

Alignment of T7 gene 10A, wt and designed variants

Changes from preferred to non-preferred codons are highlighted.

T7 gene 10A wt	ATGGCTAGCATGACTGGTGGACAGCAAATGGGTA	CTA	AACCAAGGTAAAGGTGTAGTTGCT	60
T7 gene 10A Fop=0.50	ATGGCTAGCATGACTGGTGGACAGCAAATGGGTA	CTA	AACCAAGGTAAAGGTGTAGTTGCT	60
T7 gene 10A Fop=0.30	ATGGCTAGCATGACTGGTGGACAGCAAATGGGTA	CTA	AACCAAGGTAAAGGTGTAGTTGCT	60
T7 gene 10A Fop=0.20	ATGGCTAGCATGACTGGTGGACAGCAAATGGGTA	CTA	AACCAAGGTAAAGGTGTAGTTGCT	60
T7 gene 10A Fop=0.10	ATGGCTAGCATGACTGGTGGACAGCAAATGGGTA	CTA	AACCAAGGTAAAGGTGTAGTTGCT	60
T7 gene 10A wt	GCTGGAGATAAACTGGCGTTGTTCTTGAAGGTATTTGGCGGTGAAGTCCTGACTGCGTTC	120		
T7 gene 10A Fop=0.50	GCTGGAGATAAACTGGCGTTGTTCTTGAAGGTATTTGGCGGTGAAGTCCTGACTGCGTTC	120		
T7 gene 10A Fop=0.30	GCTGGAGATAAACTGGCGTTGTTCTTGAAGGTATTTGGCGGTGAAGTCCTGACTGCGTTC	120		
T7 gene 10A Fop=0.20	GCTGGAGATAAACTGGCGTTGTTCTTGAAGGTATTTGGCGGTGAAGTCCTGACTGCGTTC	120		
T7 gene 10A Fop=0.10	GCTGGAGATAAACTGGCGTTGTTCTTGAAGGTATTTGGCGGTGAAGTCCTGACTGCGTTC	120		
T7 gene 10A wt	GCTCGTACCTCCGTGACCACTTCTCGCCACATGGTACGTTCCATCTCCAGCGGTAAATCC	180		
T7 gene 10A Fop=0.50	GCTCGTACCTCCGTGACCACTTCTCGCCACATGGTACGTTCCATCTCCAGCGGTAAATCC	180		
T7 gene 10A Fop=0.30	GCTCGTACCTCCGTGACCACTTCTCGCCACATGGTACGTTCCATCTCCAGCGGTAAATCC	180		
T7 gene 10A Fop=0.20	GCTCGTACCTCCGTGACCACTTCTCGCCACATGGTACGTTCCATCTCCAGCGGTAAATCC	180		
T7 gene 10A Fop=0.10	GCTCGTACCTCCGTGACCACTTCTCGCCACATGGTACGTTCCATCTCCAGCGGTAAATCC	180		
T7 gene 10A wt	GCTCAGTTCCTGTTCTGGGTCGCACTCAGGCAGCGTATCTGGCTCCGGGCGAGAACCTC	240		
T7 gene 10A Fop=0.50	GCTCAGTTCCTGTTCTGGGTCGCACTCAGGCAGCGTATCTGGCTCCGGGCGAGAACCTC	240		
T7 gene 10A Fop=0.30	GCTCAGTTCCTGTTCTGGGTCGCACTCAGGCAGCGTATCTGGCTCCGGGCGAGAACCTC	240		
T7 gene 10A Fop=0.20	GCTCAGTTCCTGTTCTGGGTCGCACTCAGGCAGCGTATCTGGCTCCGGGCGAGAACCTC	240		
T7 gene 10A Fop=0.10	GCTCAGTTCCTGTTCTGGGTCGCACTCAGGCAGCGTATCTGGCTCCGGGCGAGAACCTC	240		
T7 gene 10A wt	GACGATAAACGTAAGGACATCAAACACACCCGAGAAGGTAATCACCATTGACGGTCTCCTG	300		
