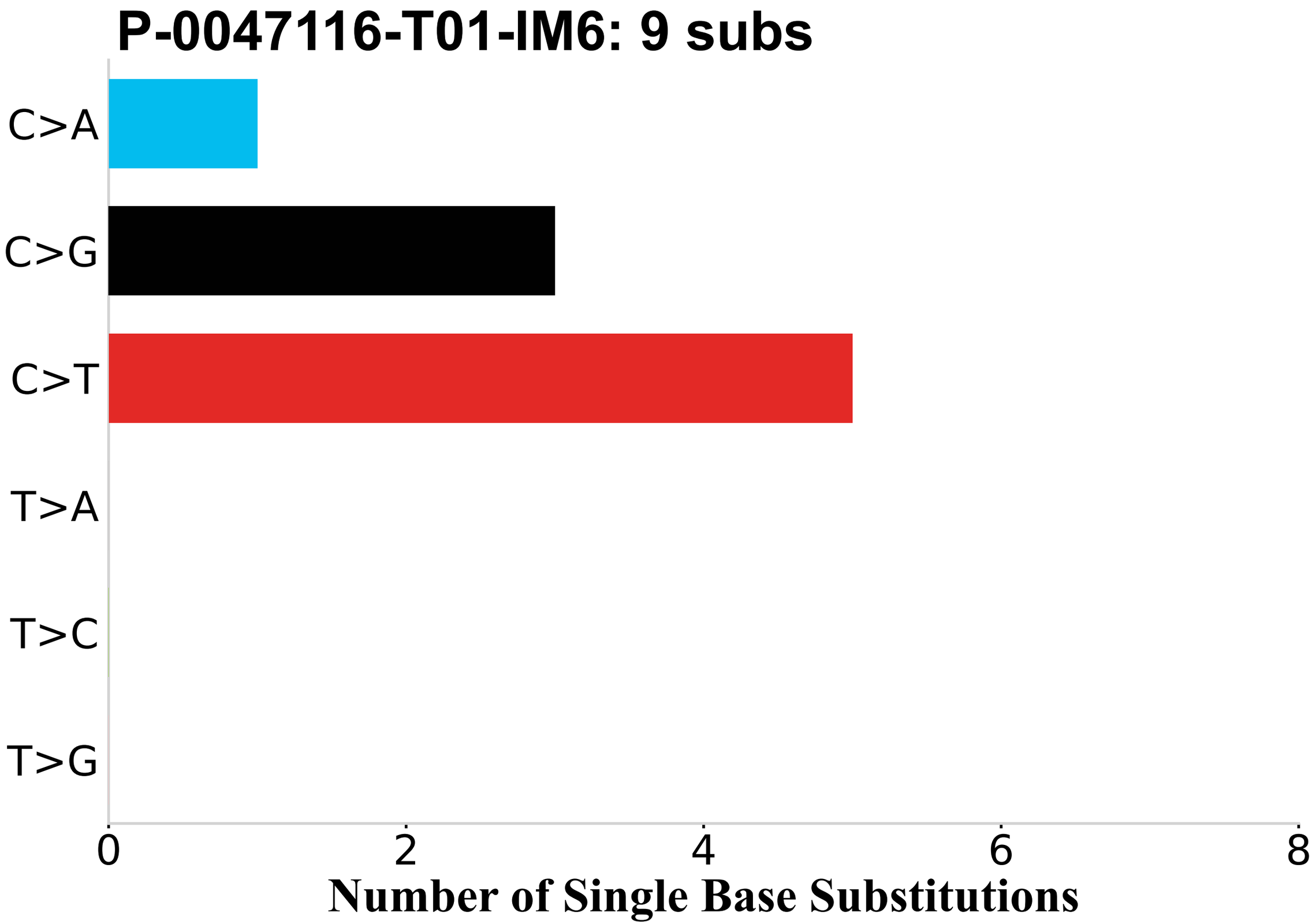

P-0046758-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

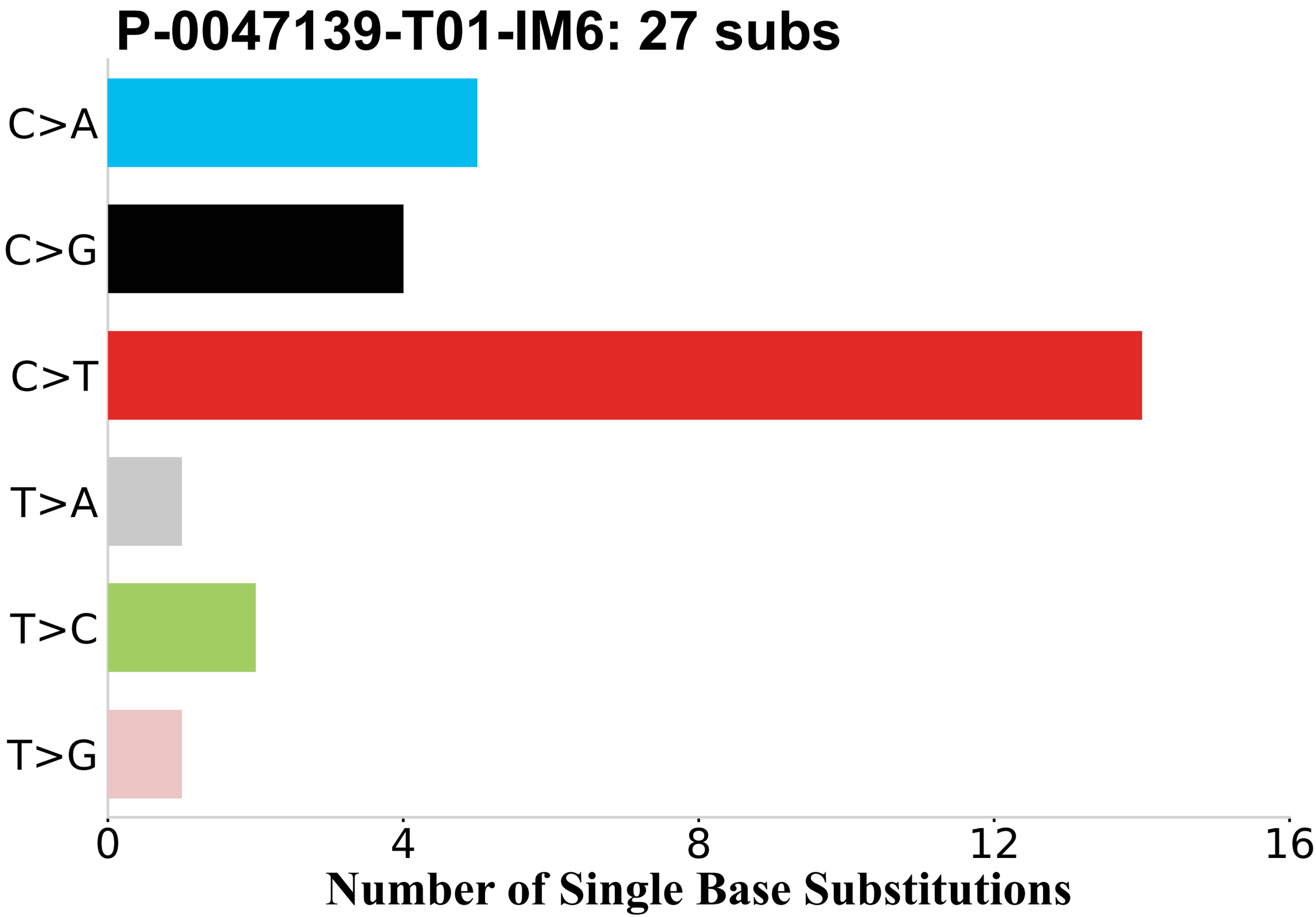

P-0046835-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

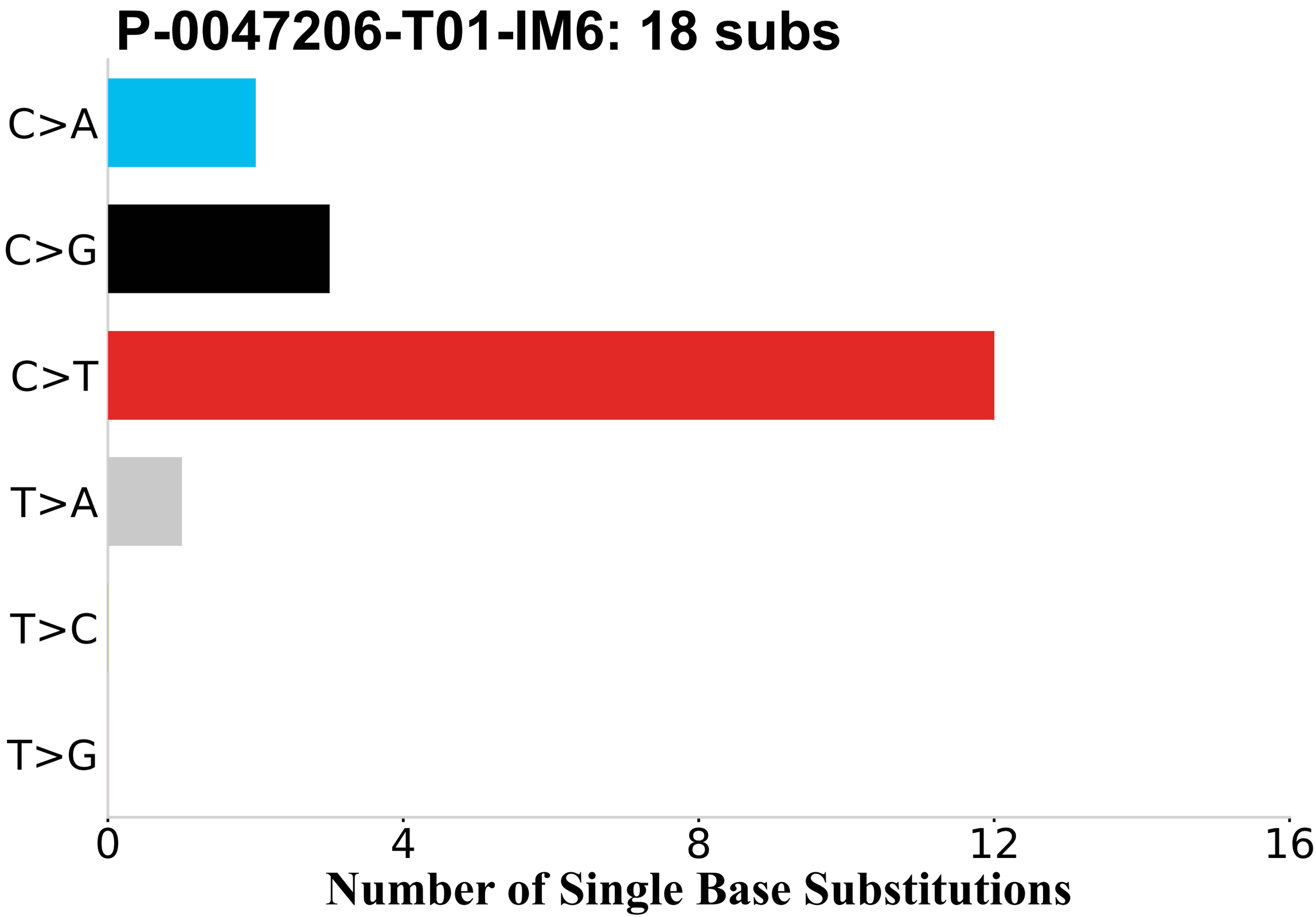

P-0046894-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

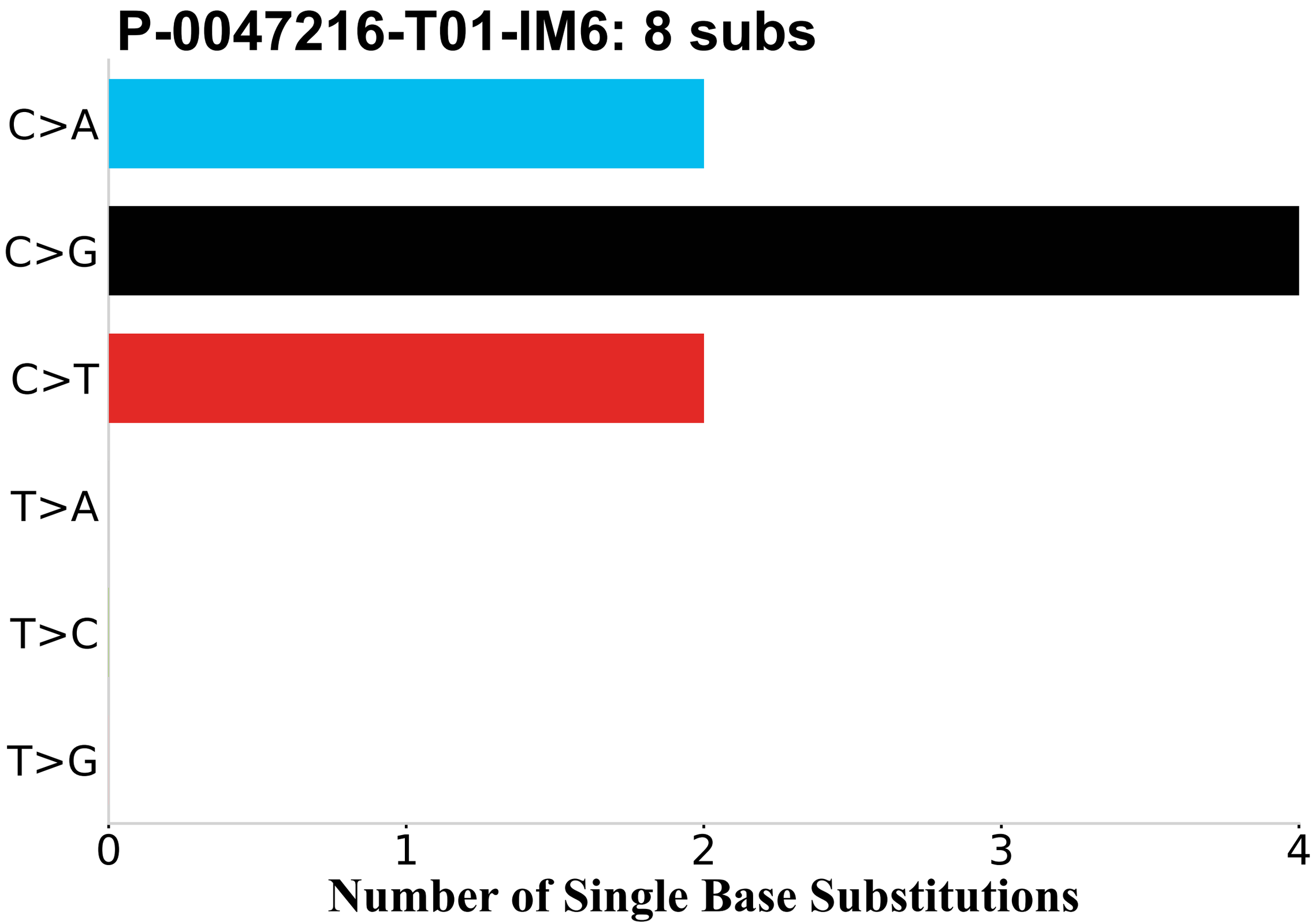

P-0046919-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

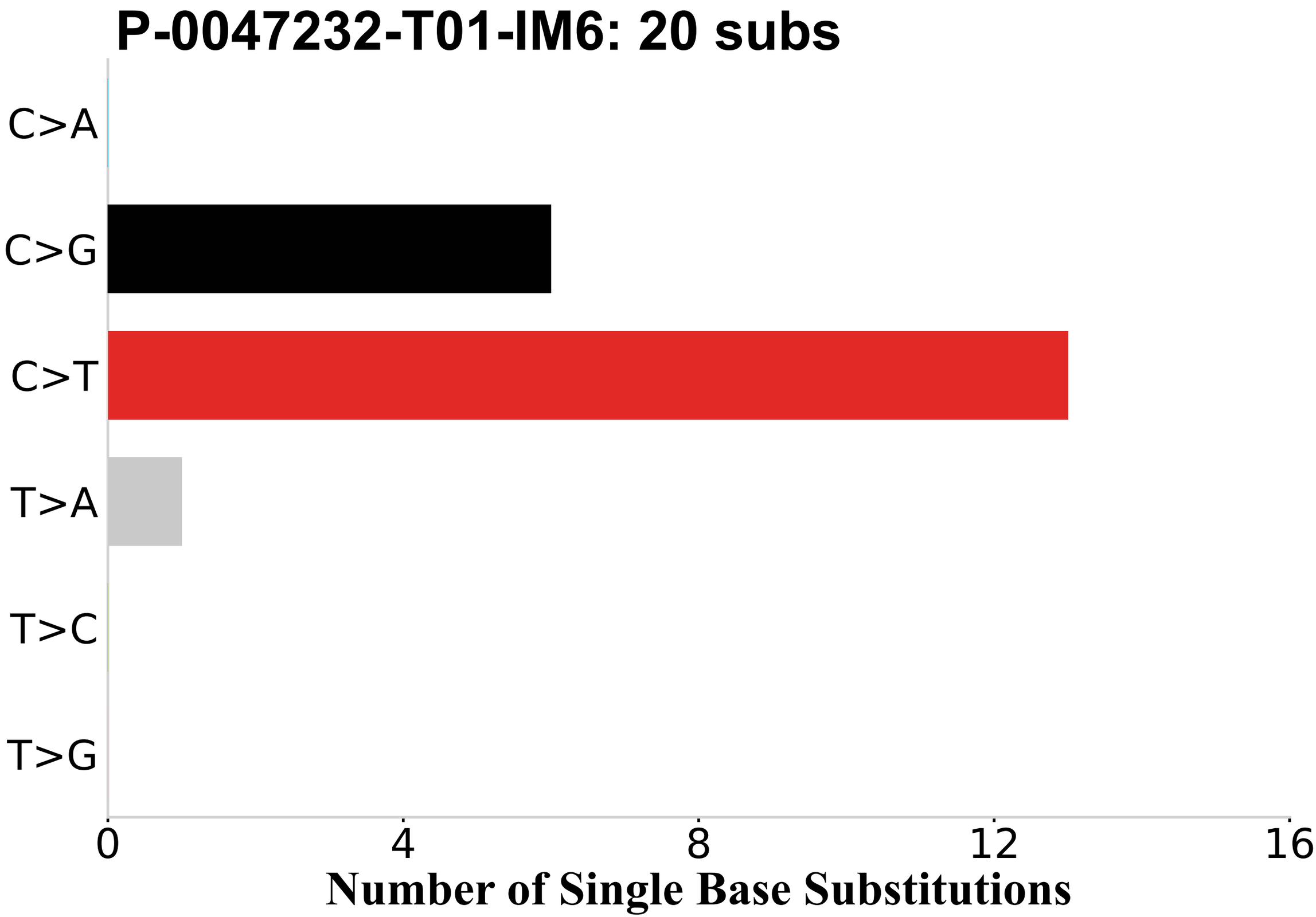

P-0047007-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

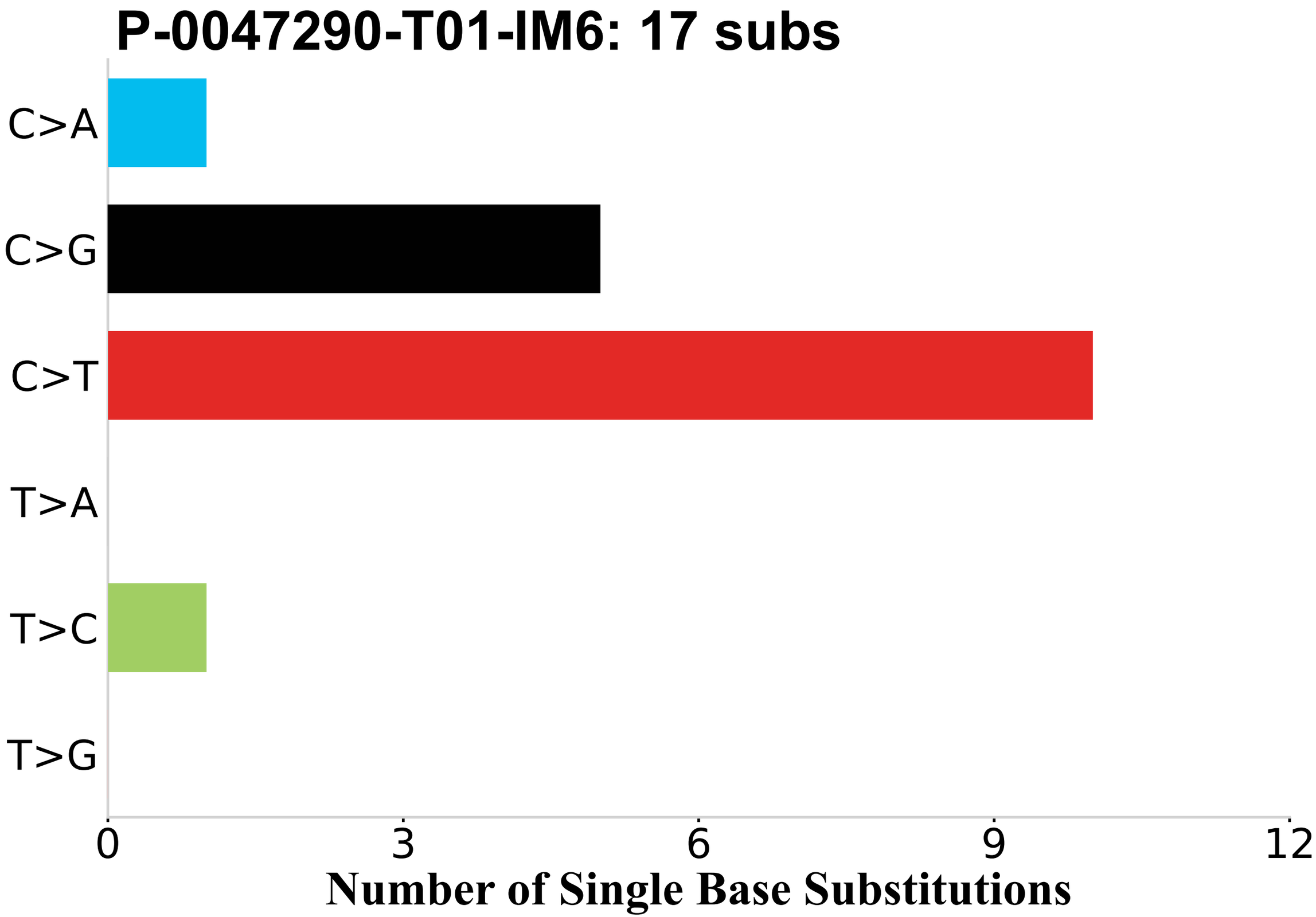

P-0047116-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

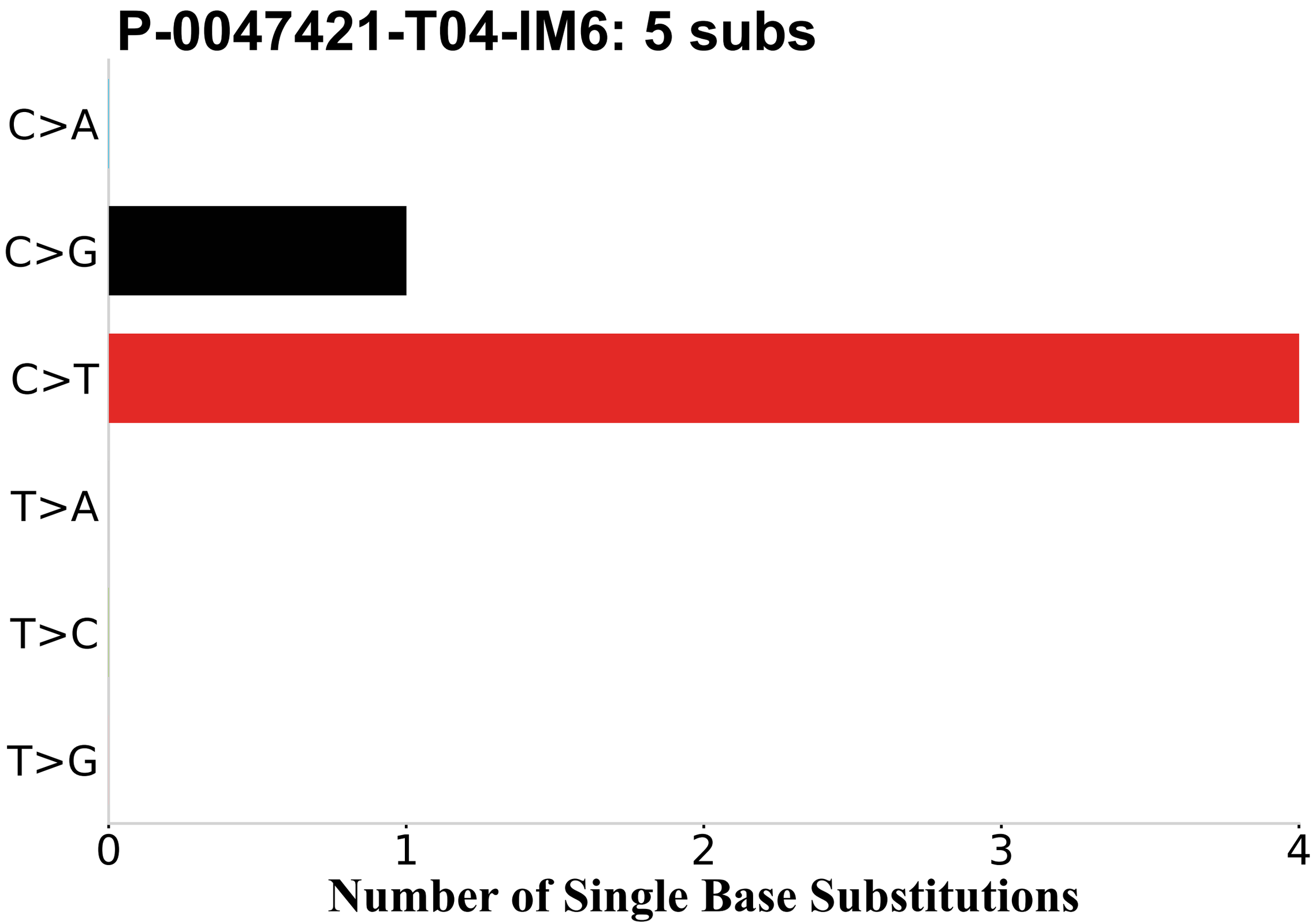

P-0047139-T01-IM6: 27 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

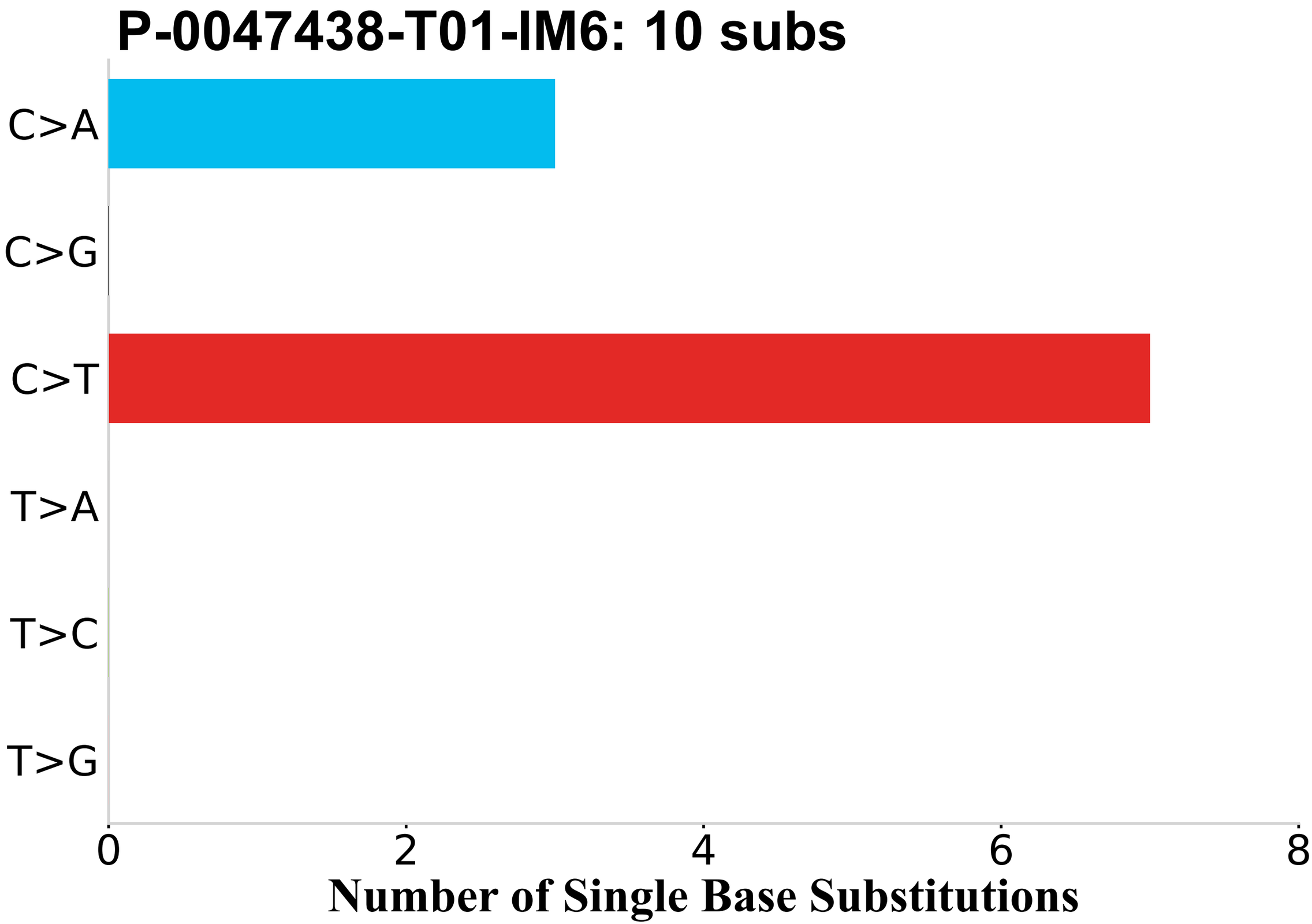

P-0047206-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0047216-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047232-T01-IM6: 20 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0047290-T01-IM6: 17 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0047421-T04-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047438-T01-IM6: 10 subs
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C>T
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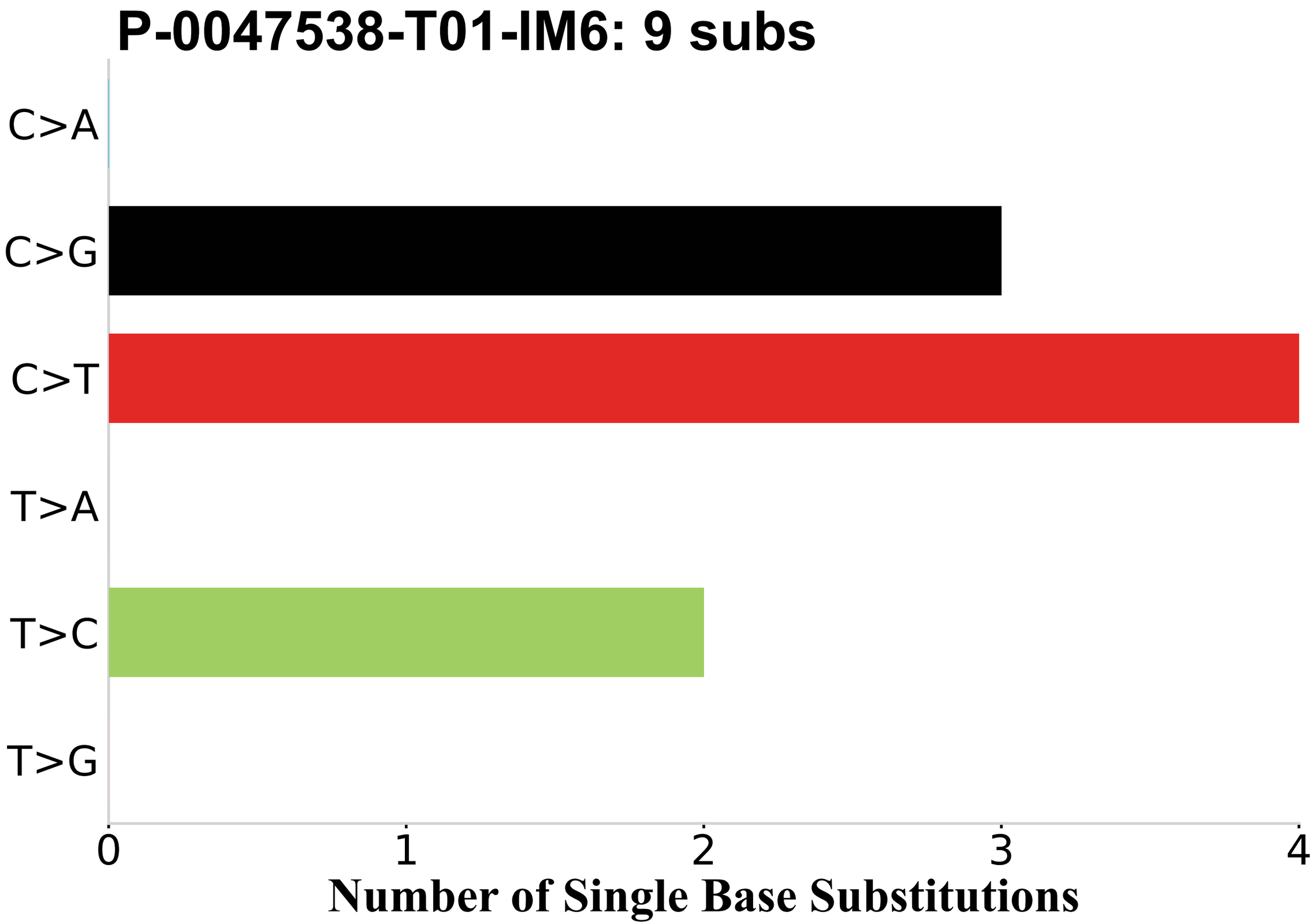
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0047538-T01-IM6: 9 subs
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C>G
C>T
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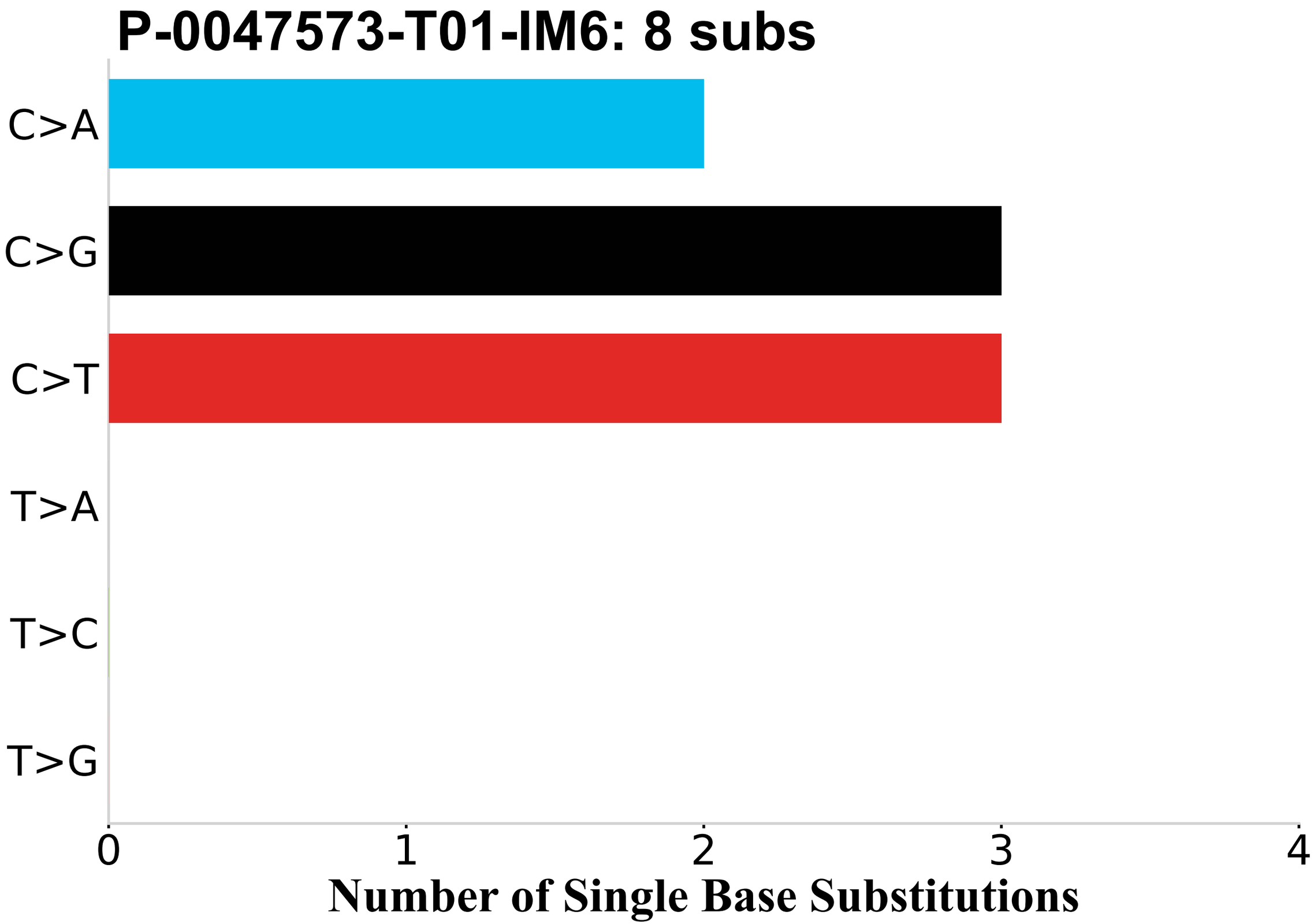
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047573-T01-IM6: 8 subs
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C>T
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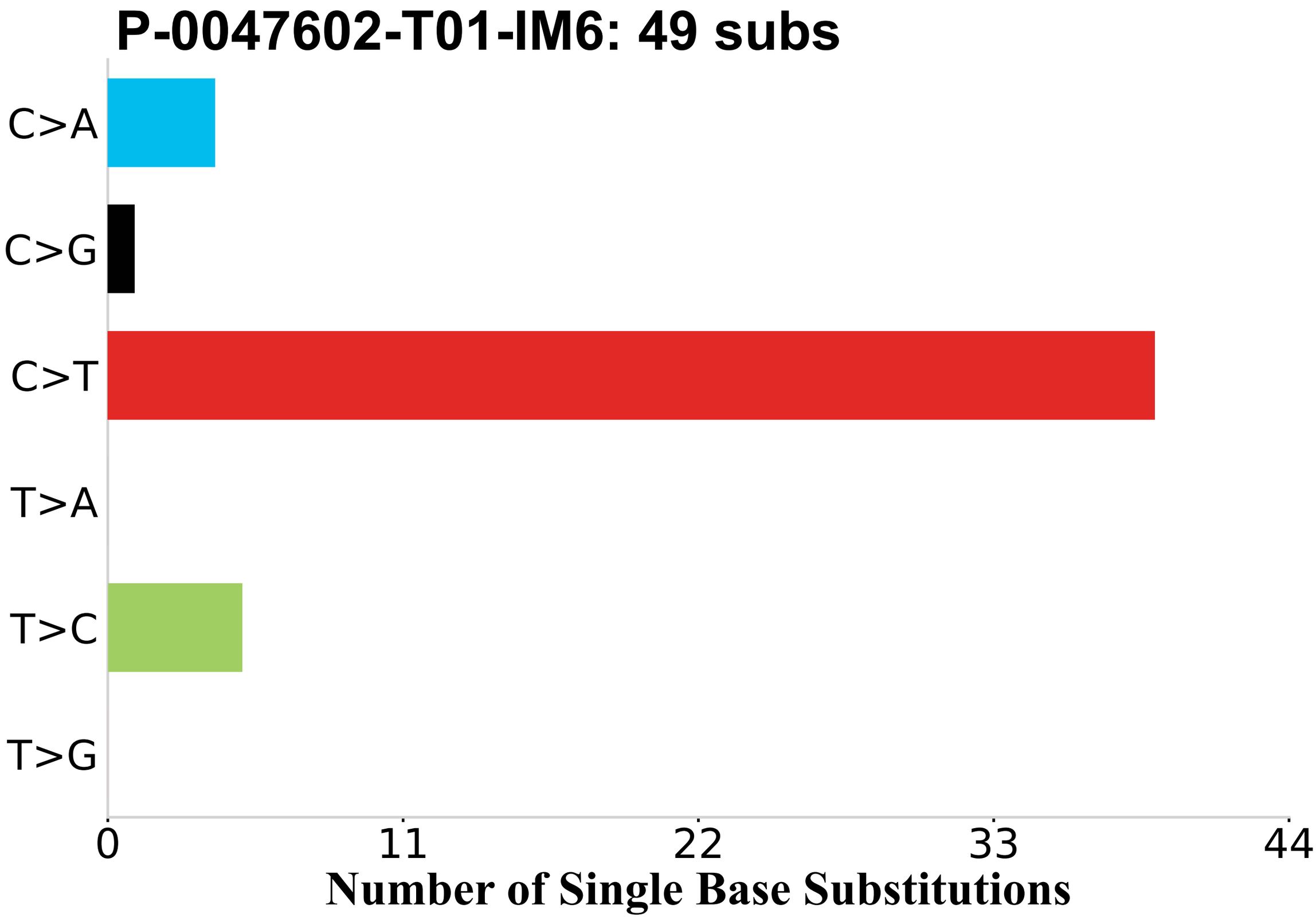
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047602-T01-IM6: 49 subs
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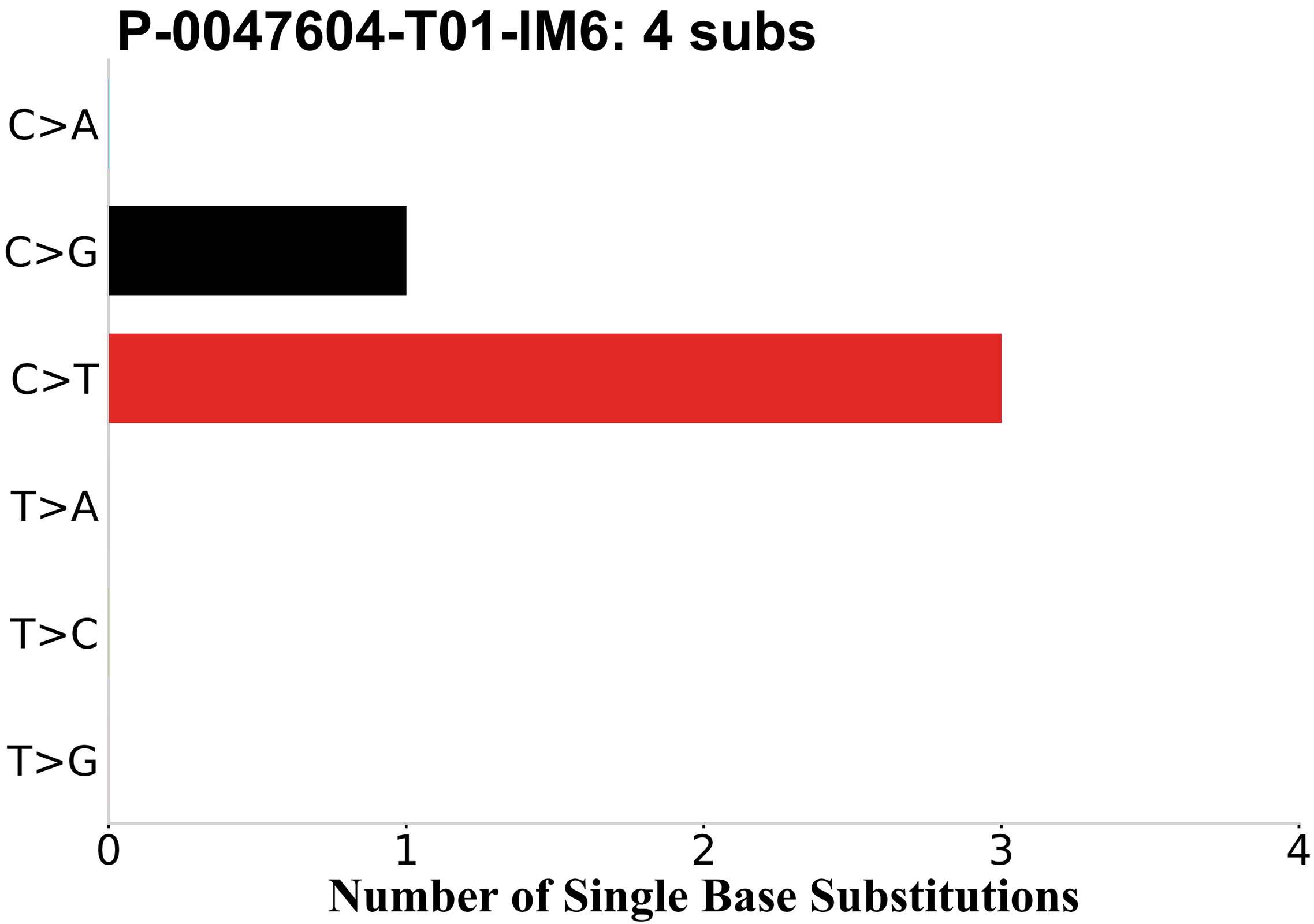
T>C
T>G
0
11
22
33
44
Number of Single Base Substitutions


P-0047604-T01-IM6: 4 subs
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C>G
C>T
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T>C
T>G
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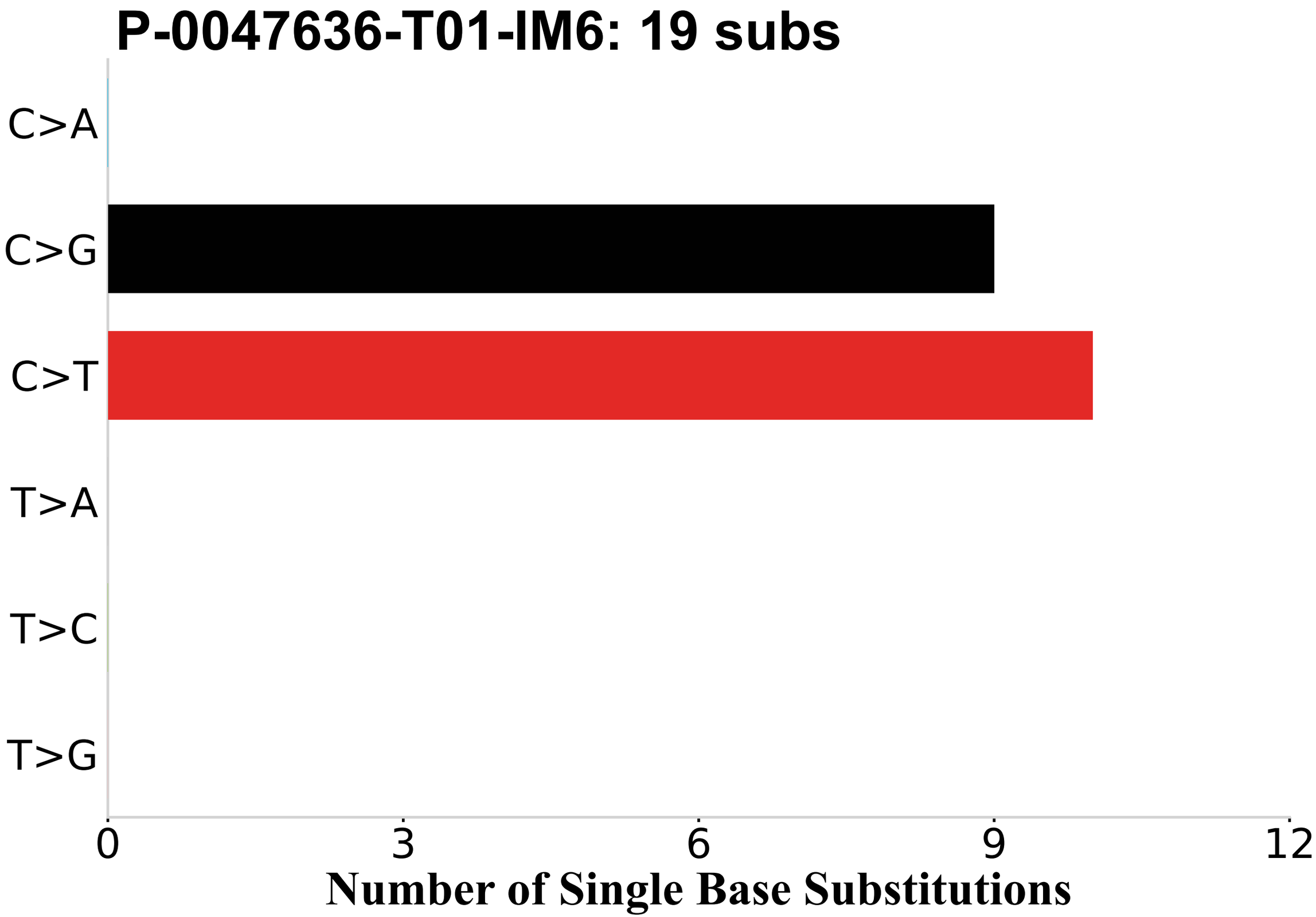
1
2
3
4
Number of Single Base Substitutions


