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MDPI

Untargeted and targeted metabolomics and Tryptophan Decarboxylase *in vivo* characterization provide novel insight on the development of kiwifruits (*Actinidia deliciosa*)

Supplementary File 2

Table 1. Primer list.

Gene description	Primer direction	Primer length (bp)	Tm (°C)	Amplicon length (bp)	Primer Sequence
AdTDC	FOR	22	61*	1510	**CACC**ATGGGCAGCCTCGACTCC
	REV	25	61*		CTATGTAGCATCCTTTGACCTGAGC
AdTDC (q-RT-PCR)	FOR	20	65	98	TGGCAAGTGGGTACGGGTCG
	REV	20	65		TCGGACCGGATGTGGCTCTG
Actin (q-RT-PCR; Achn107181)	FOR	20	65	94	GTCTCGACCTTGCTGGCCGT
	REV	20	65		ATTTCCCGTTCGGCCGTGGT

The CACC tag for the directional cloning is underlined in bold. Asterisks indicate the Tm assessed by OligoPerfect (Thermo Fisher Scientific).

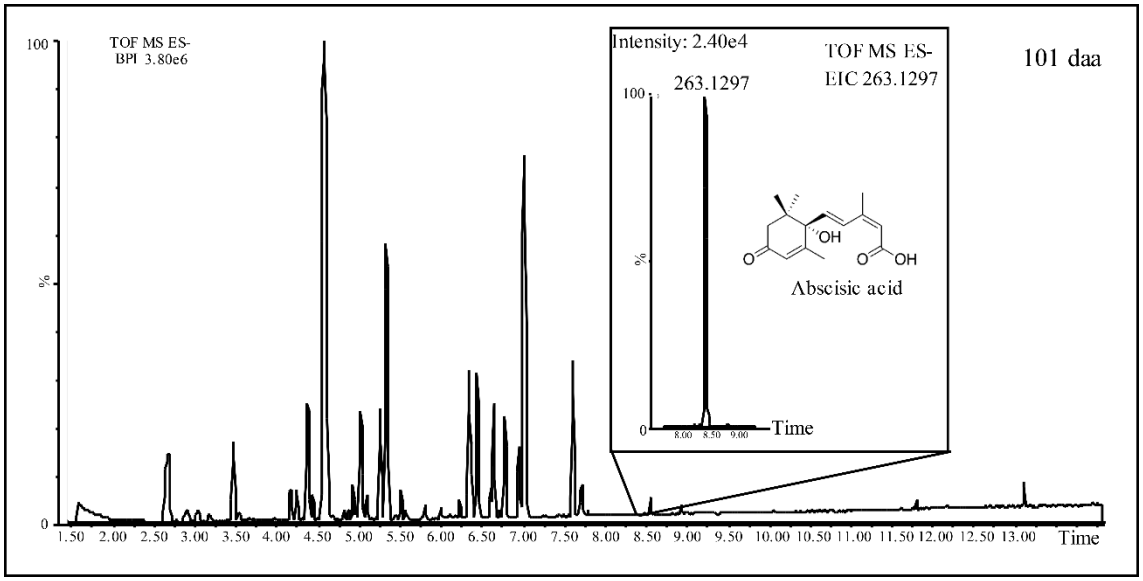

Figure S1: ABA peak detected by negative UPLC-MS analysis. The sample is a kiwifruit methanol extract corresponding to 101 days after anthesis (daa). The box highlights the peak corresponding to abscisic acid.

```
# Aligned_sequences: 2
# 1: Achn173261
# 2: AdTDC11
# Matrix: EBLOSUM62
# Gap_penalty: 10.0
# Extend_penalty: 0.5
#
# Length: 501
# Identity:     497/501 (99.2%)
# Similarity:   499/501 (99.6%)
# Gaps:           0/501 ( 0.0%)
# Score: 2635.0
#
#
#=====================================

Achn173261         1 MGSLDSNFSVNSTEFKPLDPEEFRKQAHTMVDFIADYYKNIETYPVLSQA     50
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
AdTDC11            1 MGSLDSNFSVNSTEFKPLDPEEFRKQAHTMVDFIADYYKNIETYPVLSQA     50

Achn173261        51 QPGYLRARLPETAPYRPETFETILQDVEKSIIPGITHWLSPKFFAFFPAT    100
                     ||||||||||||||||||||||||||||||||||||||||||||||||||||
AdTDC11           51 QPGYLRARLPETAPYRPETFETILQDVEKSIIPGITHWLSPKFFAFFPAT    100

Achn173261       101 VSTAAFLGEMLCTCFNSVGFNWLASPAATELEMVVMDWLAHMLKLPKSFM    150
                     ||||||||||||||||||||||||||||||||||||||||||||||||||||
AdTDC11          101 VSTAAFLGEMLCTCFNSVGFNWLASPAATELEMVVMDWLAHMLKLPKSFM    150

Achn173261       151 FQGTGGGVIQGTTSDSILCTLVAARNRALENVGVDNIGKLVVYGSDQTHS    200
                     ||||||||||||||||||||||||||.||||||||||||||||||||||||
AdTDC11          151 FQGTGGGVIQGTTSDSILCTLVAARNRTLENVGVDNIGKLVVYGSDQTHS    200

Achn173261       201 TYTKACKLAGIYPRNIRSVPAGSDTCFAMSPVALRKVIDADLAAGMVPLY    250
                     ||||||||||||||||||||||||||||||||||||||||||||:||||
AdTDC11          201 TYTKACKLAGIYPRNIRSVPAGSDTCFAMSPVALRKVIDADLAAGLVPLY    250

Achn173261       251 LCVTVGTTSTTAVDPLEDLADVANDYGVWVHVDAAYGGSACICPEFRHYL    300
                     ||||||||||||||||||||||||||||||||||||||||||||||||||||
AdTDC11          251 LCVTVGTTSTTAVDPLEDLADVANDYGVWVHVDAAYGGSACICPEFRHYL    300

Achn173261       301 DGIELVDSLSLSPHKWLLSYLDCCCLWVKQPGLLVKALSTNPEYLRNKPR    350
                     ||||||||||||||||||||||||||||||||||||||||||||||||||.
AdTDC11          301 DGIELVDSLSLSPHKWLLSYLDCCCLWVKQPGLLVKALSTNPEYLRNKPS    350

Achn173261       351 ESDSVVDYKDWQVGTGRRFKALRLWLVLRSYGIANLQSHIRSDVRMAKMF    400
                     ||||||||||||||||||||||||||||||||||||||||||||||||||||
AdTDC11          351 ESDSVVDYKDWQVGTGRRFKALRLWLVLRSYGIANLQSHIRSDVRMAKMF    400

Achn173261       401 EGFVKSDPRFELVVPRIFSLVCFRLNPHPGSYPGYLELLNKKLLEWVNST    450
                     ||||||||||||||||||||||||||||||||||||||||||||||||||||
AdTDC11          401 EGFVKSDPRFELVVPRIFSLVCFRLNPHPGSYPGYLELLNKKLLEWVNST    450

Achn173261       451 GGLYMTHTVAGGLYMLRFAVGATLTEECHVVAAWKIIKEGADVLLRSKDA    500
                     ||||||||||||||||||||||||||||||||||:|||||||||||||||
AdTDC11          451 GGLYMTHTVAGGLYMLRFAVGATLTEECHVVAAWKLIKEGADVLLRSKDA    500

Achn173261       501 T    501
                     |
AdTDC11          501 T    501
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Figure S2: ClustalW alignment of the amino acid sequences of AdTDC11 and Achn173261.

```
Achn173261   ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC1       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC2       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC3       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC4       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC5       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC6       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC7       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC8       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC9       ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC10      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC11      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC12      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC13      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC14      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC15      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC16      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC17      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC18      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC19      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