T7 gene 10A Fop=0.50	GACGATAAACGTAAGGACATCAAACACACCCGAGAAGGTAATCACCATTGACGGTCTCCTG	300		
T7 gene 10A Fop=0.30	GACGATAAACGTAAGGACATCAAACACACCCGAGAAGGTAATCACCATTGACGGTCTCCTG	300		
T7 gene 10A Fop=0.20	GACGATAAACGTAAGGACATCAAACACACCCGAGAAGGTAATCACCATTGACGGTCTCCTG	300		
T7 gene 10A Fop=0.10	GACGATAAACGTAAGGACATCAAACACACCCGAGAAGGTAATCACCATTGACGGTCTCCTG	300		
T7 gene 10A wt	ACGGCTGACGTTCTGATTTATGATATTGAGGACGCGATGAACCACTACGACGTTTCGCTCT	360		
T7 gene 10A Fop=0.50	ACGGCTGACGTTCTGATTTATGATATTGAGGACGCGATGAACCACTACGACGTTTCGCTCT	360		
T7 gene 10A Fop=0.30	ACGGCTGACGTTCTGATTTATGATATTGAGGACGCGATGAACCACTACGACGTTTCGCTCT	360		
T7 gene 10A Fop=0.20	ACGGCTGACGTTCTGATTTATGATATTGAGGACGCGATGAACCACTACGACGTTTCGCTCT	360		
T7 gene 10A Fop=0.10	ACGGCTGACGTTCTGATTTATGATATTGAGGACGCGATGAACCACTACGACGTTTCGCTCT	360		

T7 gene 10A wt	GAGTATACCTCTCAGTTGGGTGAATCTCTGGCGATGGCTGCGGATGGTGCGGTTCTGGCT	420
T7 gene 10A Fop=0.50	GAGTATACCTCTCAGTTGGGTGAATCTTTAGCGATGGCAGCGGATGGTGCGGTGCTAGCC	420
T7 gene 10A Fop=0.30	GAGTATACCTCTCAATTGGGTGAAAGCTTAGCGATGGCAGCGGATGGTGCGGTGCTAGCC	420
T7 gene 10A Fop=0.20	GAGTATACCTCTCAATTGGGTGAAAGCTTAGCGATGGCAGCGGATGGAGCGGTGCTAGCC	420
T7 gene 10A Fop=0.10	GAGTATACCAGCCAATTGGGAGAGAGCTTAGCGATGGCAGCGGATGGAGCGGTGCTAGCC	420
T7 gene 10A wt	GAGATTGCCGGTCTGTGTAACGTGGAAAGCAAATATAATGAGAACATCGAGGGCTTAGGT	480
T7 gene 10A Fop=0.50	GAGATTGCCGGTCTGTGTAACGTGGAGAGCAAATATAATGAGAATATCGAGGGCTTAGGT	480
T7 gene 10A Fop=0.30	GAGATTGCCGGTCTGTGTAACGTGGAGAGCAAATATAATGAGAATATCGAGGGCTTAGGT	480
T7 gene 10A Fop=0.20	GAGATTGCCGGGTTGTGTAAATGTGGAGAGCAAATATAATGAGAATATAGAGGGCTTAGGT	480
T7 gene 10A Fop=0.10	GAGATTGCCGGGTTGTGTAAATGTGGAGAGCAAATATAATGAGAATATAGAGGGCTTAGGA	480
T7 gene 10A wt	ACTGCTACCGTAATTGAGACCACTCAGAACAAGGCCGCACTTACCGACCAAGTTGCGCTG	540
T7 gene 10A Fop=0.50	ACAGCAACCGTAATTGAGACCACTCAGAACAAGGCCGCACTTACCGACCAAGTTGCGTTG	540
T7 gene 10A Fop=0.30	ACAGCAACAGTAATTGAGACCACTCAAAATAAGGCCGCACTTACCGACCAAGTCGCGTTG	540