P-0047636-T01-IM6: 19 subs
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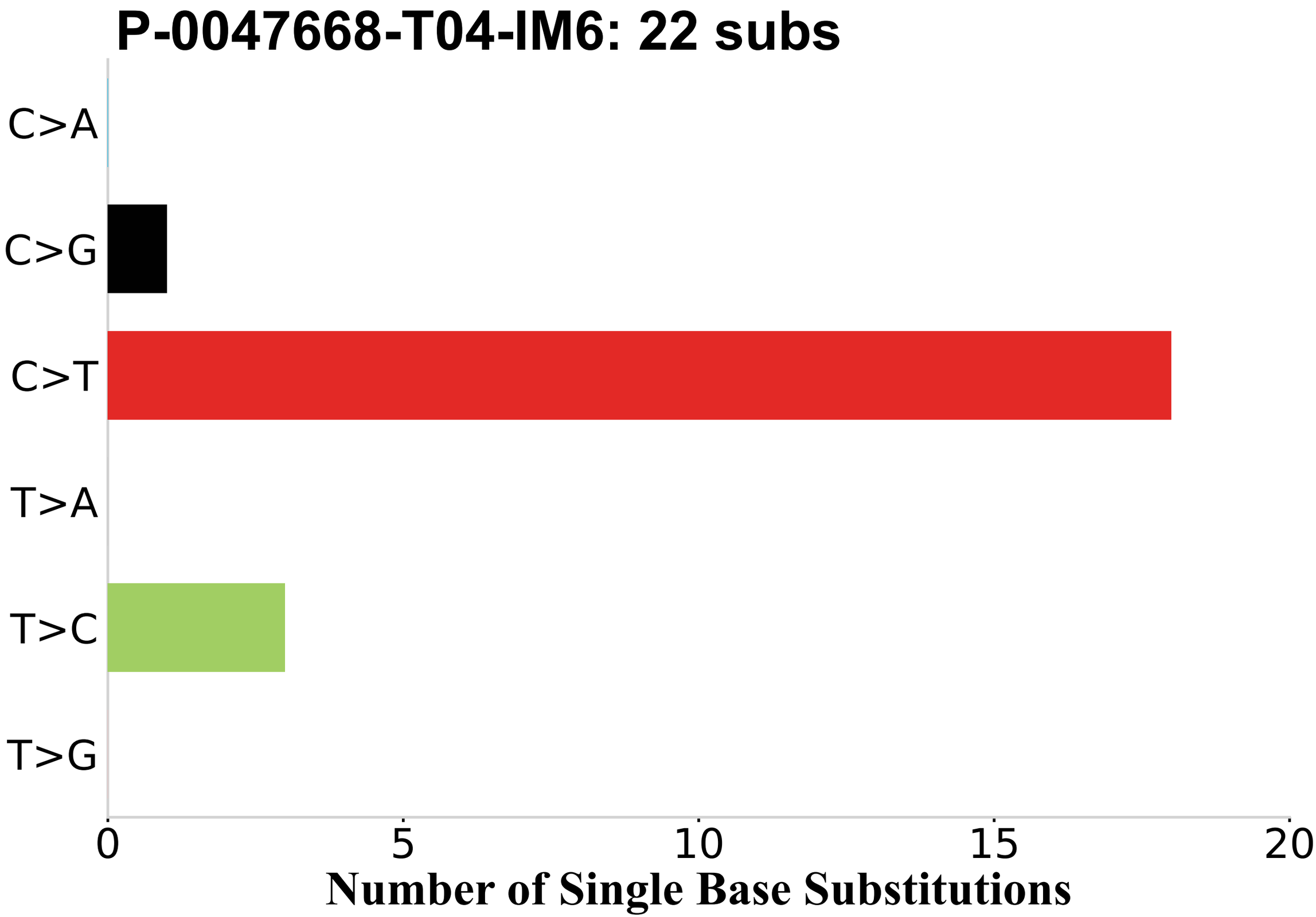
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0047668-T04-IM6: 22 subs
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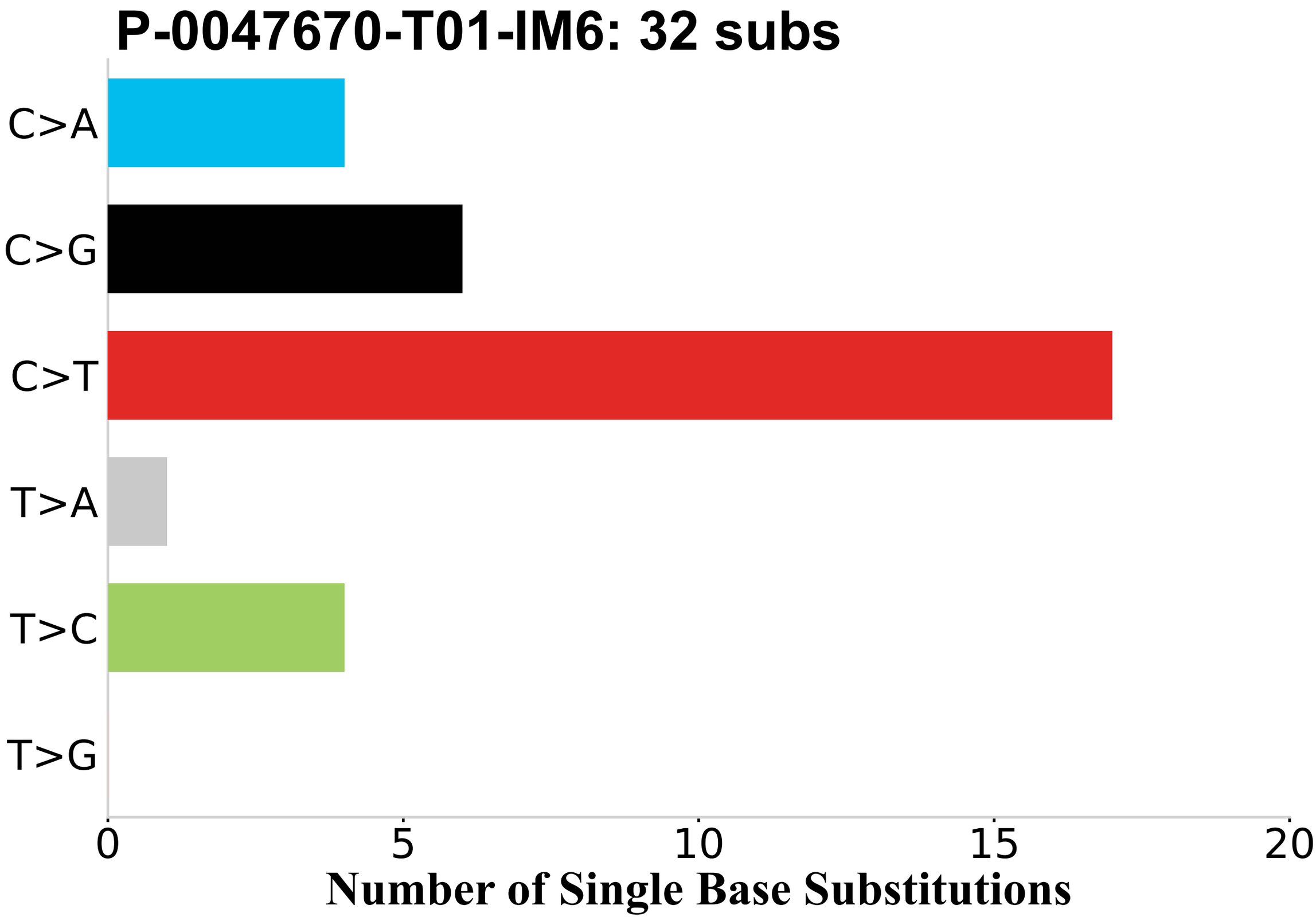
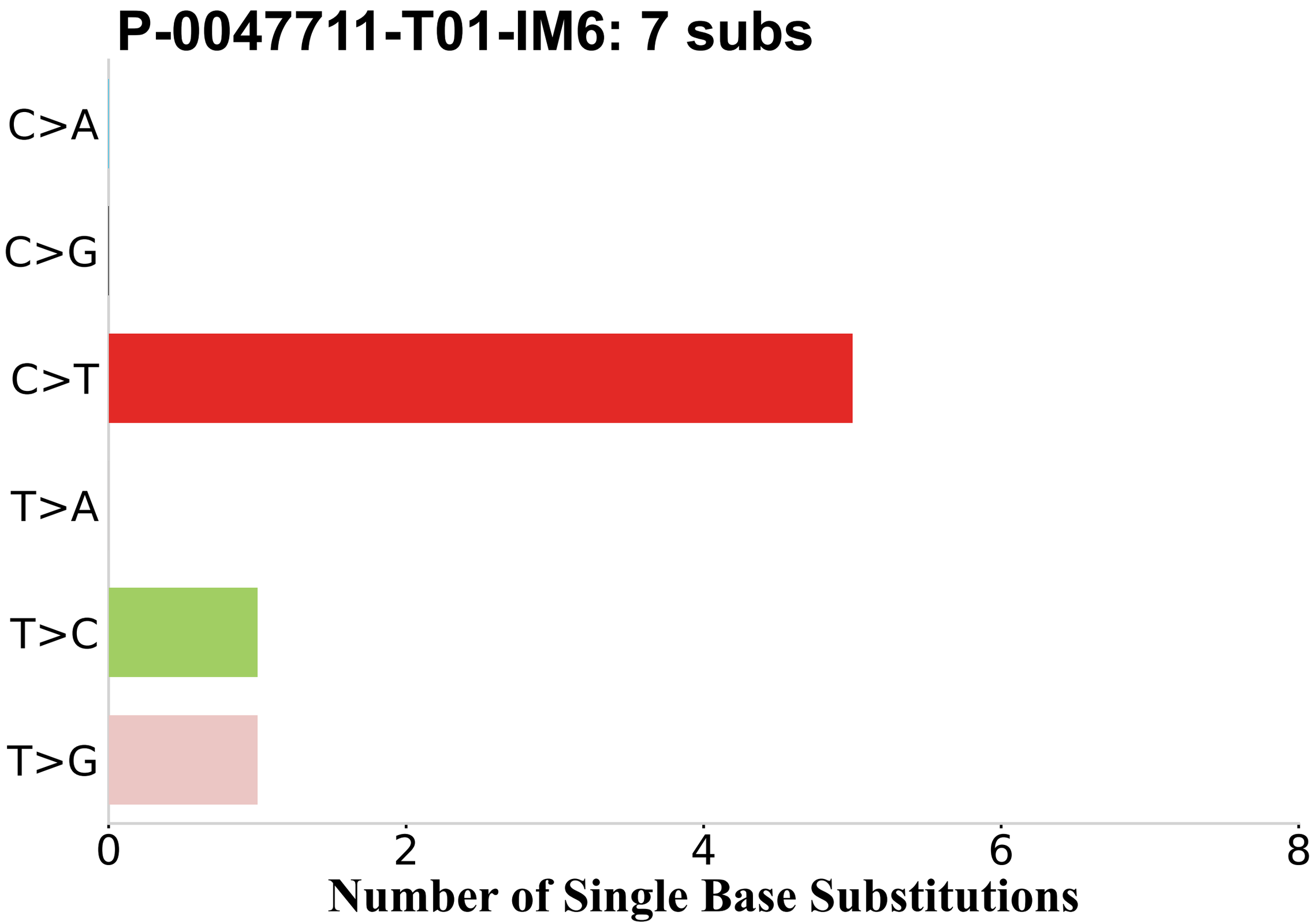
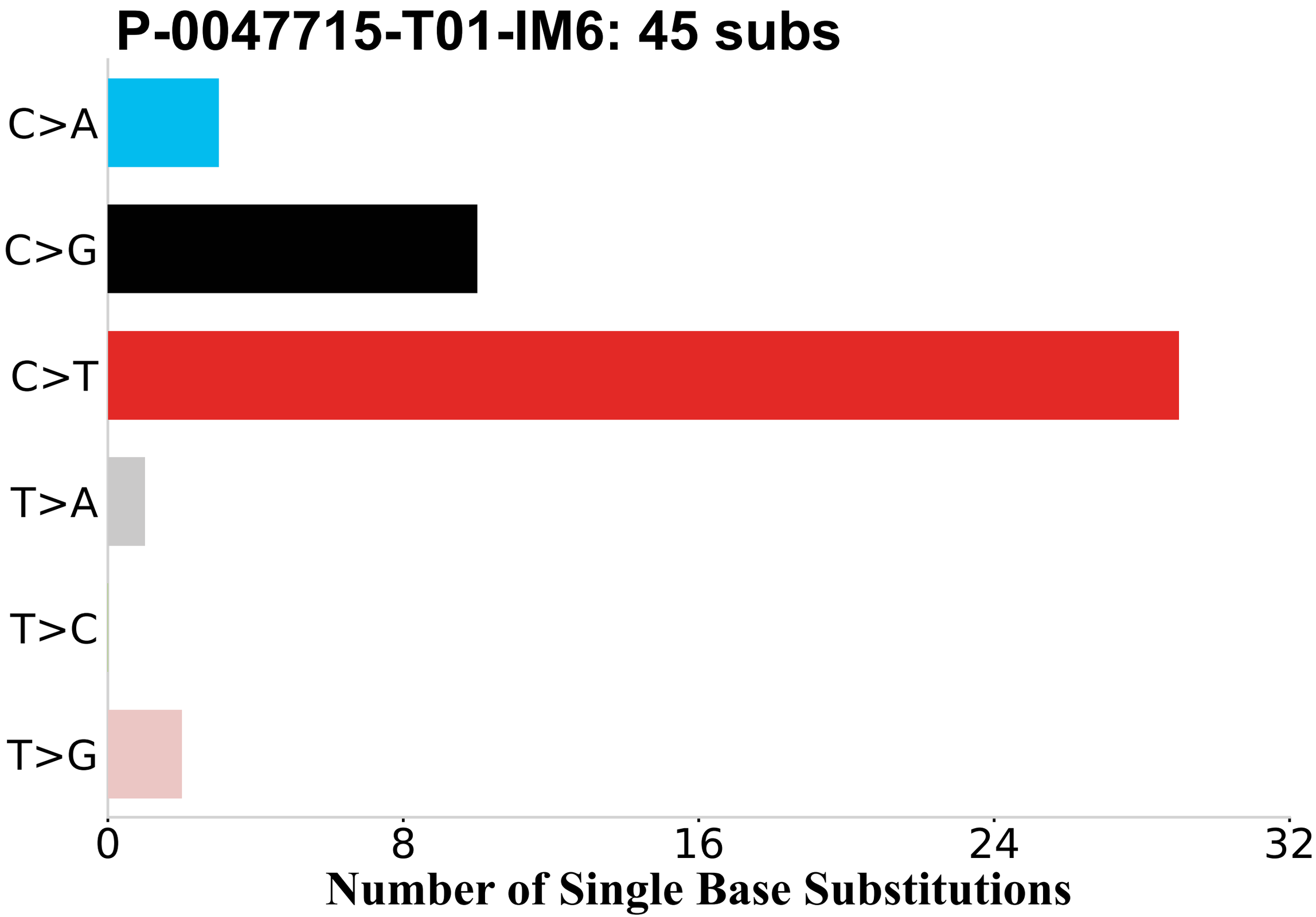
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0047670-T01-IM6: 32 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0047711-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0047715-T01-IM6: 45 subs
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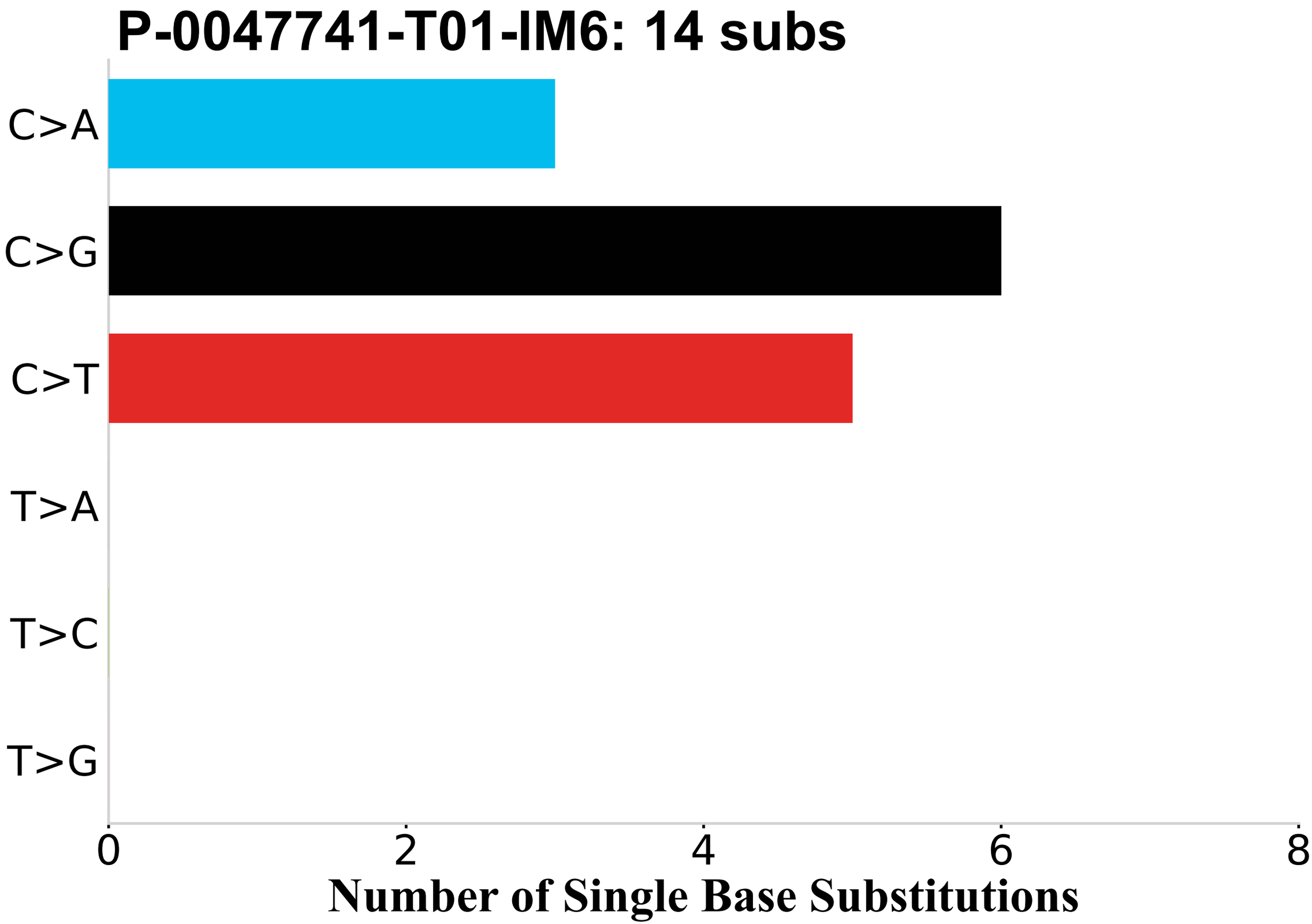
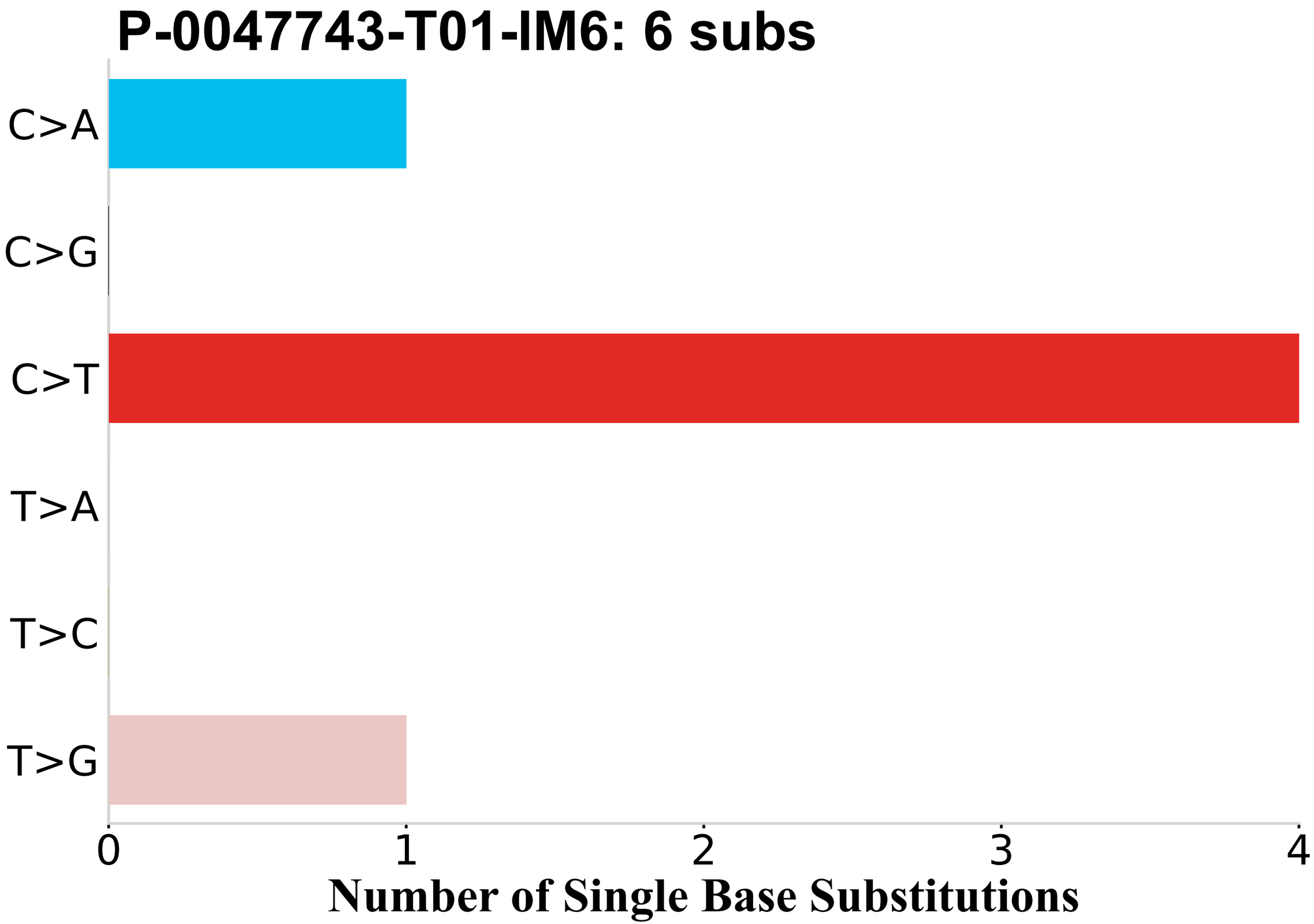
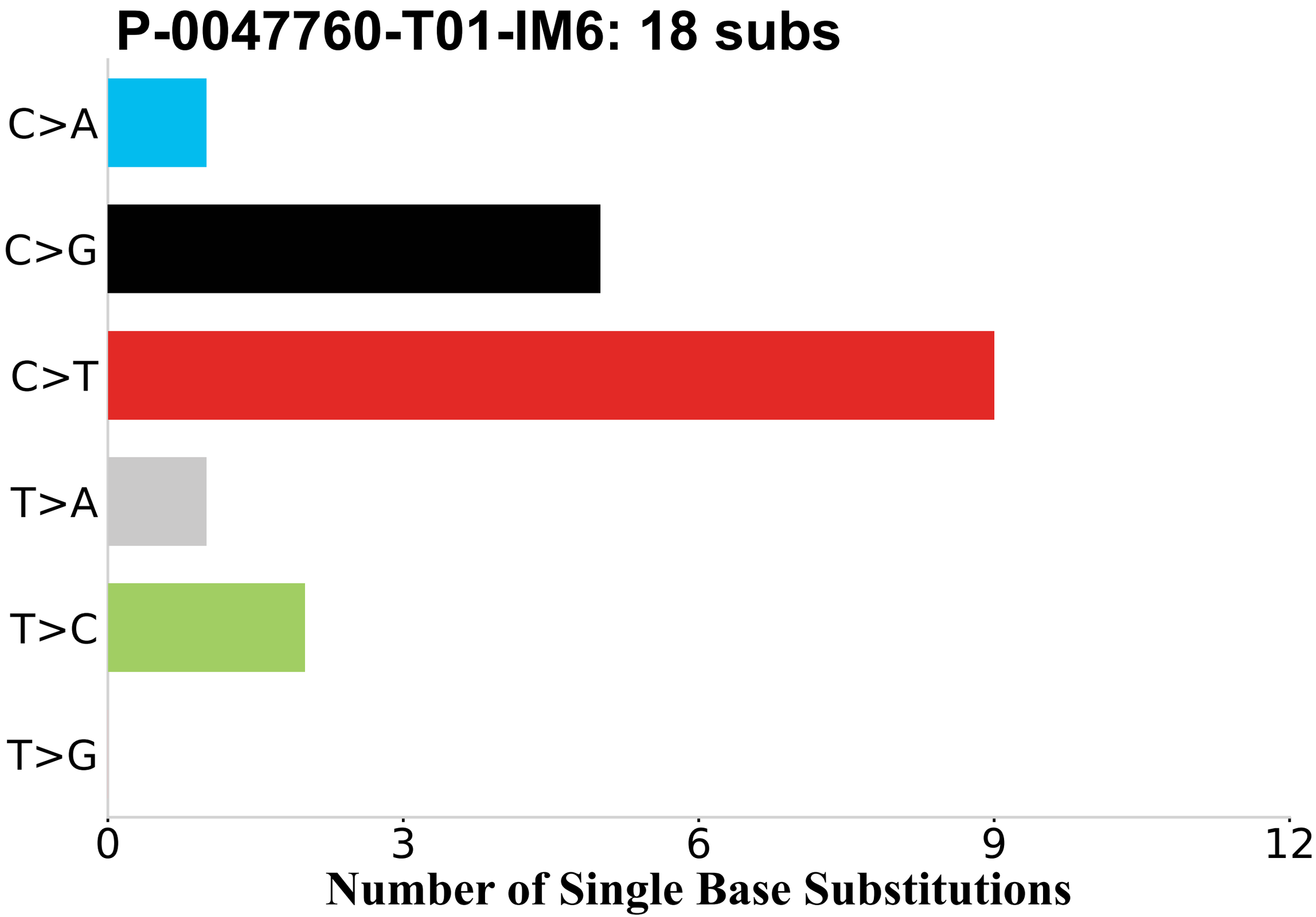
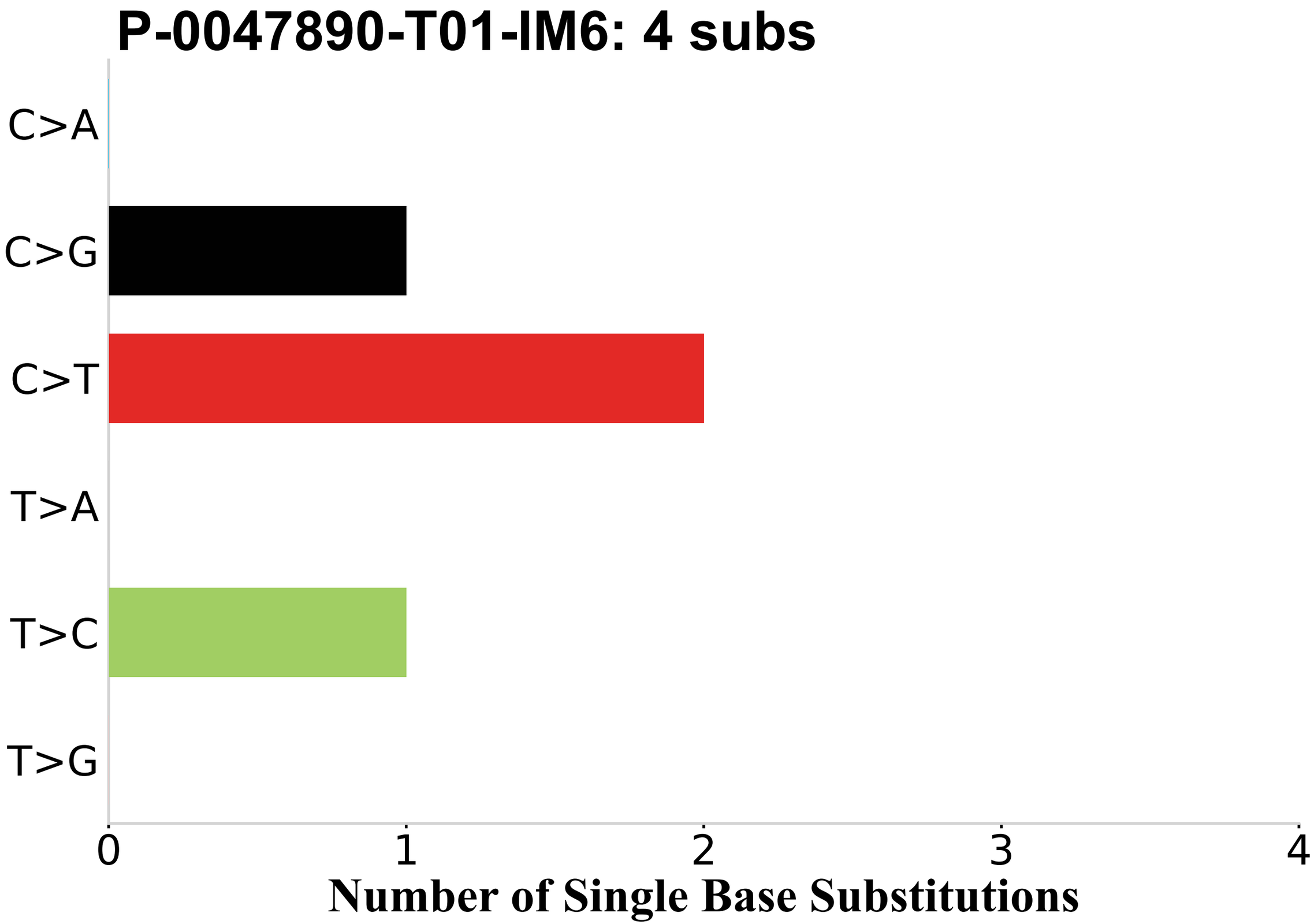
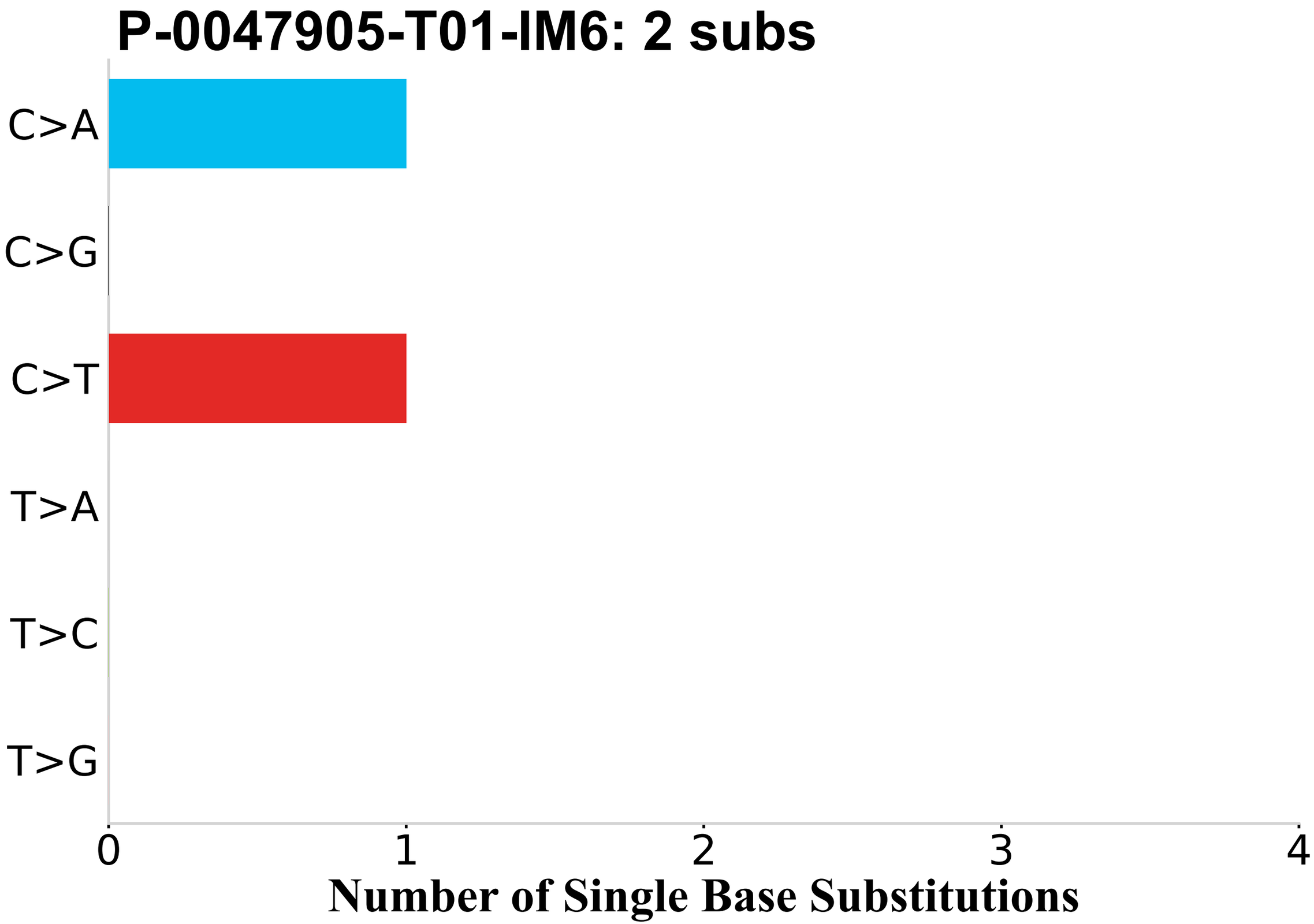
C>T
T>A
T>C
T>G
0
8
16
24
32
Number of Single Base Substitutions

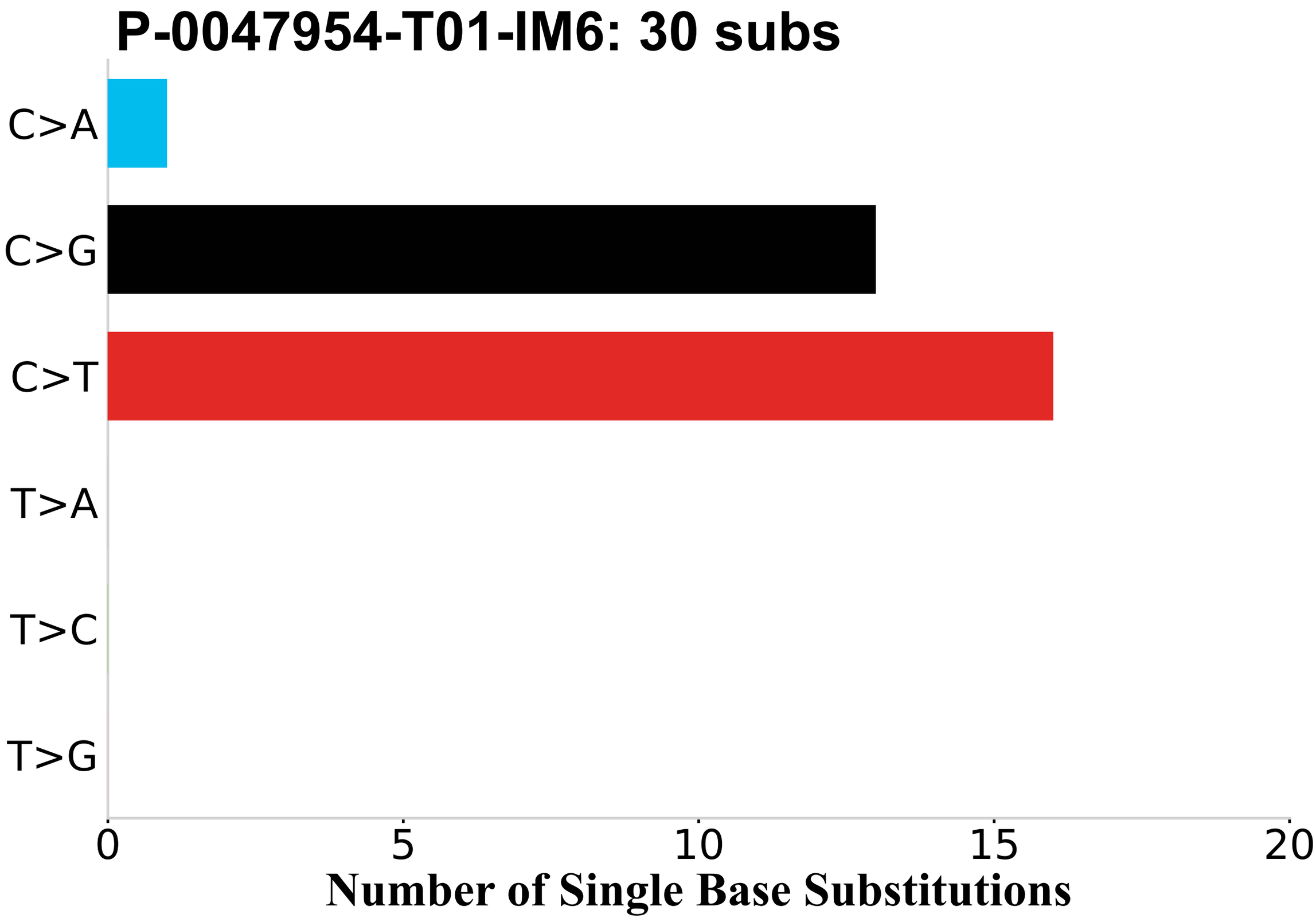

P-0047741-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0047743-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047760-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0047890-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047905-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0047954-T01-IM6: 30 subs
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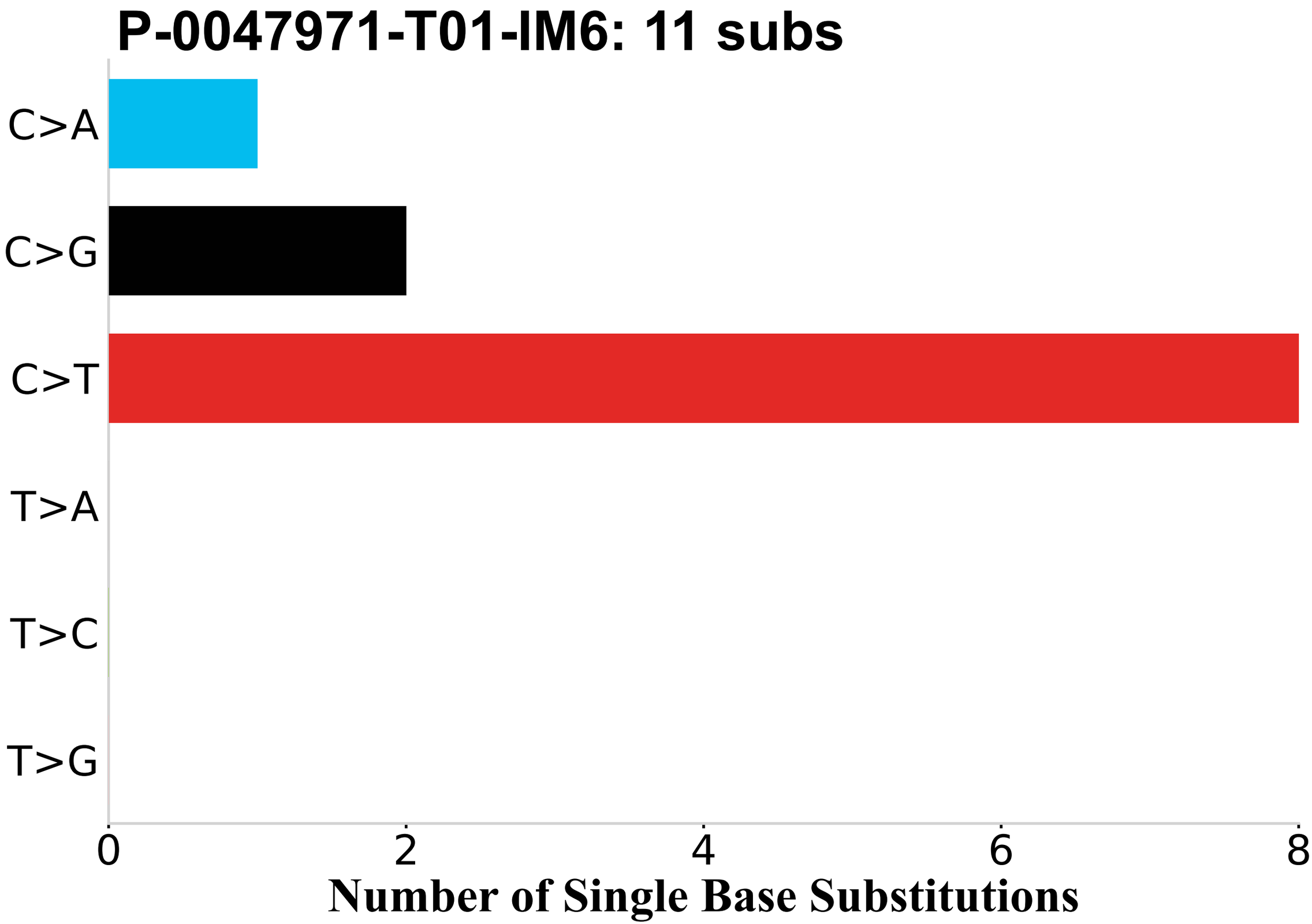
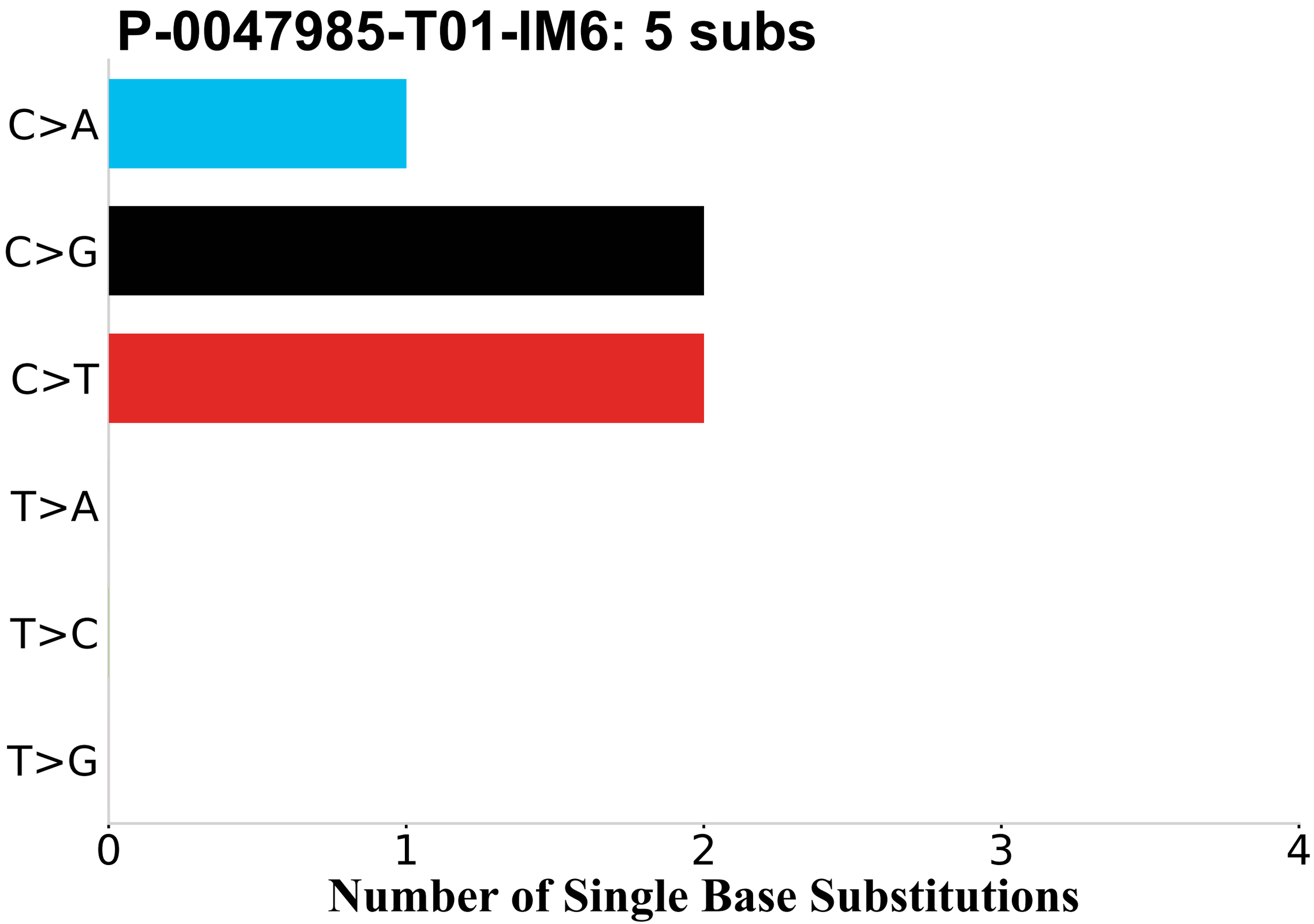
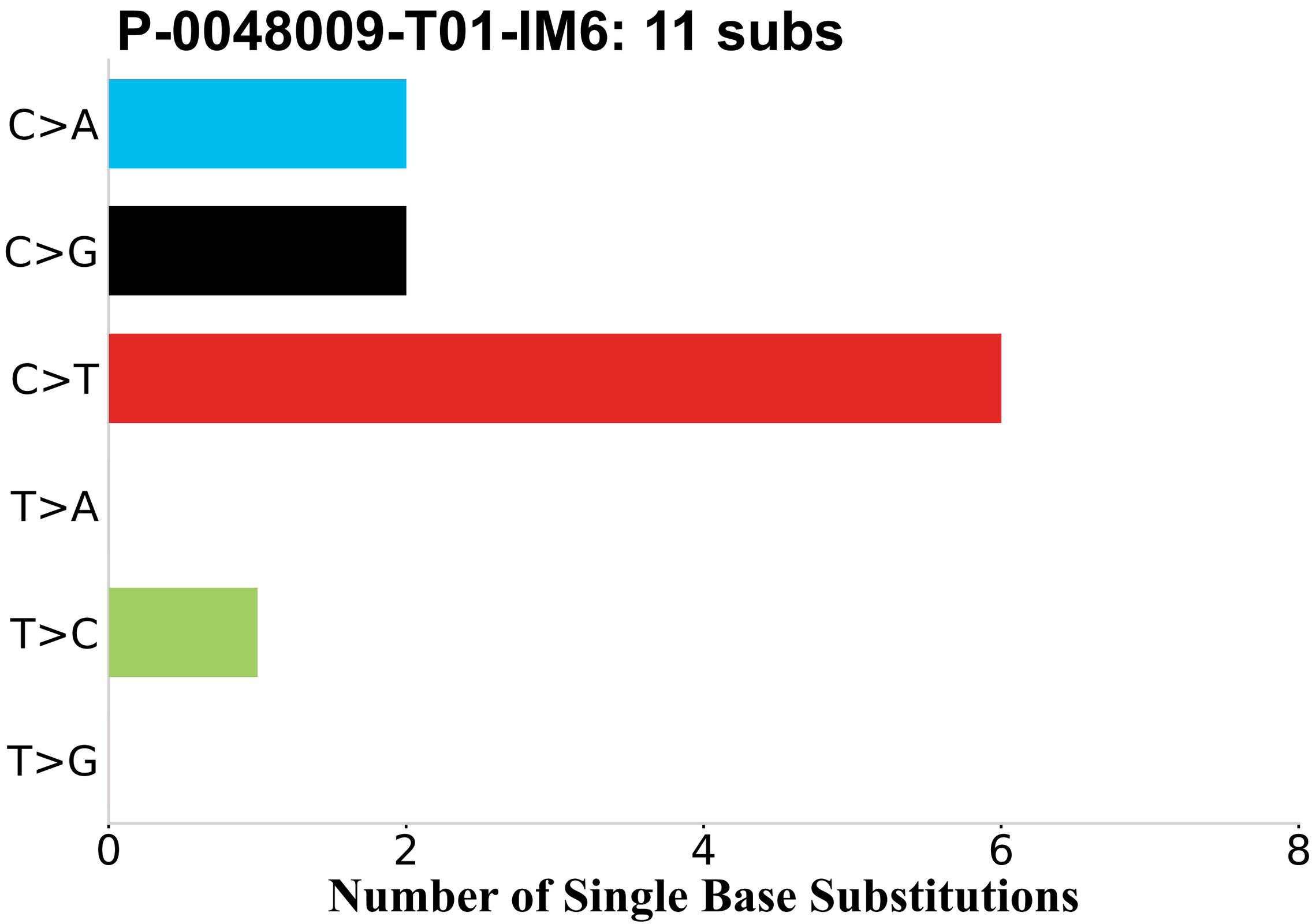
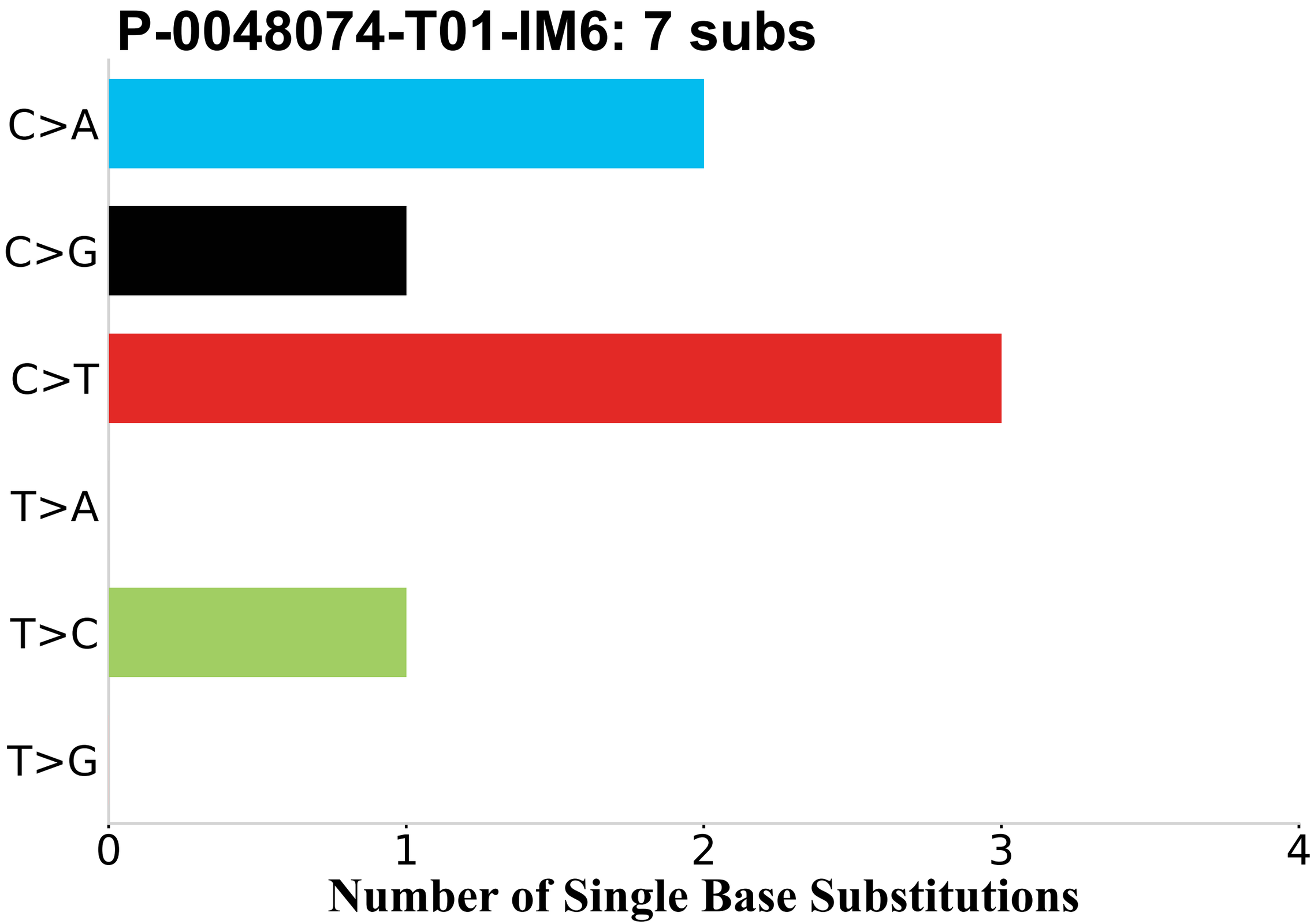
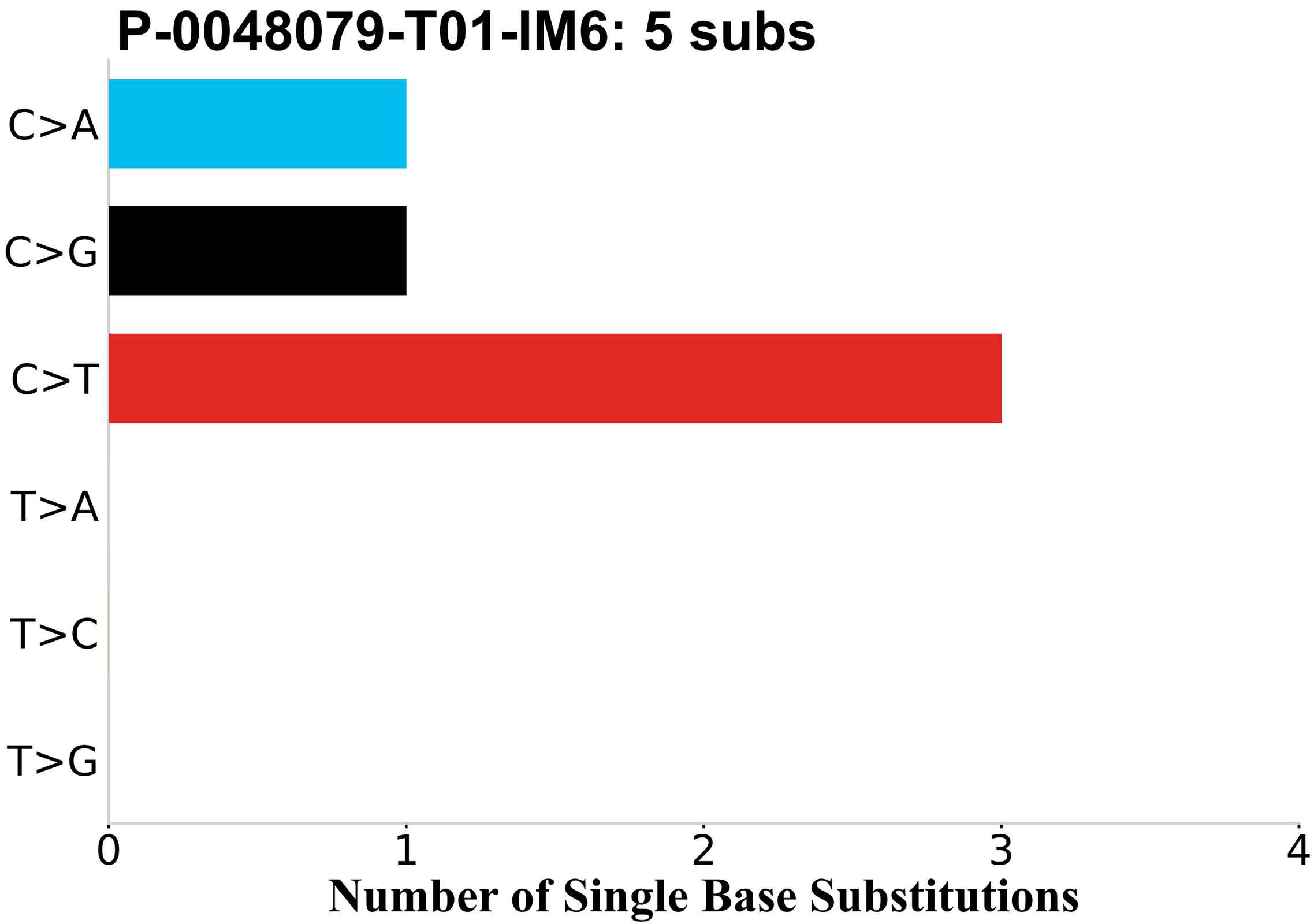
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