AdTDC20      ATGGGCAGCCTCGACTCCAACTTCTCCGTCAACTCCACCGAATTCAAACCGCTCGACCCC   60
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Achn173261   GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC1       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC2       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC3       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCGGACTACTACAAGAAC   120
AdTDC4       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCGGACTACTACAAGAAC   120
AdTDC5       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC6       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC7       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCGGACTACTACAAGAAC   120
AdTDC8       GAAGAGTTCCGTAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC9       GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC10      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC11      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC12      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC13      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC14      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC15      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC16      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC17      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC18      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC19      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
AdTDC20      GAAGAGTTCCGAAAACAAGCCCATACCATGGTAGATTTCATTGCAGACTACTACAAGAAC   120
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Achn173261  ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC1      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCACGCTTACCC  180
AdTDC2      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCACGCTTACCC  180
AdTDC3      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCAGGCTACCTACGGGCACGCTTACCC  180
AdTDC4      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCAGGCTACCTACGGGCACGCTTACCC  180
AdTDC5      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCACGCTTACCC  180
AdTDC6      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCACGCTTACCC  180
AdTDC7      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCAGGCTACCTACGGGCACGCTTACCC  180
AdTDC8      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCACGCTTACCC  180
AdTDC9      ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC10     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC11     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC12     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC13     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC14     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC15     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC16     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC17     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC18     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC19     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
AdTDC20     ATCGAAACCTACCCGGTTCTCAGCCAAGCCCAACCGGGCTACCTACGGGCCCGCTTACCC  180
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Achn173261  GAAACTGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC1      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC2      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC3      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC4      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC5      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC6      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC7      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC8      GAAACAGCCCCGTACCGCCCCGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC9      GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAAAGC  240
AdTDC10     GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAAAGC  240
AdTDC11     GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC12     GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC13     GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC14     GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC15     GAAACCGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC16     GAAACTGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC17     GAAACTGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
AdTDC18     GAAACTGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC  240
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AdTDC19      GAAACTGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC    240
AdTDC20      GAAACTGCCCCGTACCGCCCTGAAACGTTCGAAACCATACTACAAGACGTGGAGAAGAGC    240
             ***** ************** ********************************** ***