T7 gene 10A Fop=0.20	ACAGCAACAGTAATTGAGACGACTCAAAATAAGGCCGCACTTACCGACCAAGTCGCGTTG	540
T7 gene 10A Fop=0.10	ACAGCAACAGTGATTGAGACGACACAAAATAAGGCCGCACTTACCGACCAAGTCGCGTTG	540
T7 gene 10A wt	GGTAAGGAGATTATTGCGGCTCTGACTAAGGCTCGTGCGGCTCTGACCAAGAAGTATGTT	600
T7 gene 10A Fop=0.50	GGAAAGGAGATTATTGCGGCCCTGACTAAGGCCCGTGCGGCTCTCACCAAGAAGTATGTT	600
T7 gene 10A Fop=0.30	GGAAAGGAGATTATTGCGGCCCTCACAAAGGCCCGTGCGGCGCTCACCAAGAAGTATGTG	600
T7 gene 10A Fop=0.20	GGAAAGGAGATTATTGCGGCCCTCACAAAGGCCCGTGCGGCGCTCACCAAGAATTATGTG	600
T7 gene 10A Fop=0.10	GGAAAGGAGATTATTGCGGCCCTCACAAAGGCCCGAGCGGCGCTCACCAAGAATTATGTG	600
T7 gene 10A wt	CCGGCTGCTGACCGTGTGTTCTACTGTGACCCAGATAGCTACTCTGCGATTCTGGCAGCA	660
T7 gene 10A Fop=0.50	CCCGCGGCGGACCGTGTGTTCTATTGTGACCCAGATAGCTACTCTGCGATTCTGGCAGCA	660
T7 gene 10A Fop=0.30	CCCGCGGCGGATAGGGTGTTTTATTGTGACCCAGATAGCTATTCTGCGATTTTAGCAGCA	660
T7 gene 10A Fop=0.20	CCCGCGGCGGATAGGGTGTTTTATTGTGACCCAGATAGCTATTCTGCGATTTTAGCAGCA	660
T7 gene 10A Fop=0.10	CCCGCGGCGGATAGGGTGTTTTATTGTGATCCAGATAGCTATAGCGCGATTTTAGCAGCA	660
T7 gene 10A wt	CTGATGCCGAACGCAGCAAACACTACGCTGCTCTGATTGACCCTGAGAAGGGTTCTATCCGC	720
T7 gene 10A Fop=0.50	CTAATGCCTAACGCAGCAAACACTATGCAGCTCTGATTGACCCTGAGAAGGGTTCTATCCGC	720
T7 gene 10A Fop=0.30	CTAATGCCTAACGCAGCAAATTATGCAGCTCTGATTGACCCTGAGAAGGGTTTCGATCCGC	720
T7 gene 10A Fop=0.20	CTAATGCCTAATGCAGCAAATTATGCAGCTTTGATTGATCCTGAGAAGGGTTCGATACGA	720
T7 gene 10A Fop=0.10	CTAATGCCTAATGCAGCAAATTATGCAGCATTGATTGATCCTGAGAAGGGTTCGATACGA	720
T7 gene 10A wt	AACGTTATGGGCTTTGAGGTTGTAGAAGTTCGACCTCACCGCTGGTGGTGCTGGTACC	780
T7 gene 10A Fop=0.50	AACGTTATGGGCTTTGAGGTTGTGGAAGTTCGACCTCACCGCTGGTGGTGCTGGAACG	780
T7 gene 10A Fop=0.30	AACGTCATGGGTTTTGAGGTTGTGGAGGTTCCGCATCTCACAGCAGGTGGTGCTGGAACG	780
T7 gene 10A Fop=0.20	AACGTCATGGGTTTTGAGGTCGTGGAGGTTCCGCATCTCACAGCAGGTGGGGCTGGAACG	780
T7 gene 10A Fop=0.10	AATGTCATGGGTTTTGAGGTCGTGGAGGTTCCCATCTCACAGCAGGGGGGCTGGAACG	780