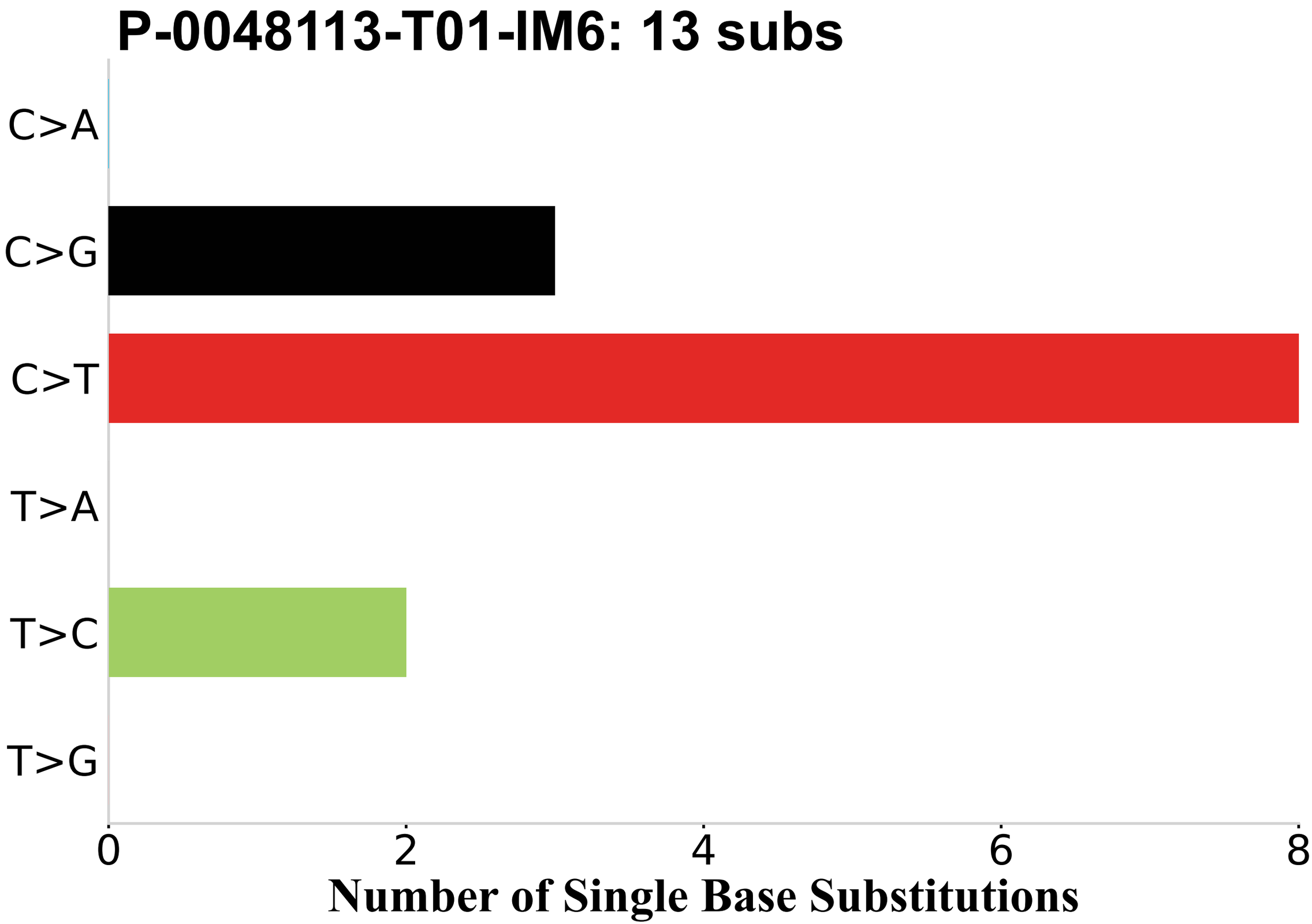

P-0047971-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

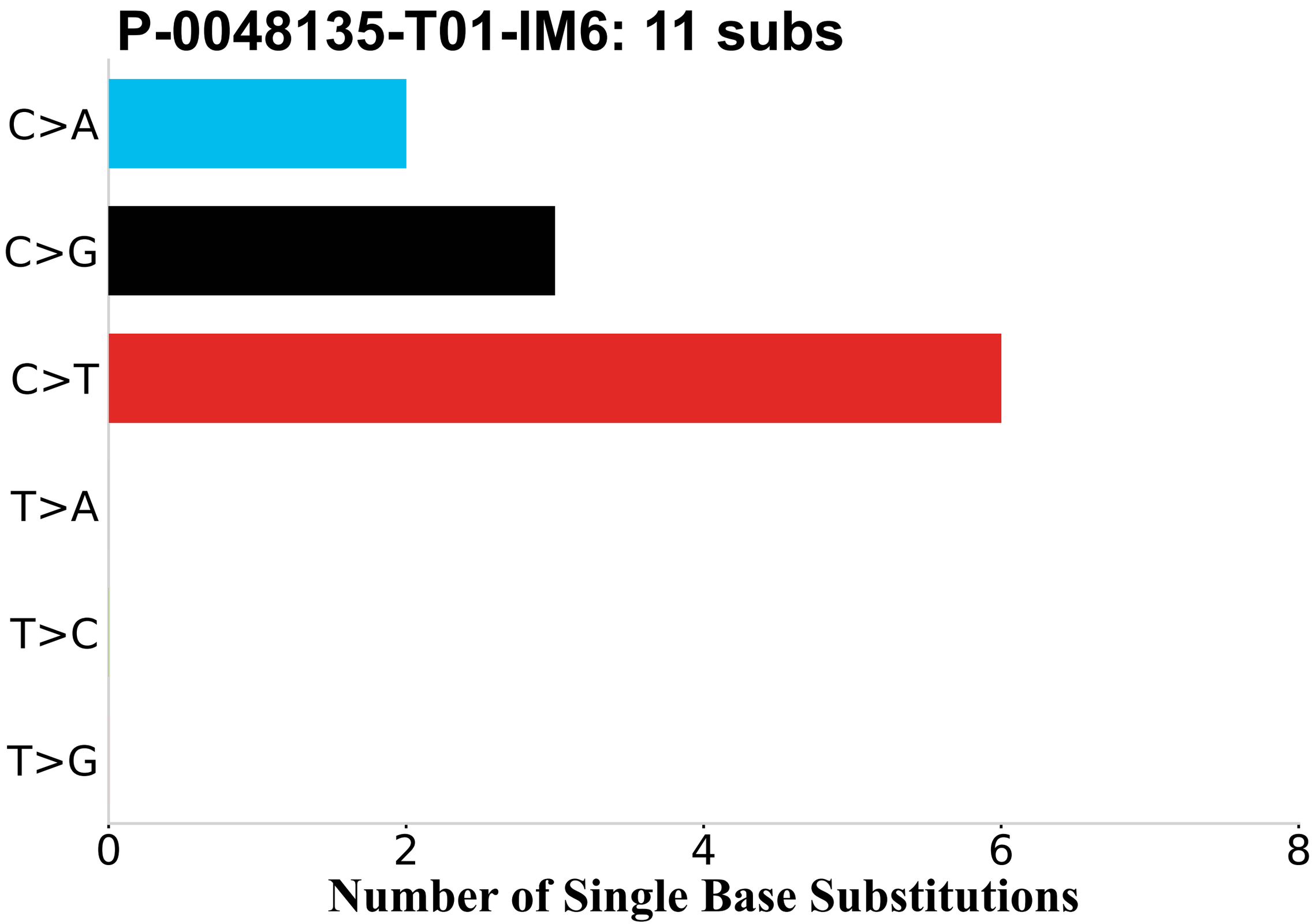

P-0047985-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

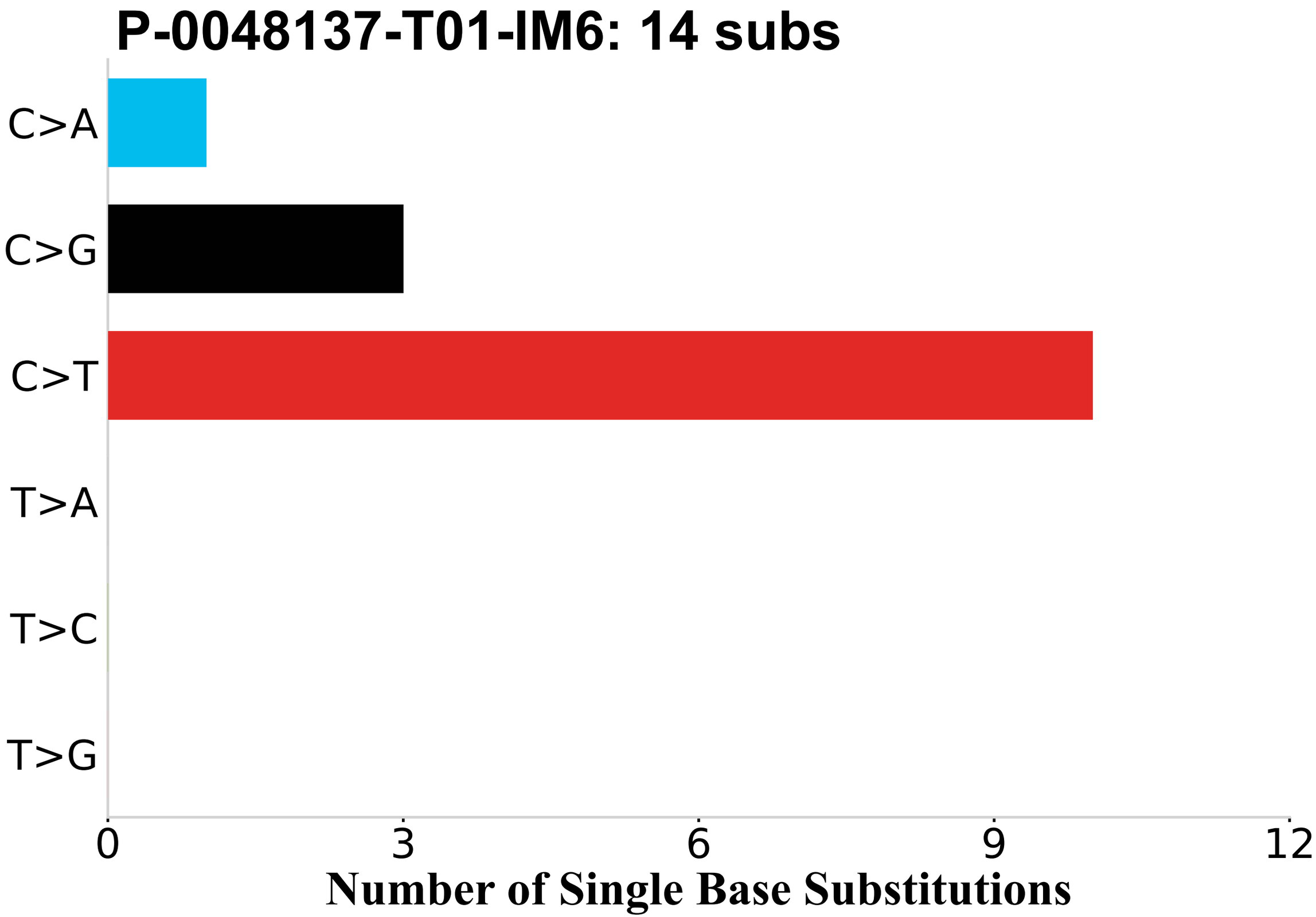

P-0048009-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048074-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048079-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048113-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048135-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048137-T01-IM6: 14 subs
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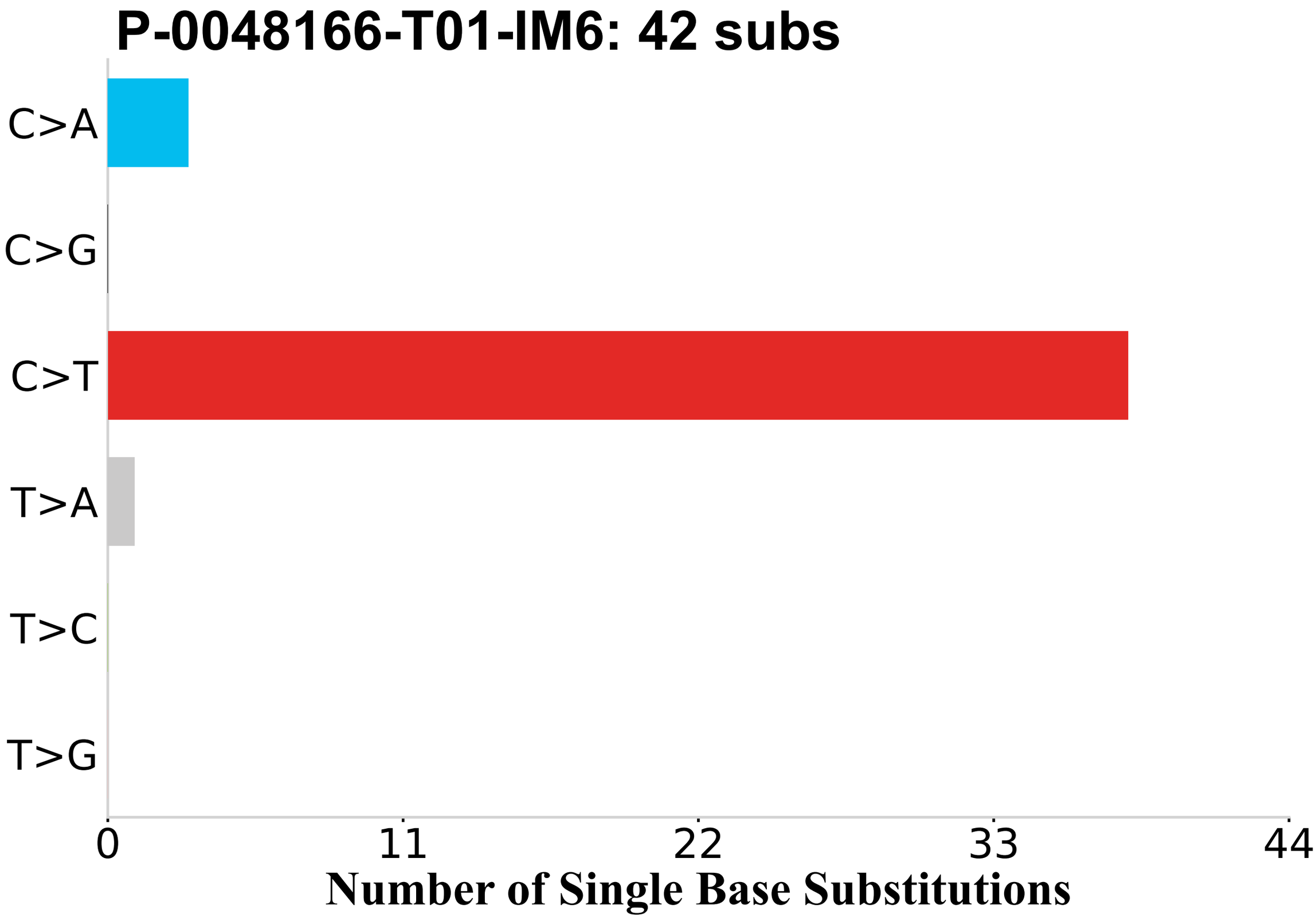
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0048166-T01-IM6: 42 subs
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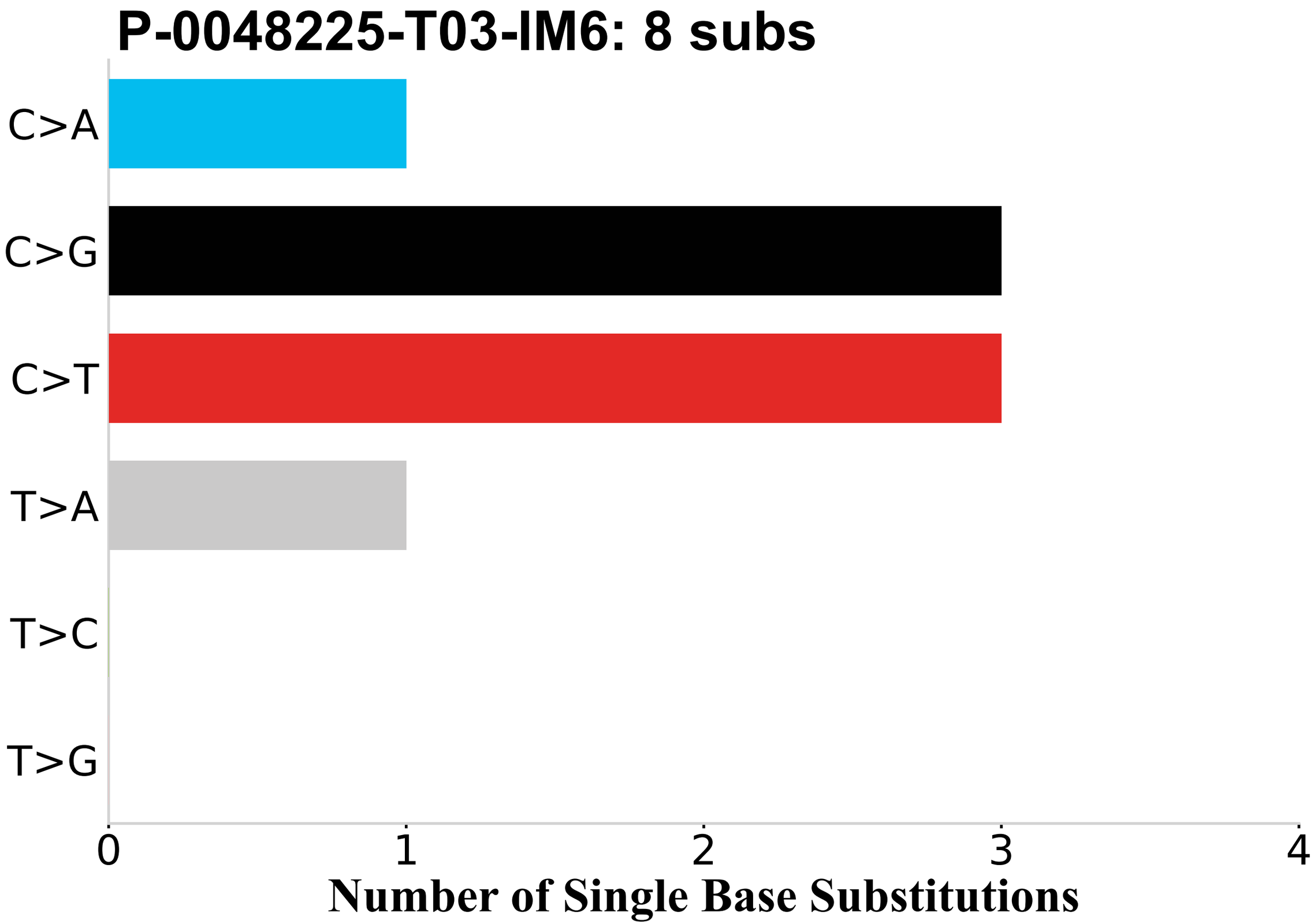
C>G
C>T
T>A
T>C
T>G
0
11
22
33
44
Number of Single Base Substitutions


P-0048225-T03-IM6: 8 subs
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C>G
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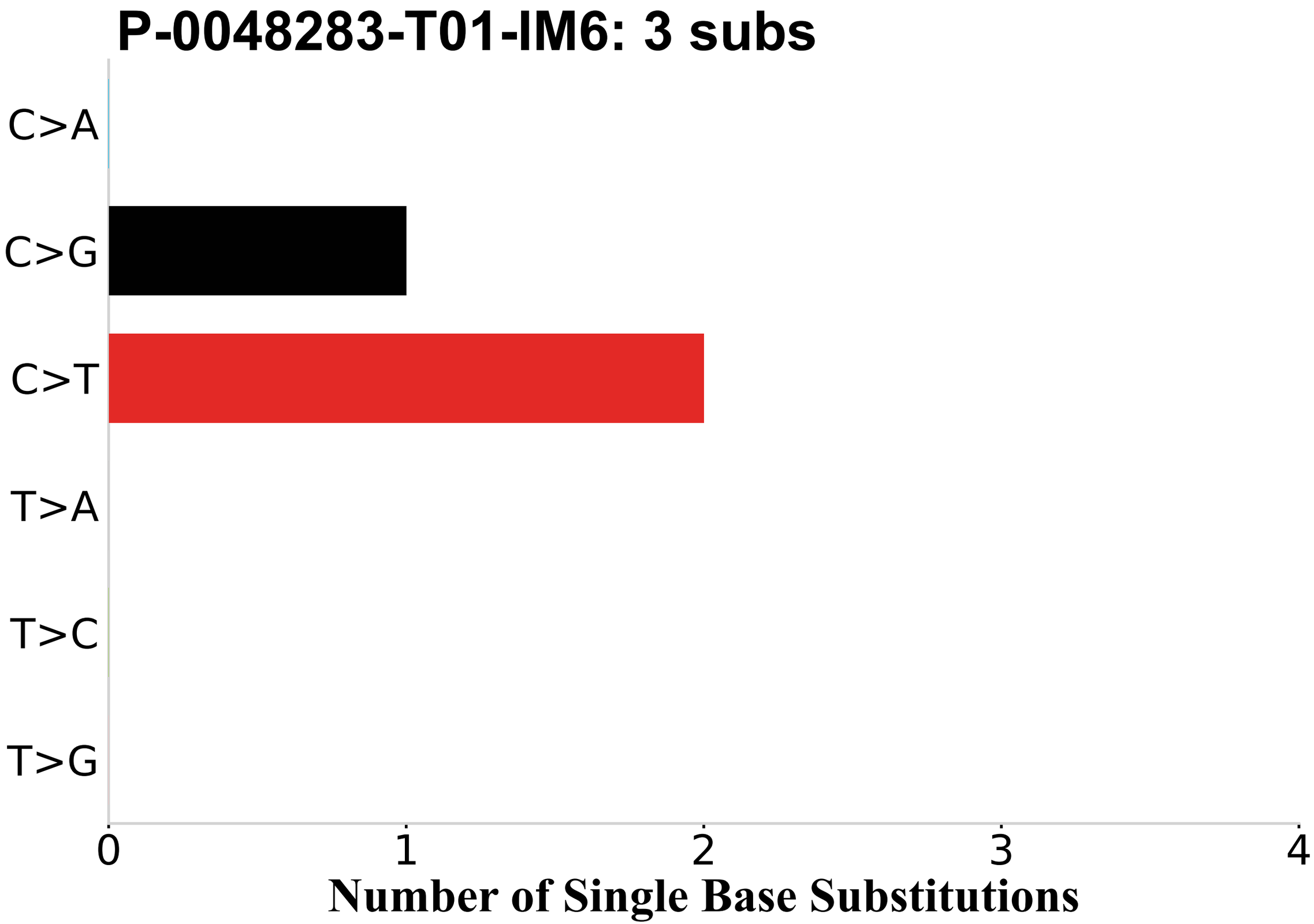
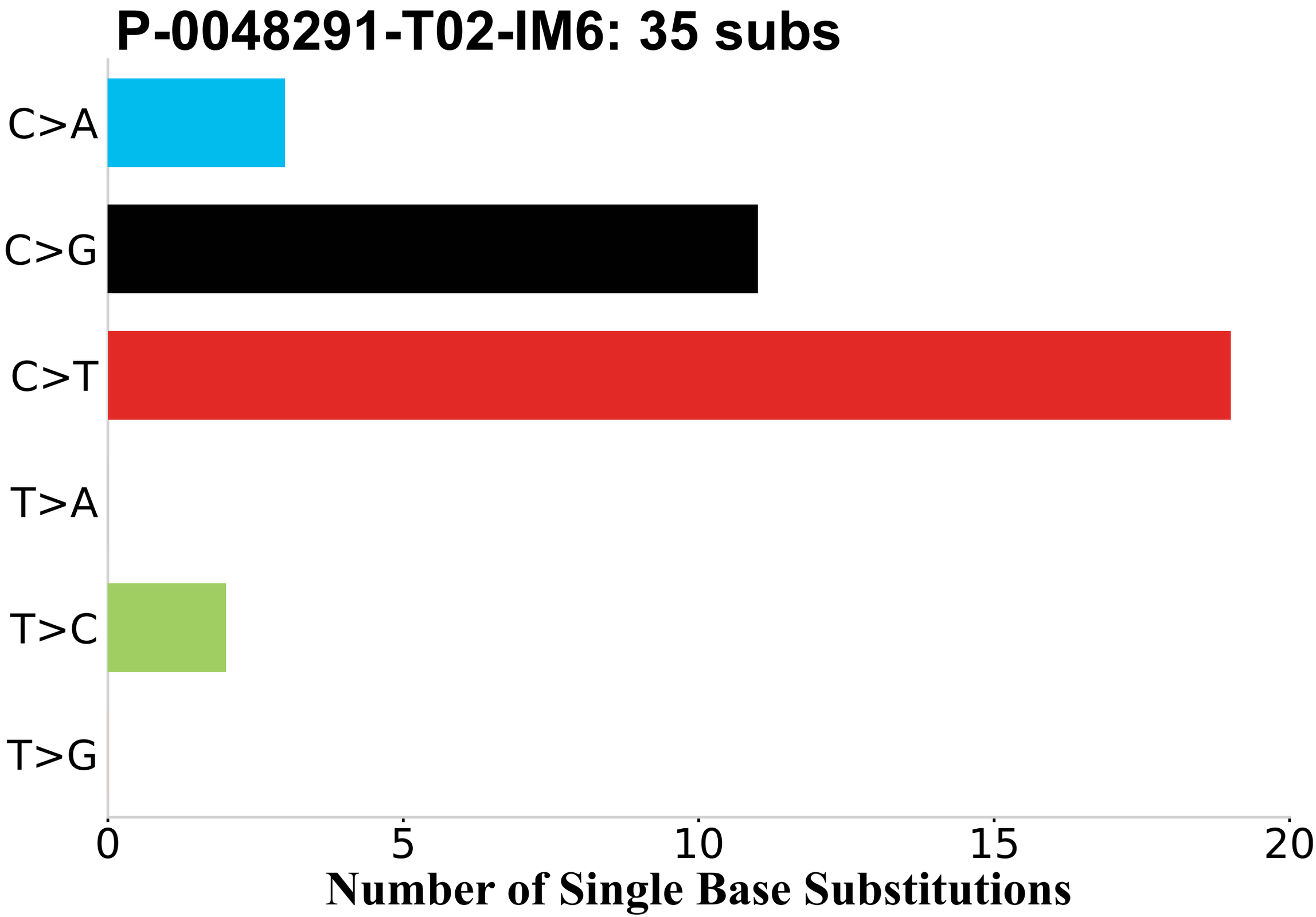
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048283-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048291-T02-IM6: 35 subs
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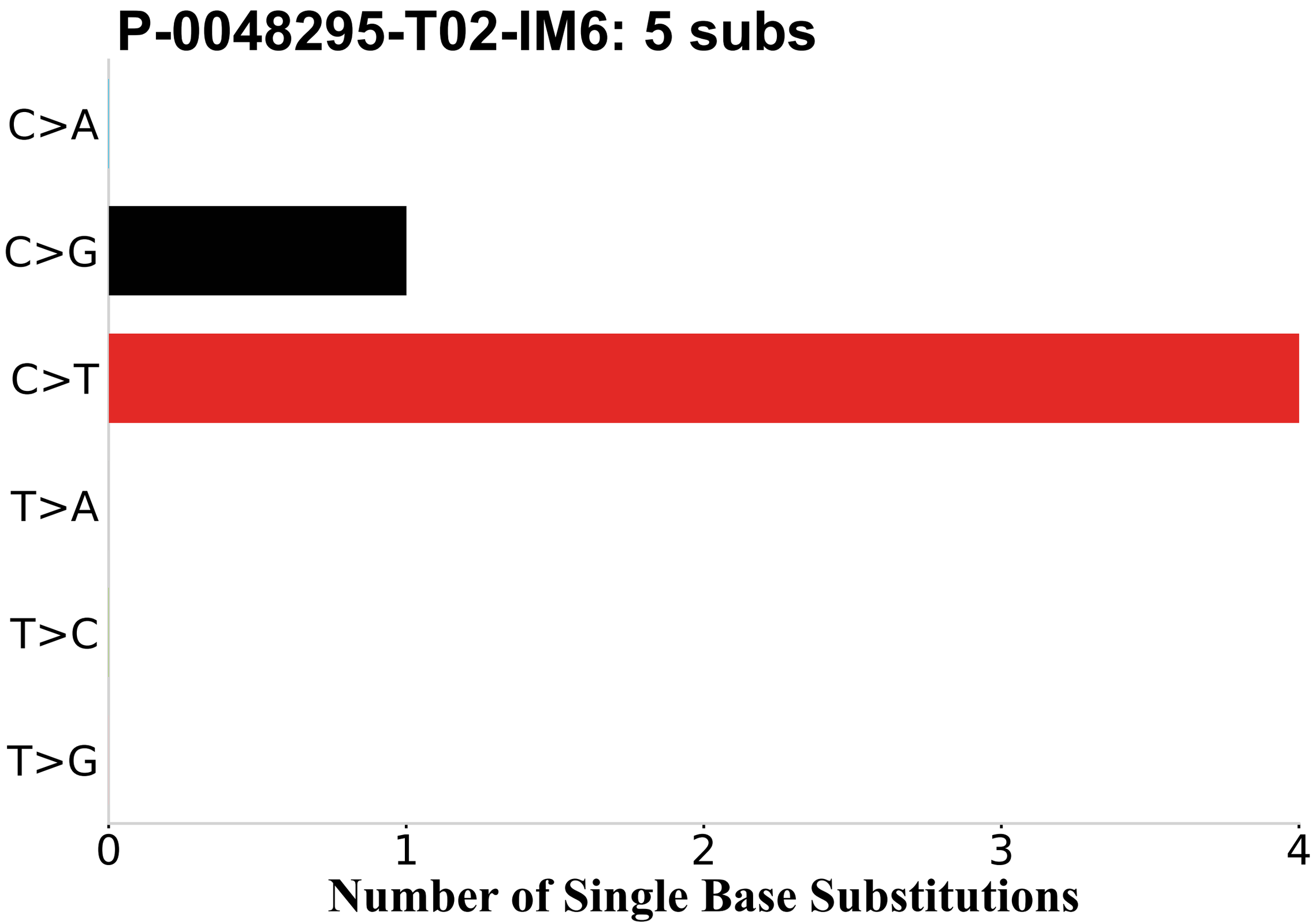
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0048295-T02-IM6: 5 subs
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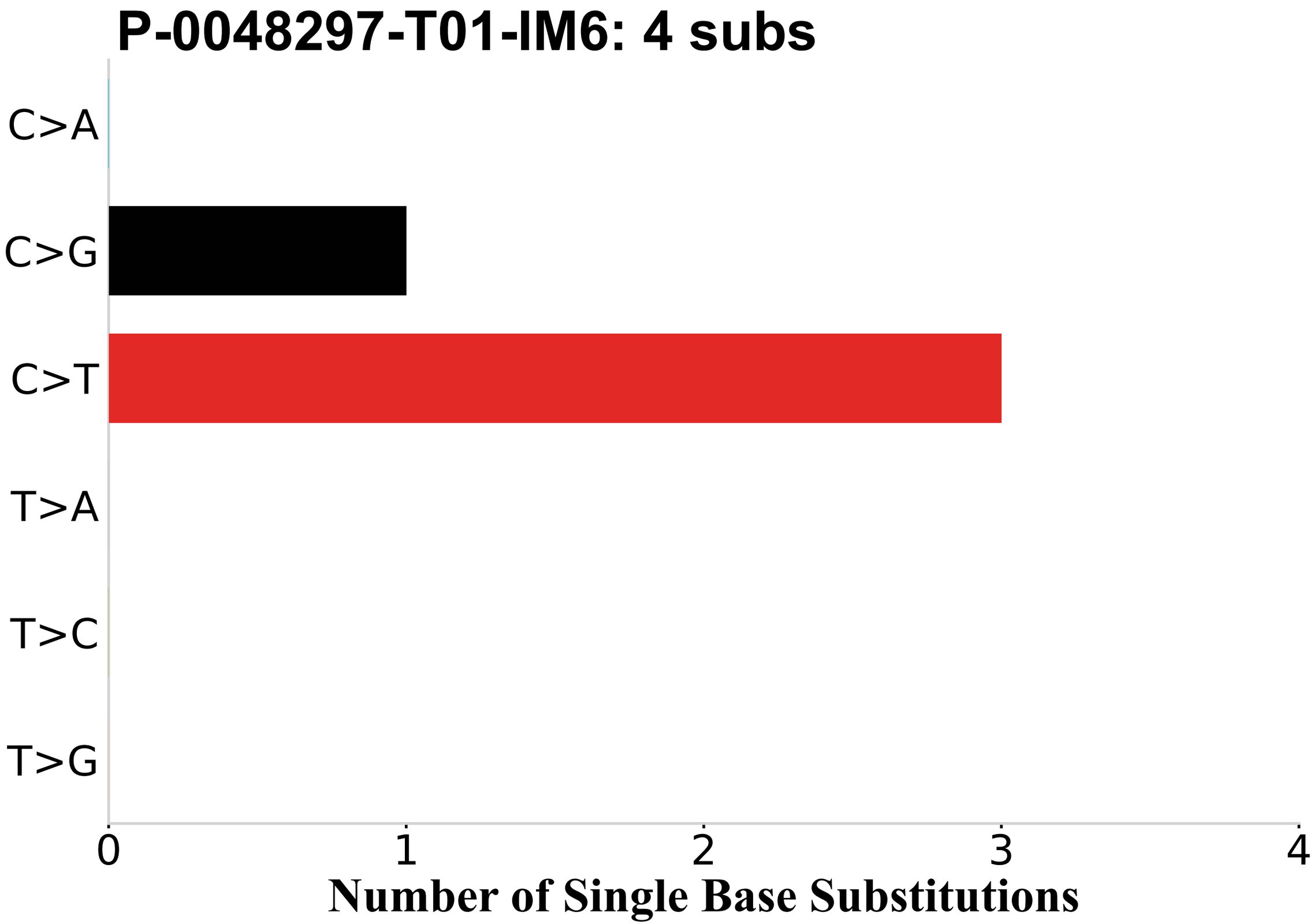
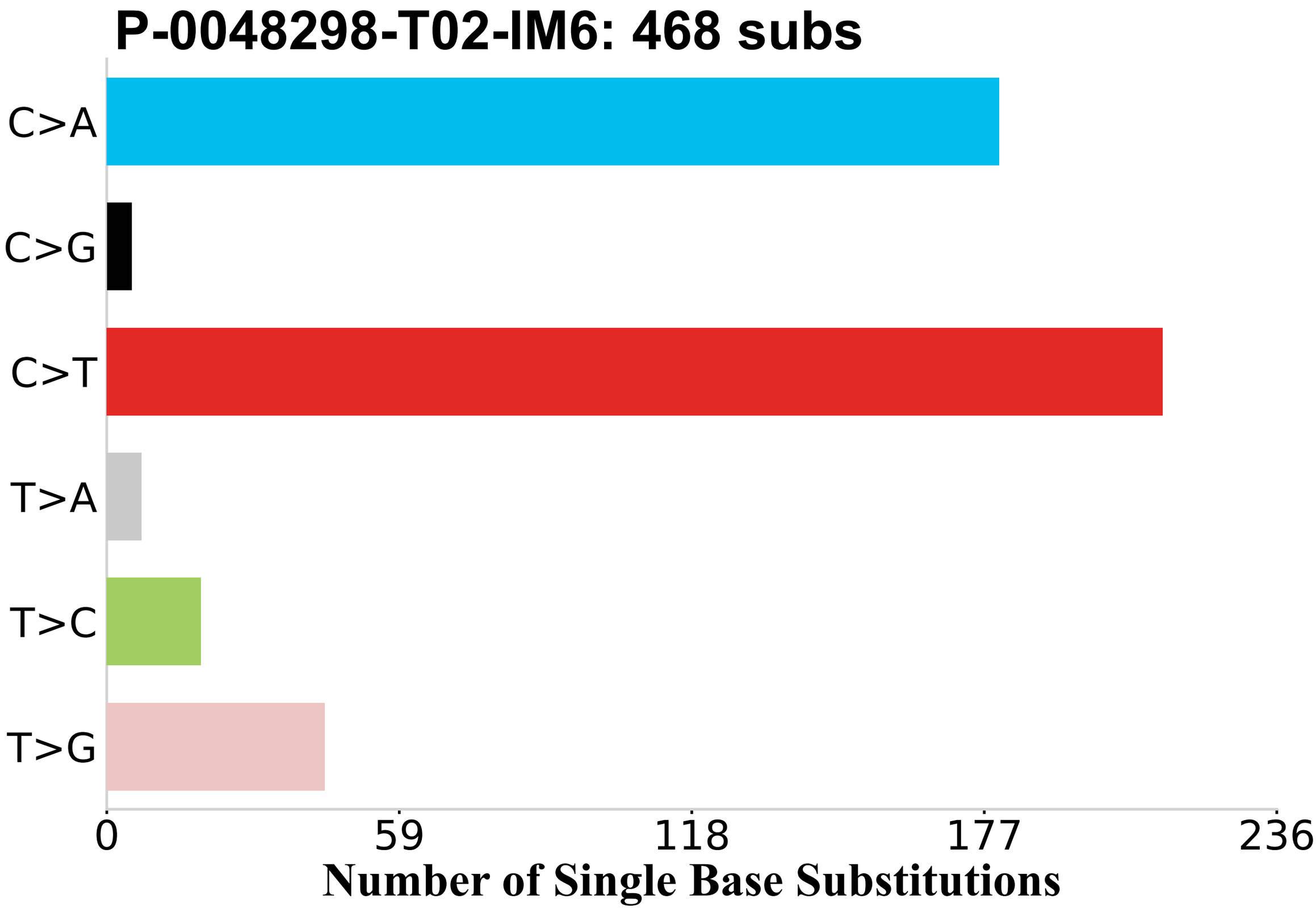
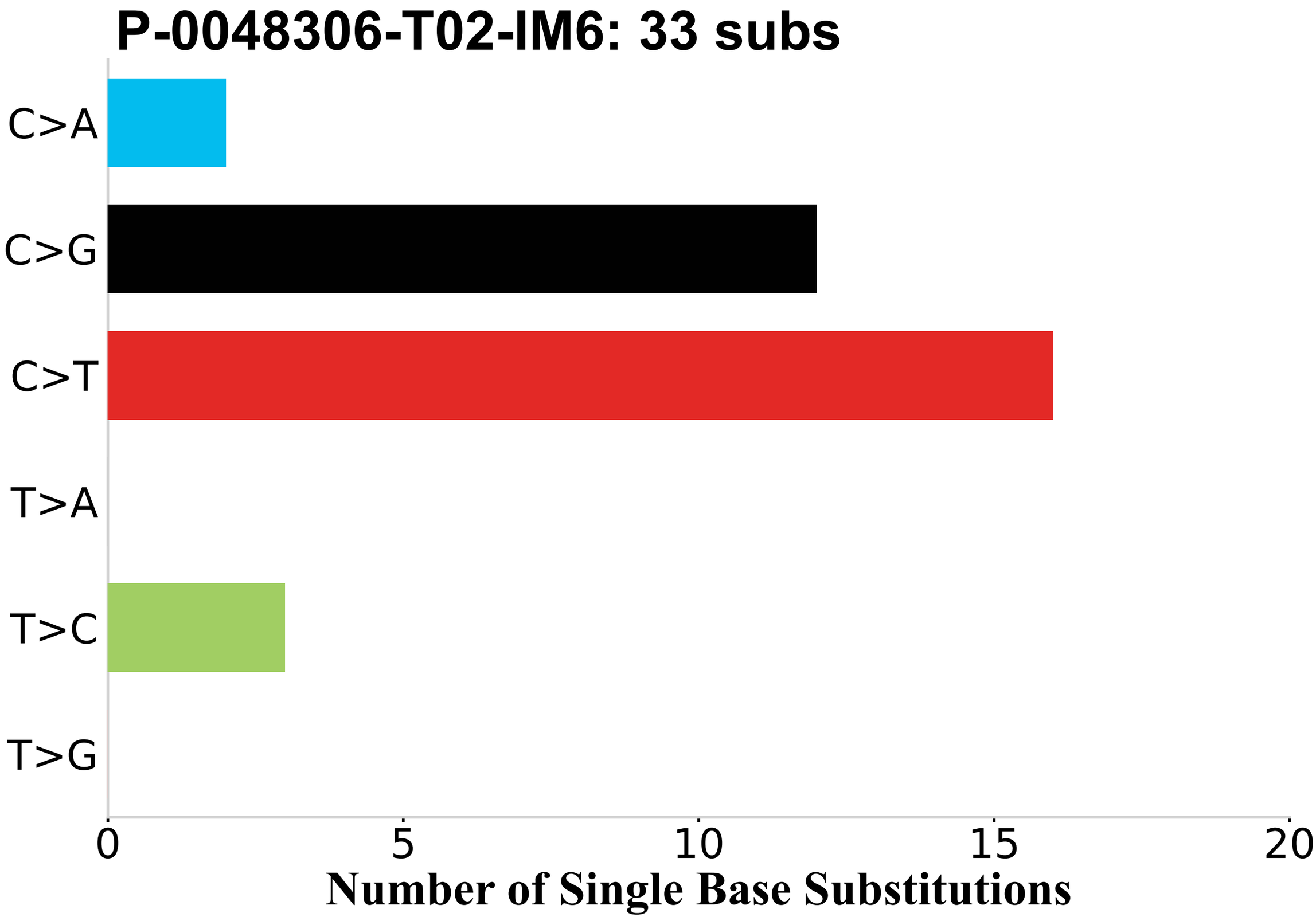
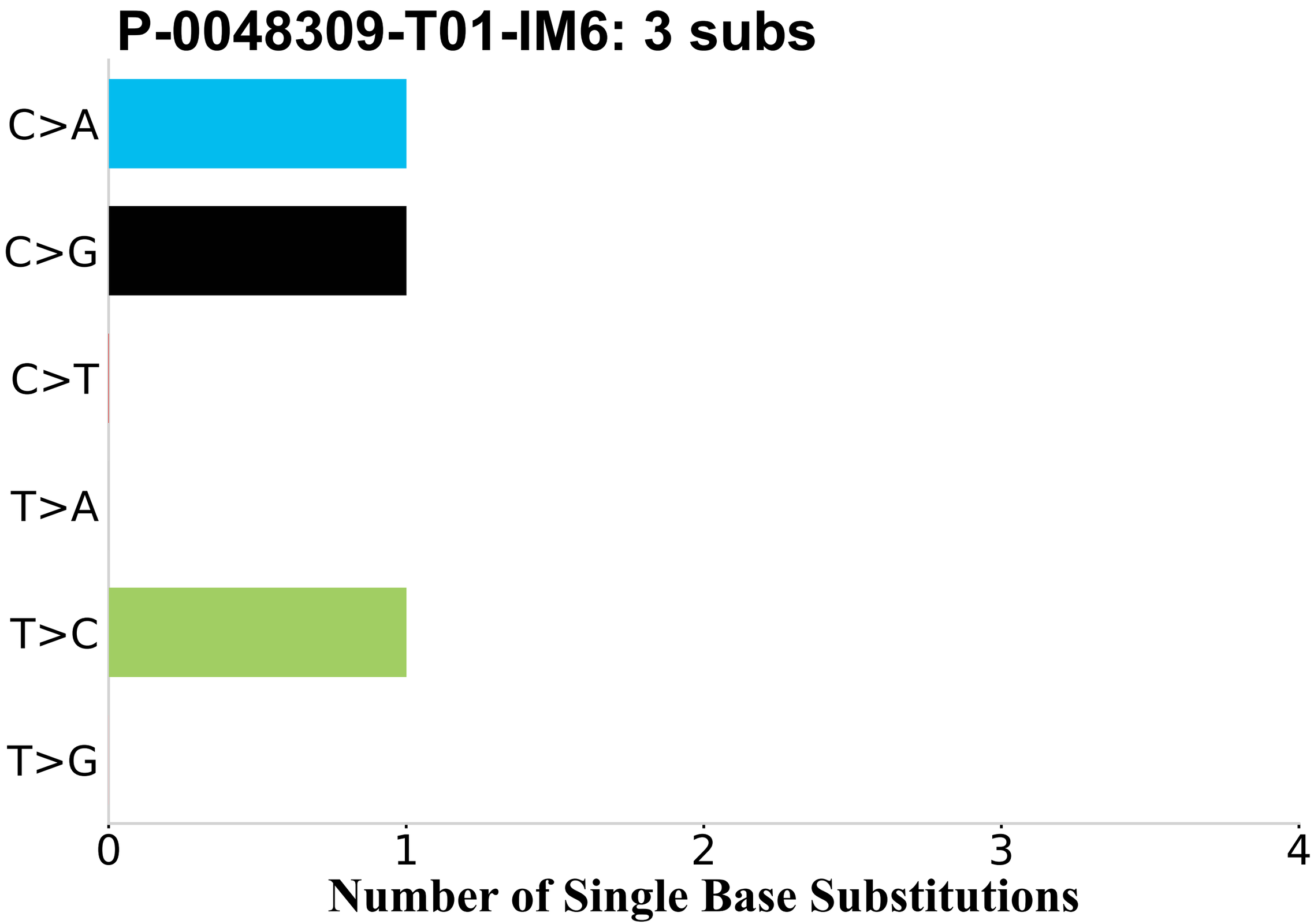
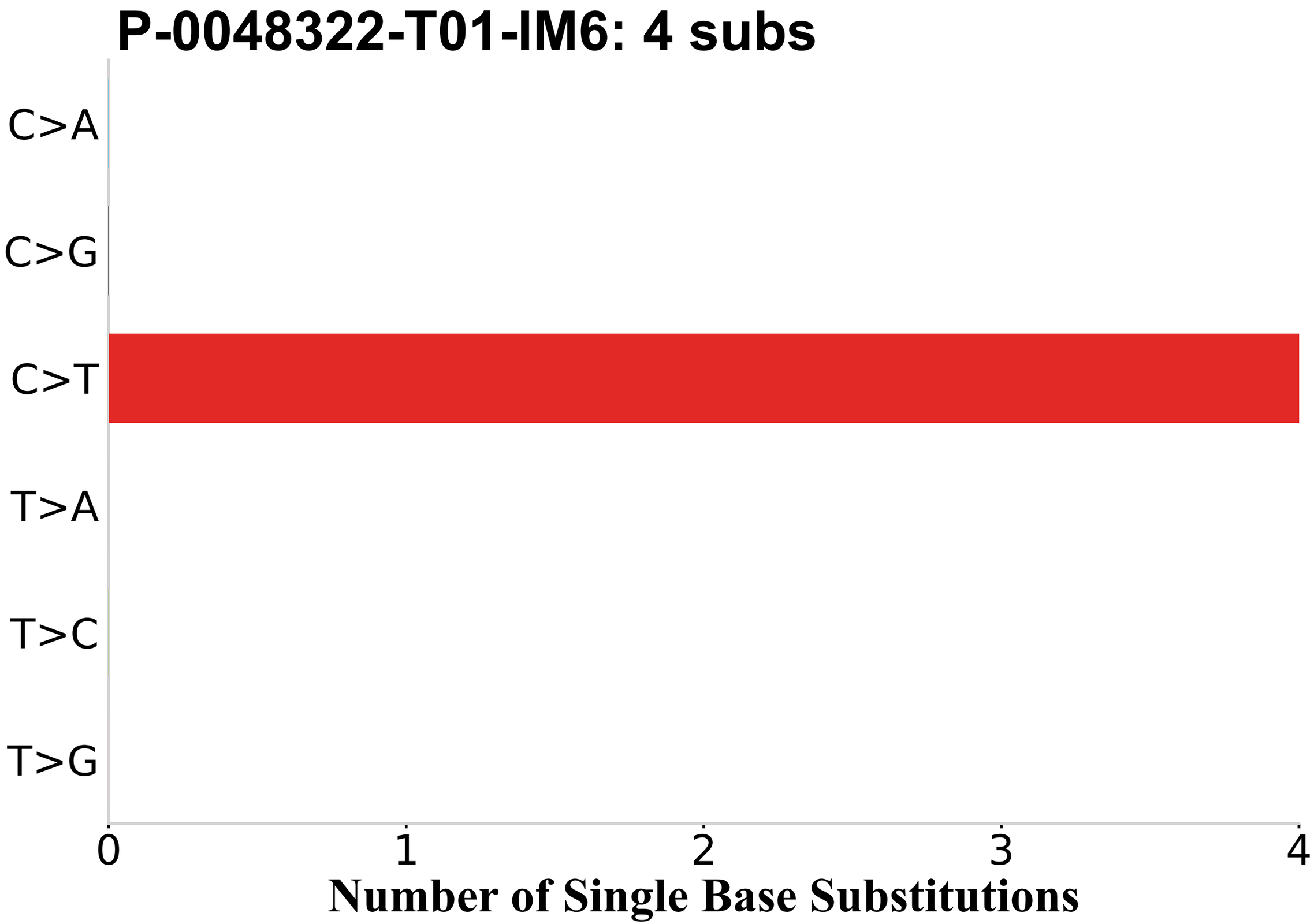
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

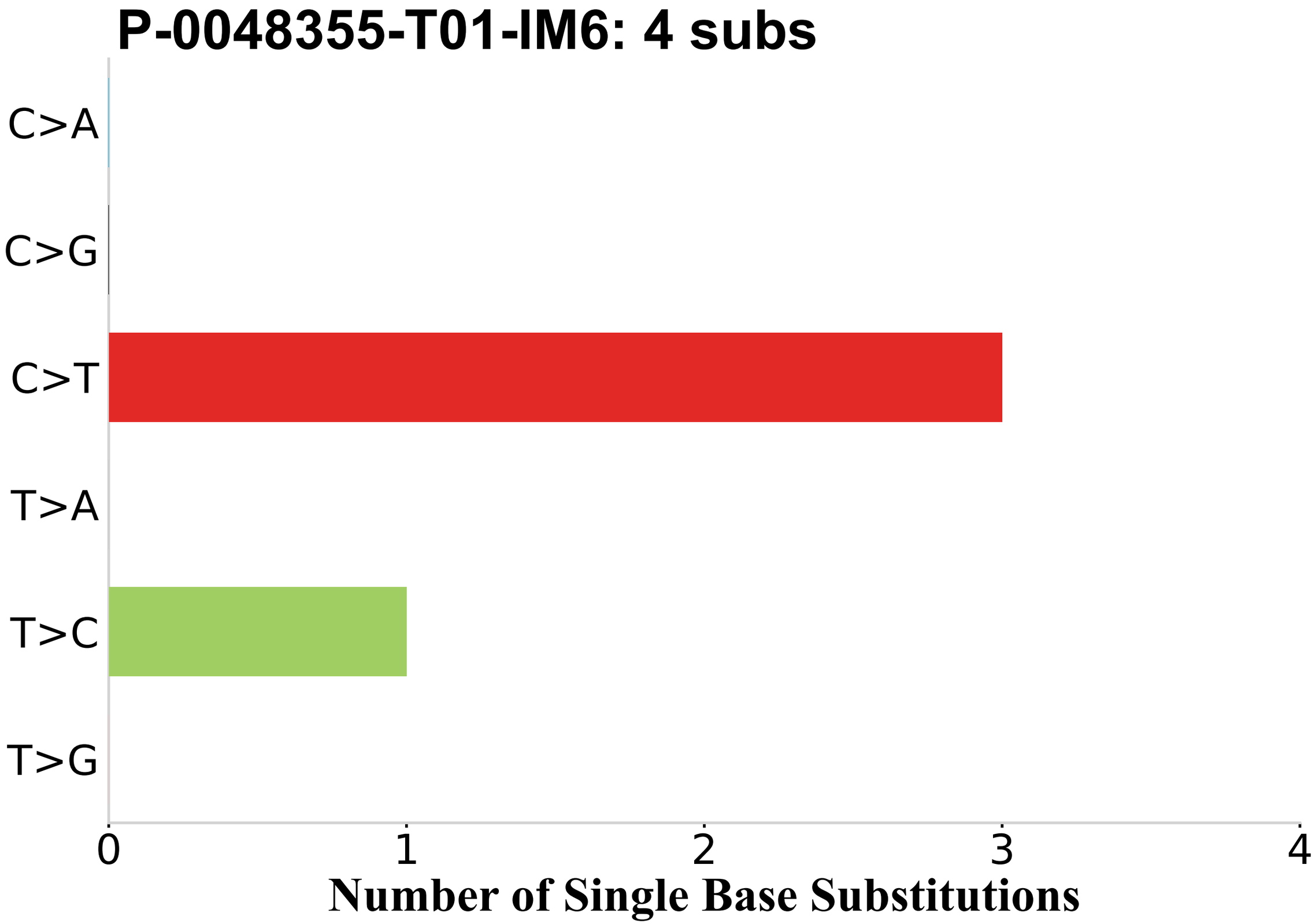

P-0048297-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

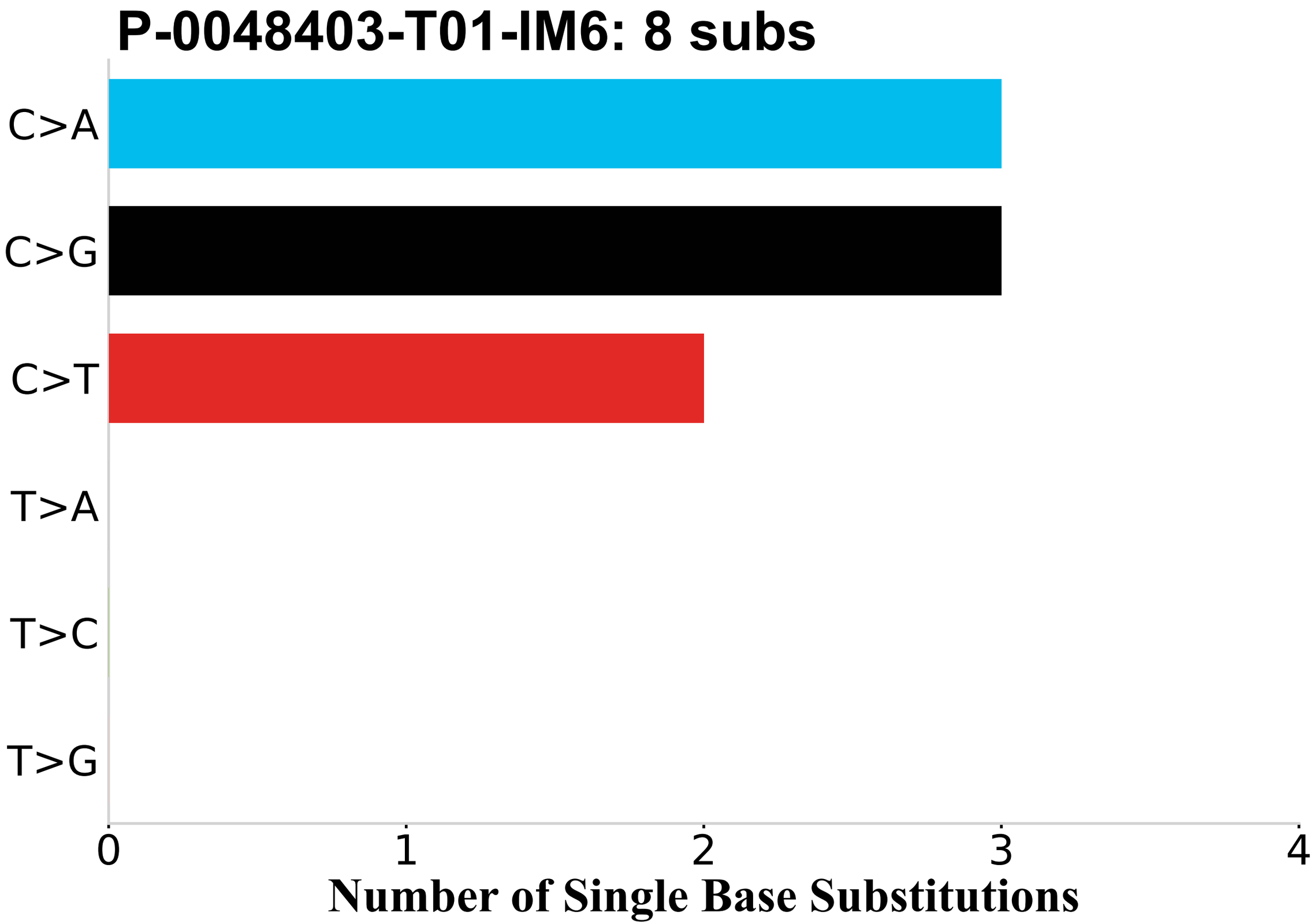

P-0048298-T02-IM6: 468 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
59
118
177
236
Number of Single Base Substitutions