Achn173261   ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC1       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC2       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC3       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC4       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC5       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC6       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC7       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC8       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCCACC    300
AdTDC9       ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCAGCCACC    300
AdTDC10      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCAGCCACC    300
AdTDC11      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAATTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC12      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAATTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC13      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAATTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC14      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAATTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC15      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAATTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC16      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC17      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC18      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC19      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCTACC    300
AdTDC20      ATAATACCGGGAATCACCCATTGGCTGAGCCCTAAGTTTTTTGCTTTTTTTCCGGCTACC    300
             ********************************** ***************** ** ***

Achn173261   GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC1       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC2       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC3       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC4       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC5       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC6       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC7       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC8       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC9       GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTCGGGTTC    360
AdTDC10      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTCGGGTTC    360
AdTDC11      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC12      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC13      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC14      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC15      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
AdTDC16      GTGAGCACGGCGGCGTTTCTGGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC    360
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AdTDC18      GTGAGCACGGCGGCGTTTCTGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC   360
AdTDC19      GTGAGCACGGCGGCGTTTCTGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC   360
AdTDC20      GTGAGCACGGCGGCGTTTCTGGGGGAGATGCTGTGCACGTGCTTTAATTCTGTGGGGTTC   360
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Achn173261   AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC1       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC2       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC3       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC4       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC5       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC6       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC7       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC8       AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC9       AACTGGTTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCT   420
AdTDC10      AACTGGTTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCT   420
AdTDC11      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC12      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC13      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC14      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC15      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC16      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC17      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC18      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC19      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
AdTDC20      AACTGGCTGGCCTCGCCGGCGGCAACGGAGCTGGAGATGGTGGTCATGGACTGGCTGGCC   420
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Achn173261   CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC1       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC2       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC3       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC4       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC5       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC6       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC7       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC8       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC9       CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC10      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACTGGTGGTGGGGTCATACAA   480
AdTDC11      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC12      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC13      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC14      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
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AdTDC15      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC16      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC17      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC18      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC19      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
AdTDC20      CACATGTTGAAGCTTCCTAAATCTTTCATGTTTCAAGGCACGGGTGGTGGGGTCATACAA   480
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Achn173261   GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTGCACTCGAG   540
AdTDC1       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC2       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC3       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC4       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC5       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC6       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC7       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC8       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC9       GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC10      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTTGCCGCGAGAGACCGTGCACTCGAG   540
AdTDC11      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTACACTCGAG   540
AdTDC12      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTACACTCGAG   540
AdTDC13      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTACACTCGAG   540
AdTDC14      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTACACTCGAG   540
AdTDC15      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTACACTCGAG   540
AdTDC16      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTGCACTCGAG   540
AdTDC17      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTGCACTCGAG   540
AdTDC18      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTGCACTCGAG   540
AdTDC19      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTGCACTCGAG   540
AdTDC20      GGCACAACTAGTGACTCGATCCTCTGCACCCTCGTCGCCGCGAGAAACCGTGCACTCGAG   540
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Achn173261   AACGTGGGTGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC1       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC2       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC3       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC4       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC5       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC6       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC7       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC8       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC9       AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC10      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTATGGCTCTGATCAGACTCATTCT   600
AdTDC11      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC12      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
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AdTDC13      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC14      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC15      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC16      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC17      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC18      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC19      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
AdTDC20      AACGTGGGCGTTGATAATATCGGTAAGCTCGTCGTGTACGGCTCTGATCAGACTCATTCT   600
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Achn173261   ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC1       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC2       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC3       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC4       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC5       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC6       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC7       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC8       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC9       ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC10      ACTTACACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC11      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC12      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC13      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC14      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC15      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC16      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC17      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC18      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC19      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