T7 gene 10A wt	GCTCGTGAGGGCACTACTGGTCAGAAGCACGTCTTCCCTGCCAATAAAGGTGAGGGTAAT	840
T7 gene 10A Fop=0.50	GCAAGGGAGGGCACGACTGGACAGAAGCACGTCTTCCCTGCCAATAAAGGTGAGGGTAAT	840
T7 gene 10A Fop=0.30	GCAAGGGAGGGCACGACTGGACAGAAGCACGTCTTCCCTGCCAATAAAGGTGAGGGGAAT	840
T7 gene 10A Fop=0.20	GCAAGGGAGGGGACGACTGGACAAAAGCATGTCTTCCCTGCCAATAAAGGTGAGGGGAAT	840
T7 gene 10A Fop=0.10	GCAAGGGAGGGGACGACTGGACAAAAGCATGTCTTTTCTGCCAATAAAGGGGAGGGGAAT	840
T7 gene 10A wt	GTCAAGGTTGCTAAGGACAACGTTATCGGCCTGTTTCATGCACCGCTCTGCGGTAGGTACT	900
T7 gene 10A Fop=0.50	GTCAAGGTTGCTAAGGACAATGTTATCGGCCTGTTTCATGCACCGCTCTGCGGTGGGTACT	900
T7 gene 10A Fop=0.30	GTCAAGGTTGCCAAGGATAATGTTATCGGCCTGTTTCATGCACCGCAGCGCGGTGGGGACA	900
T7 gene 10A Fop=0.20	GTCAAGGTCGCCAAGGATAATGTGATAGGCCTGTTTCATGCACCGCAGCGCGGTGGGGACA	900
T7 gene 10A Fop=0.10	GTCAAGGTCGCCAAGGATAATGTGATAGGATTGTTTCATGCACCGAAGCGCGGTGGGGACA	900
T7 gene 10A wt	GTTAAGCTGCGTGACTTGGCTCTGGAGCGCGCTCGCCGTGCTAACTTCCAAGCGGACCAG	960
T7 gene 10A Fop=0.50	GTTAAGCTGCGTGACTTGGCTTTGGAGCGCGCTCGCCGAGCTAACTTCCAAGCGGATCAG	960
T7 gene 10A Fop=0.30	GTCAAGCTAAGAGATTTGGCTTTGGAGCGGGCGCGCCGAGCTAATTTTCAAGCGGATCAG	960
T7 gene 10A Fop=0.20	GTCAAGCTAAGAGATTTGGCGTTGGAGCGGGCGCGCCGAGCTAATTTTCAAGCGGATCAG	960
T7 gene 10A Fop=0.10	GTCAAGCTAAGAGATTTGGCGTTGGAGCGGGCGCGACGAGCTAATTTTCAAGCGGATCAA	960
T7 gene 10A wt	ATTATCGCTAAGTACGCAATGGGCCACGGTGGTCTTCGCCCAGAAGCTGCTGGTGCAGTG	1020
T7 gene 10A Fop=0.50	ATTATAGCCAAGTACGCAATGGGCCACGGTGGTCTTCGCCCAGAAGCTGCTGGTGCAGTG	1020
T7 gene 10A Fop=0.30	ATTATAGCCAAGTACGCAATGGGACACGGTGGTCTTCGCCCAGAAGCTGCTGGTGCAGTG	1020
T7 gene 10A Fop=0.20	ATTATAGCCAAGTACGCAATGGGACATGGGGGTCTTCGCCCAGAAGCTGCTGGTGCAGTG	1020
T7 gene 10A Fop=0.10	ATTATAGCCAAGTATGCAATGGGACATGGGGGGCTTCGCCCAGAAGCTGCTGGTGCAGTG	1020
T7 gene 10A wt	GTTTTCAAAGTGGAGTAA	1038
T7 gene 10A Fop=0.50	GTTTTCAAAGTGGAGTAA	1038
T7 gene 10A Fop=0.30	GTTTTCAAAGTGGAGTAA	1038
T7 gene 10A Fop=0.20	GTTTTCAAAGTGGAGTAA	1038
T7 gene 10A Fop=0.10	GTTTTCAAAGTGGAGTAA	1038