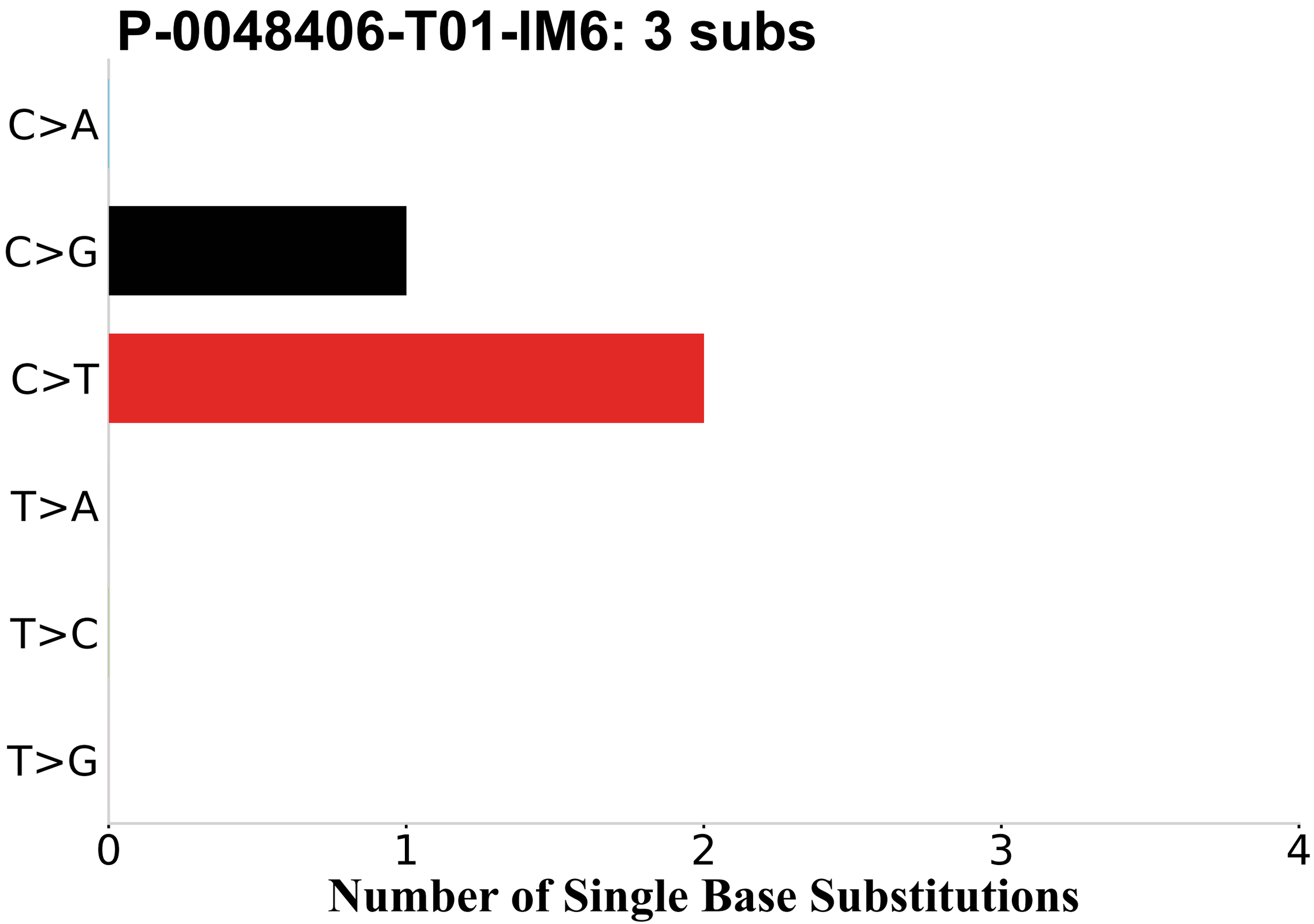

P-0048306-T02-IM6: 33 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

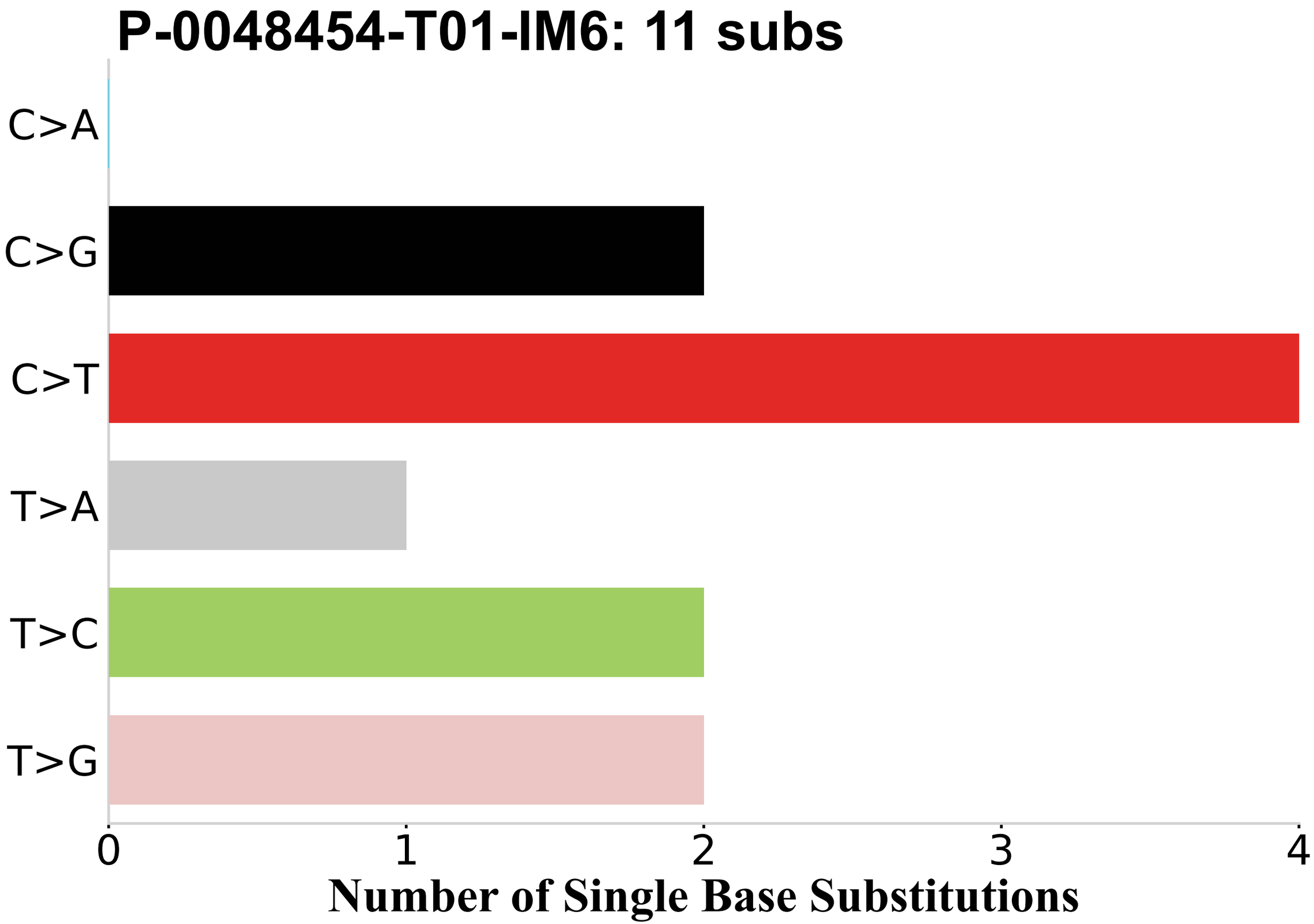

P-0048309-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

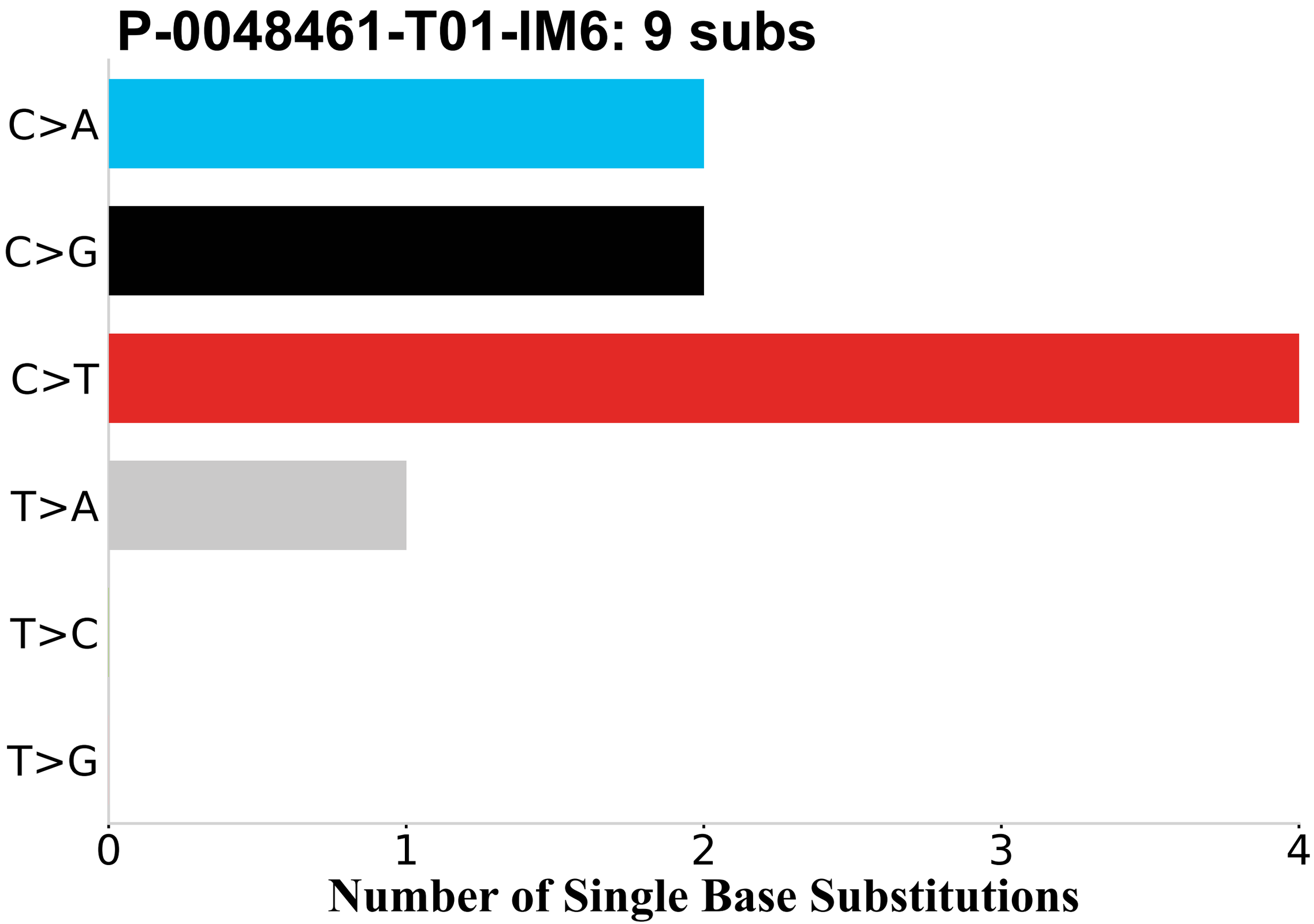

P-0048322-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048355-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048403-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048406-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048454-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048461-T01-IM6: 9 subs
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T>G
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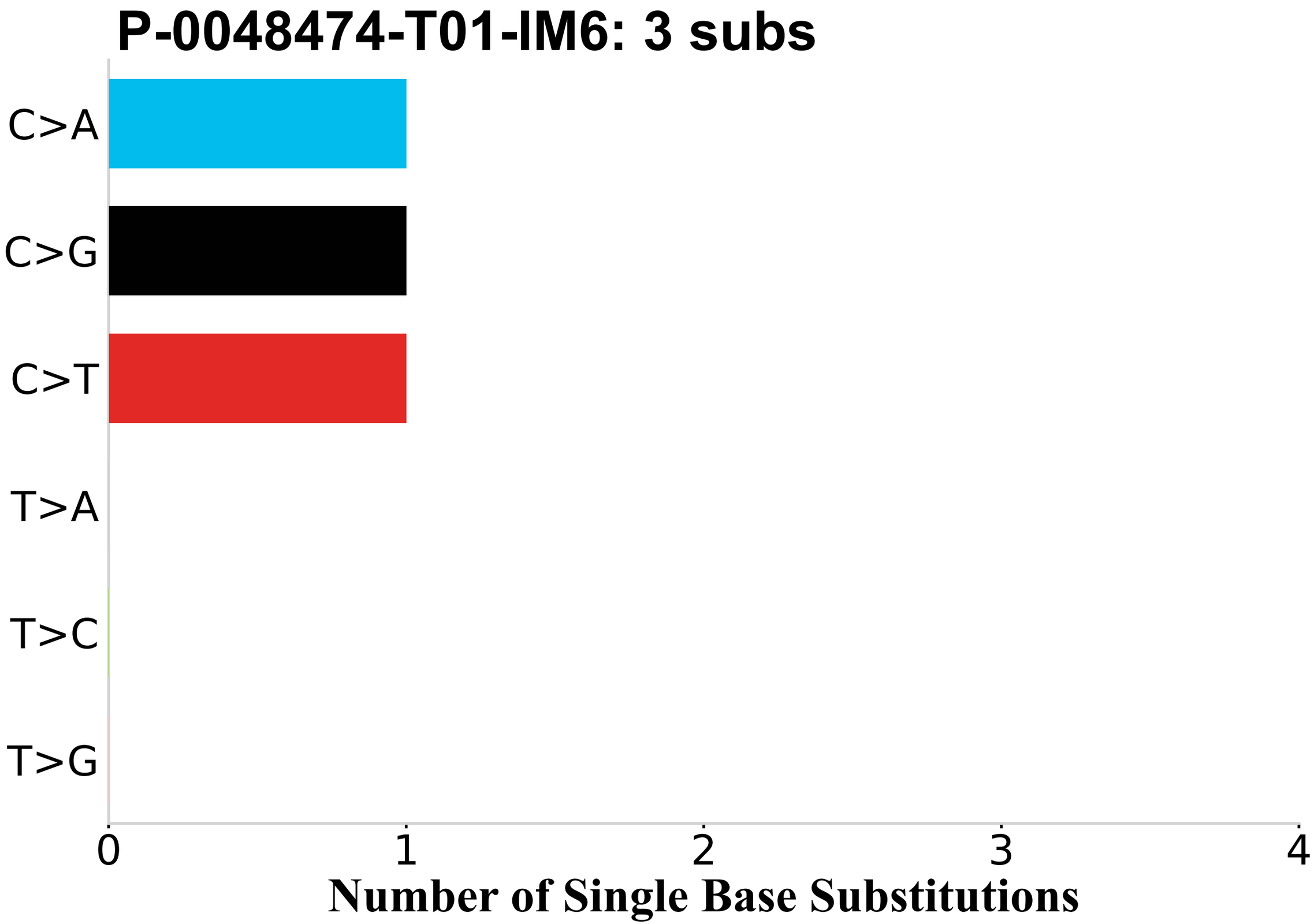
1
2
3
4
Number of Single Base Substitutions


P-0048474-T01-IM6: 3 subs
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T>C
T>G
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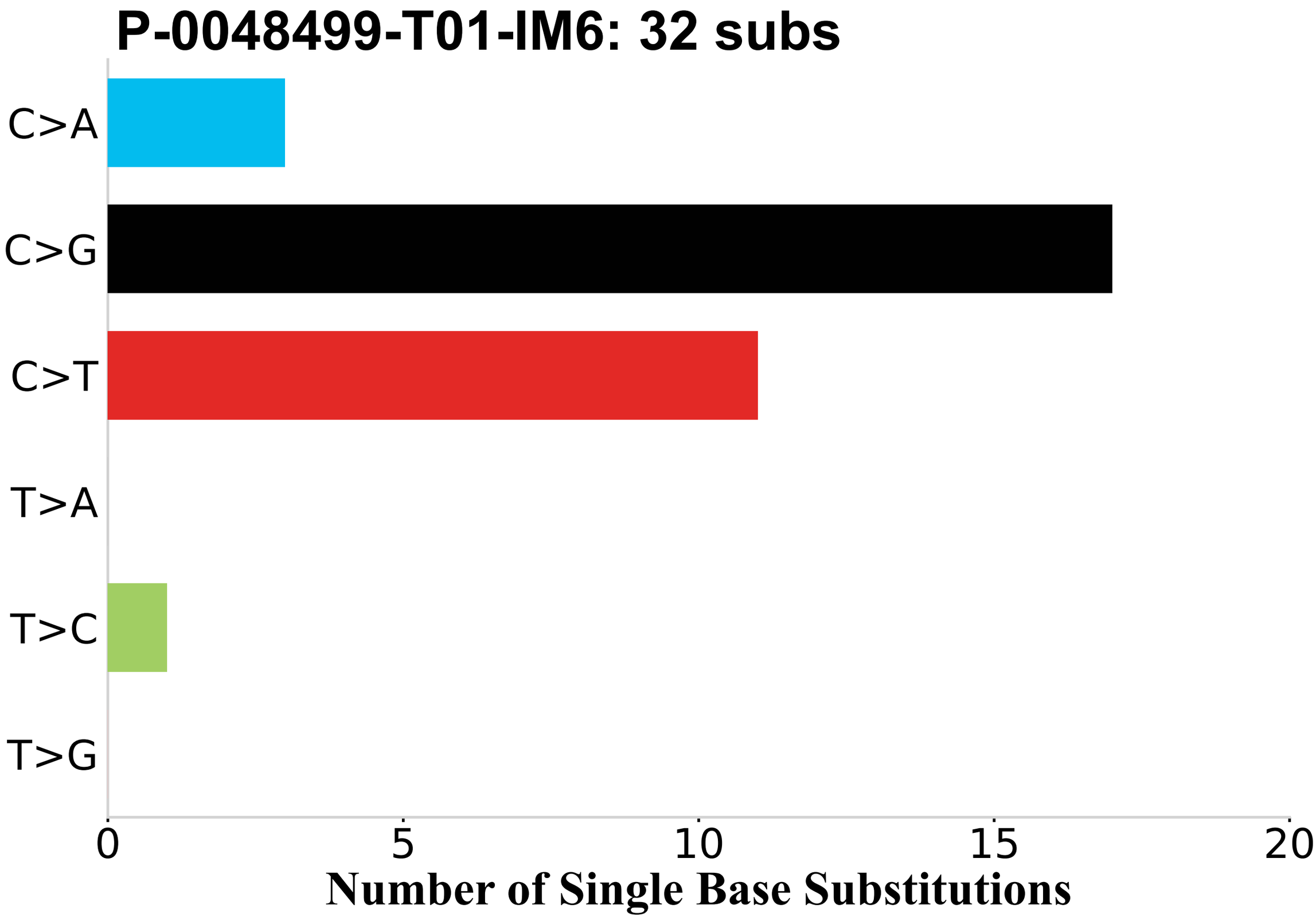
2
3
4
Number of Single Base Substitutions


P-0048499-T01-IM6: 32 subs
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C>G
C>T
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T>C
T>G
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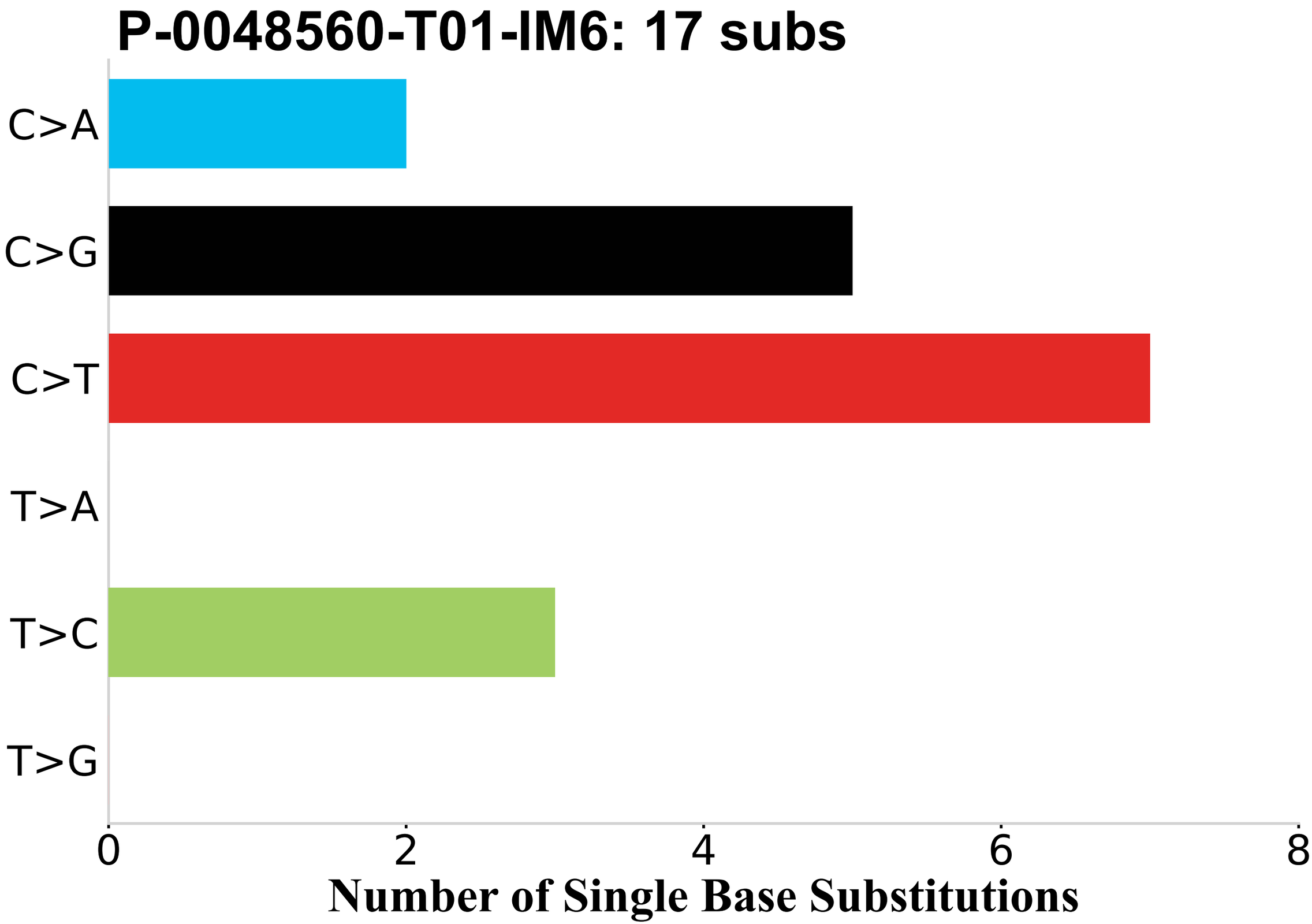
5
10
15
20
Number of Single Base Substitutions


P-0048560-T01-IM6: 17 subs
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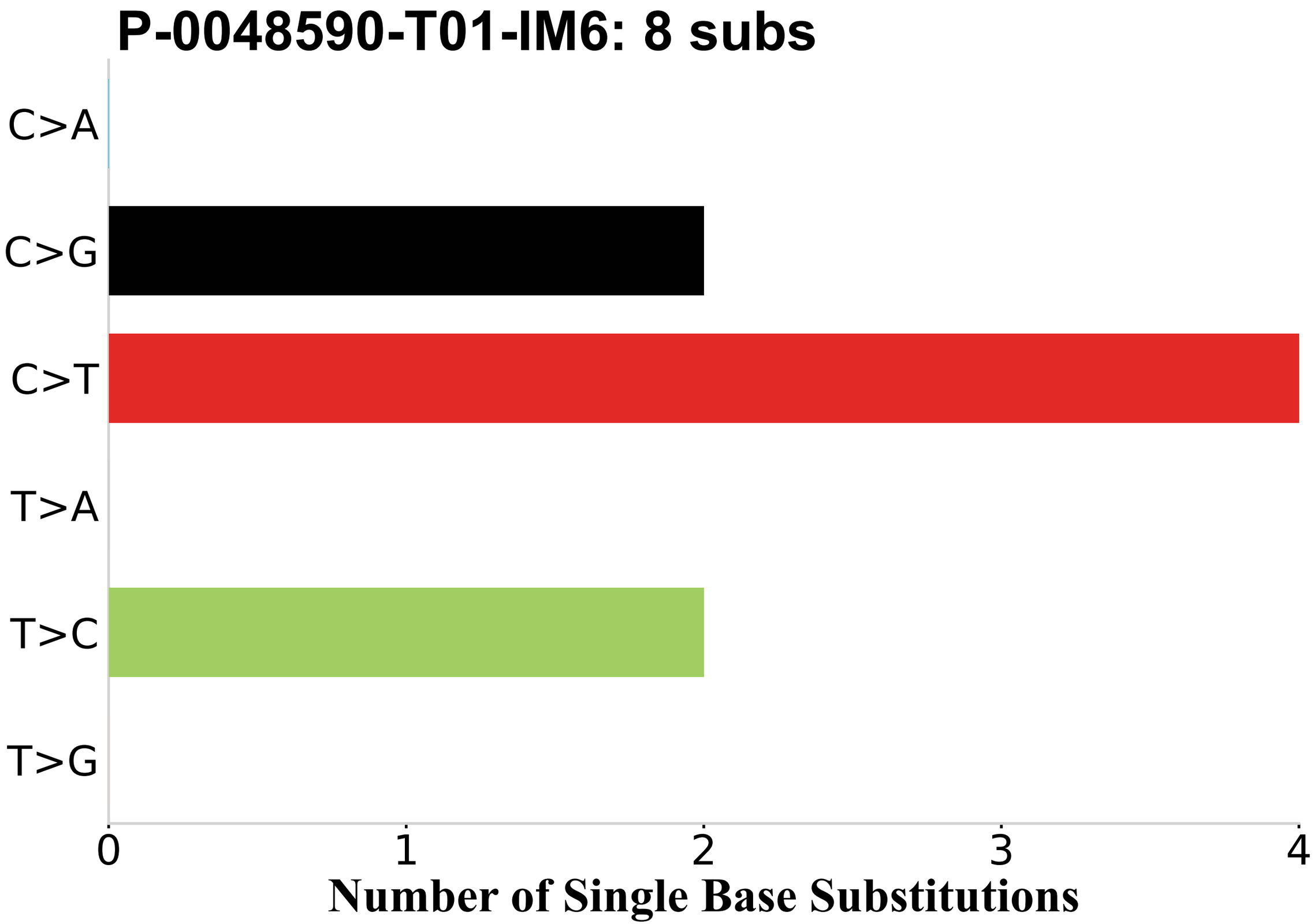
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048590-T01-IM6: 8 subs
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T>G
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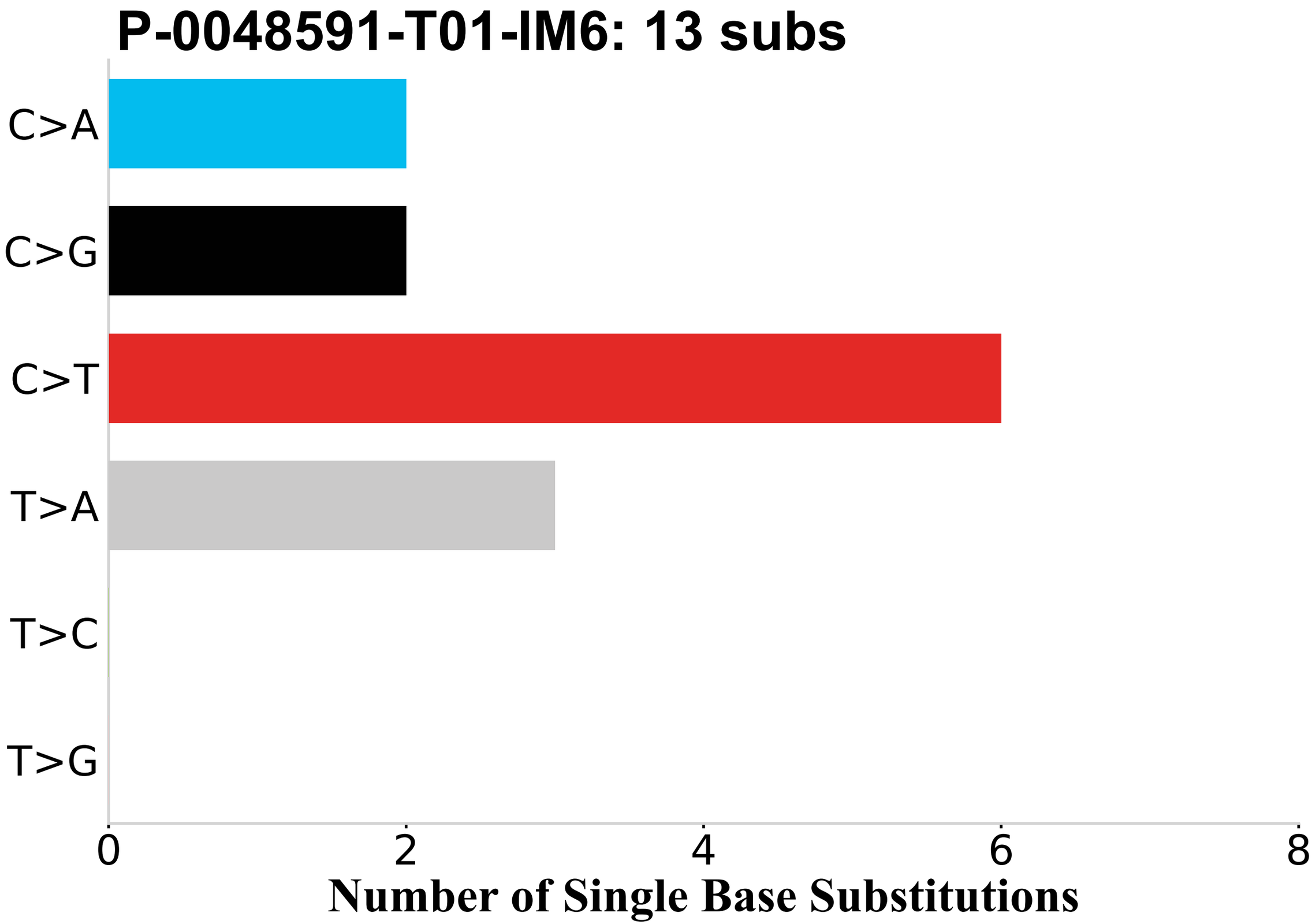
4
Number of Single Base Substitutions


P-0048591-T01-IM6: 13 subs
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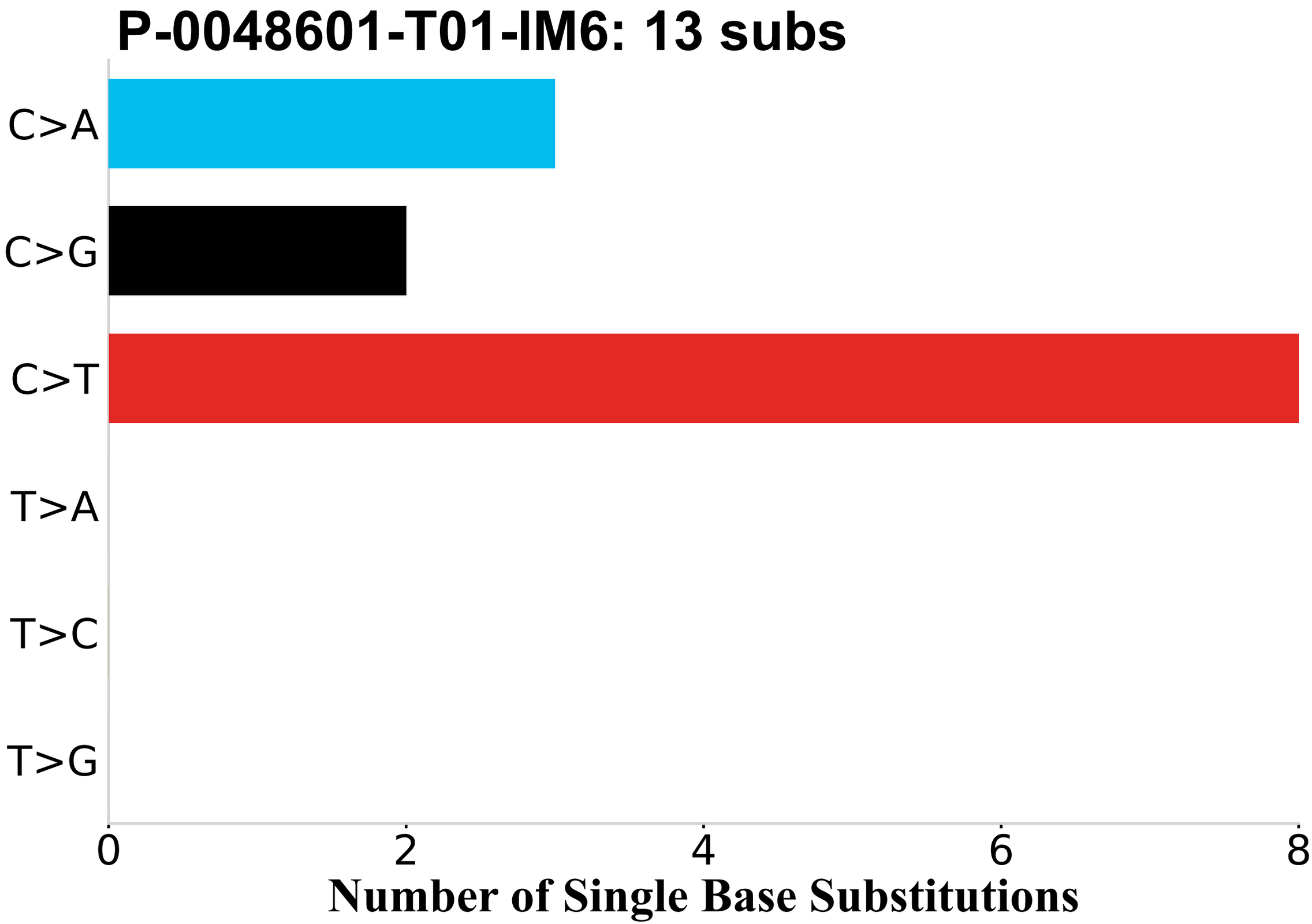
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048601-T01-IM6: 13 subs
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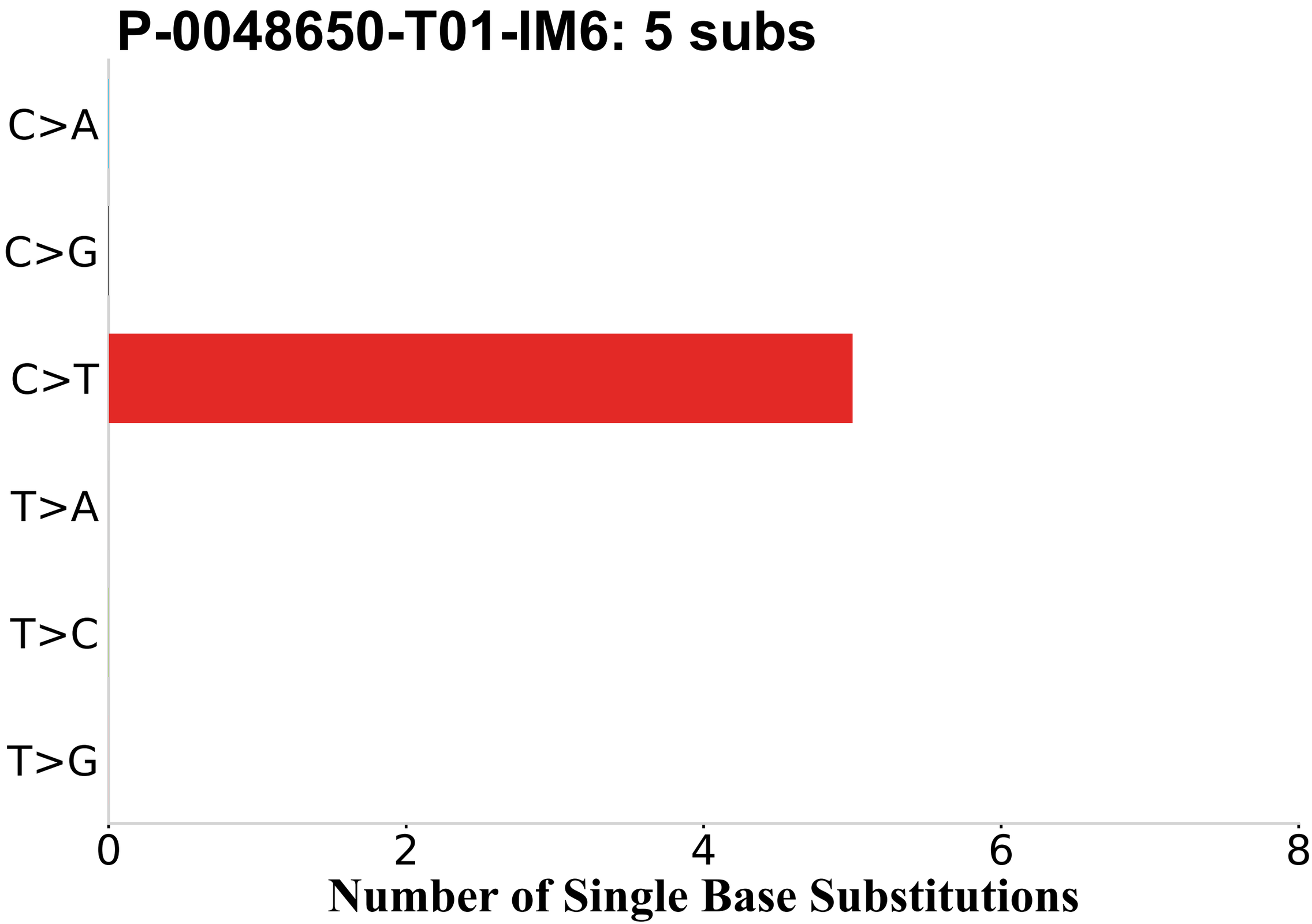
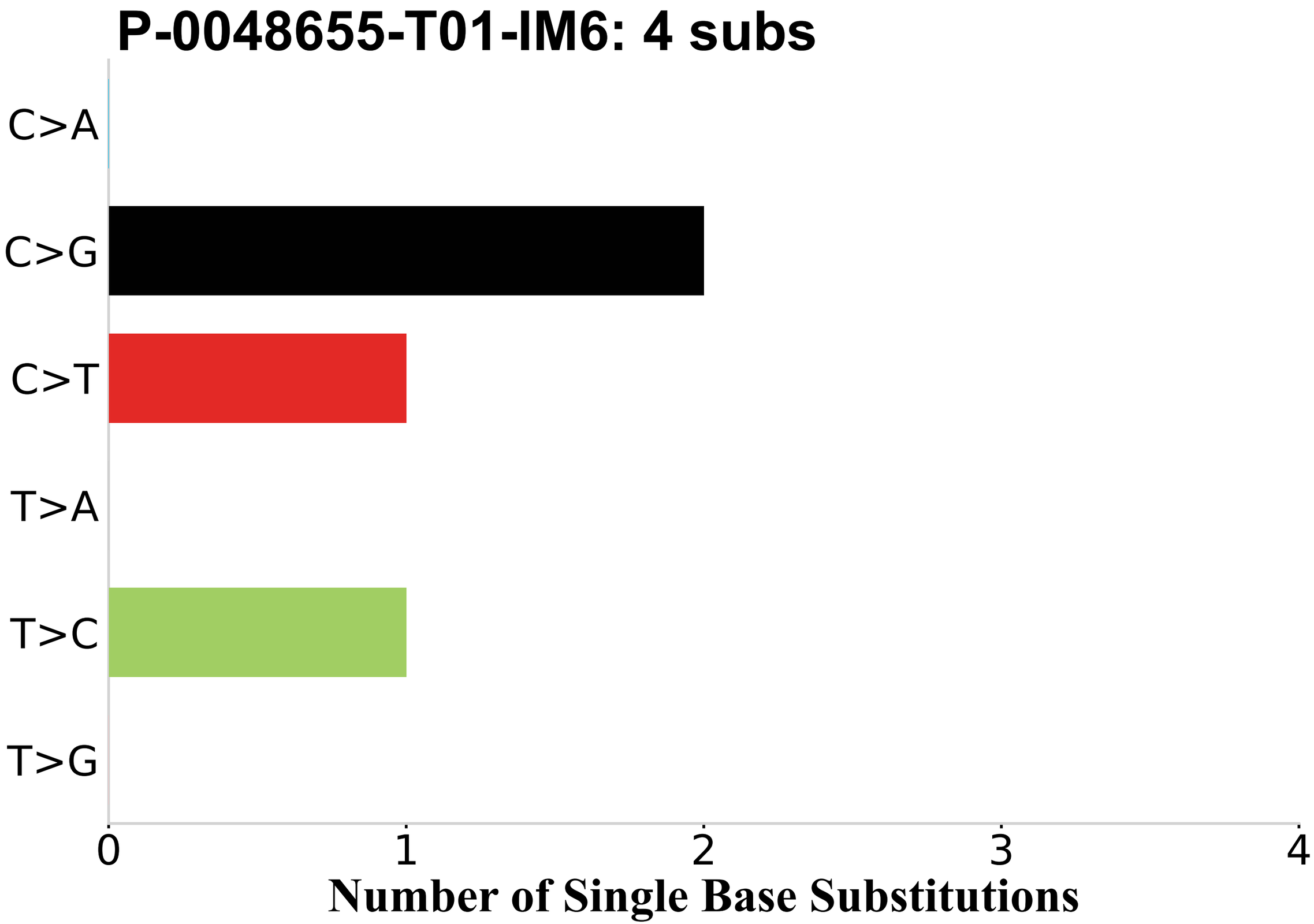
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048650-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048655-T01-IM6: 4 subs
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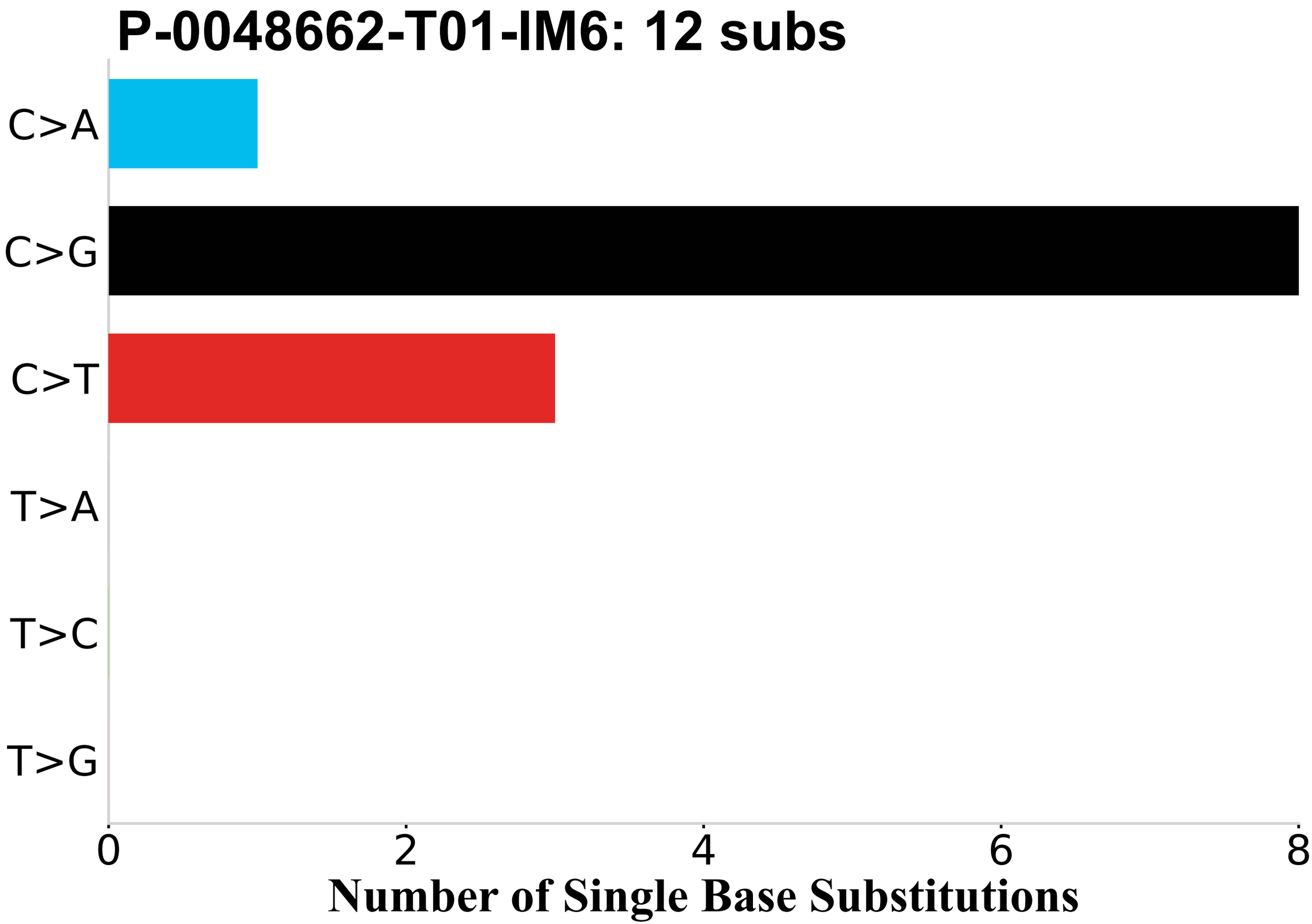
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048662-T01-IM6: 12 subs
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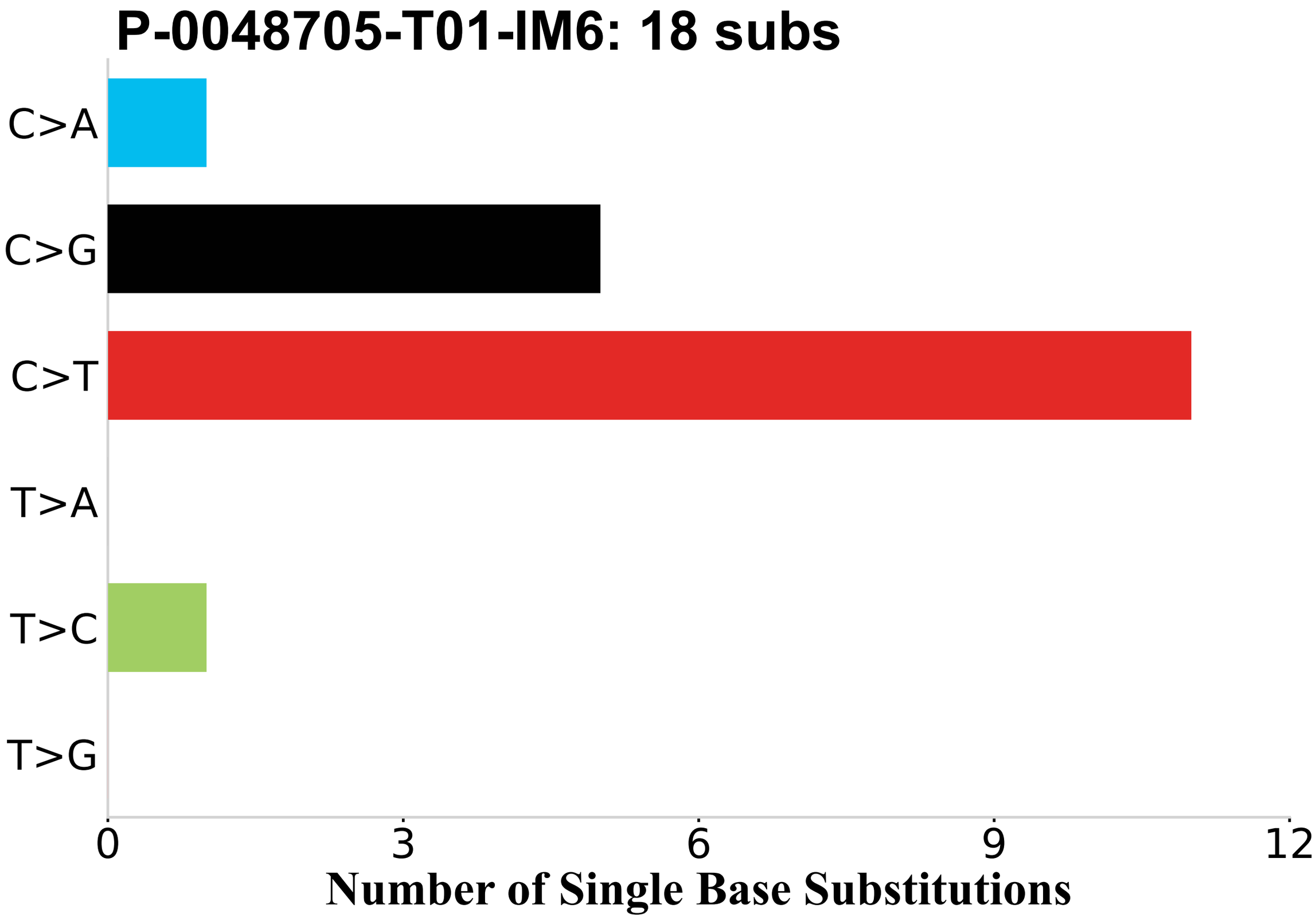
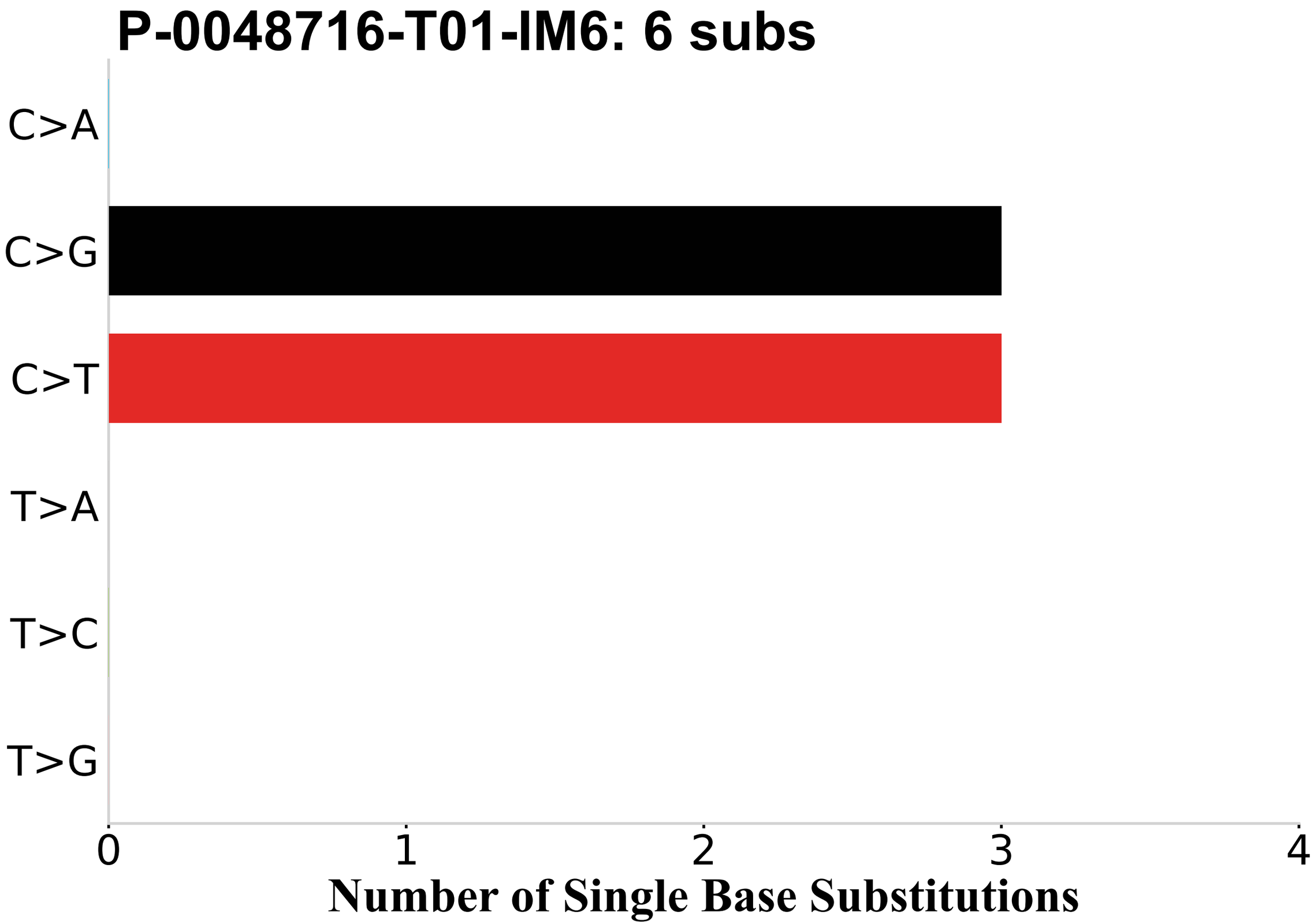
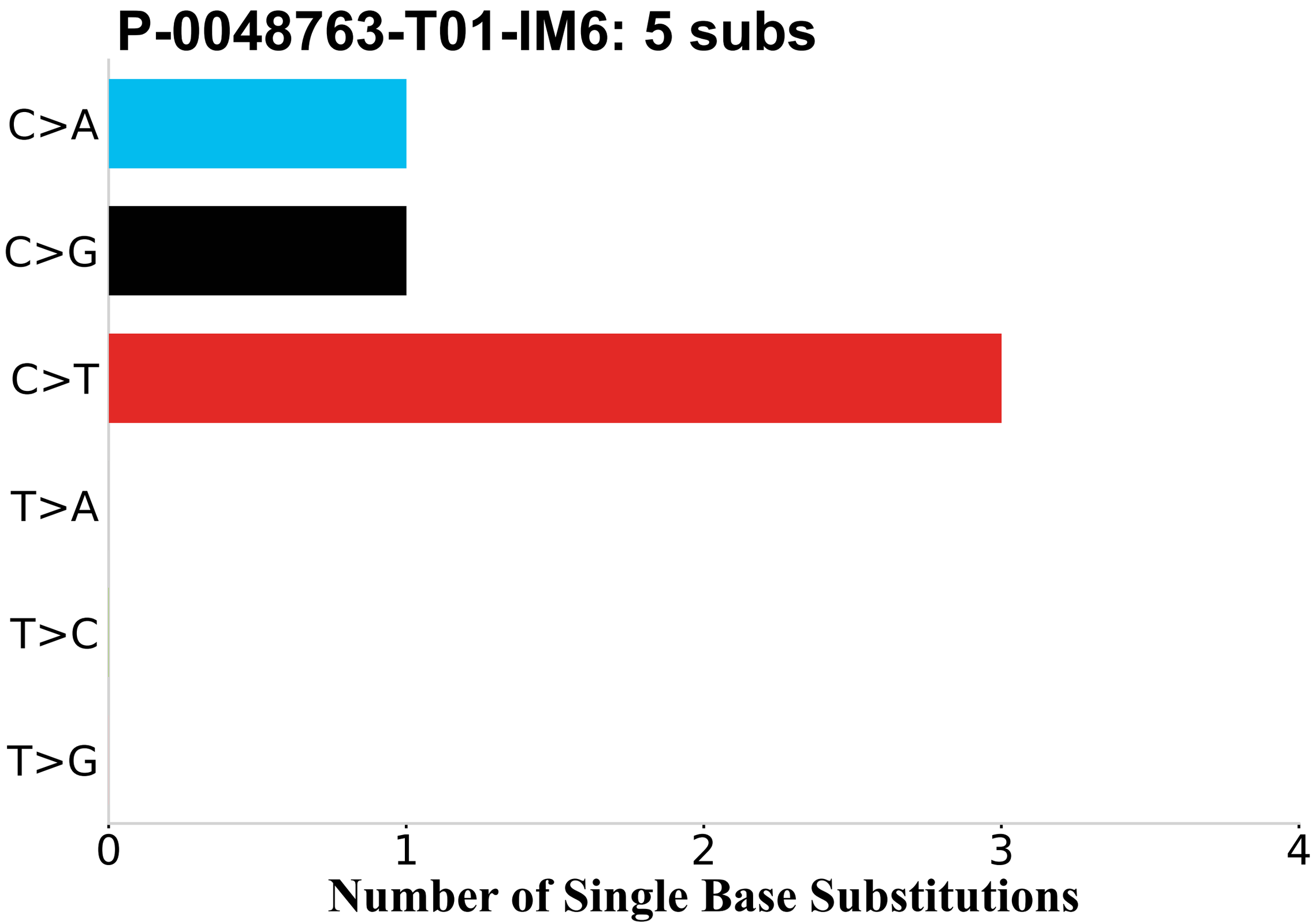
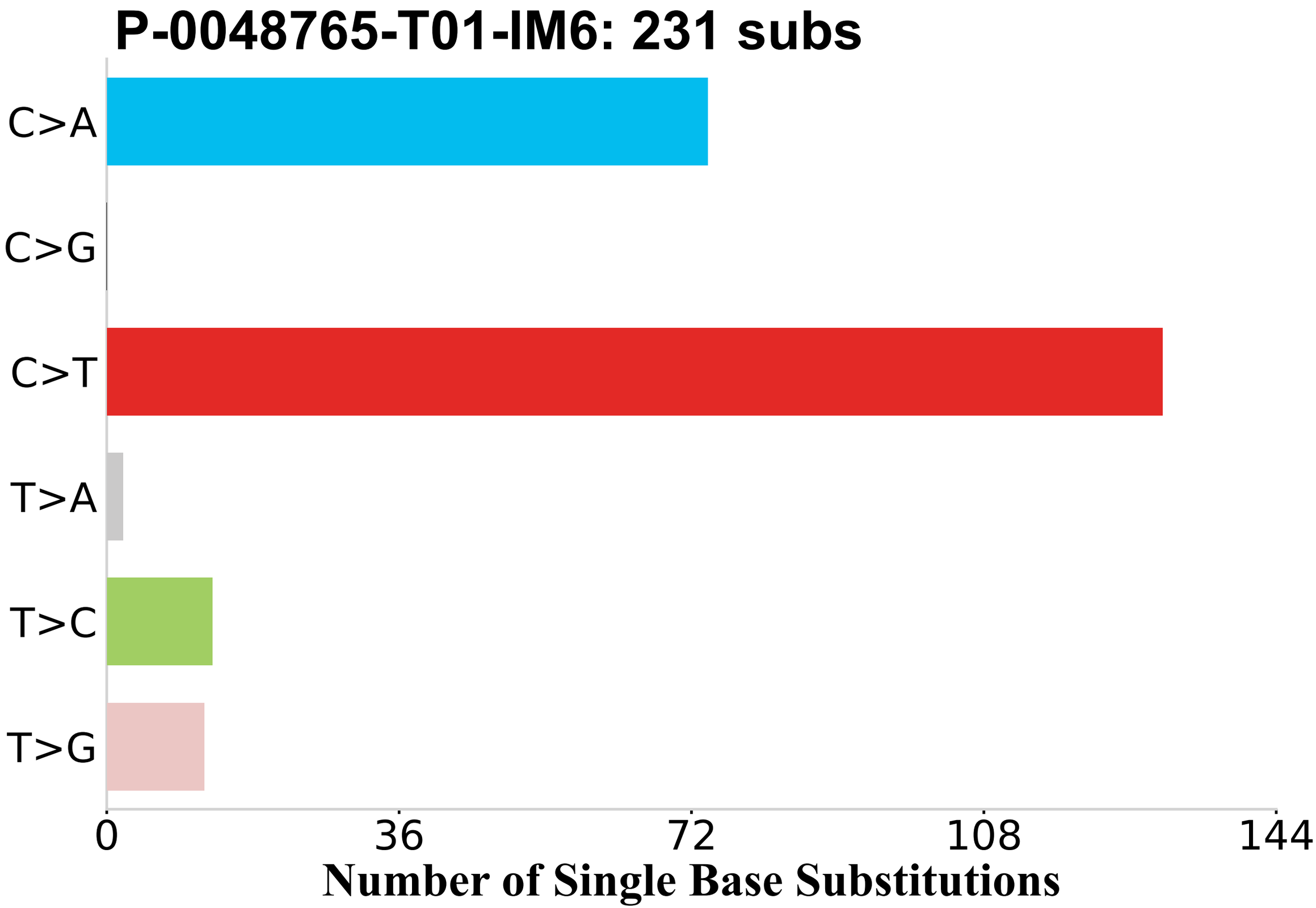
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048705-T01-IM6: 18 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0048716-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048763-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0048765-T01-IM6: 231 subs
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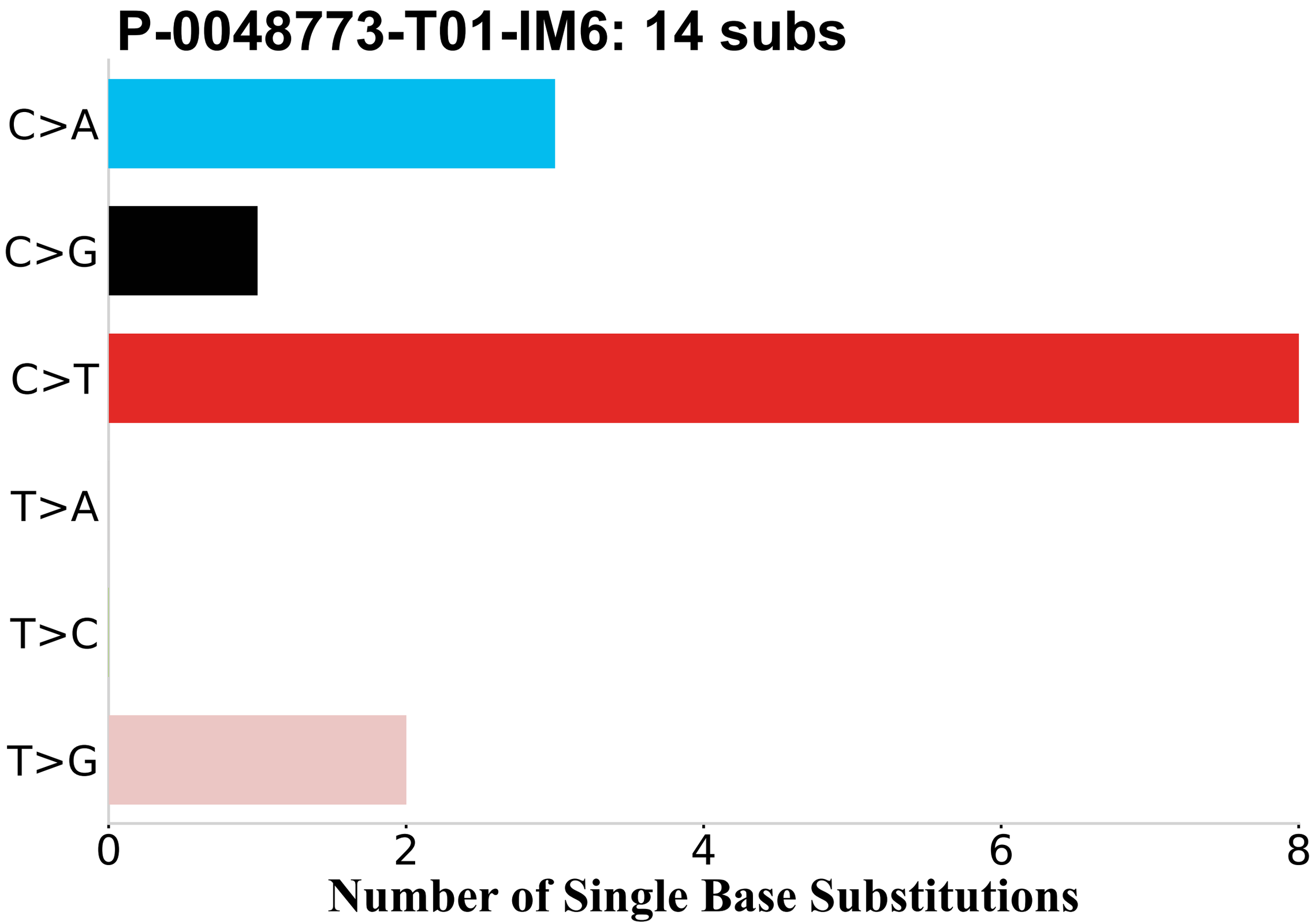
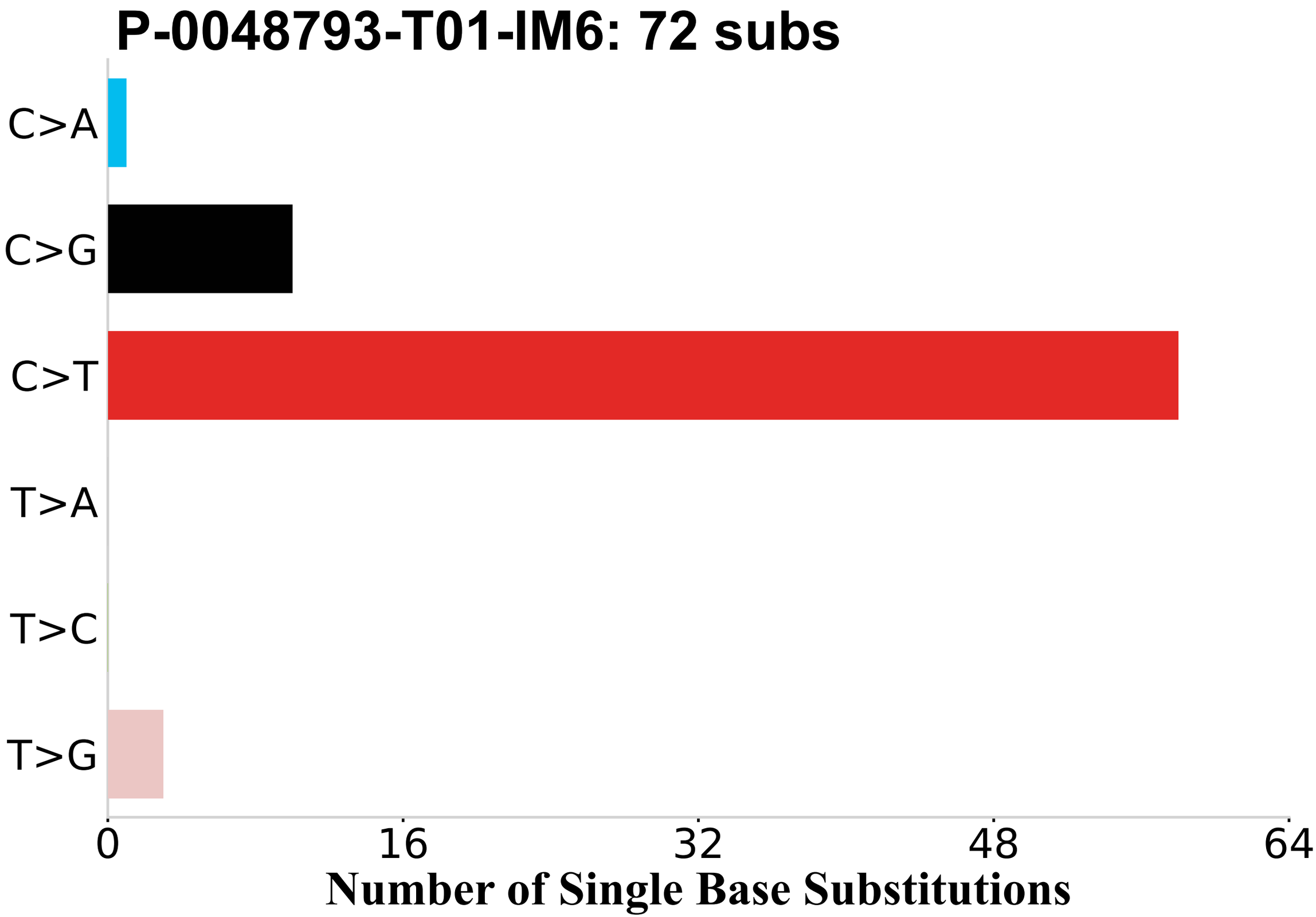
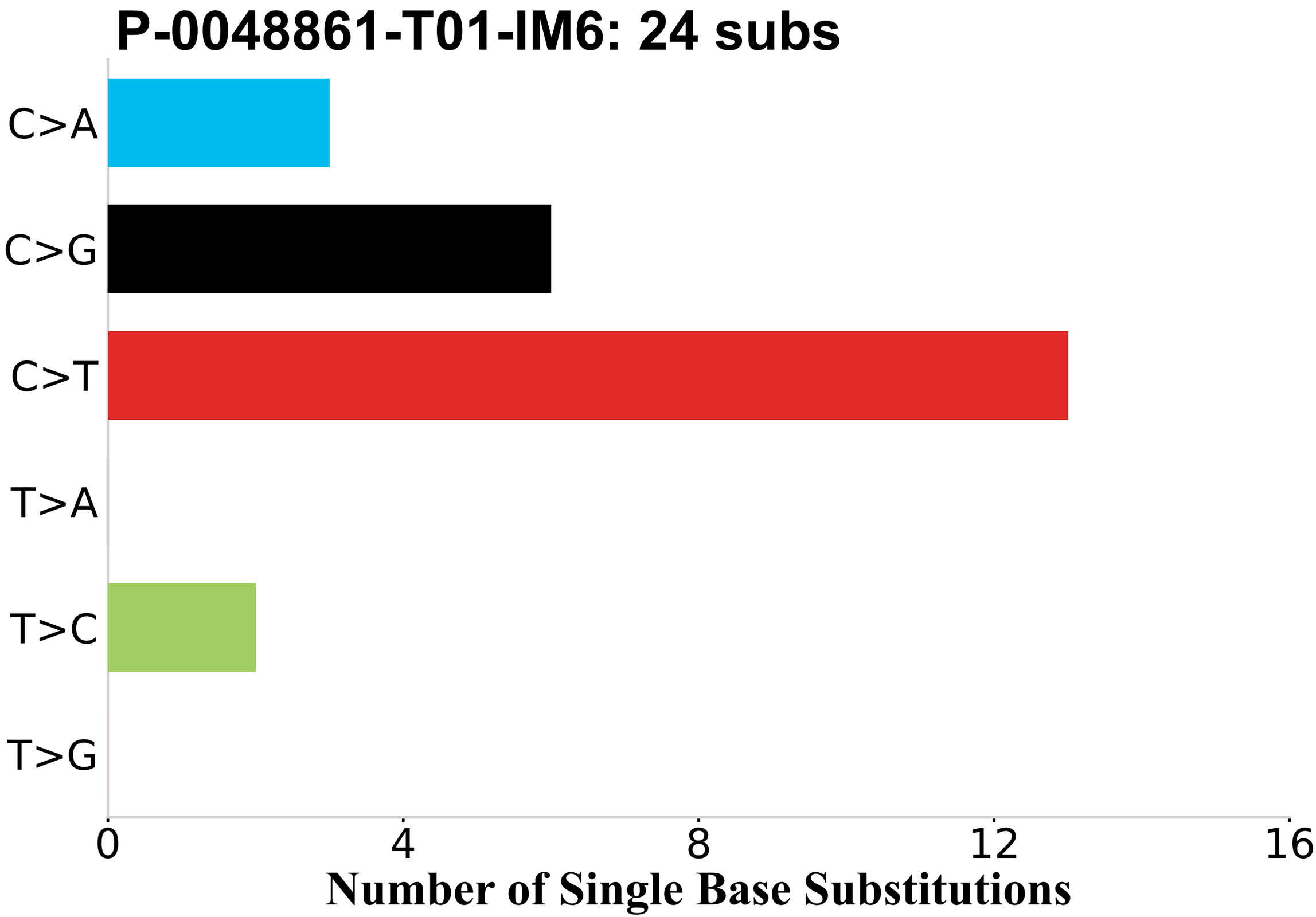
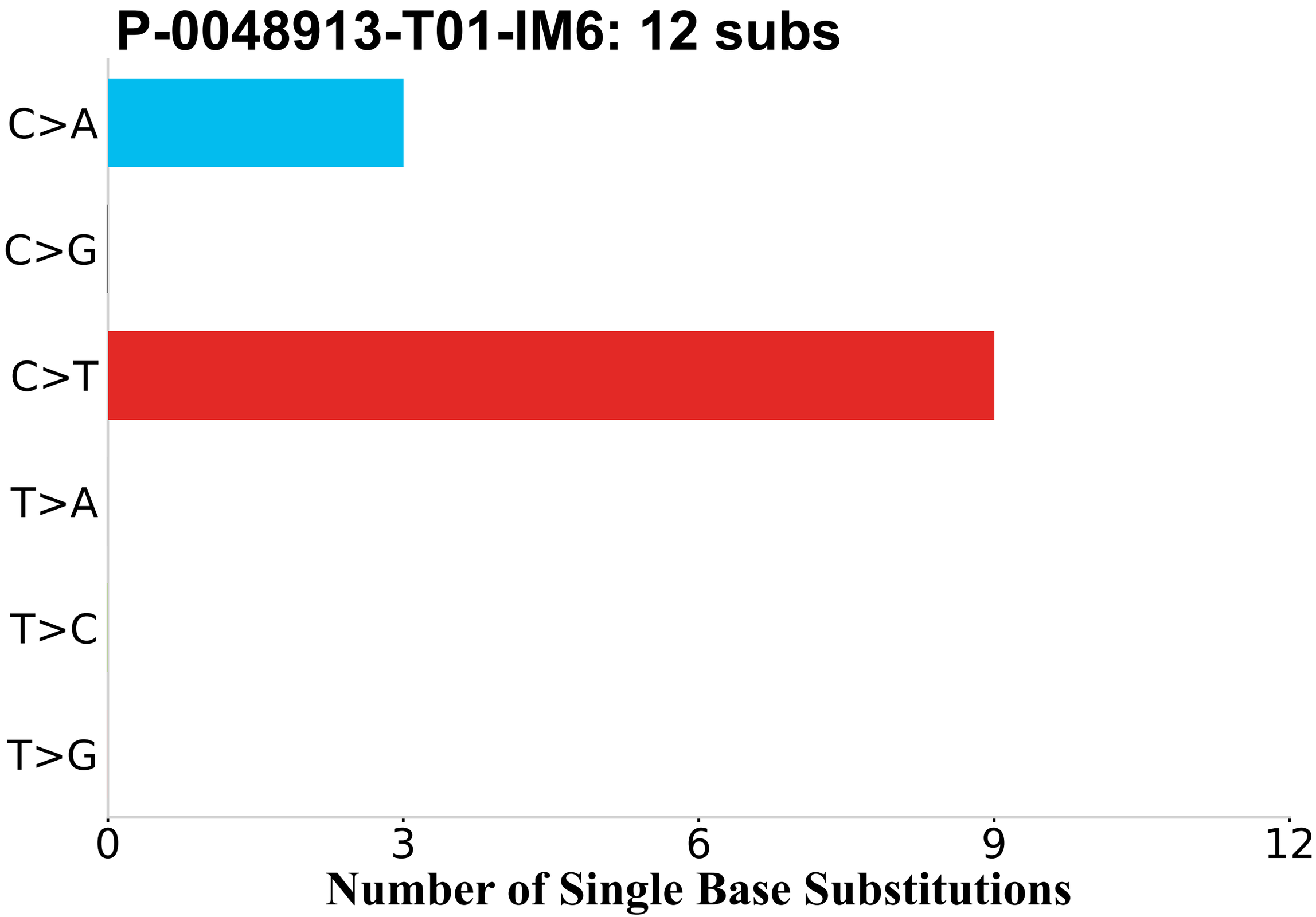
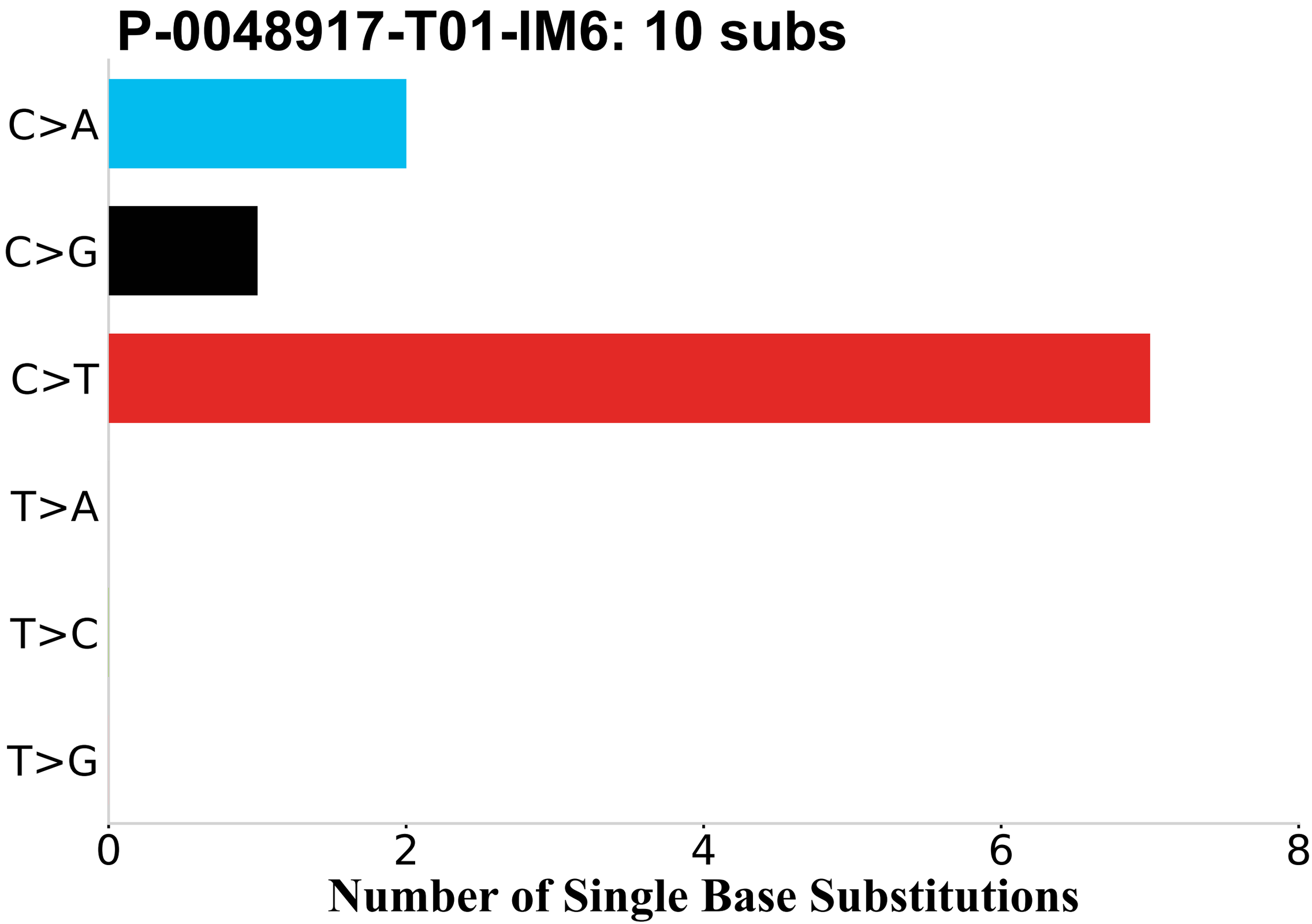
C>G
C>T
T>A
T>C
T>G
0
36
72
108
144
Number of Single Base Substitutions

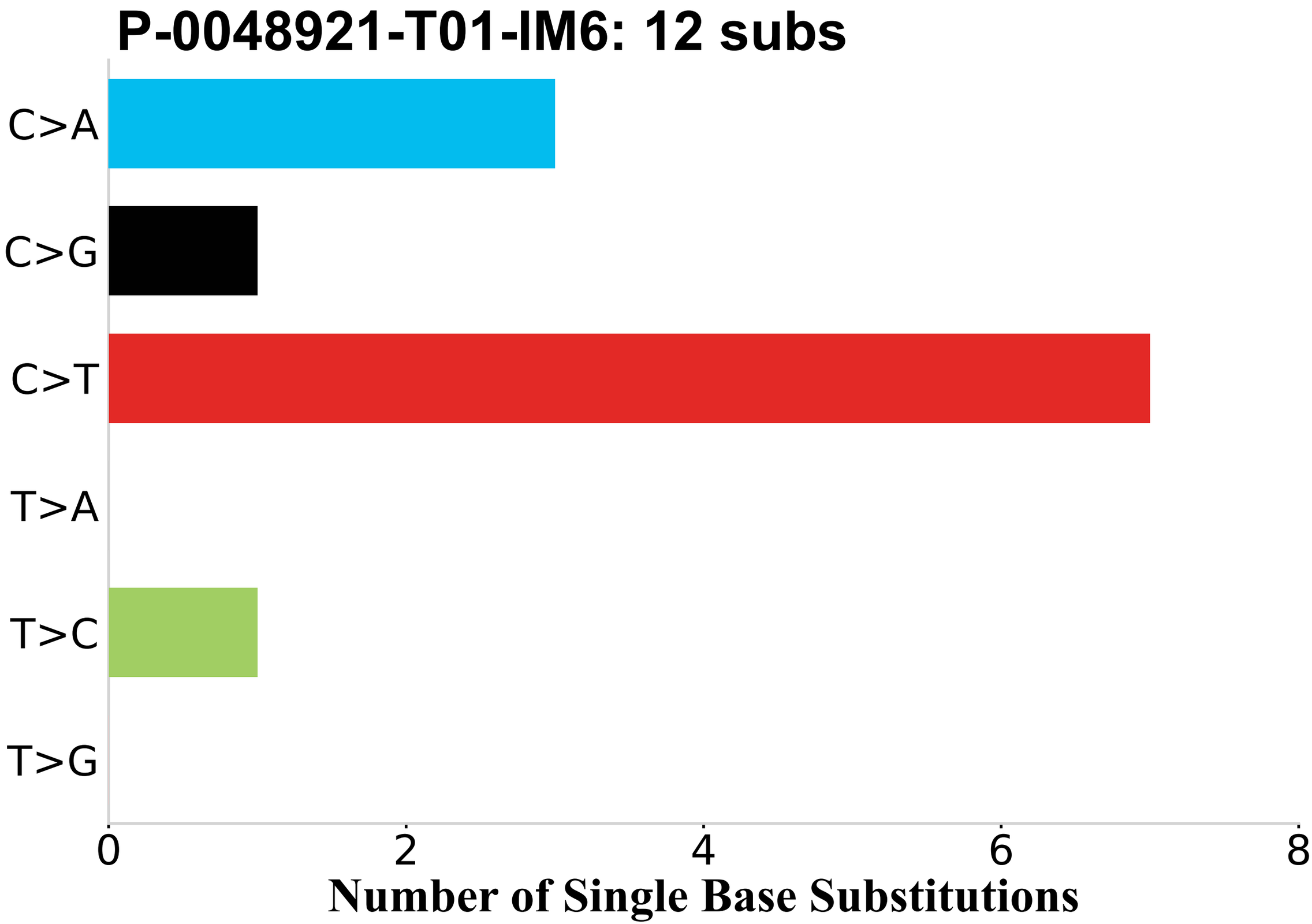

P-0048773-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0048793-T01-IM6: 72 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
16
32
48
64
Number of Single Base Substitutions

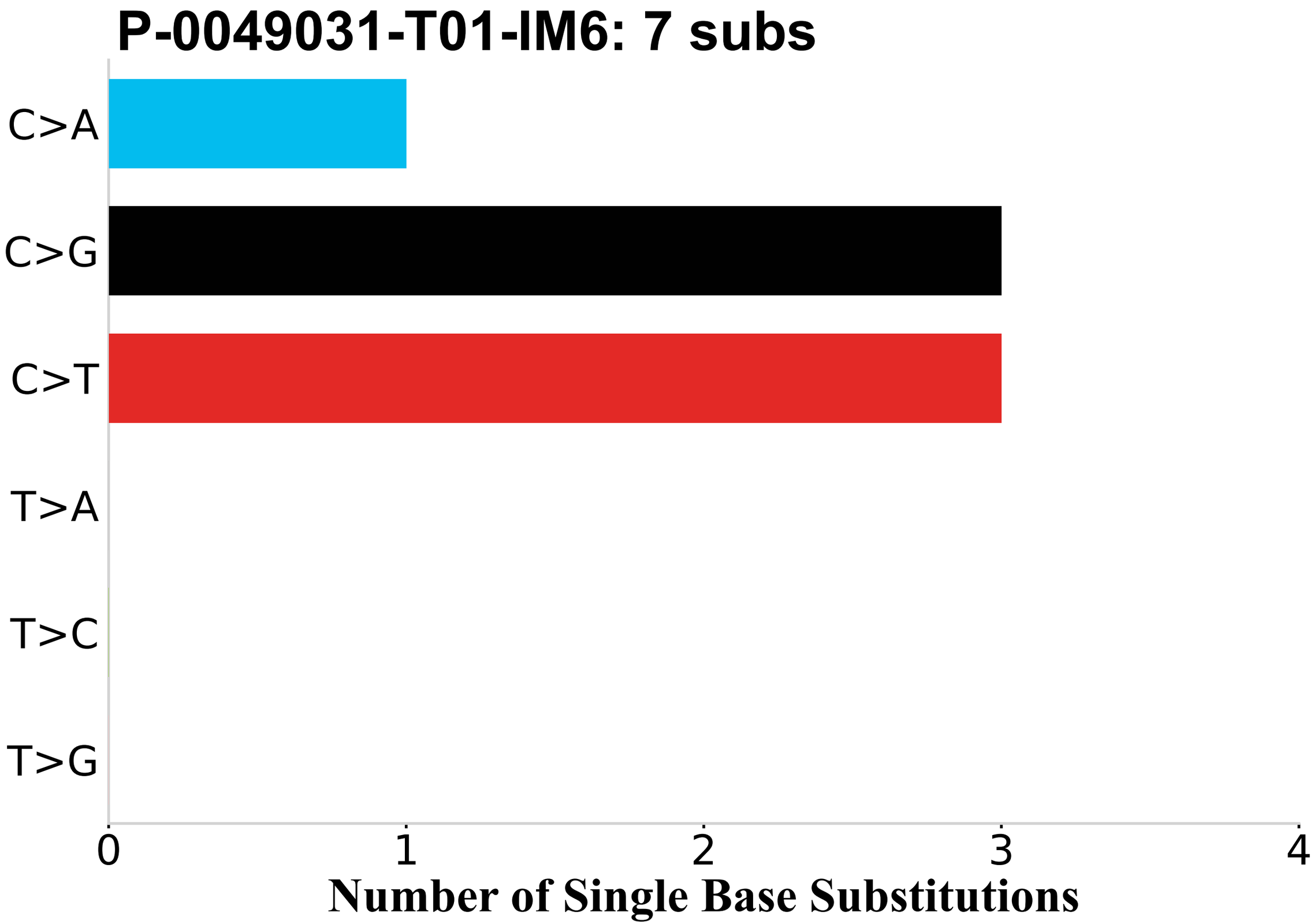

P-0048861-T01-IM6: 24 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions

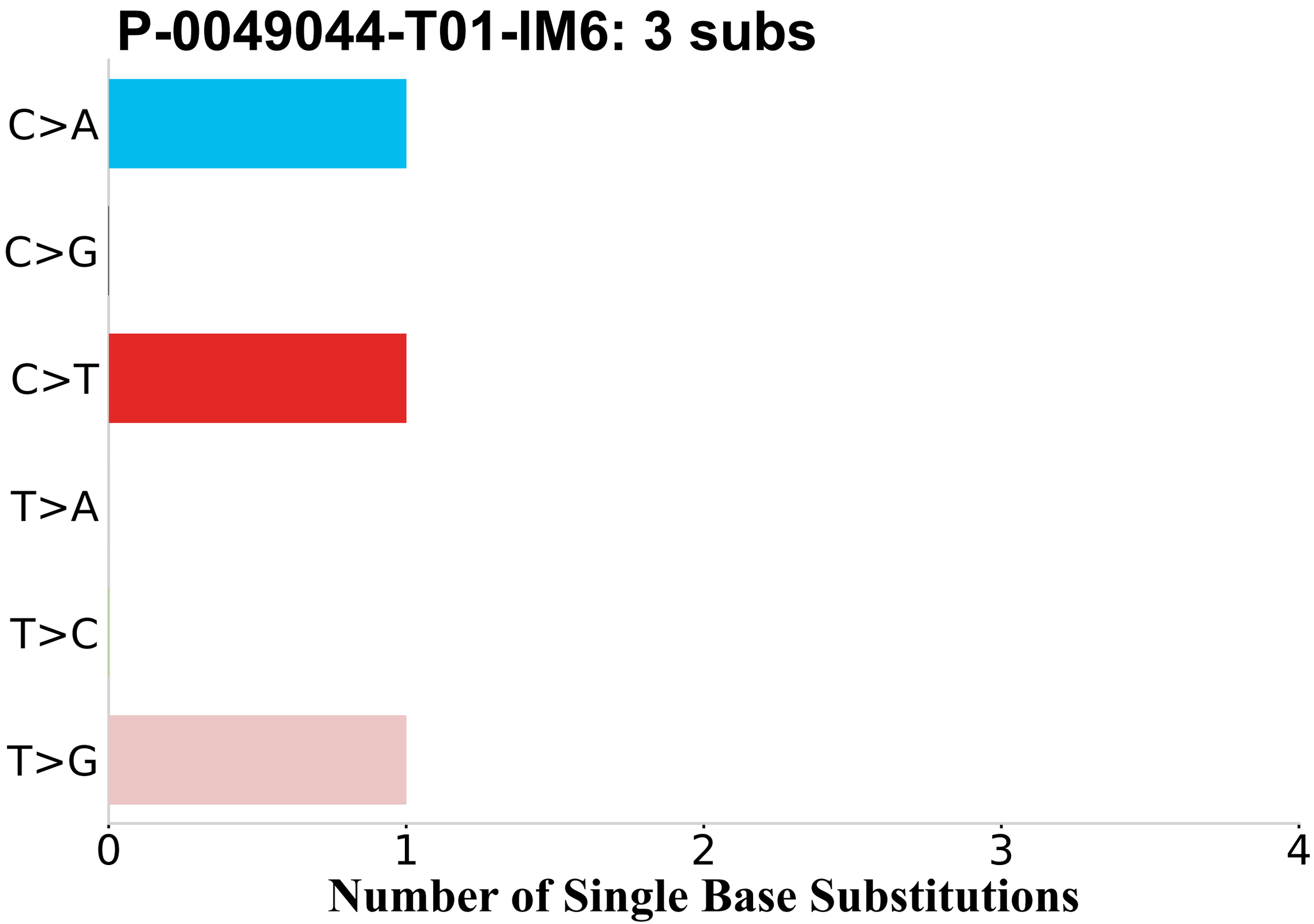

P-0048913-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

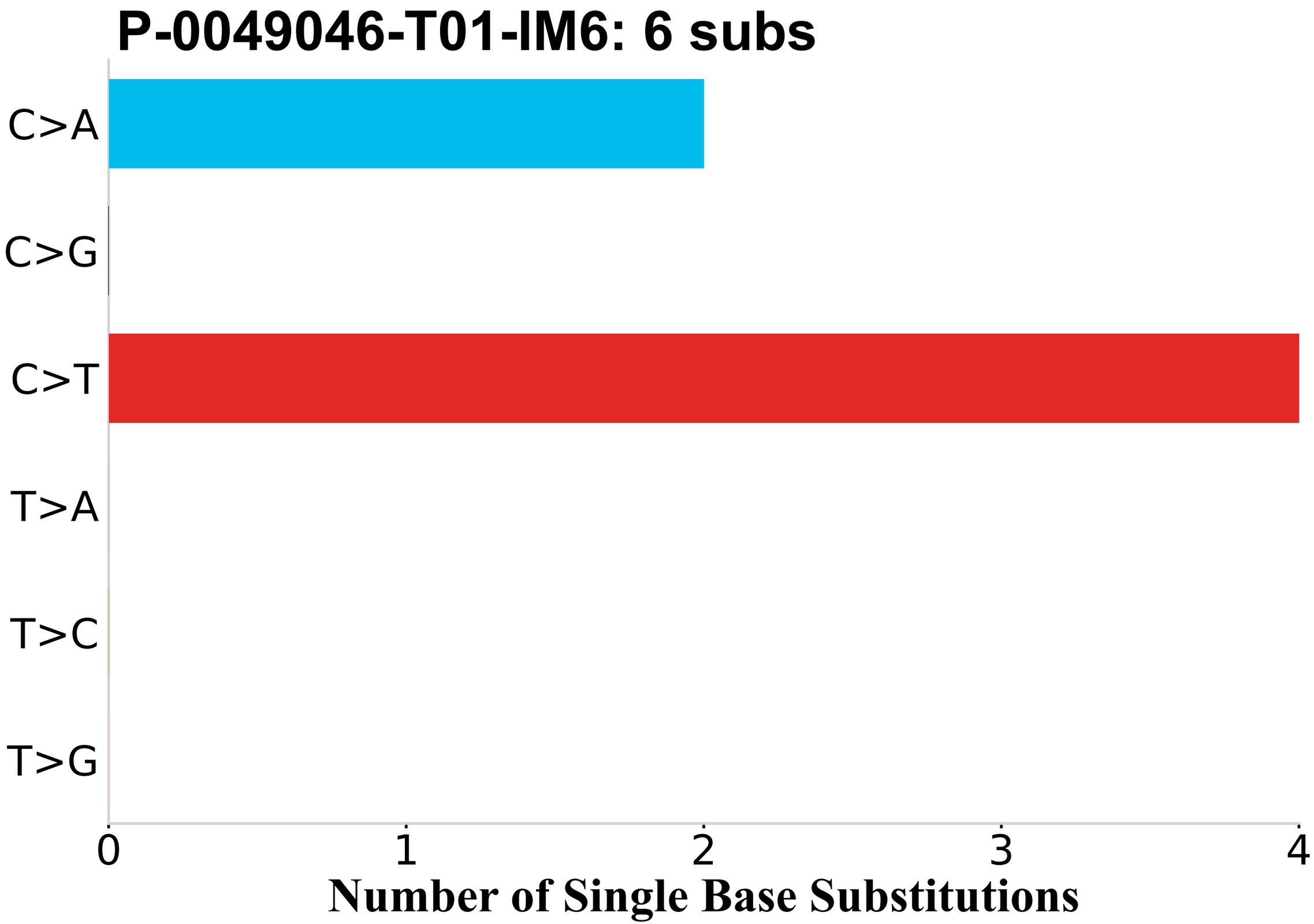

P-0048917-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

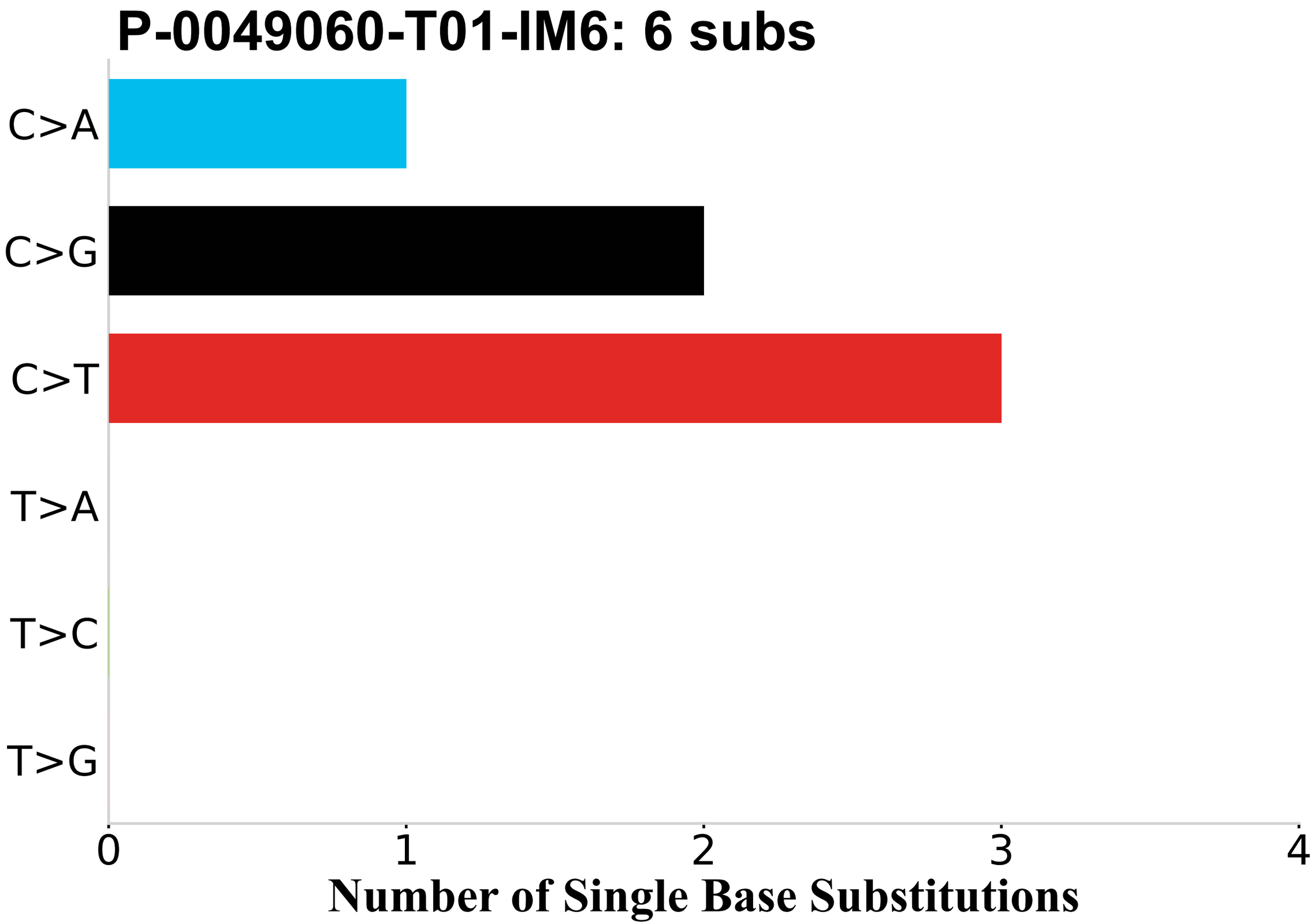

P-0048921-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

P-0048978-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049031-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049044-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049046-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049060-T01-IM6: 6 subs
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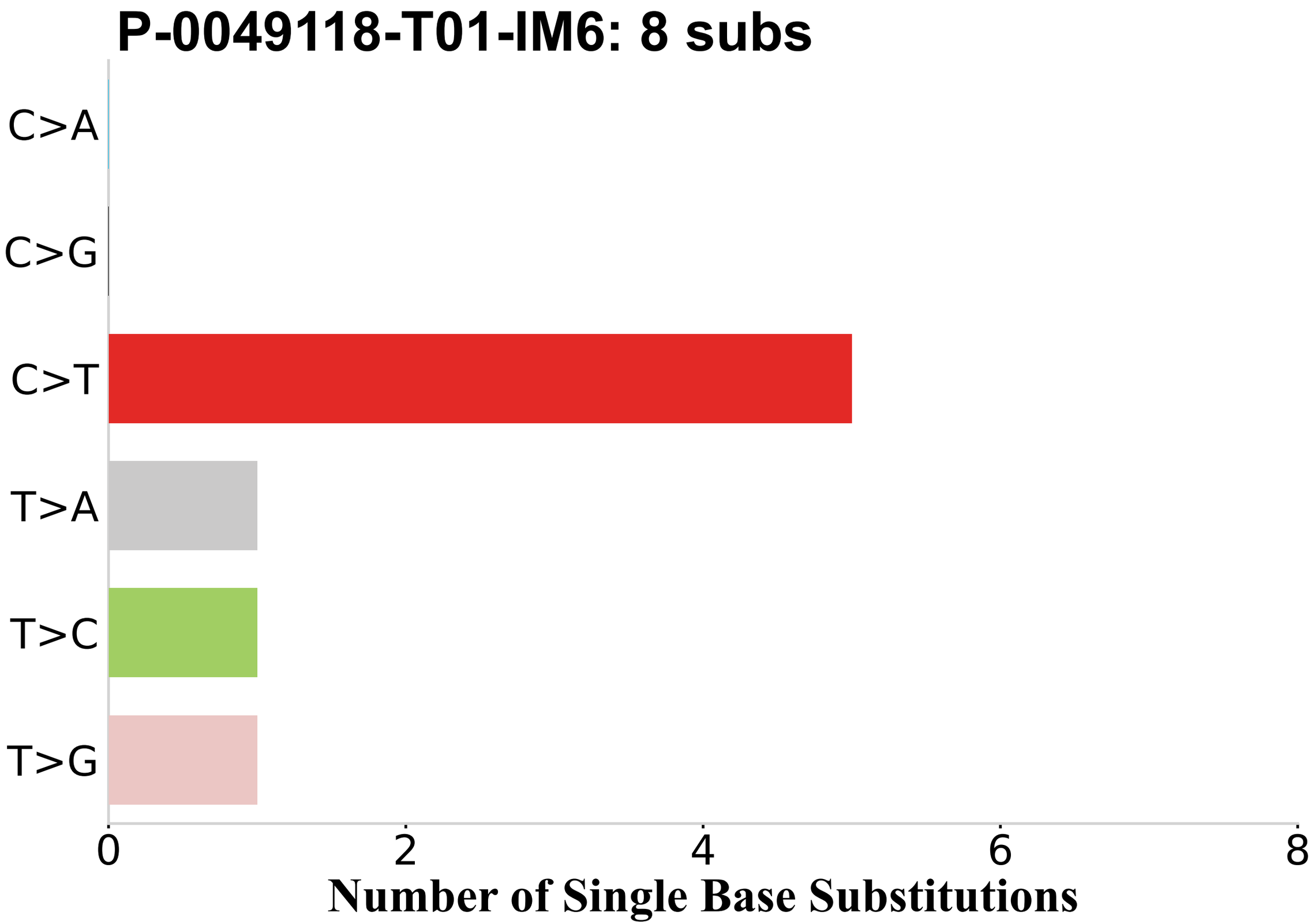
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049118-T01-IM6: 8 subs
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C>T
T>A
T>C
T>G
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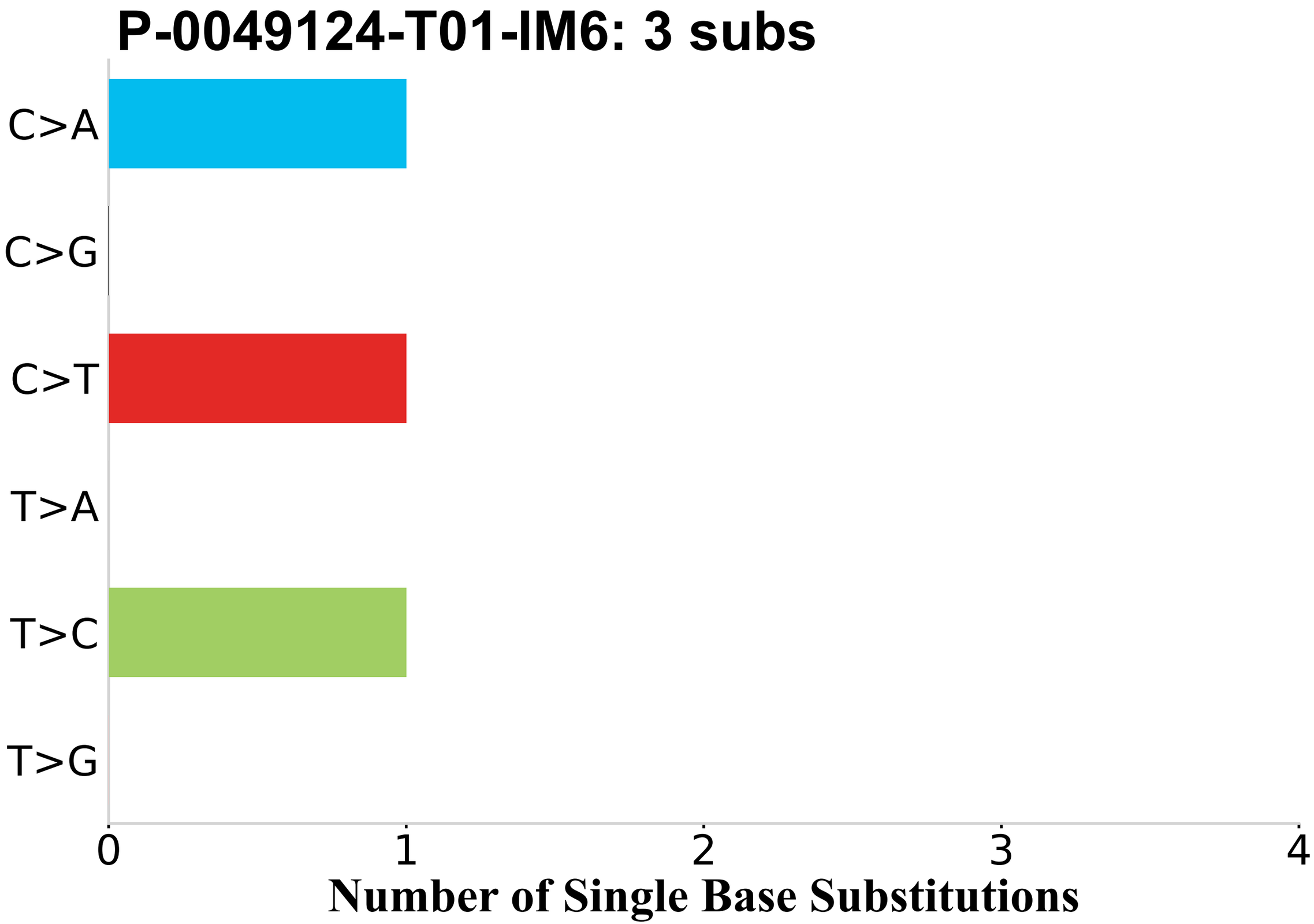
2
4
6
8
Number of Single Base Substitutions


P-0049124-T01-IM6: 3 subs
C>A
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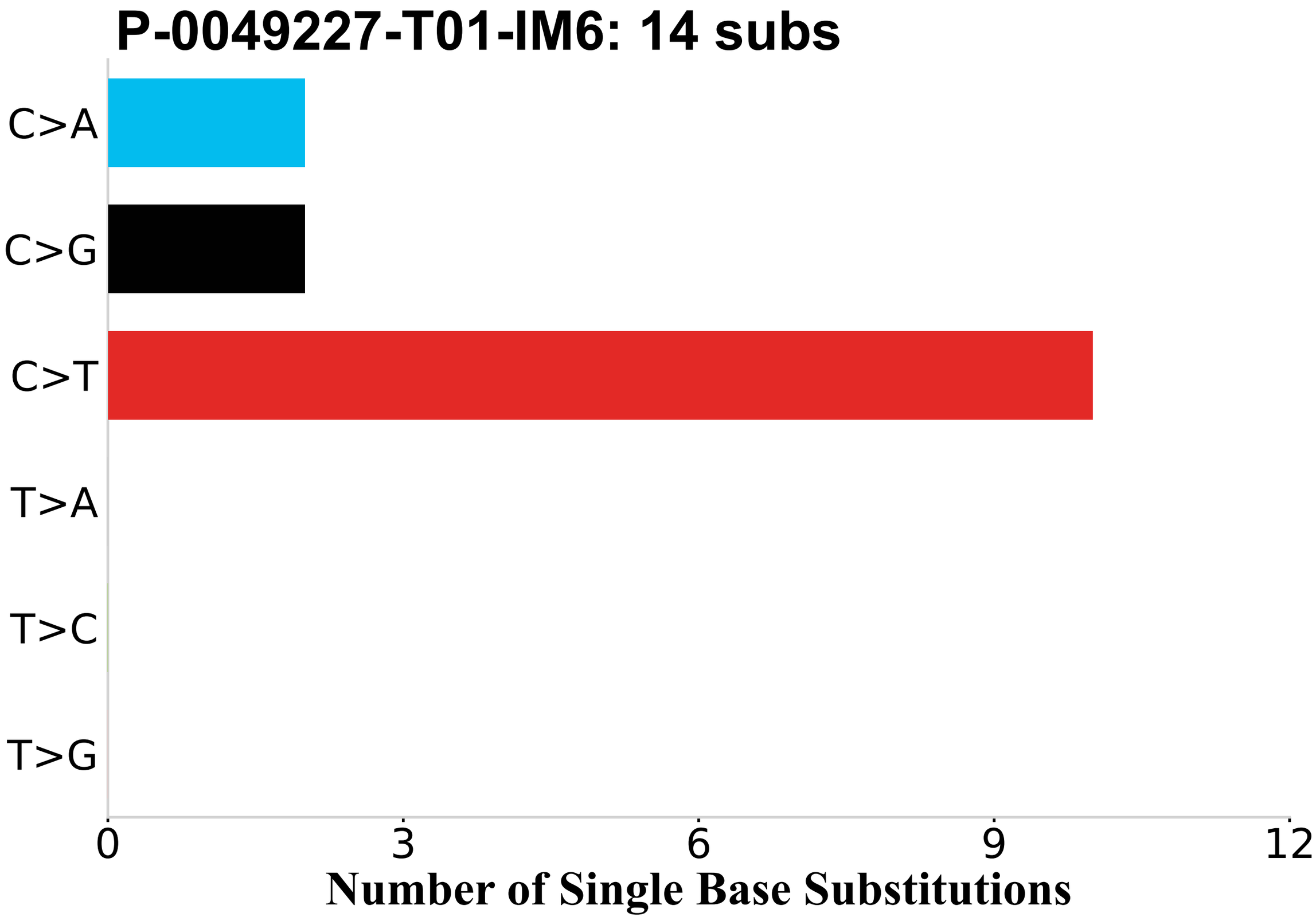
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049227-T01-IM6: 14 subs
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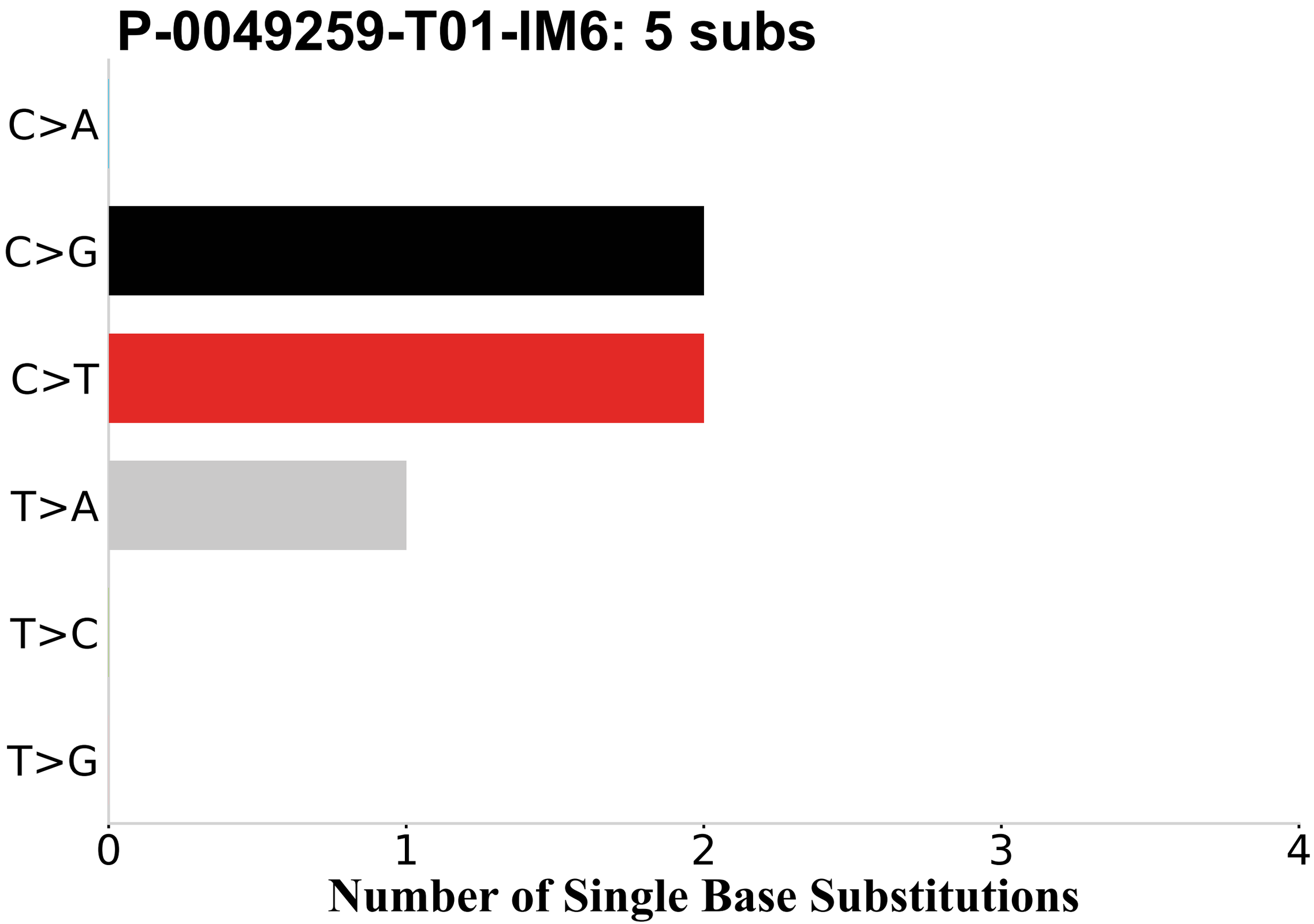
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0049259-T01-IM6: 5 subs
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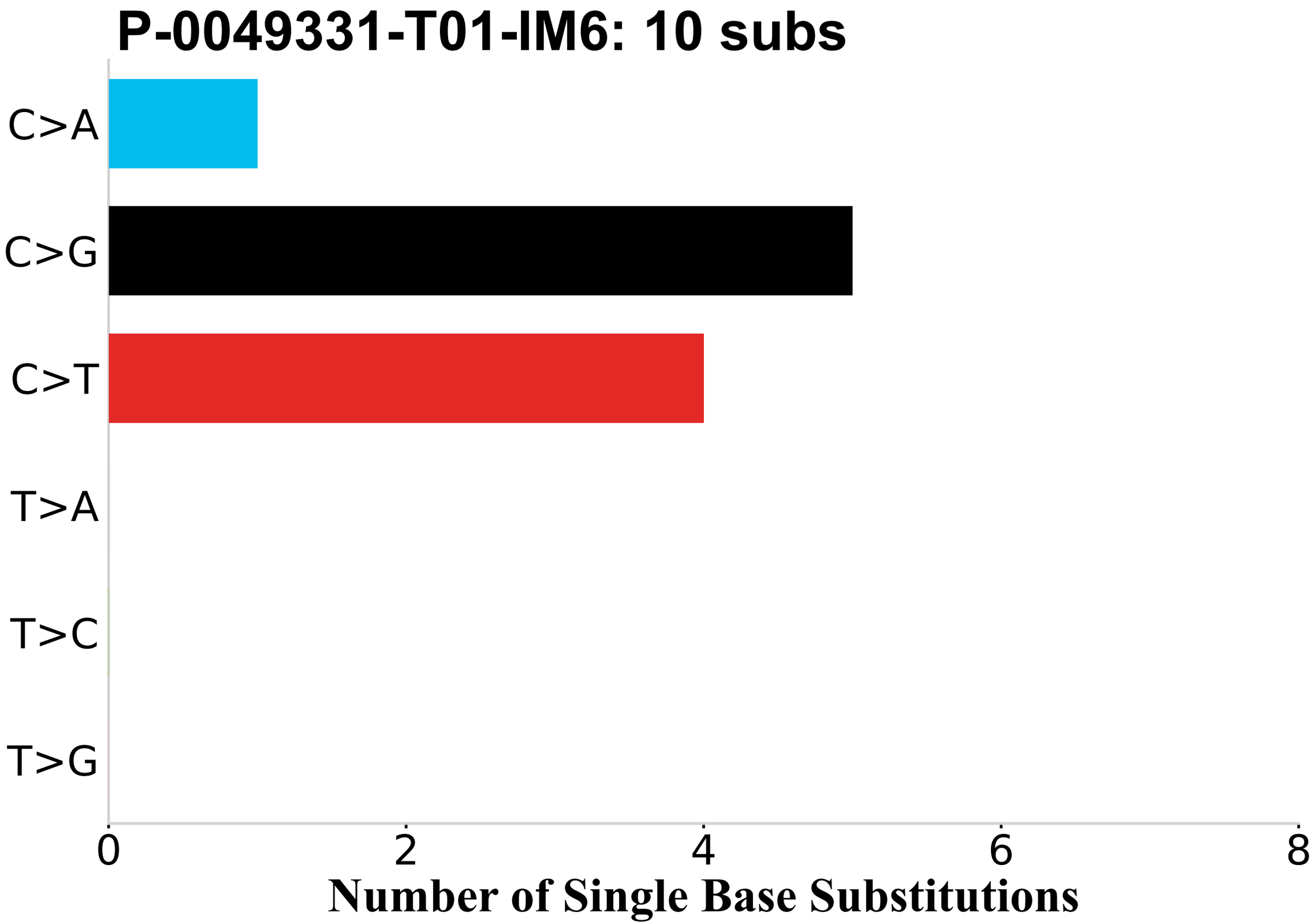
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049331-T01-IM6: 10 subs
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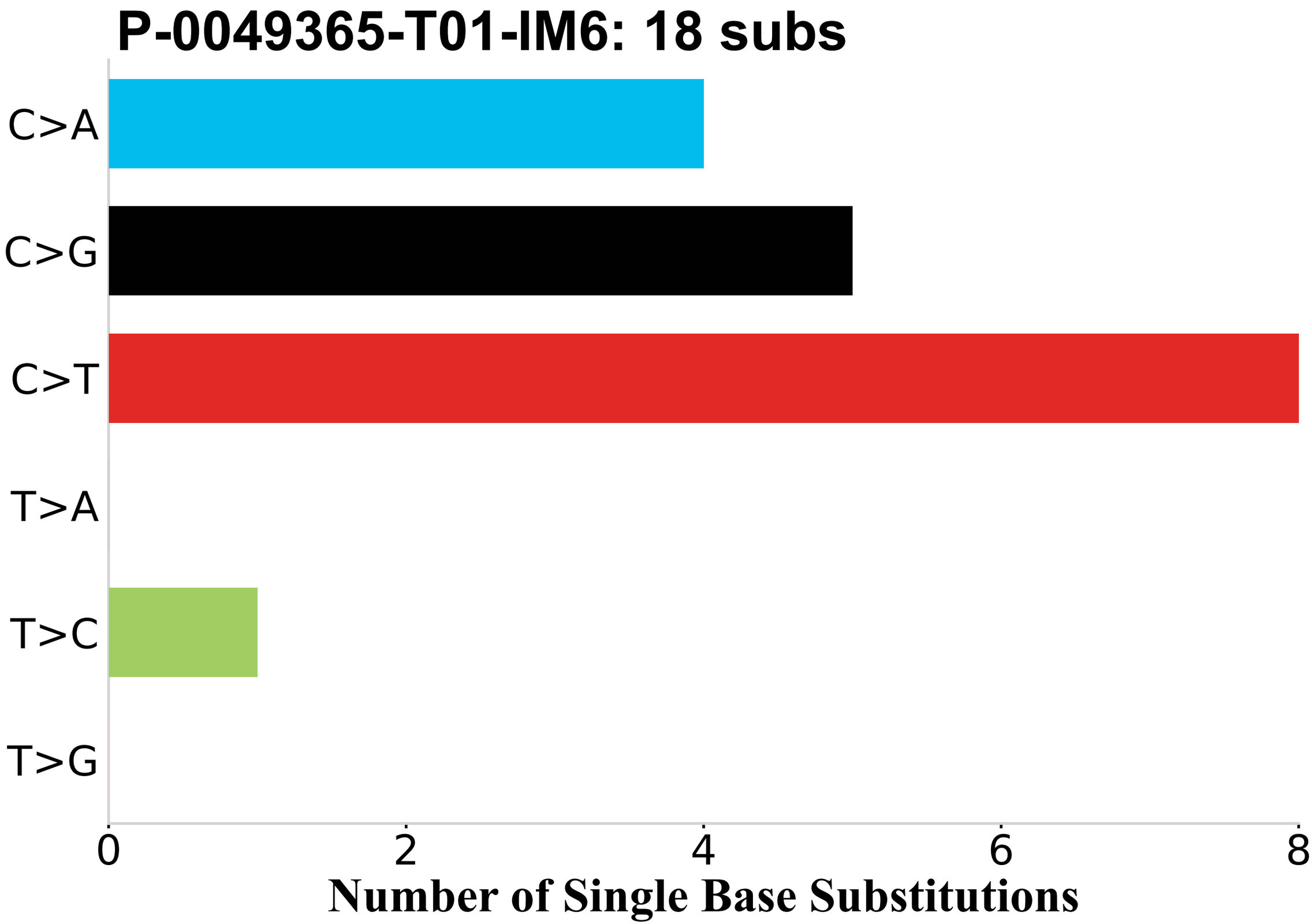
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0049365-T01-IM6: 18 subs
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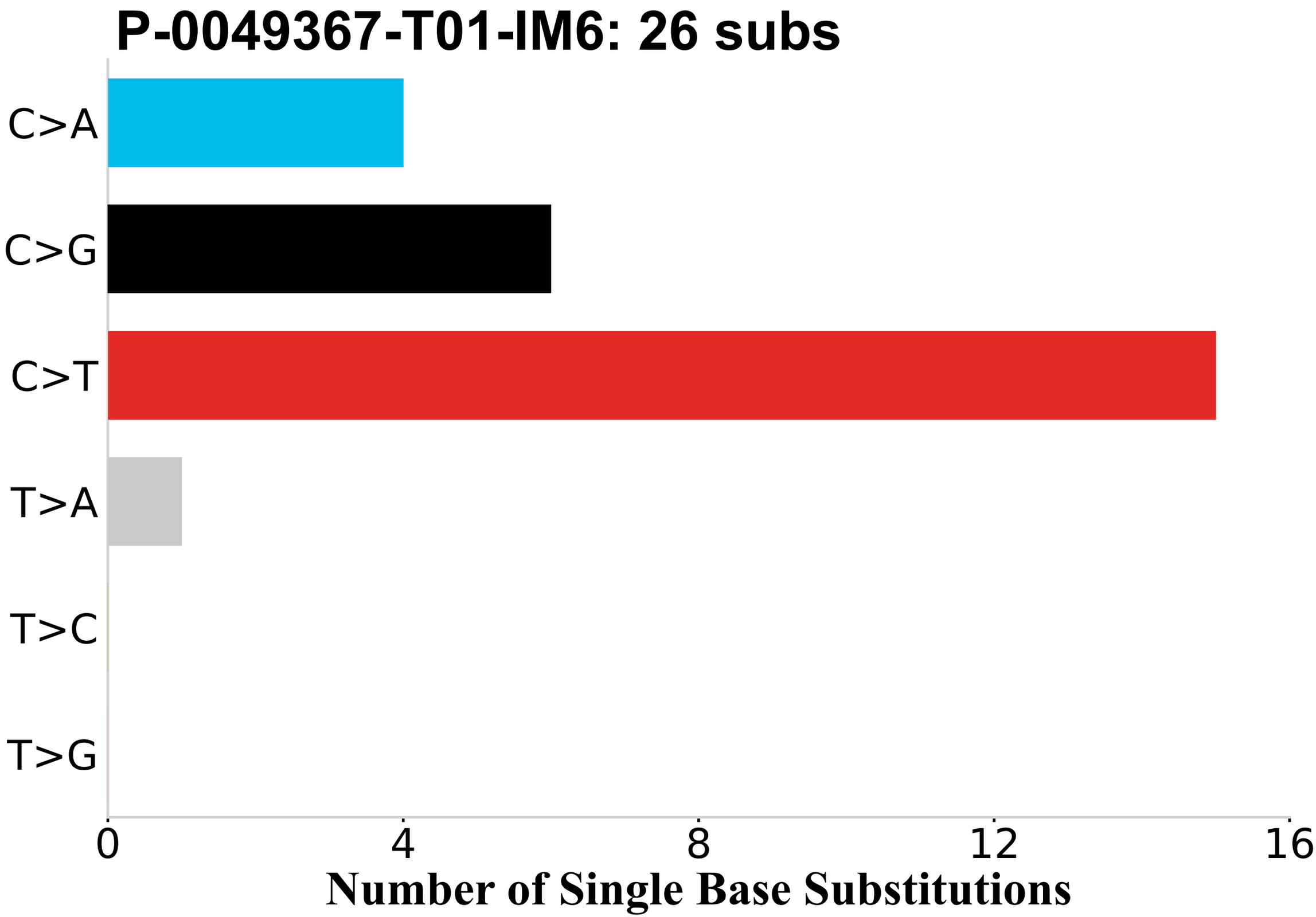
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0049367-T01-IM6: 26 subs
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C>T
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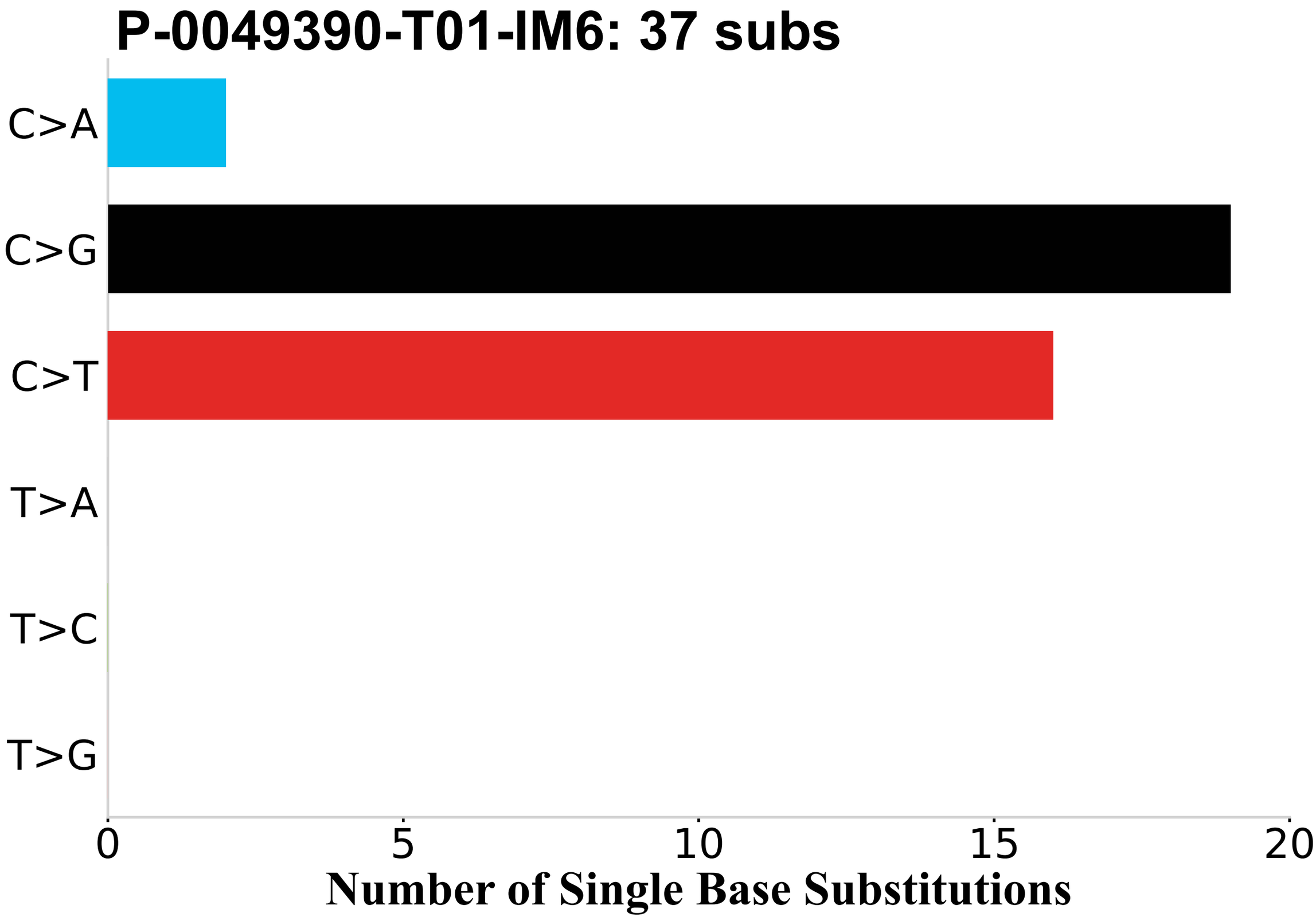
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0049390-T01-IM6: 37 subs
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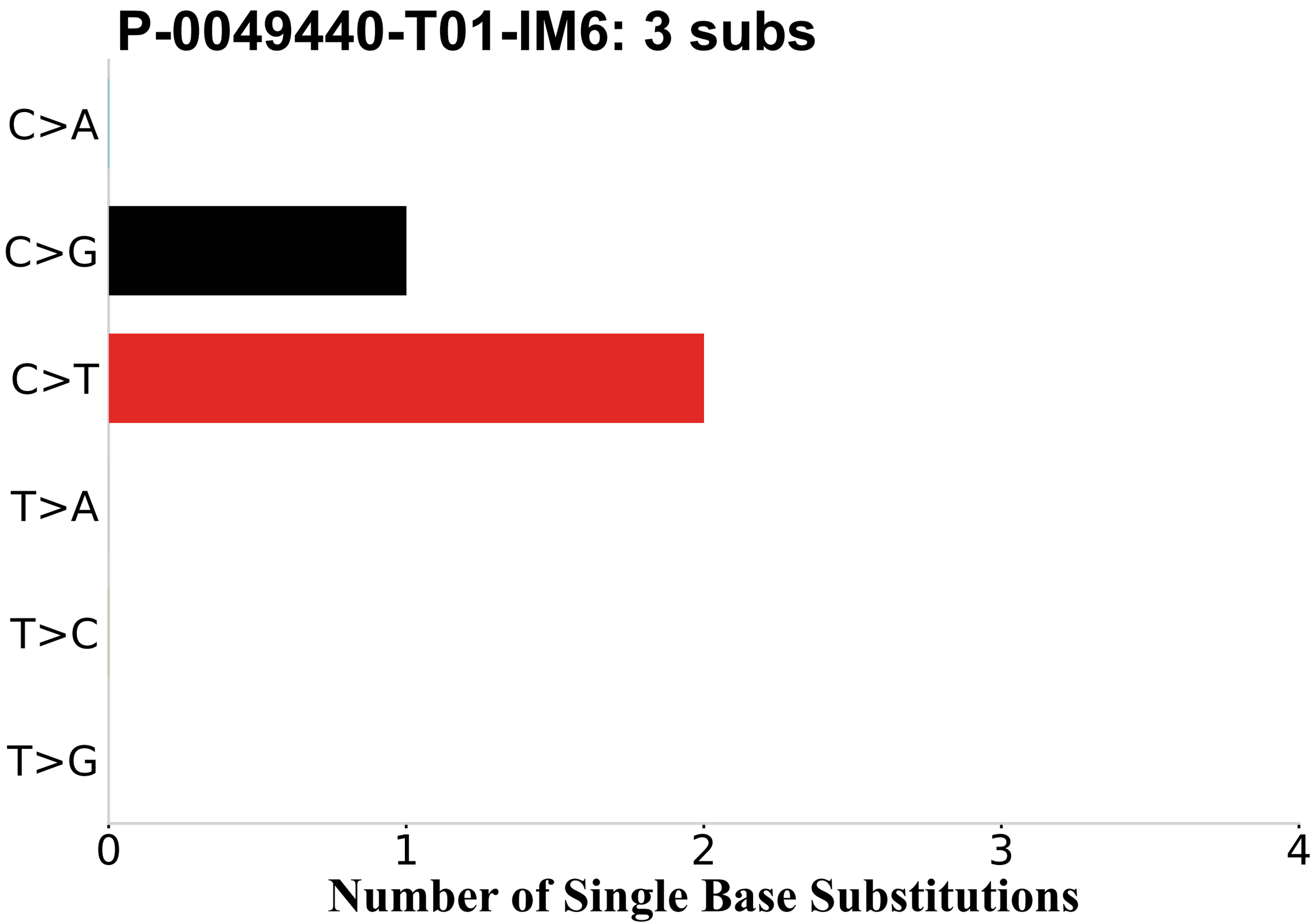
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0049440-T01-IM6: 3 subs
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C>G
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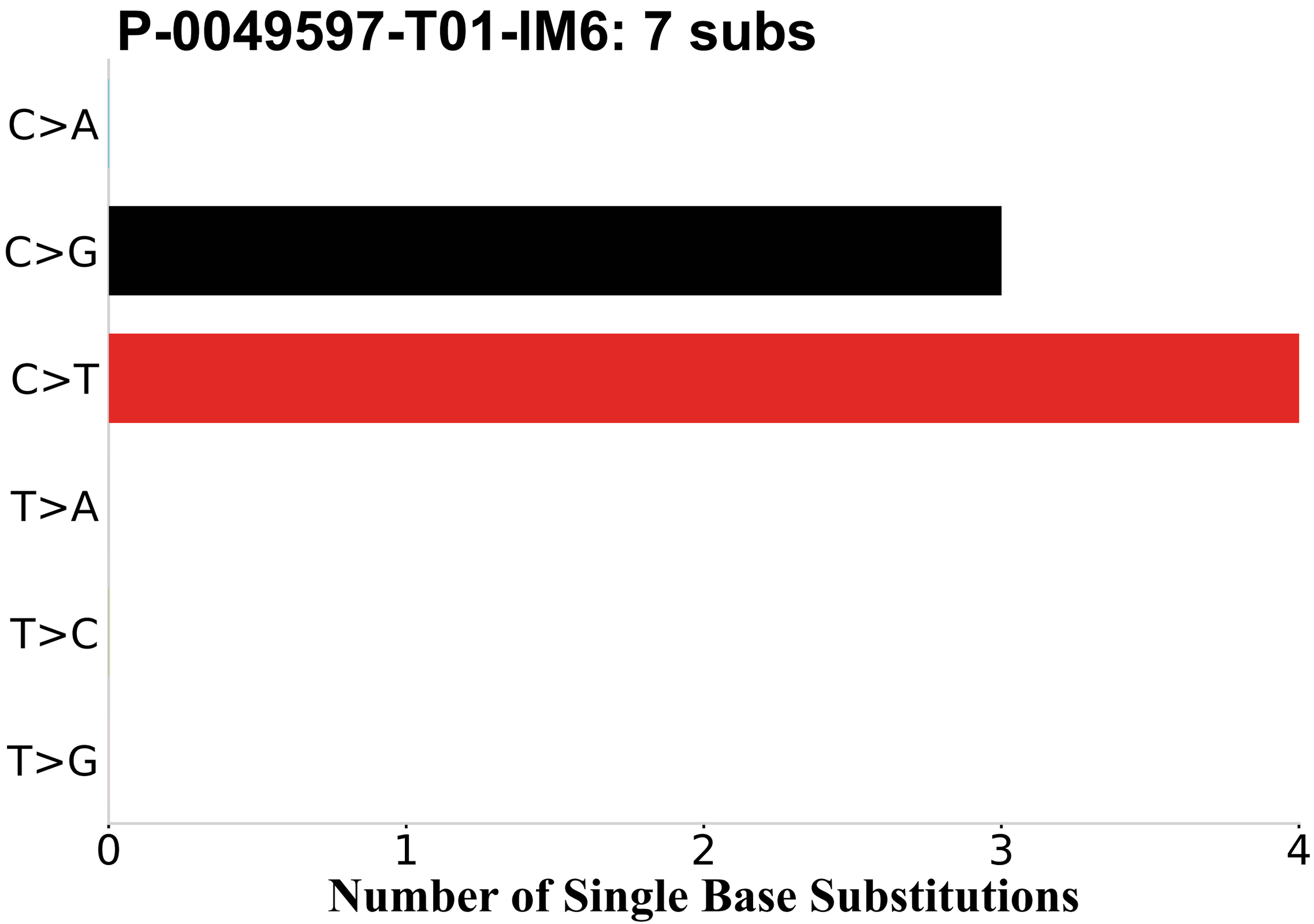
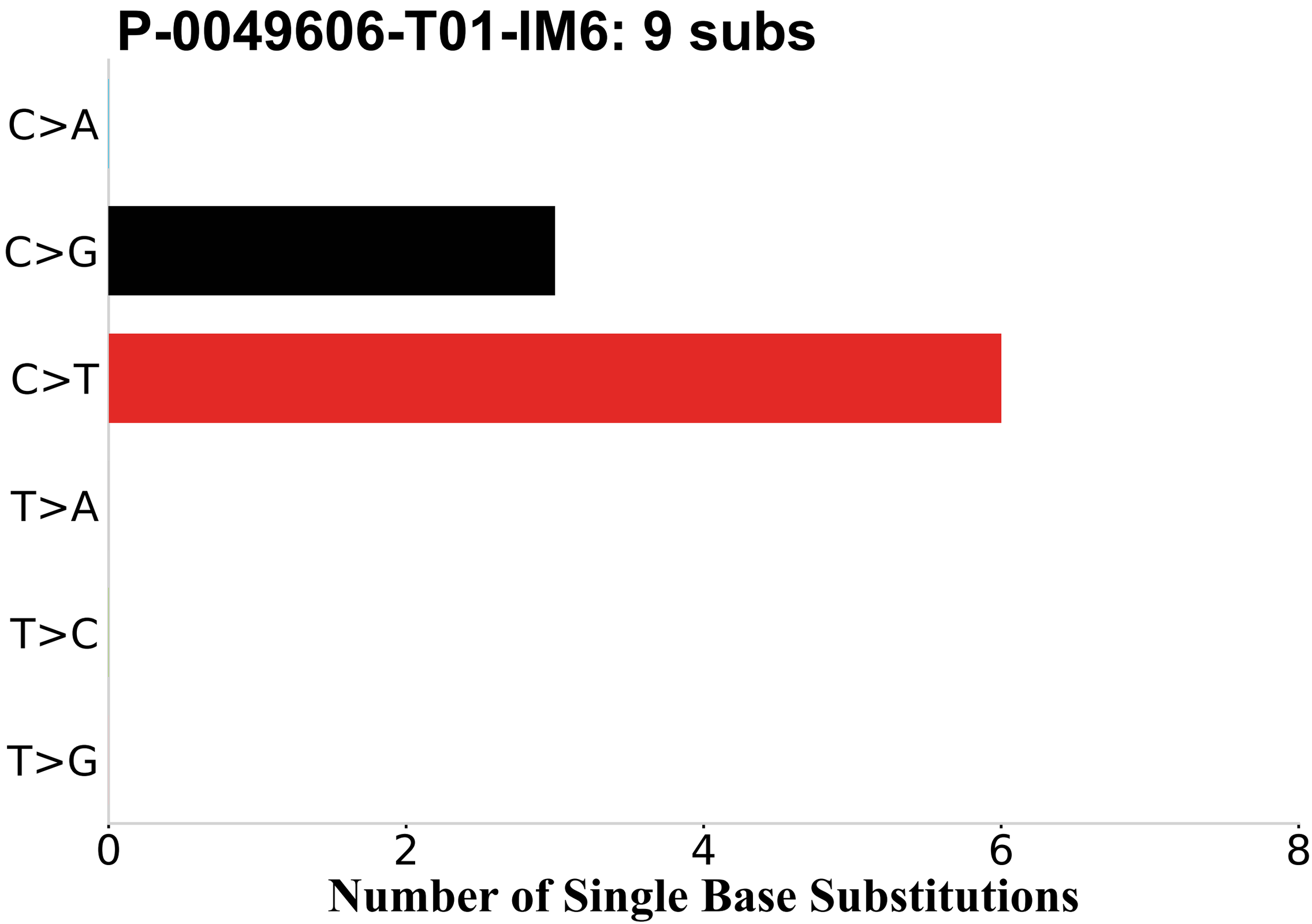
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049597-T01-IM6: 7 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049606-T01-IM6: 9 subs
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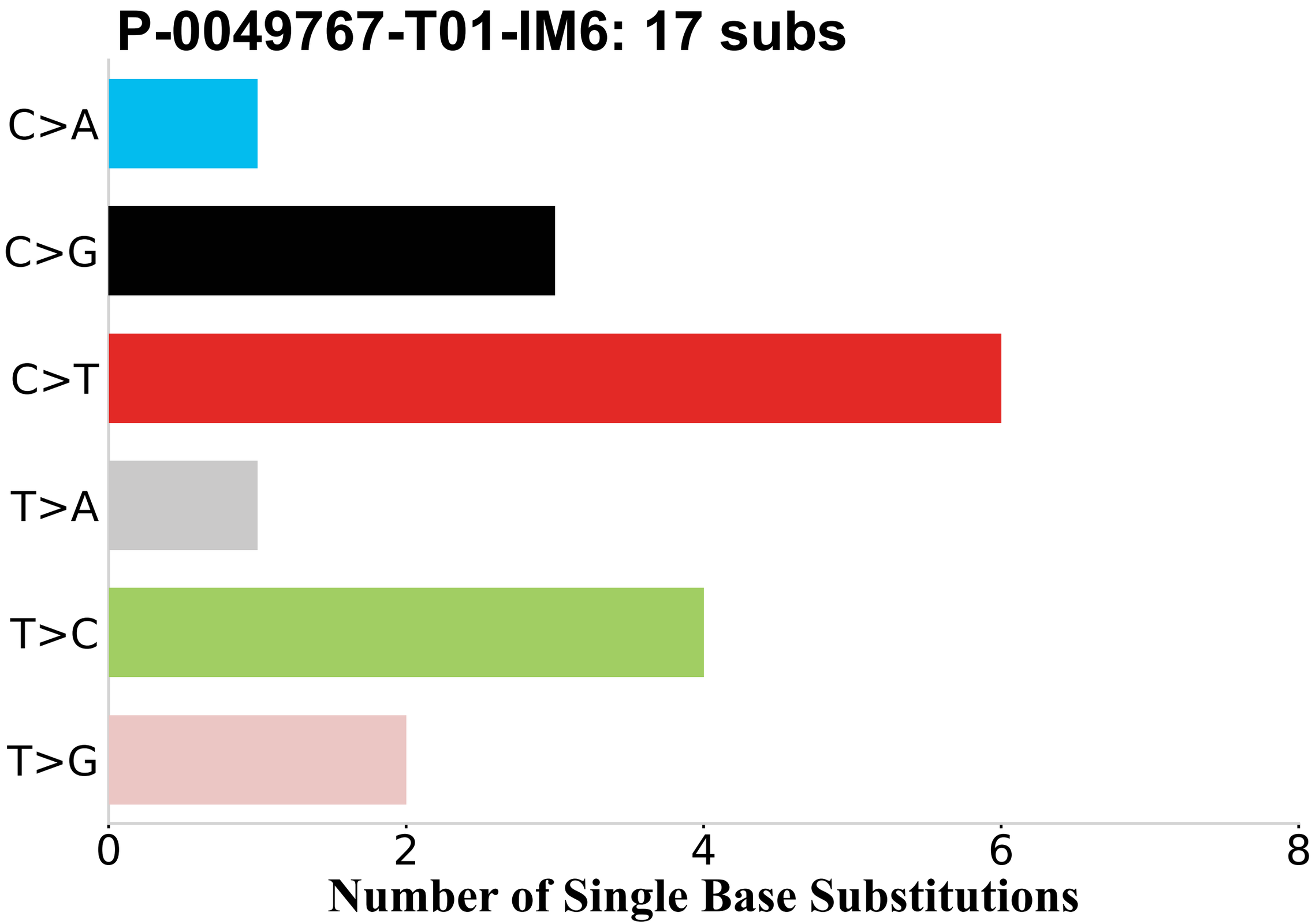
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0049767-T01-IM6: 17 subs
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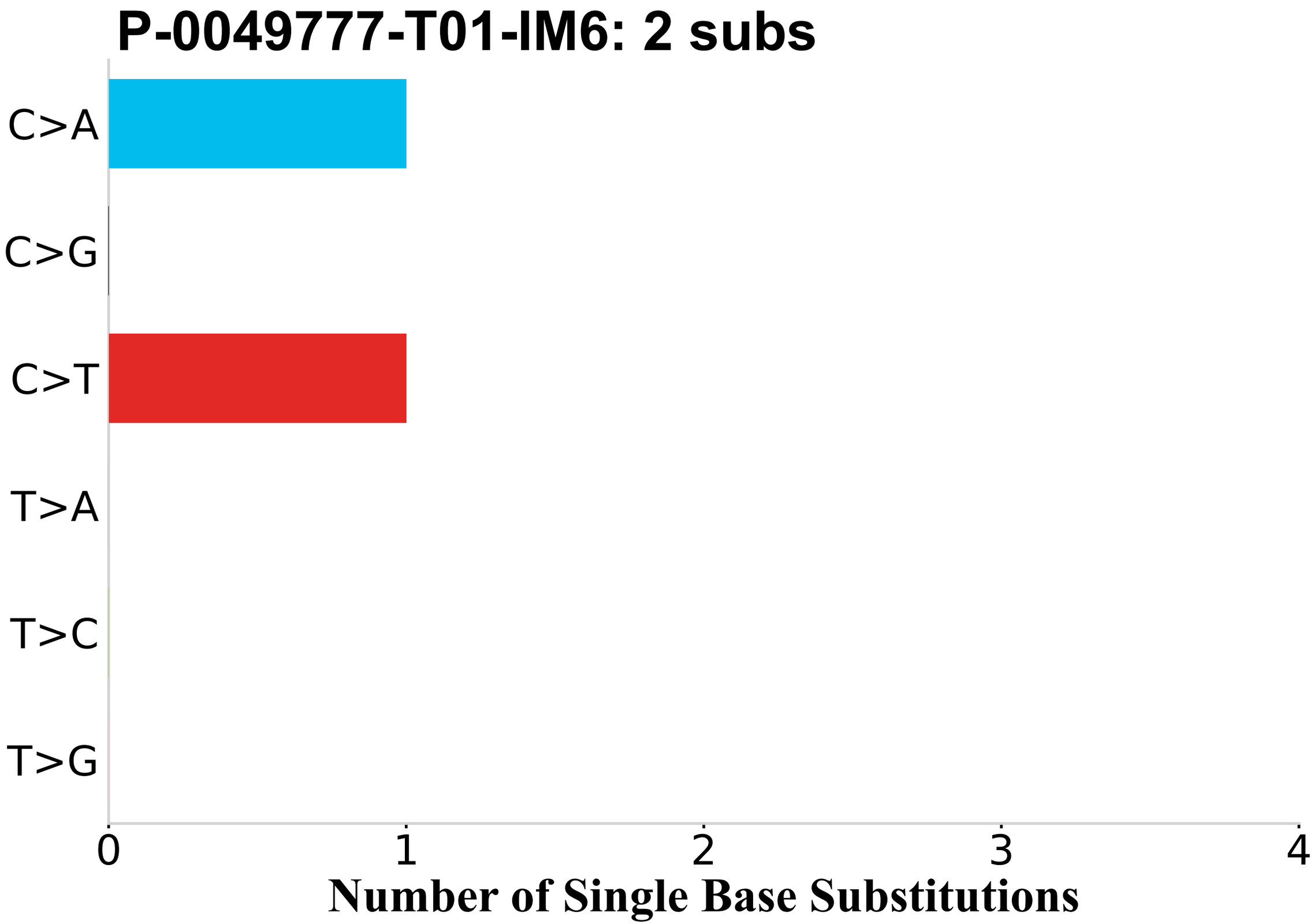
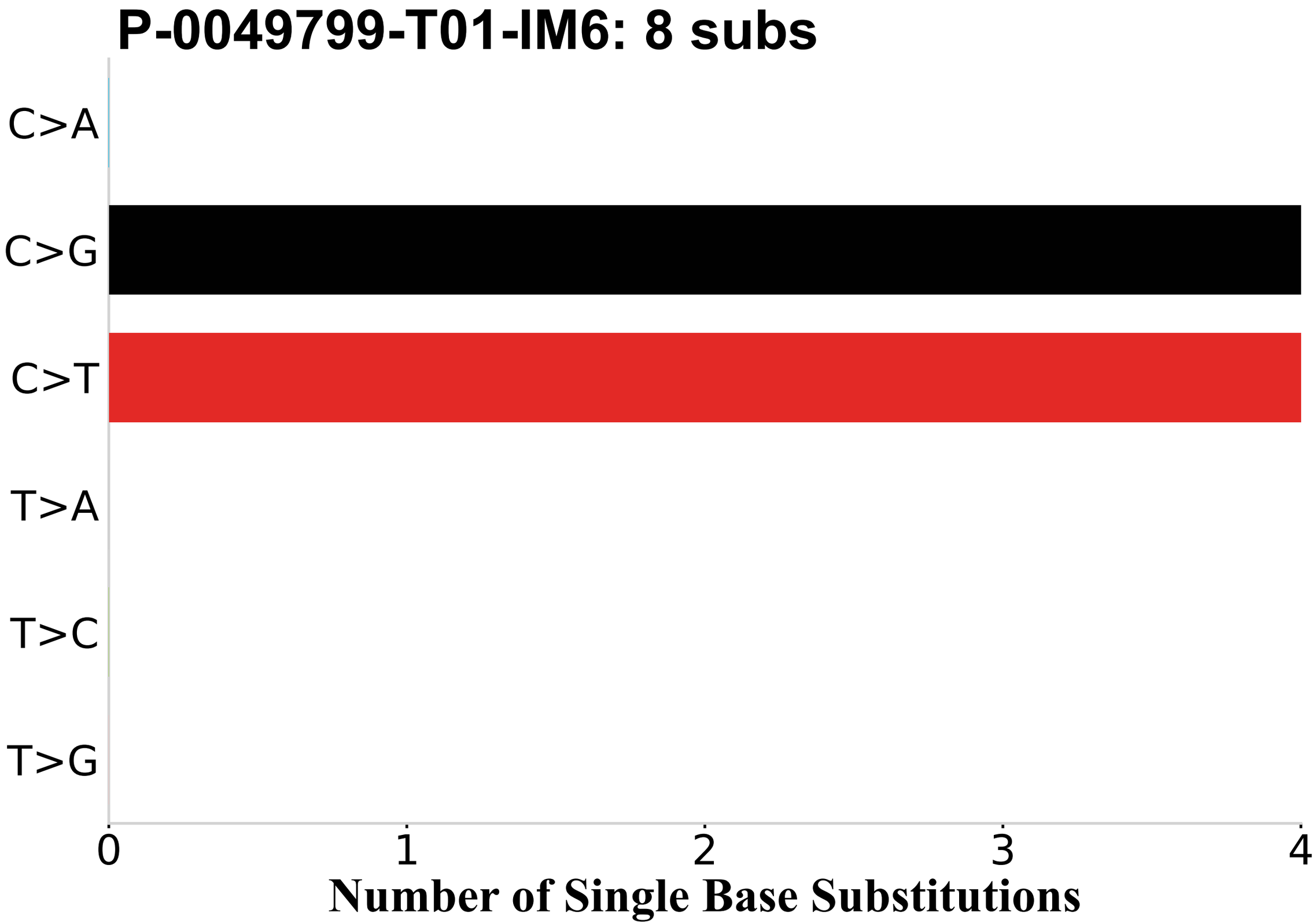
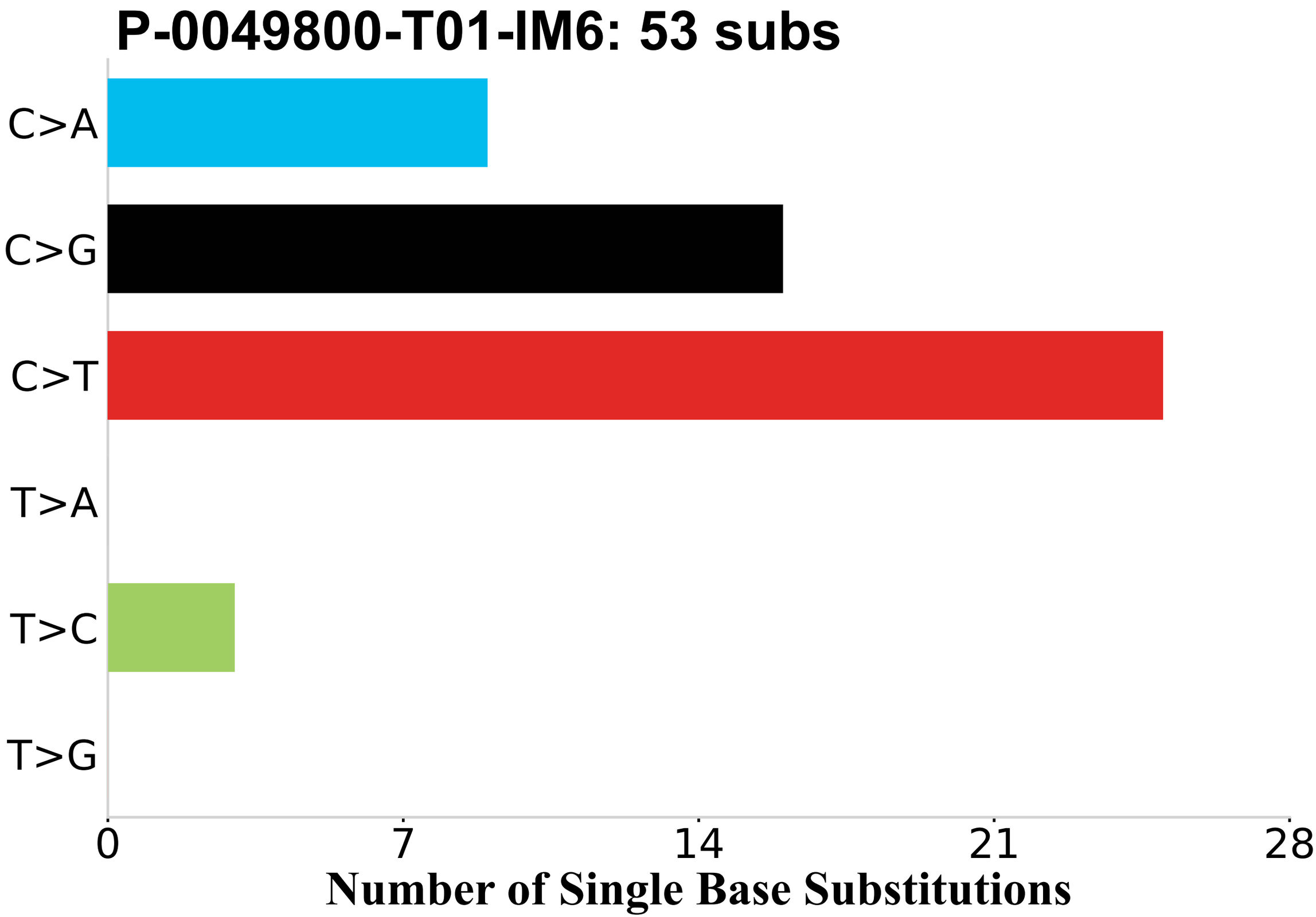
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0049777-T01-IM6: 2 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049799-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049800-T01-IM6: 53 subs
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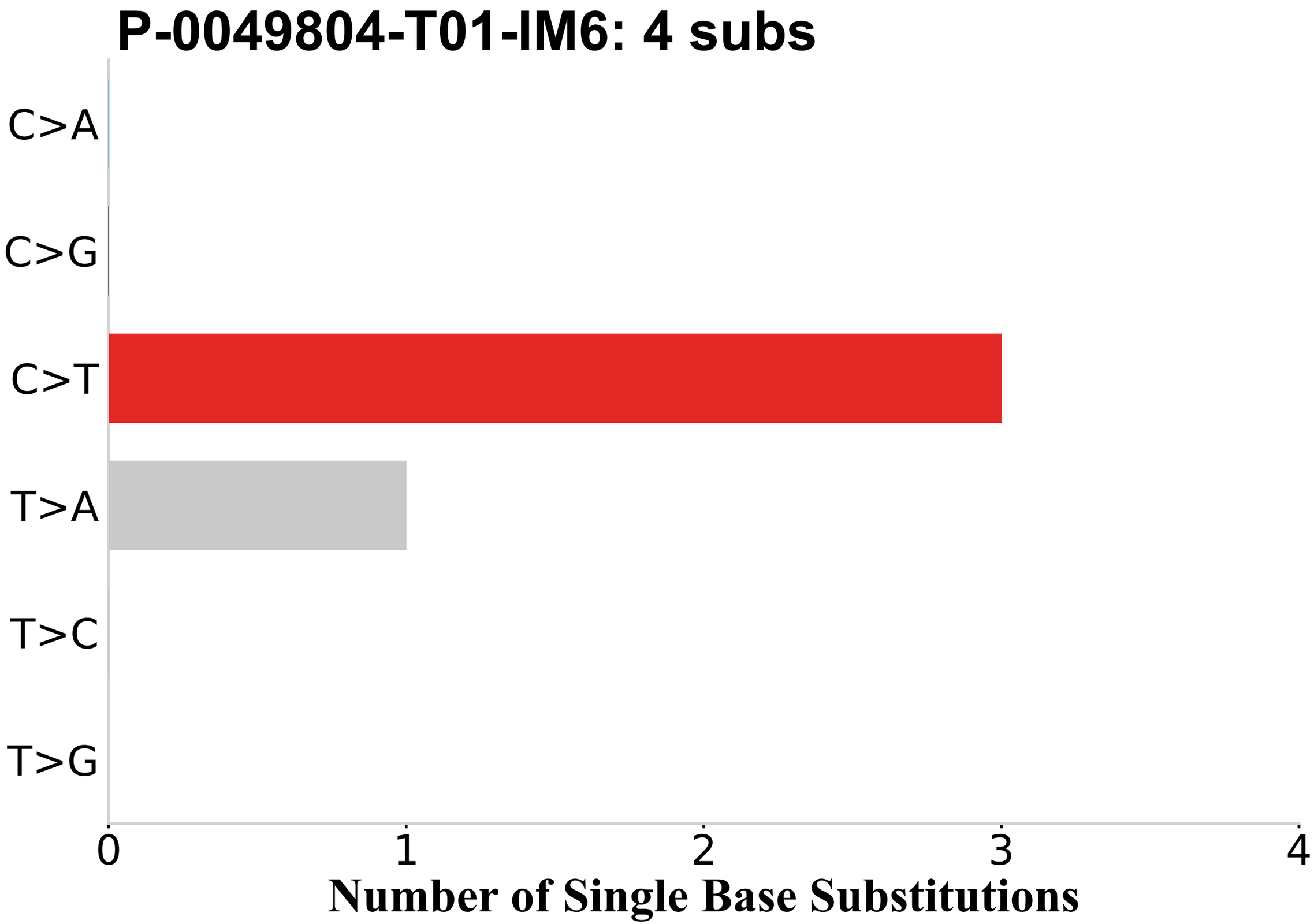
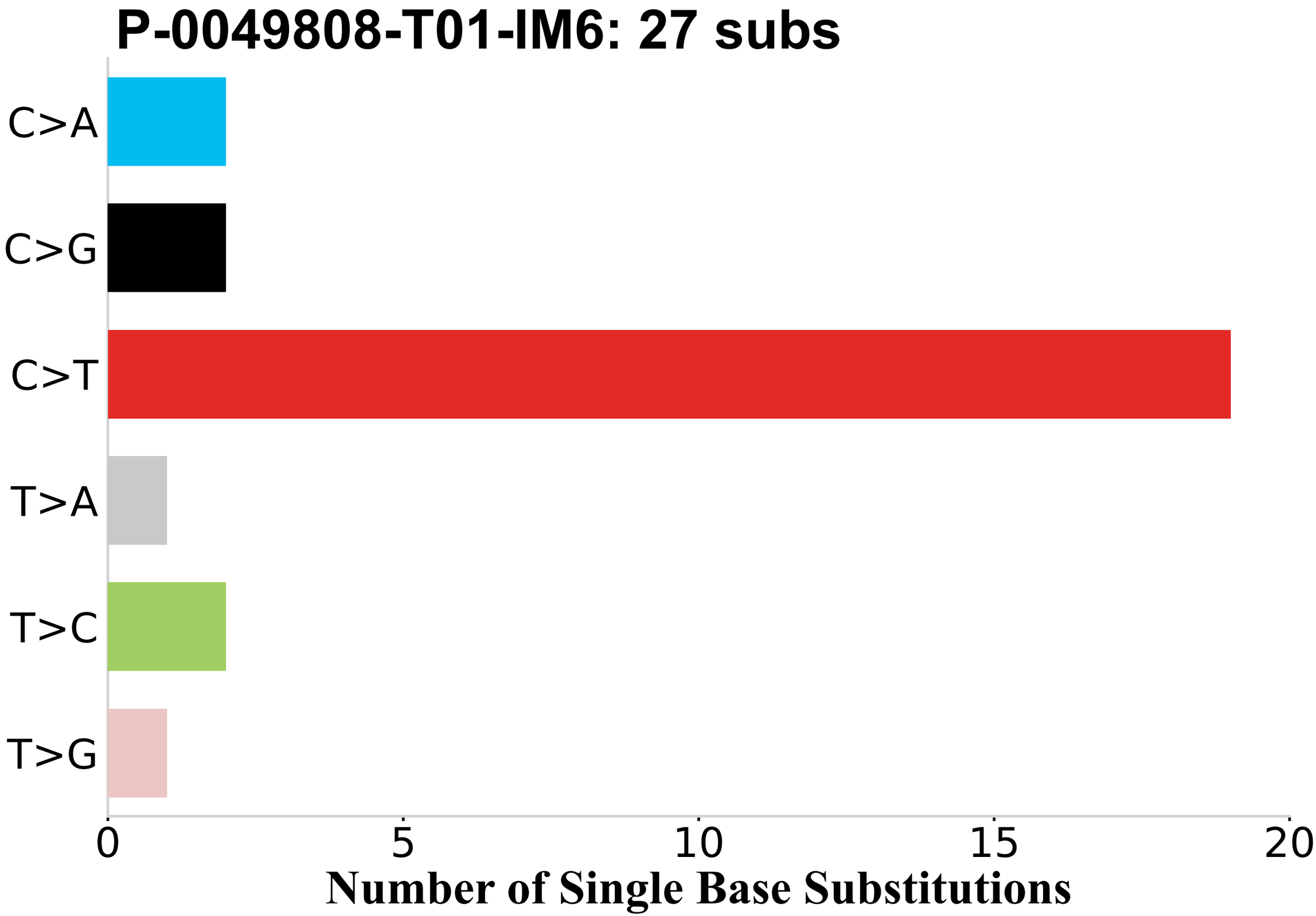
C>G
C>T
T>A
T>C
T>G
0
7
14
21
28
Number of Single Base Substitutions


P-0049804-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049808-T01-IM6: 27 subs
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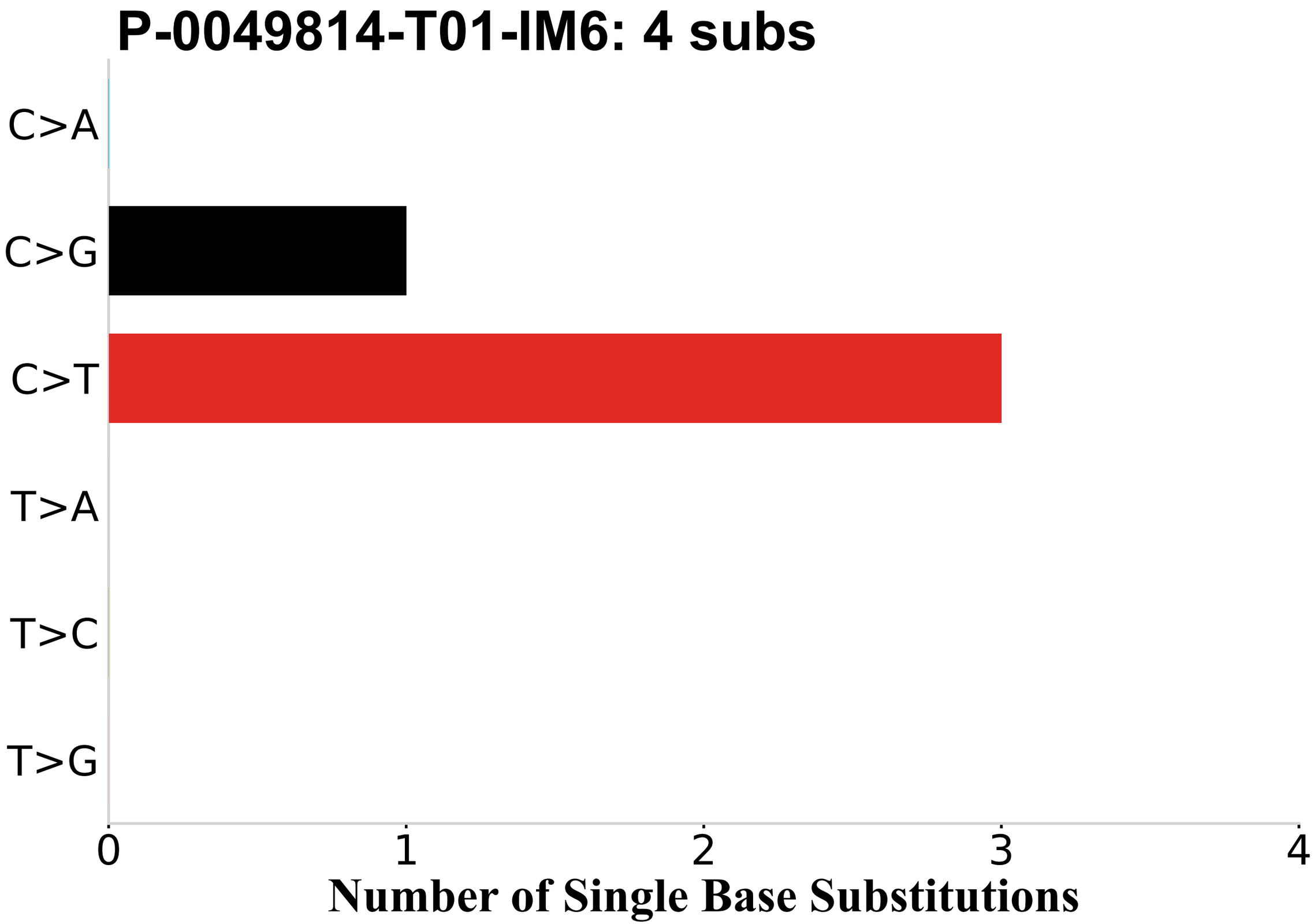
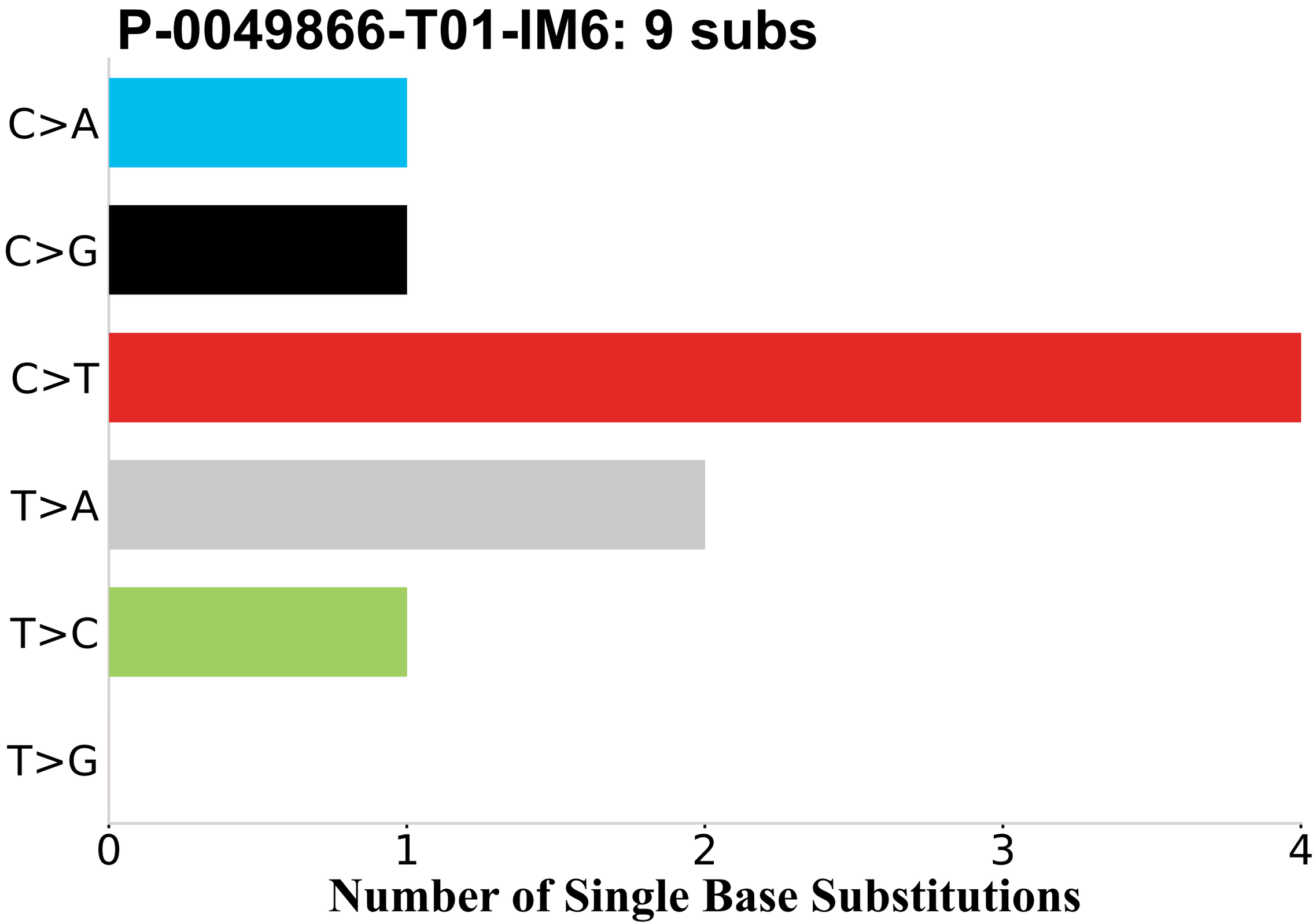
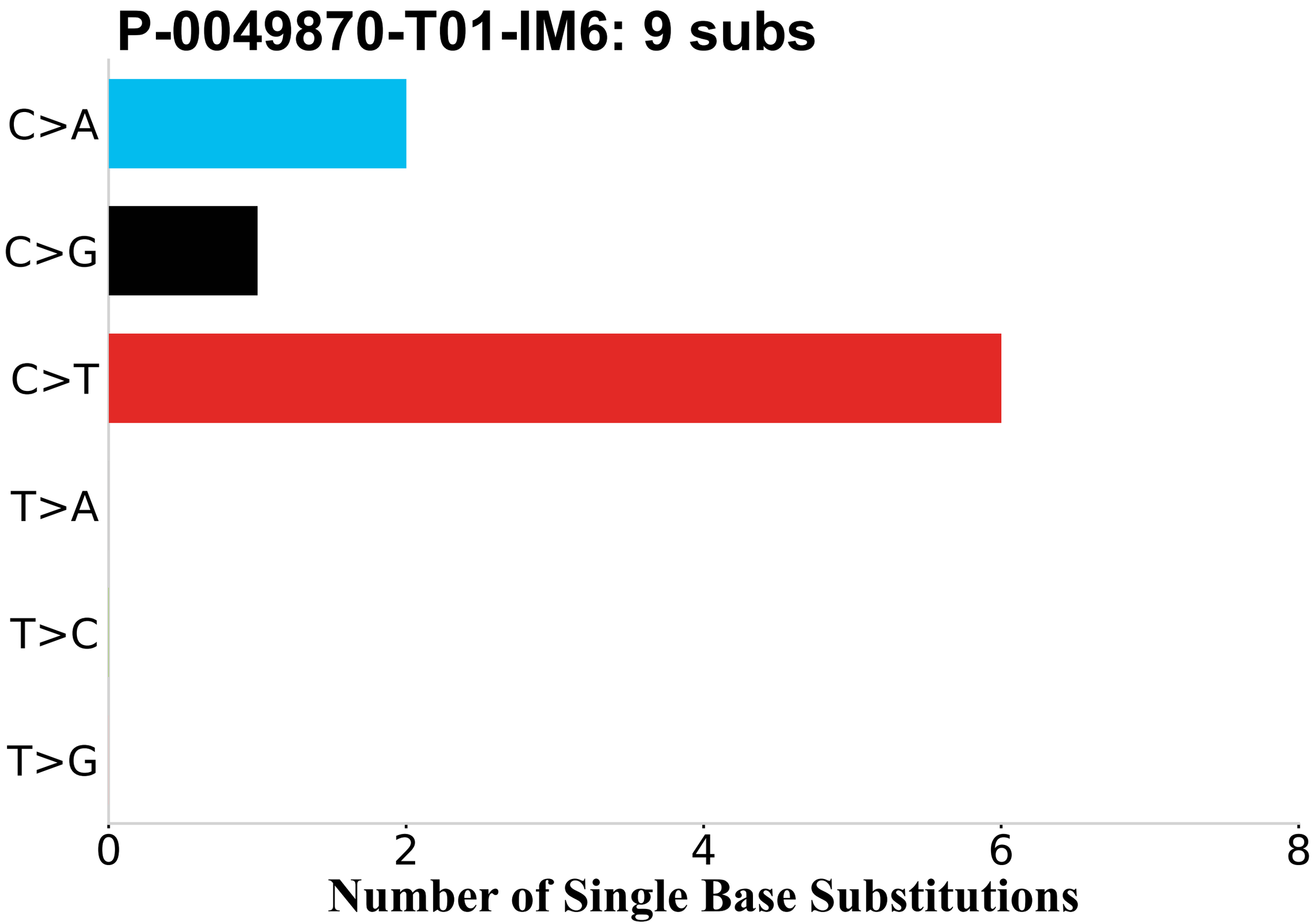
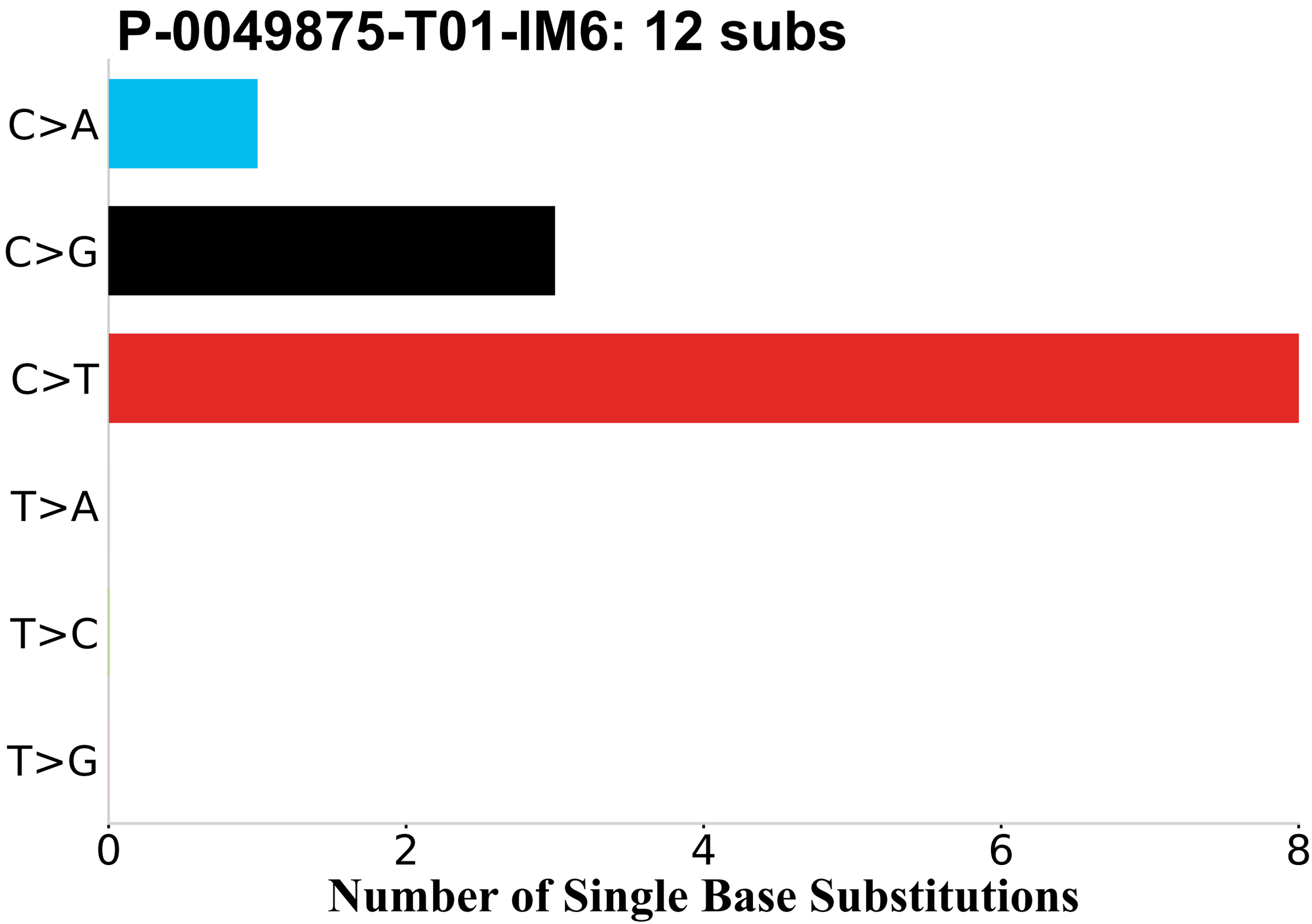
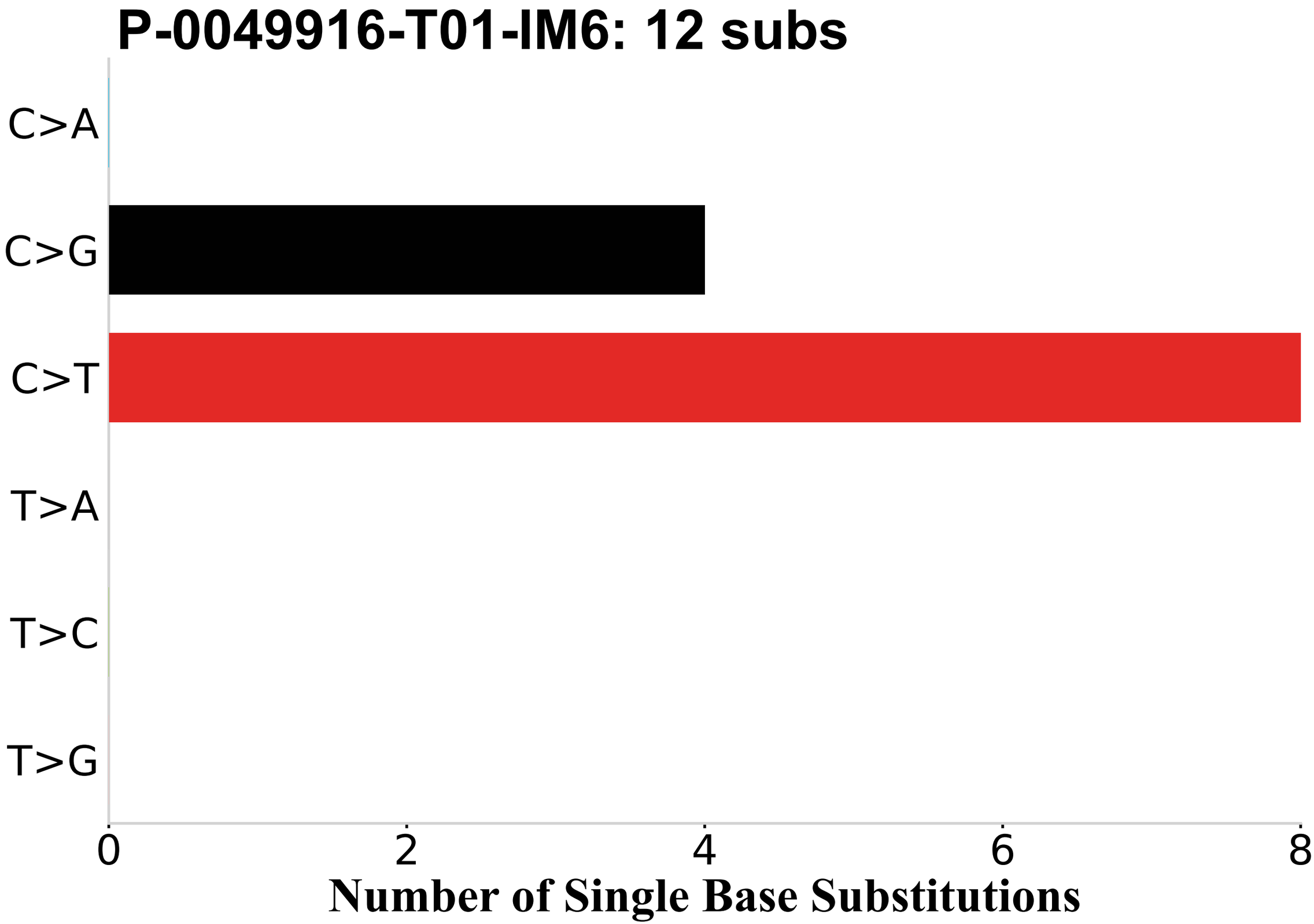
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions

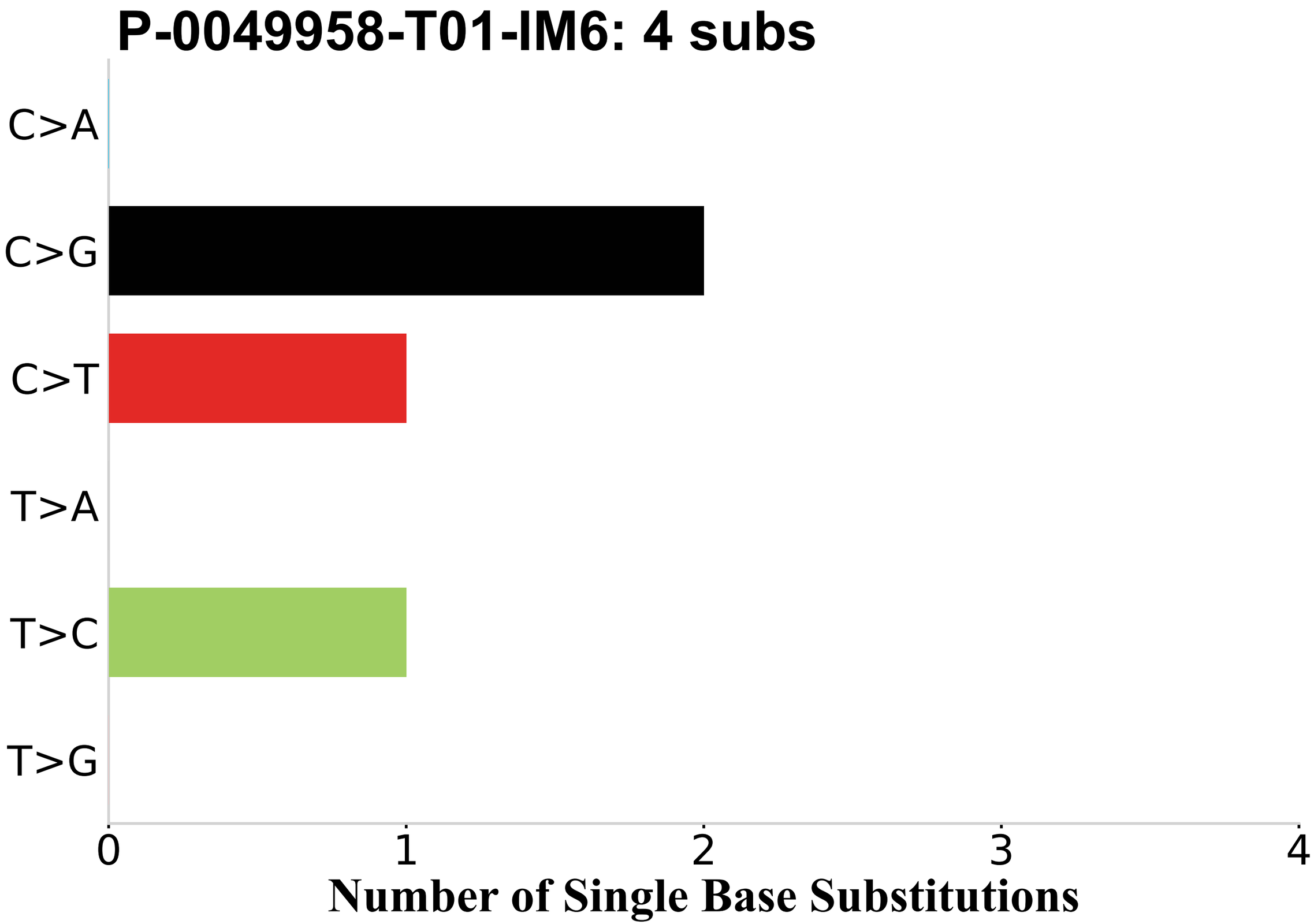

P-0049814-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

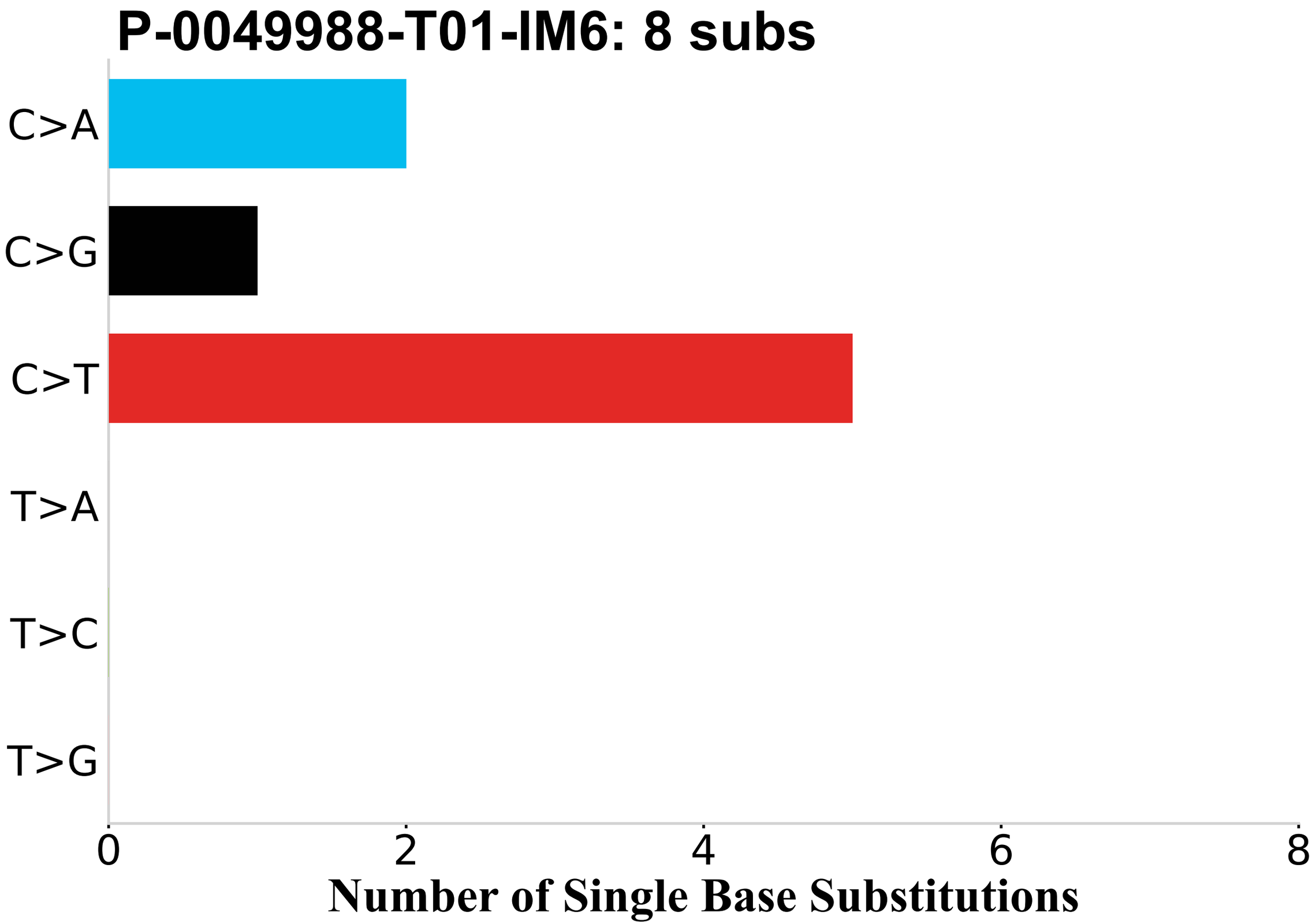

P-0049866-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0049870-T01-IM6: 9 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

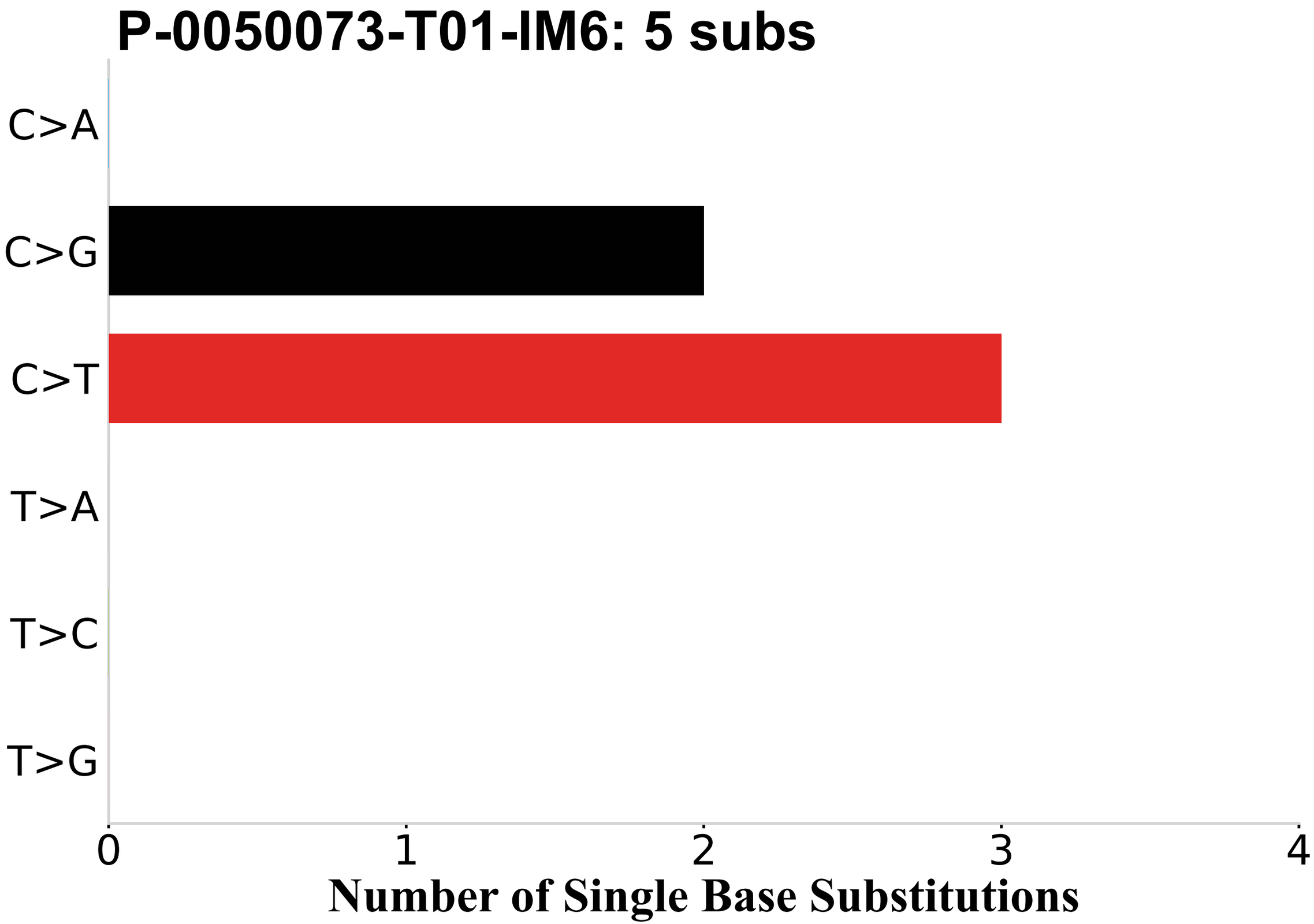

P-0049875-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

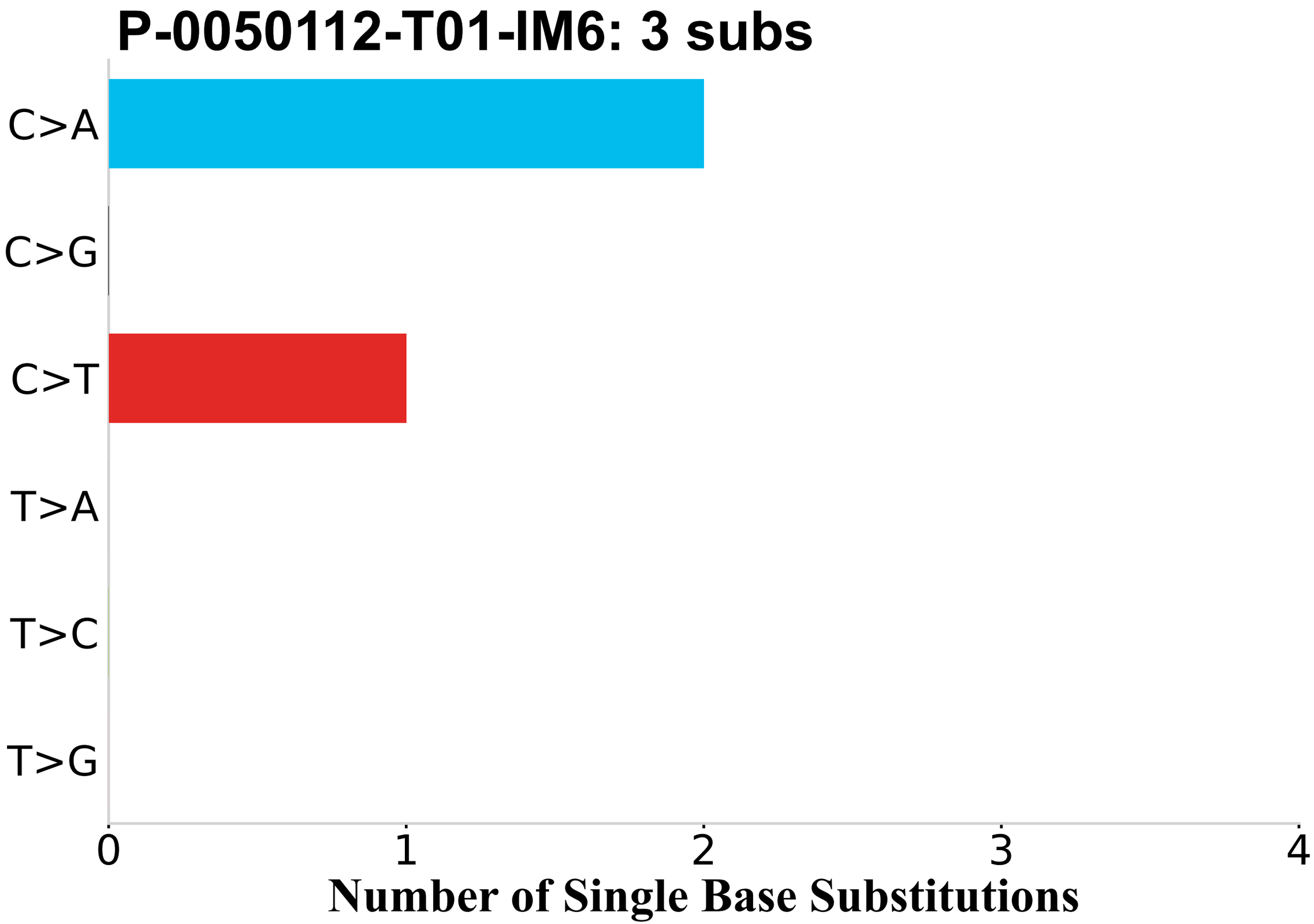

P-0049916-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

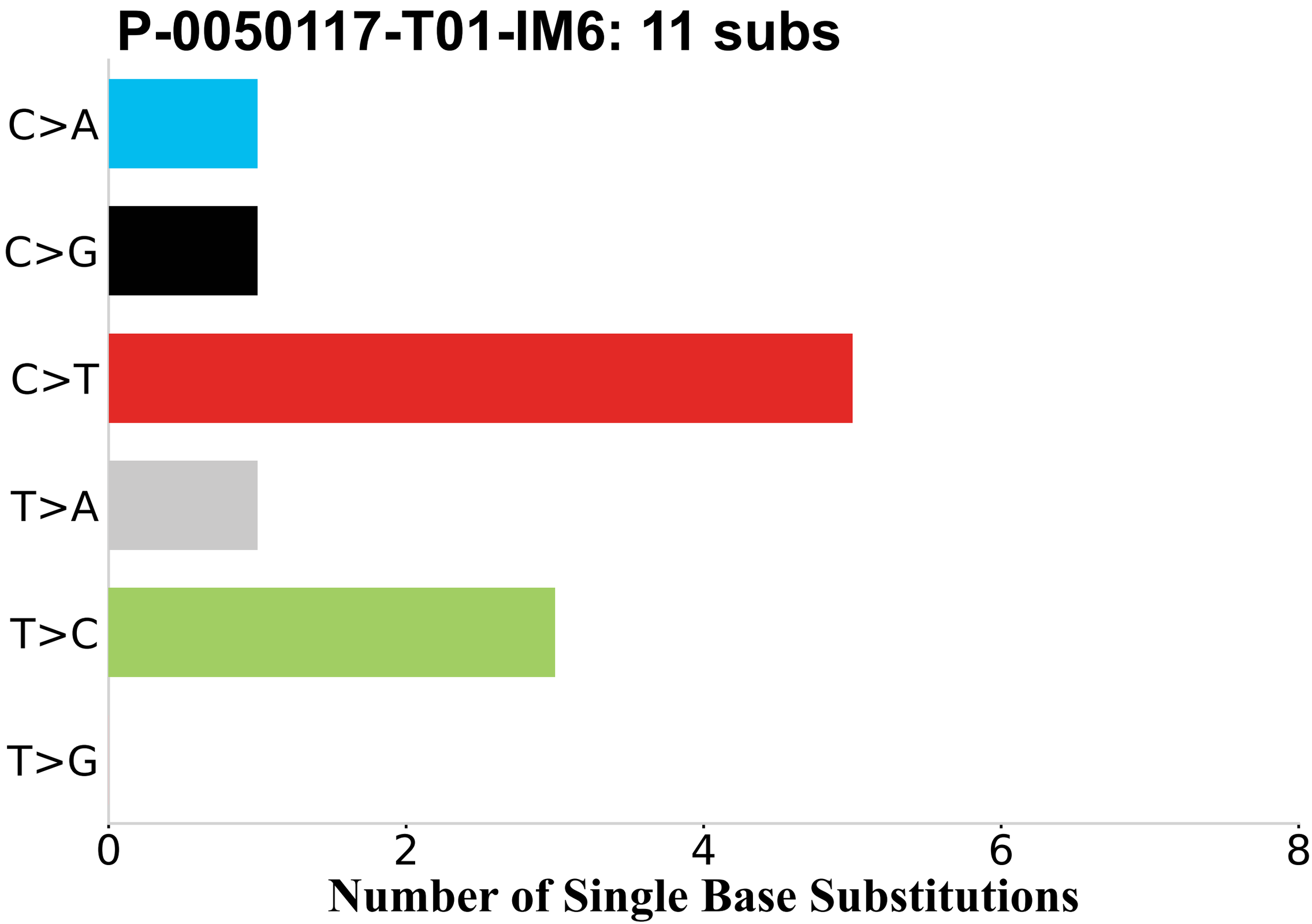

P-0049958-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

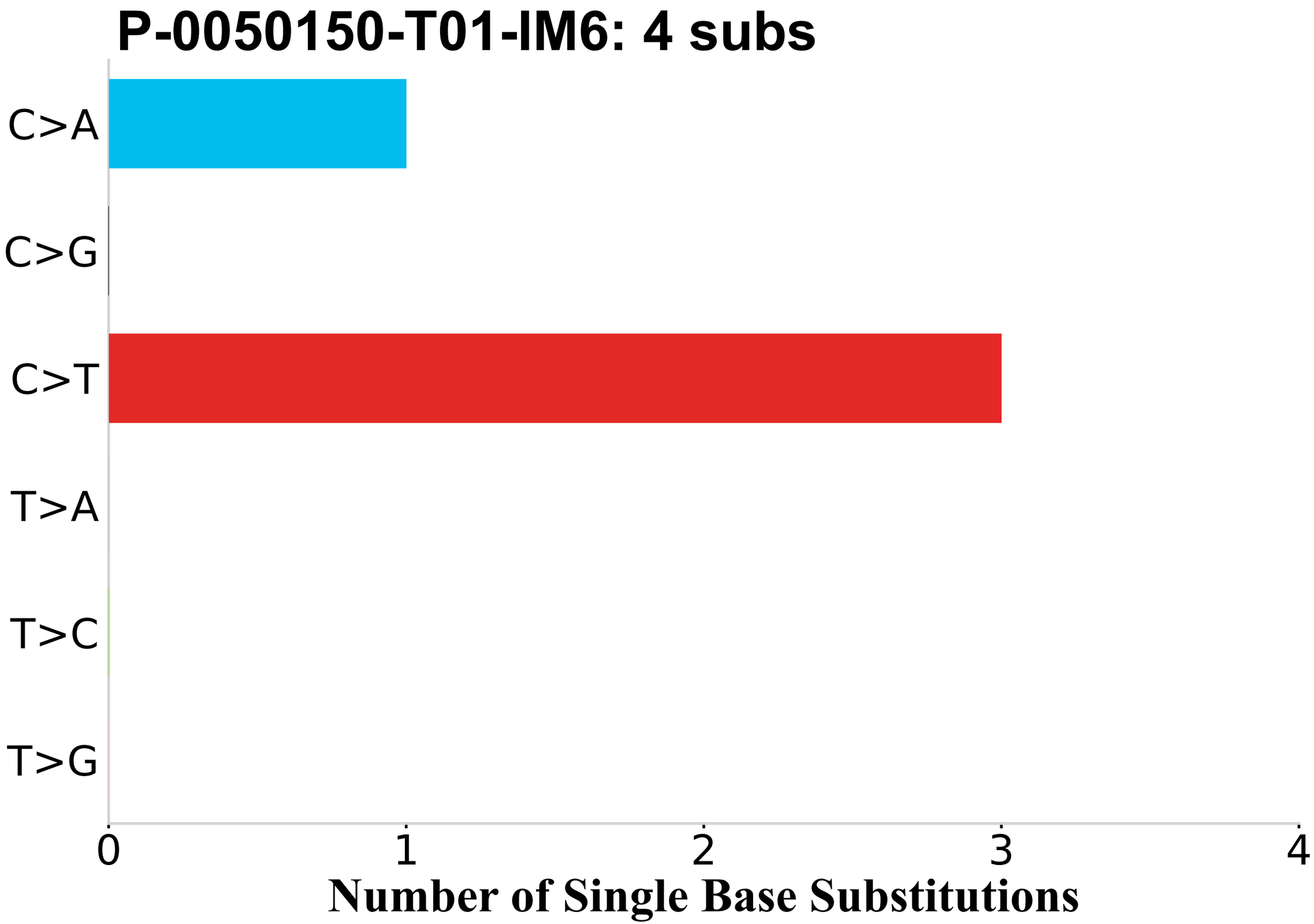

P-0049988-T01-IM6: 8 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

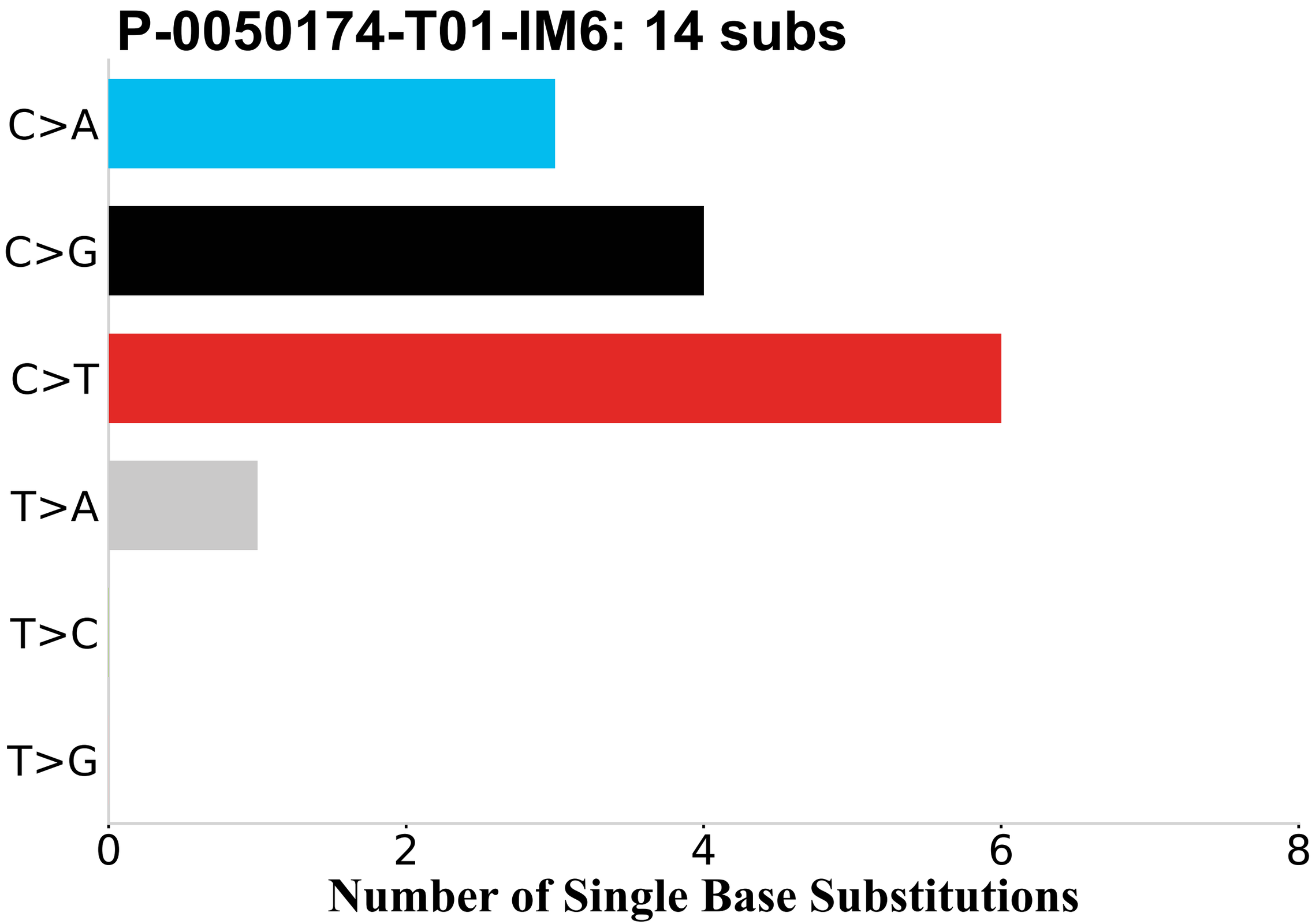
P-0049990-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

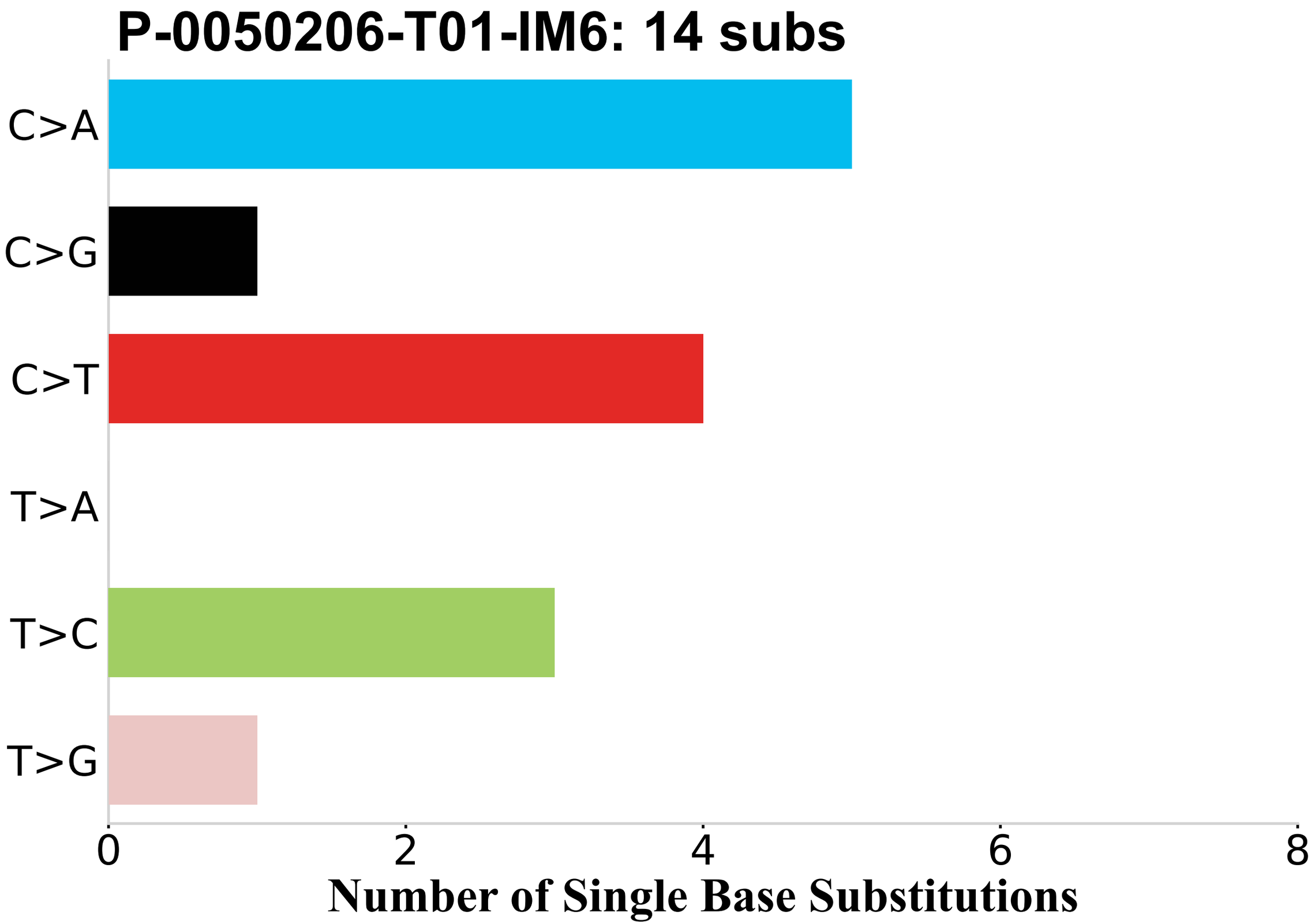

P-0050073-T01-IM6: 5 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

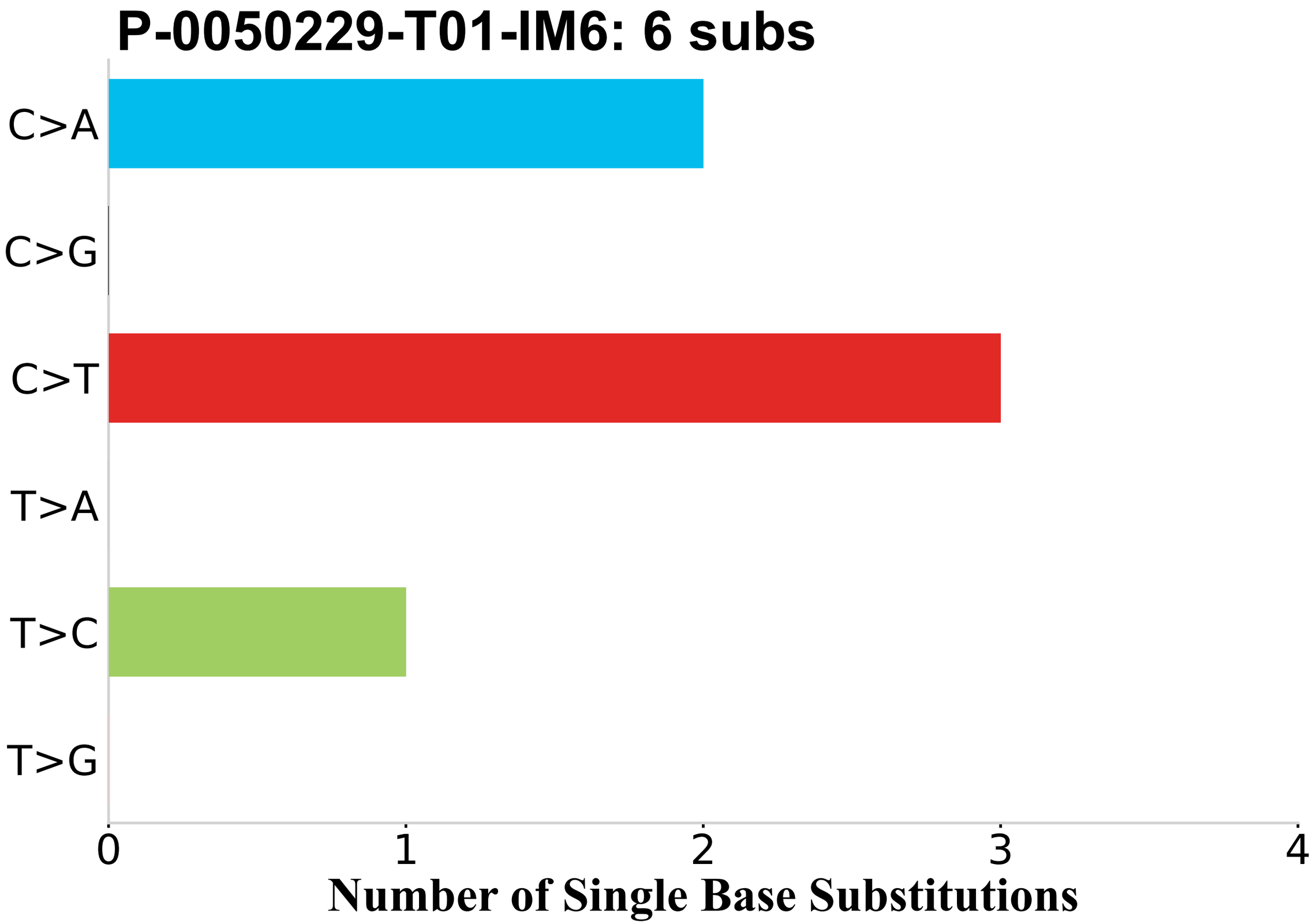

P-0050112-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

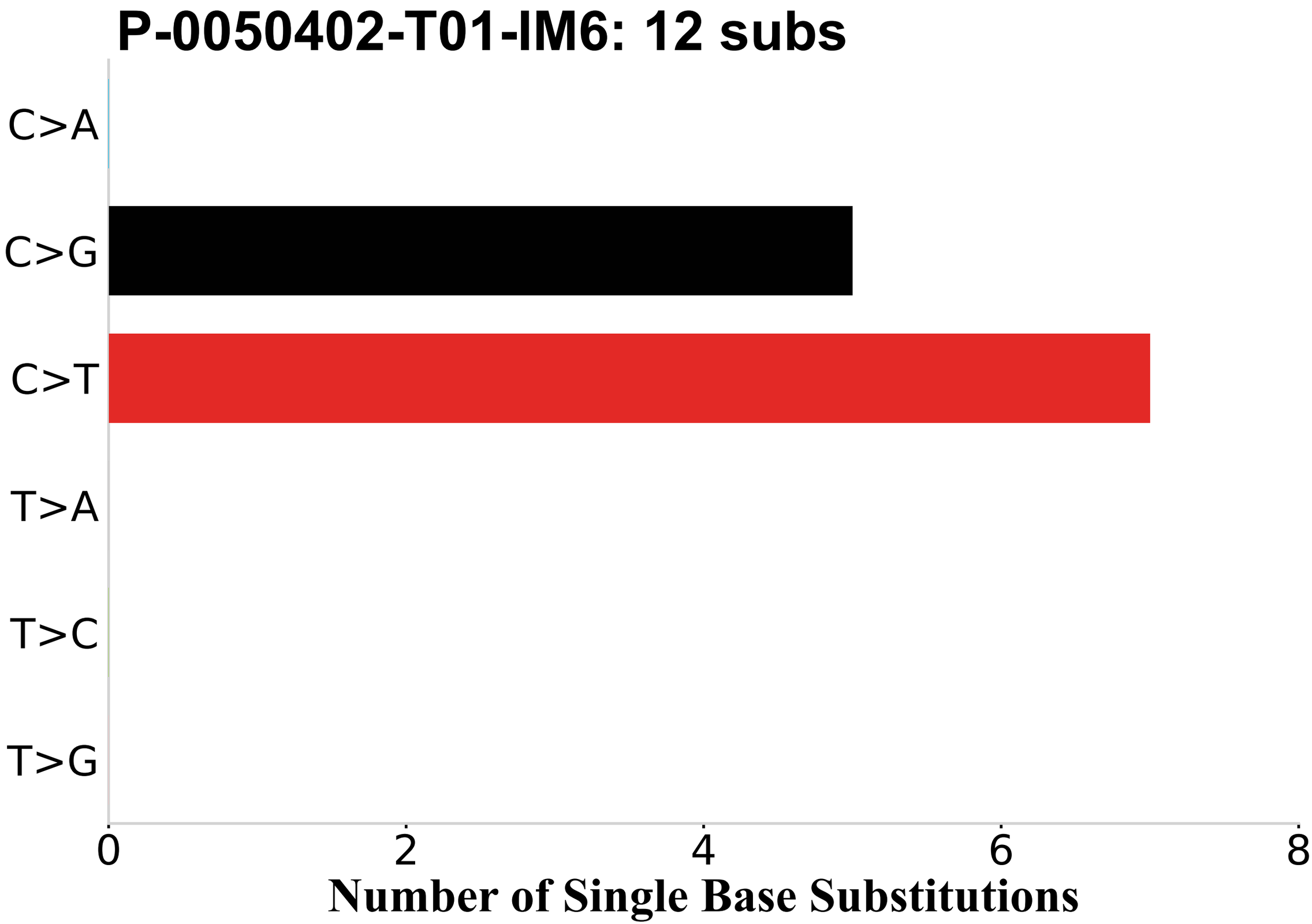

P-0050117-T01-IM6: 11 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

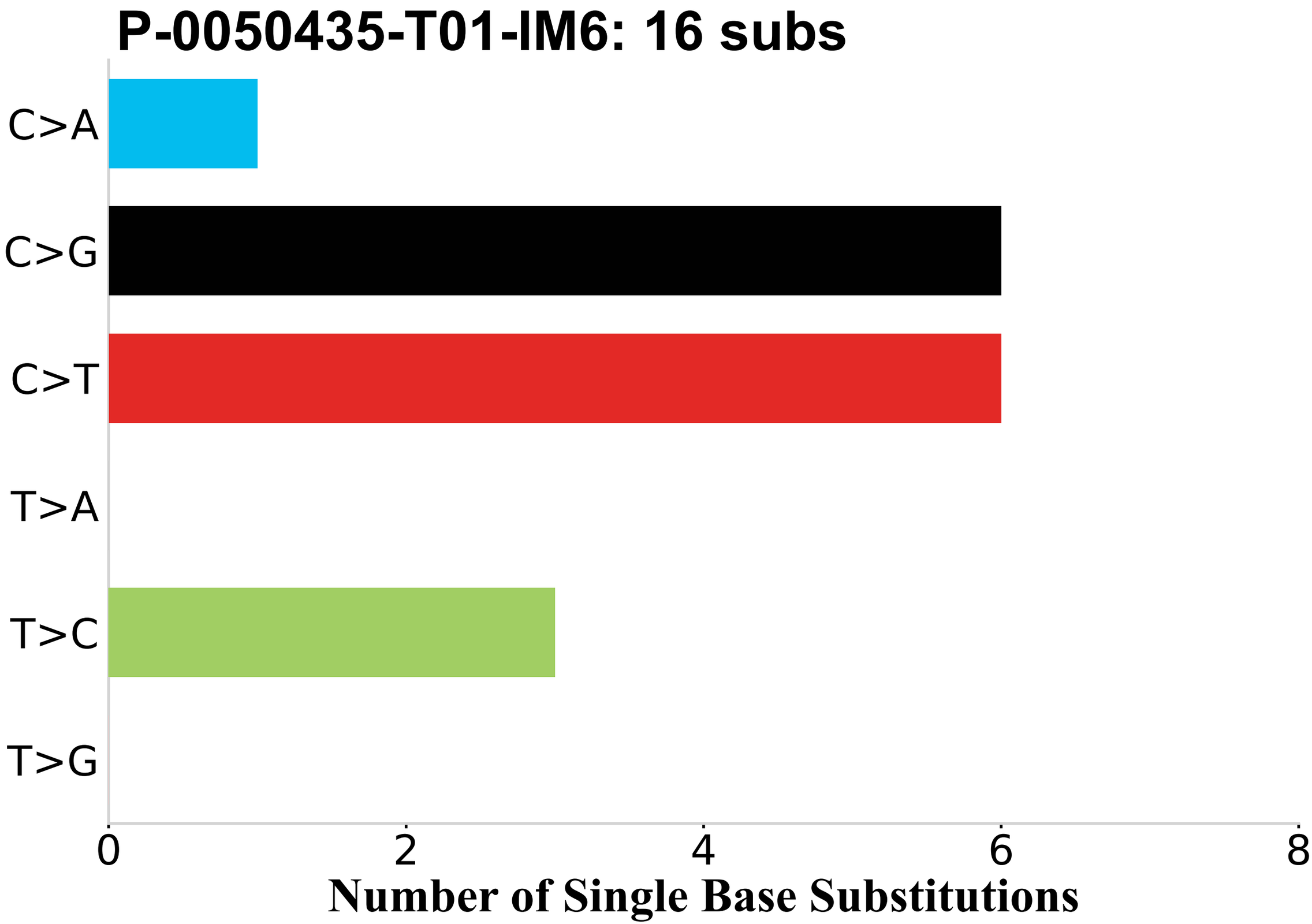

P-0050150-T01-IM6: 4 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

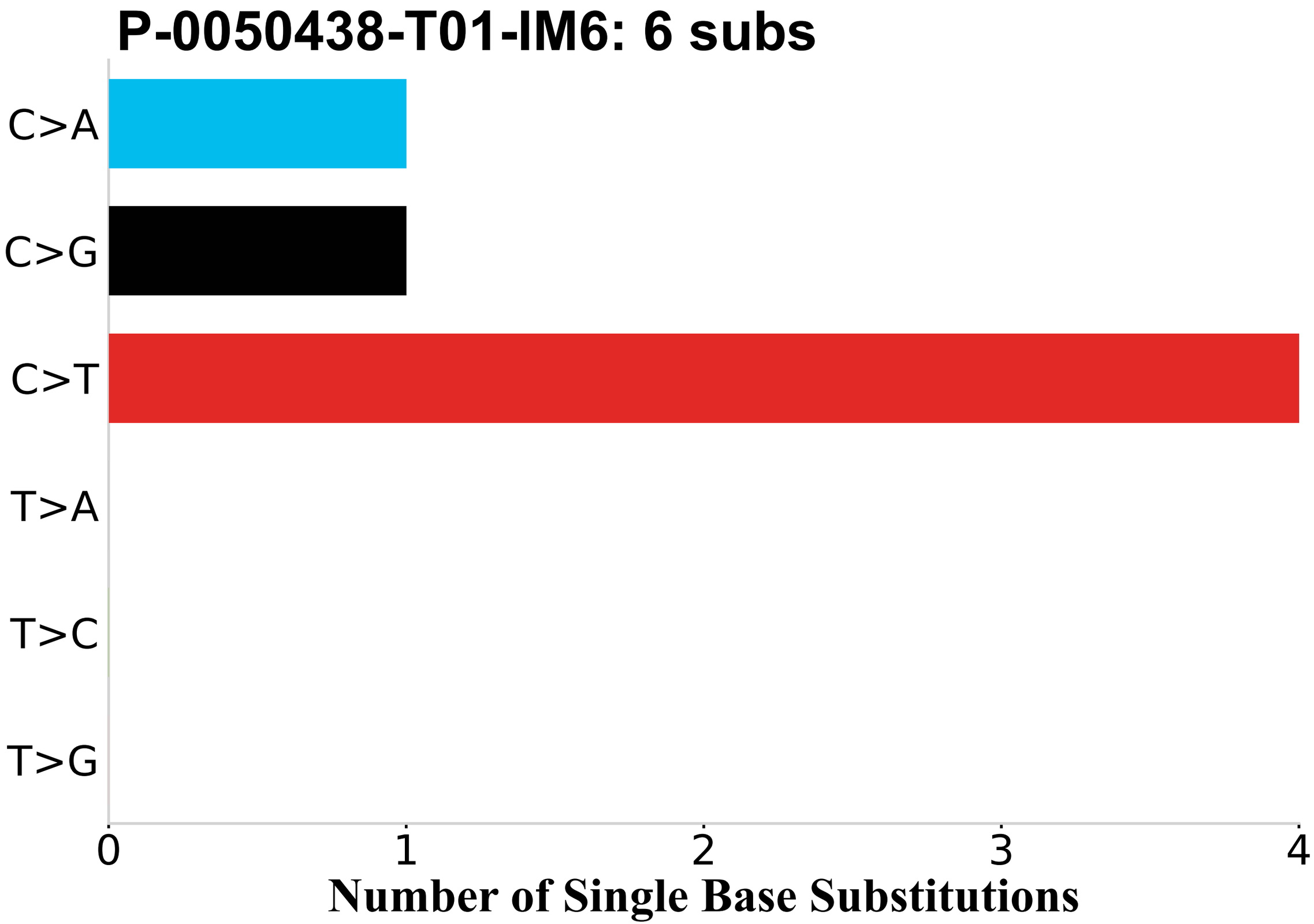

P-0050174-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

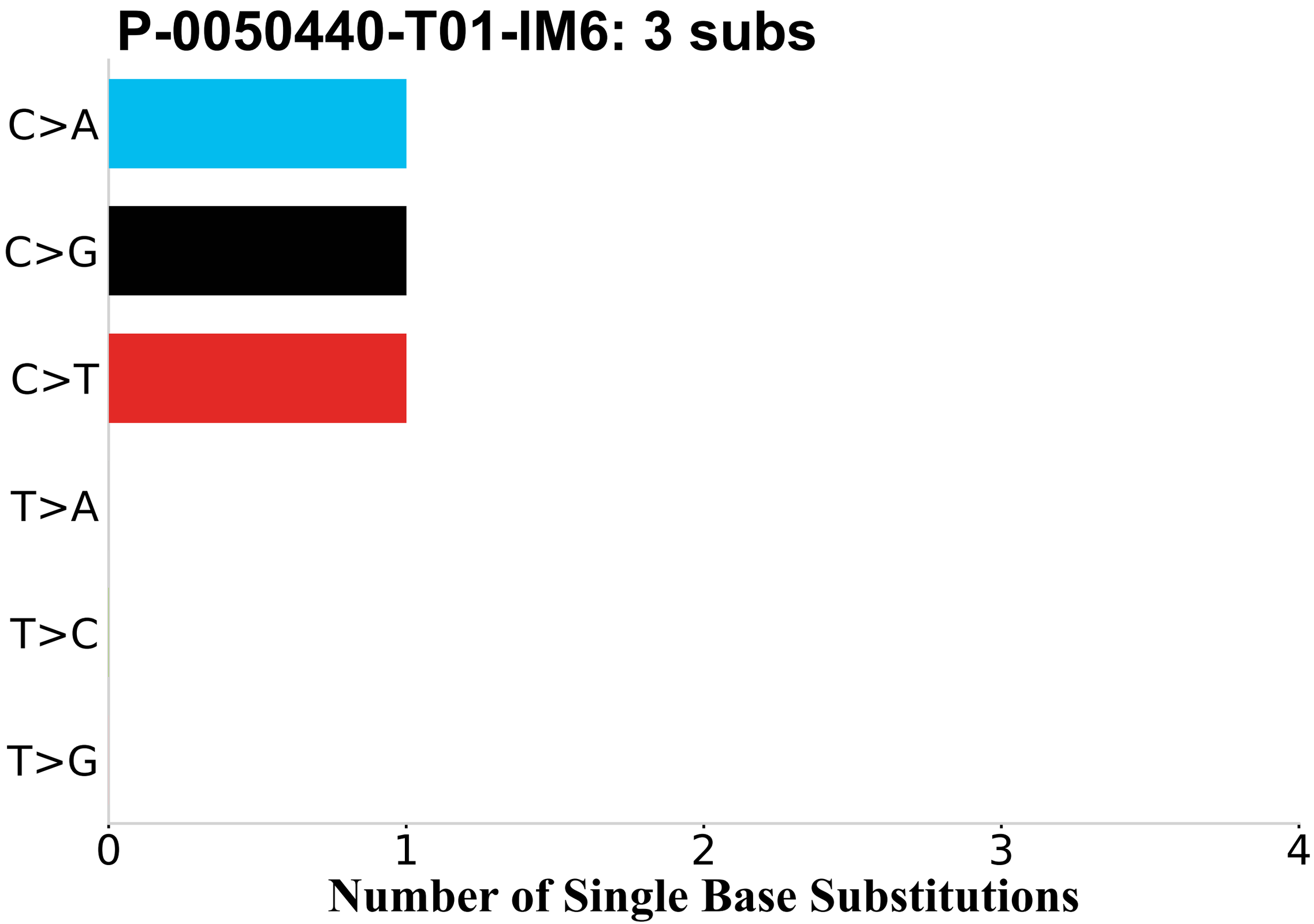

P-0050206-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0050229-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

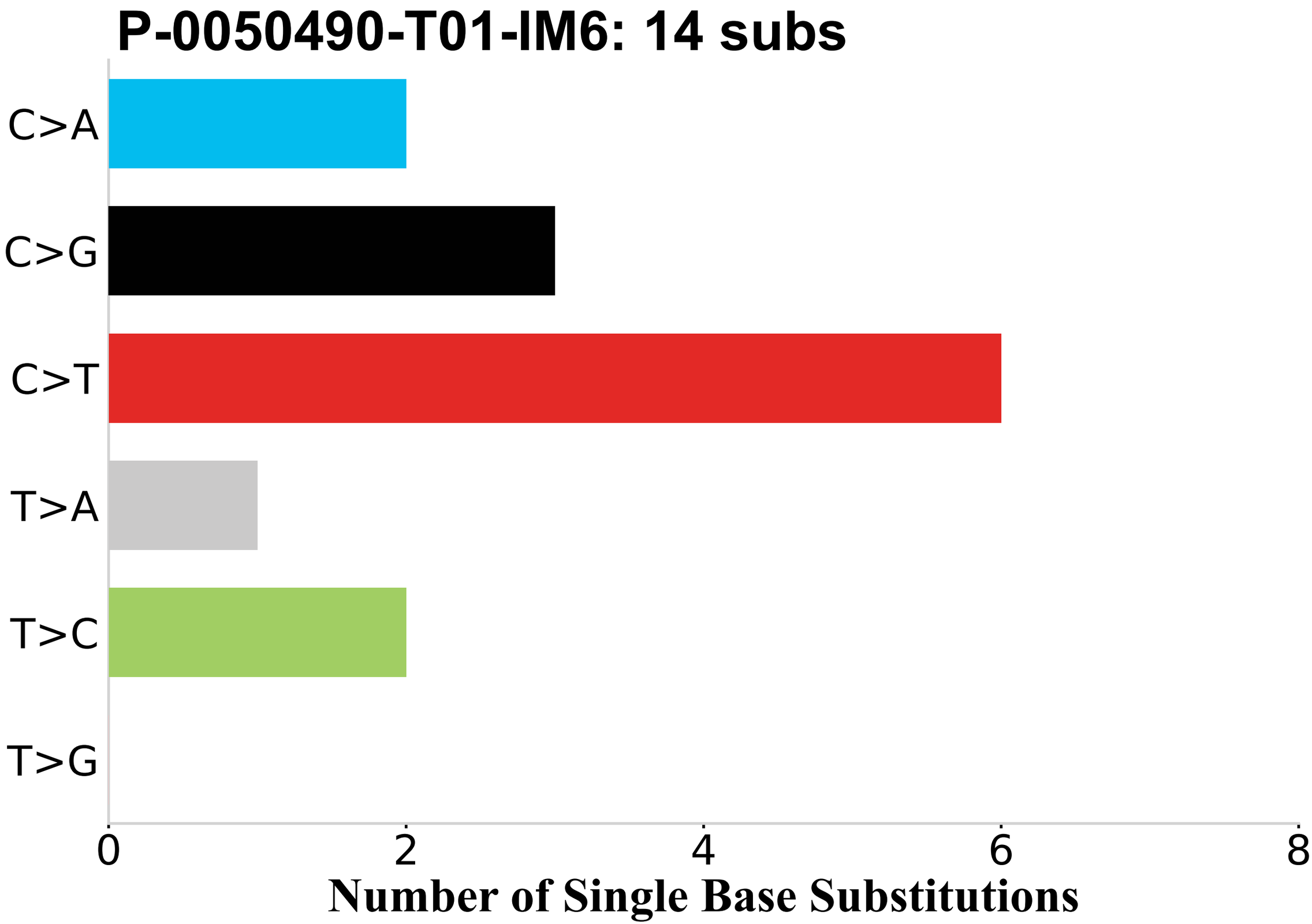

P-0050402-T01-IM6: 12 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions

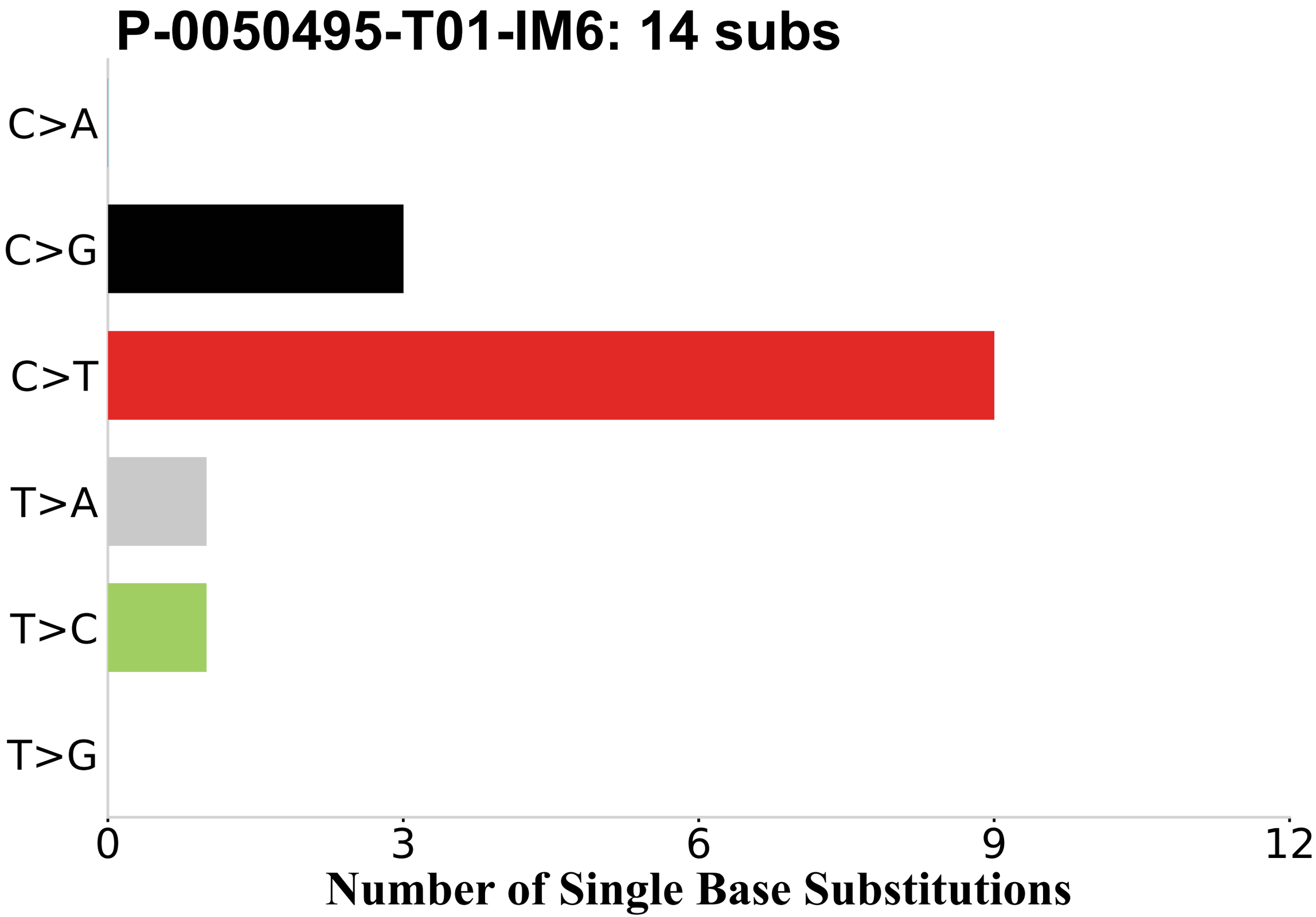

P-0050435-T01-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0050438-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0050440-T01-IM6: 3 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions

P-0050442-T01-IM6: 1 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
1
2
3
4
Number of Single Base Substitutions


P-0050490-T01-IM6: 14 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0050495-T01-IM6: 14 subs
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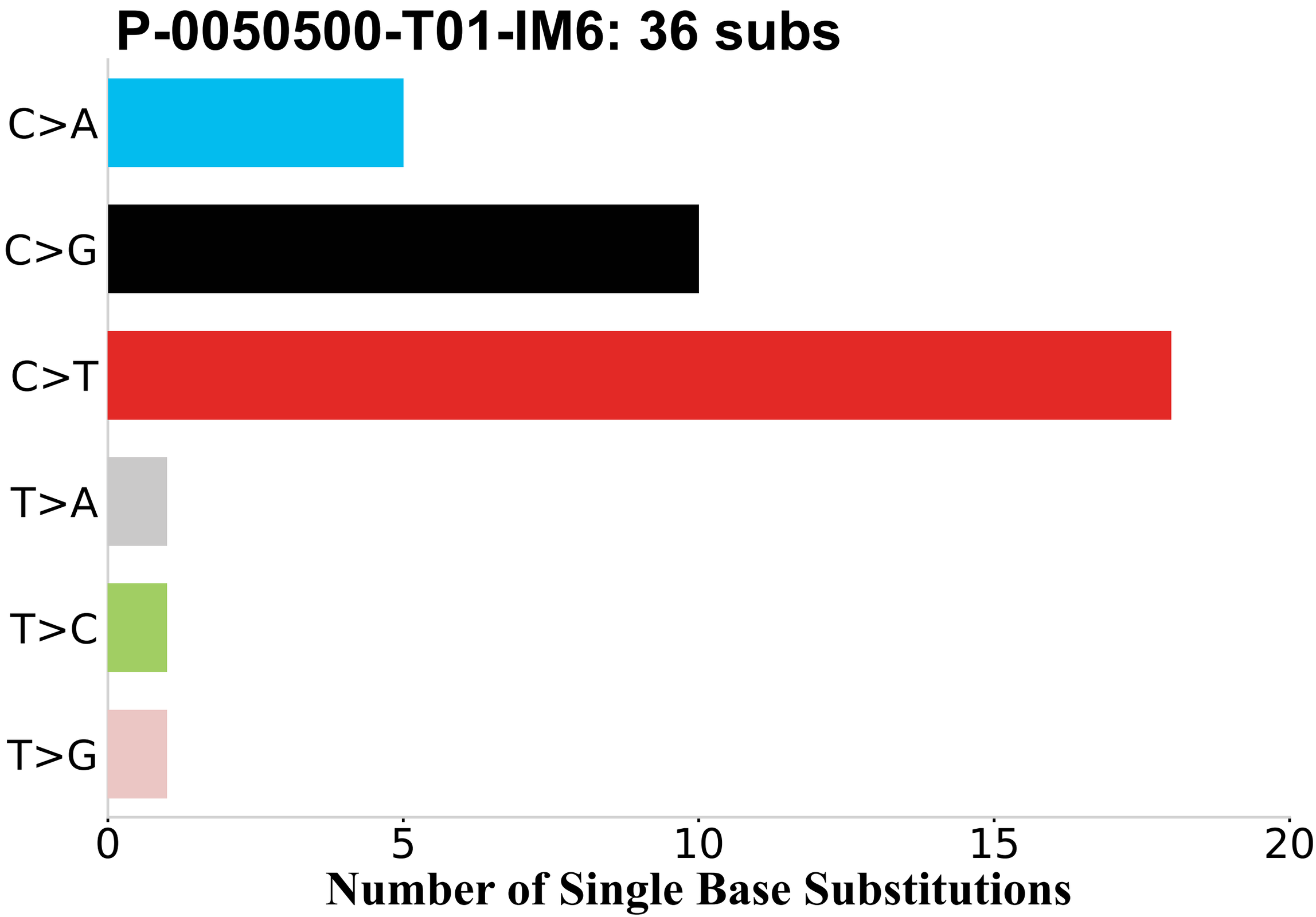
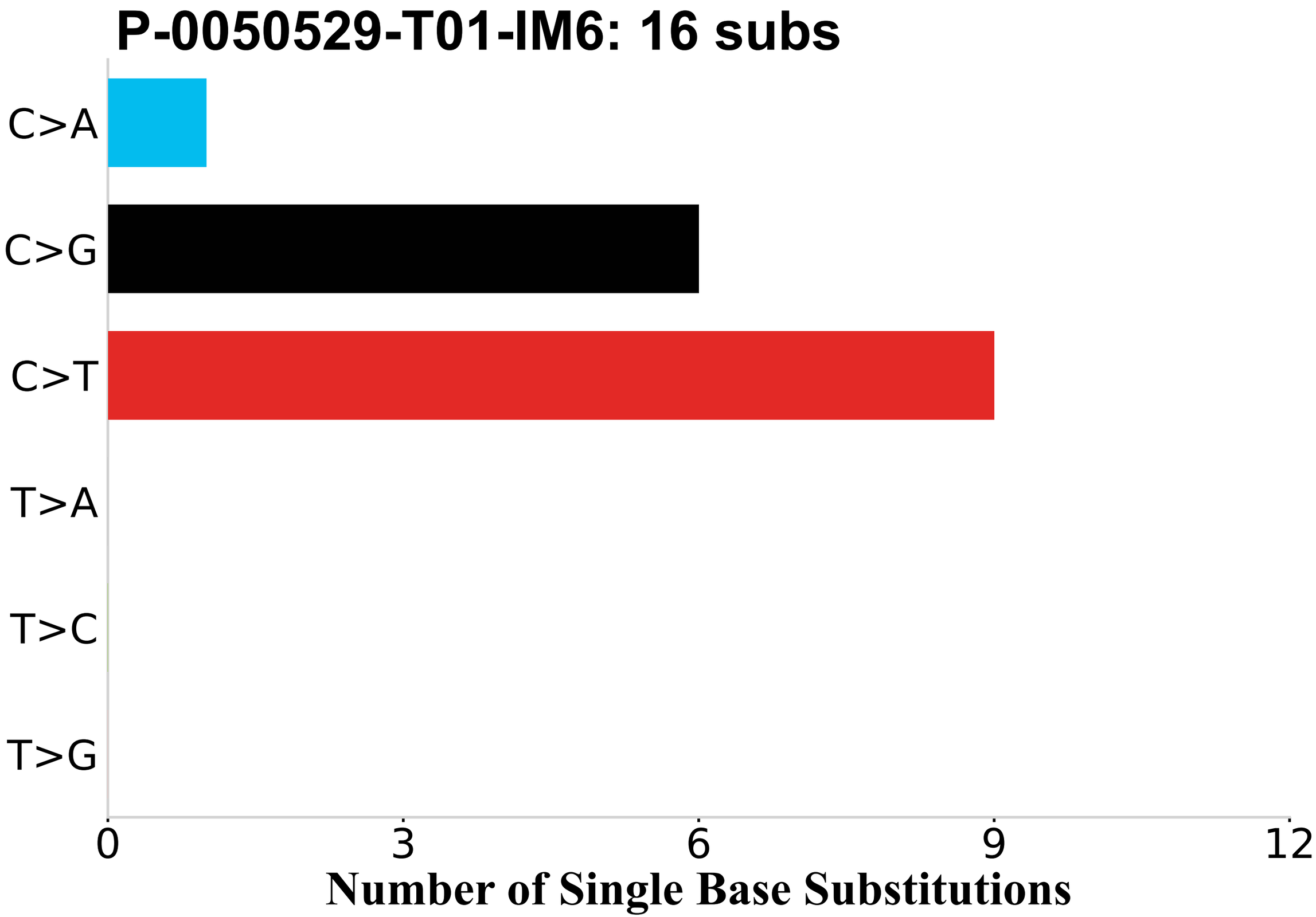
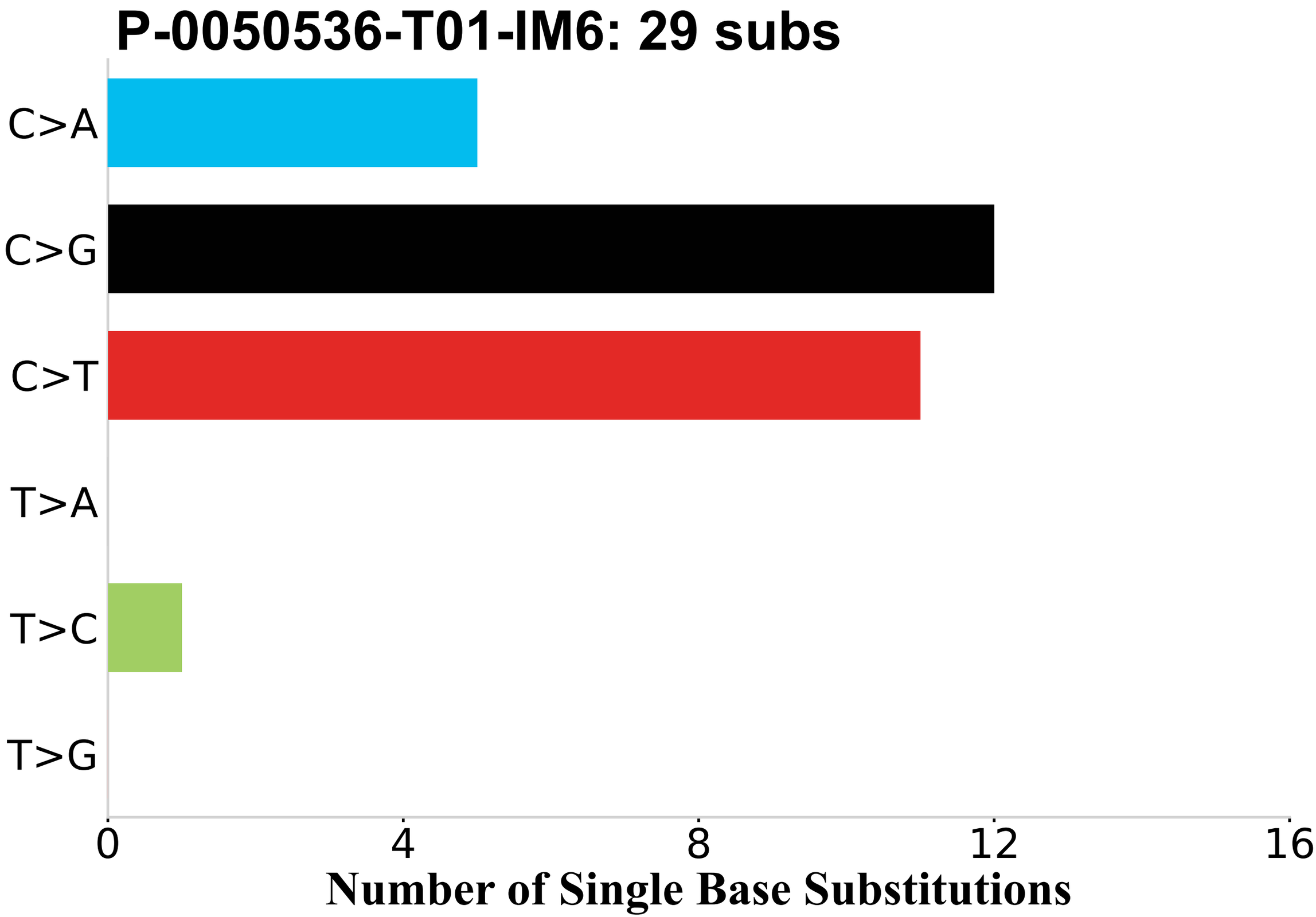
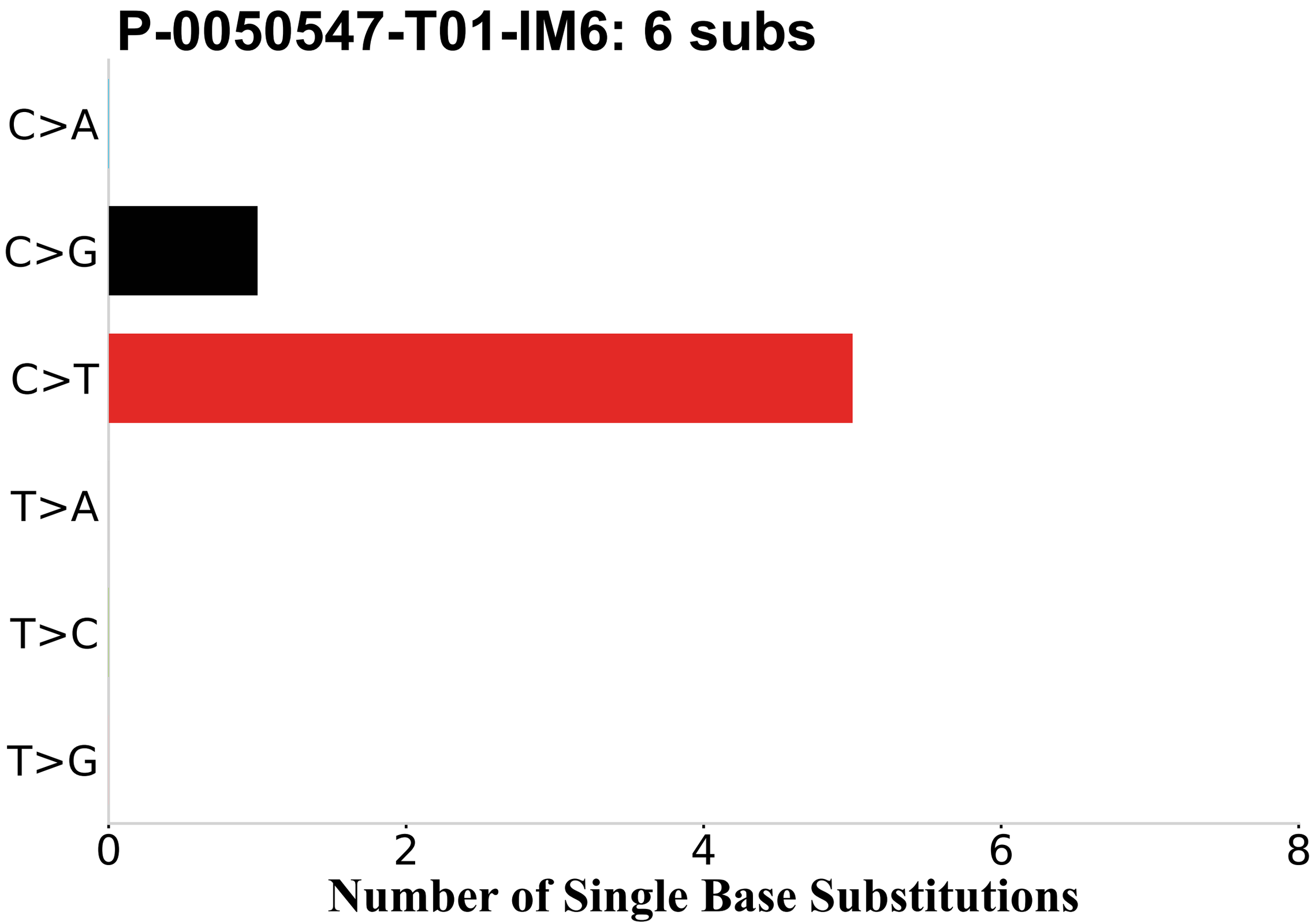
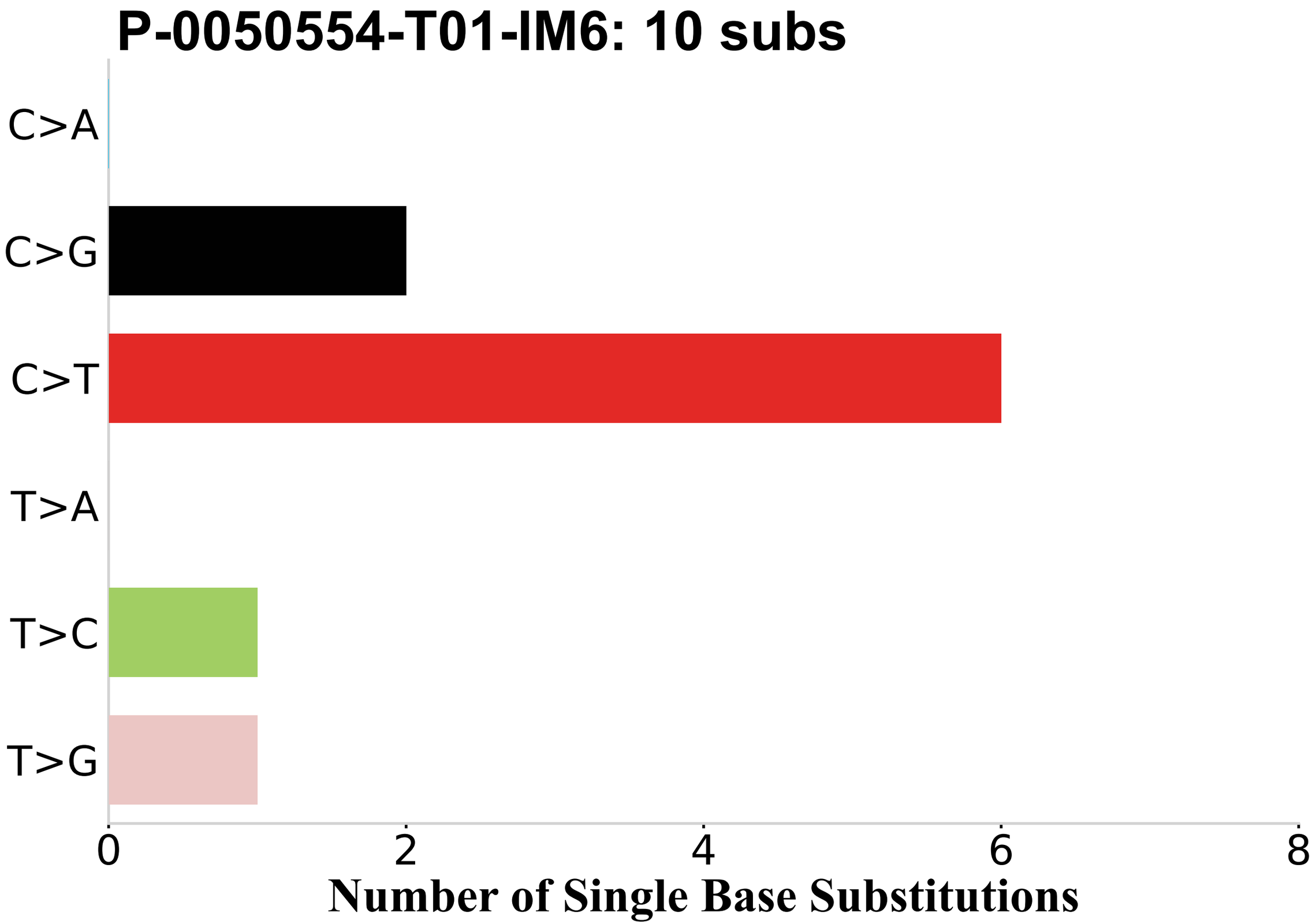
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions

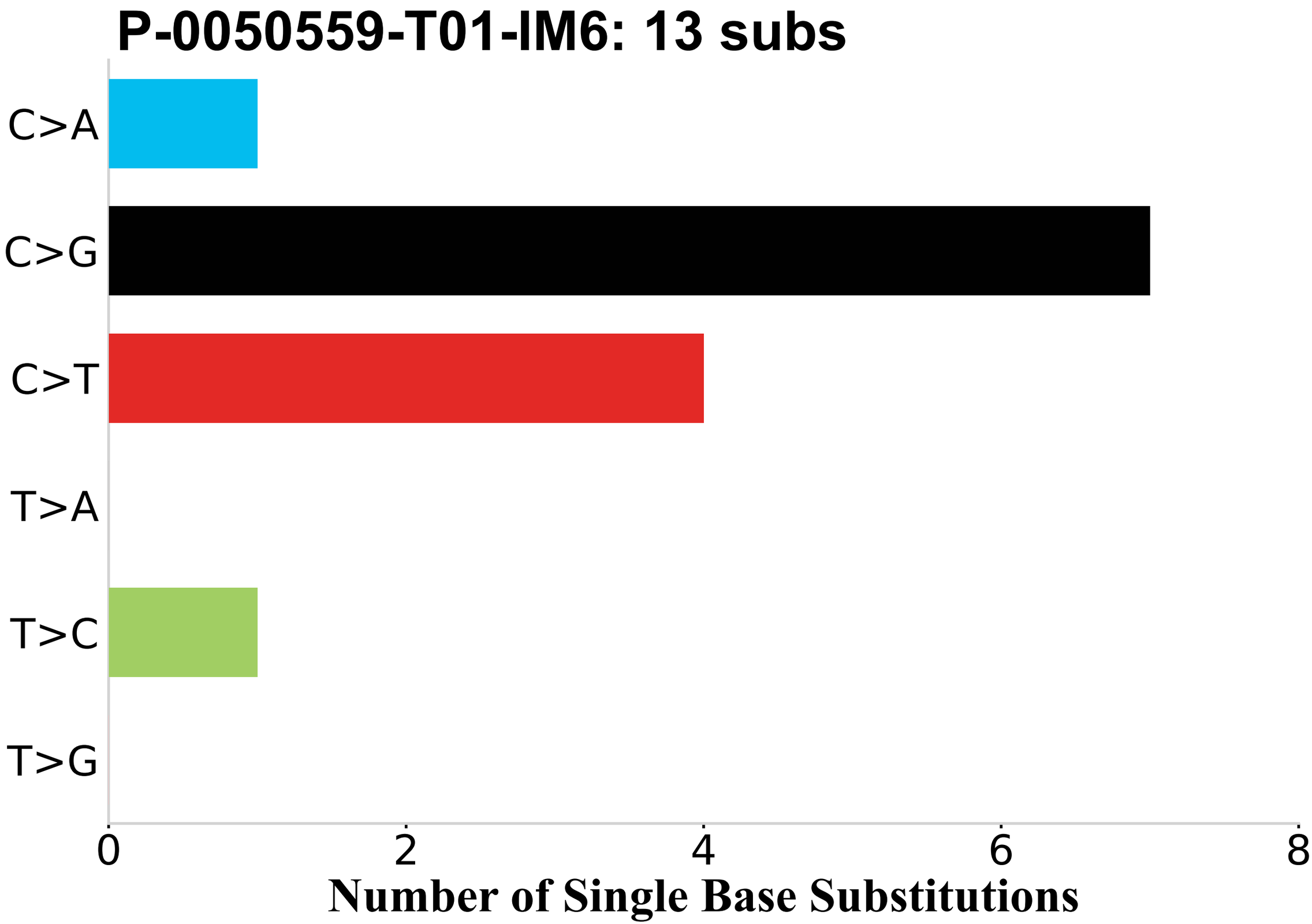

P-0050500-T01-IM6: 36 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
5
10
15
20
Number of Single Base Substitutions


P-0050529-T01-IM6: 16 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
3
6
9
12
Number of Single Base Substitutions


P-0050536-T01-IM6: 29 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
4
8
12
16
Number of Single Base Substitutions


P-0050547-T01-IM6: 6 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0050554-T01-IM6: 10 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions


P-0050559-T01-IM6: 13 subs
C>A
C>G
C>T
T>A
T>C
T>G
0
2
4
6
8
Number of Single Base Substitutions