AdTDC20      ACTTATACCAAGGCGTGTAAGCTGGCGGGGATATATCCGCGCAACATACGATCGGTGCCC   660
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Achn173261   GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC1       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAAGTGATAGATACT   720
AdTDC2       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC3       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC4       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC5       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC6       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC7       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC8       GCAGGGTCCAACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATACT   720
AdTDC9       GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC10      GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
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AdTDC11      GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC12      GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC13      GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC14      GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC15      GCAGGGTCCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC16      GCAGGGTTCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAAGTGATAGATGCT   720
AdTDC17      GCAGGGTTCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC18      GCAGGGTTCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC19      GCAGGGTTCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
AdTDC20      GCAGGGTTCGACACGTGTTTCGCTATGTCCCCTGTGGCGCTGAGGAAGGTGATAGATGCT   720
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Achn173261   GACCTGGCAGCCGGGATGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC1       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC2       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC3       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC4       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC5       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC6       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC7       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC8       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC9       GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACG   780
AdTDC10      GACGTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACG   780
AdTDC11      GACCTGGCAGCCGGGTTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC12      GACCTGGCAGCCGGGTTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC13      GACCTGGCAGCCGGGTTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC14      GACCTGGCAGCCGGGTTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC15      GACCTGGCAGCCGGGTTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC16      GACCTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC17      GACCTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC18      GACCTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC19      GACCTGGCAGCCGGGCTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
AdTDC20      GACCTGGCAGCCGGGTTGGTCCCACTTTATTTGTGTGTGACTGTGGGGACAACTTCAACC   780
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Achn173261   ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
AdTDC1       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC2       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC3       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC4       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC5       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC6       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC7       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
AdTDC8       ACTCCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTACGGCGTTTGGATC   840
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AdTDC9       ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCTAACGATTACGGCGTTTGGGTC   840
AdTDC10      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCTAACGATTACGGCGTTTGGGTC   840
AdTDC11      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
AdTDC12      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
AdTDC13      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
AdTDC14      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
AdTDC15      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
AdTDC16      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGACCGATTATGGCGTTTGGGTC   840
AdTDC17      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGACCGATTATGGCGTTTGGGTC   840
AdTDC18      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGACCGATTATGGCGTTTGGGTC   840
AdTDC19      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGACCGATTATGGCGTTTGGGTC   840
AdTDC20      ACTGCGGTTGATCCGCTGGAGGACCTTGCTGATGTTGCGAACGATTATGGCGTTTGGGTC   840
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Achn173261   CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC1       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC2       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC3       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC4       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC5       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC6       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC7       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC8       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC9       CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC10      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC11      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC12      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC13      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC14      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC15      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC16      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC17      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC18      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC19      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
AdTDC20      CACGTGGACGCTGCCTACGGAGGGAGCGCGTGTATTTGCCCAGAGTTCCGGCACTACCTG   900
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Achn173261   GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
AdTDC1       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
AdTDC2       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
AdTDC3       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
AdTDC4       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
AdTDC5       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
AdTDC6       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC   960
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AdTDC7       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC8       GACGGGATCGAGCTAGTTGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC9       GACGGGATCGAGCAAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC10      GACGGGATCGAGCAAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC11      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC12      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC13      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC14      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC15      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC16      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC17      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC18      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC19      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
AdTDC20      GACGGGATCGAGCTAGTCGACTCACTGAGTCTGAGCCCGCACAAGTGGCTGCTCAGTTAC    960
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Achn173261   TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC1       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC2       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC3       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC4       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC5       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC6       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC7       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC8       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC9       TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC10      TTGGACTGCTGTTGCTTGTGGGTGAAGAAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC11      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC12      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC13      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC14      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC15      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC16      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC17      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC18      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC19      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
AdTDC20      TTGGACTGCTGTTGCTTGTGGGTGAAGCAACCCGGATTGCTAGTCAAAGCCTTGAGCACT    1020
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Achn173261   AACCCGGAGTACTTGAGAAACAAACCCAGAGAGTCGGACTCGGTGGTGGACTACAAGGAC    1080
AdTDC1       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC    1080
AdTDC2       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC    1080
AdTDC3       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC    1080
AdTDC4       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC    1080
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AdTDC5       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC6       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC7       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC8       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC9       AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC10      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC11      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC12      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC13      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC14      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC15      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
AdTDC16      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGATTCGGTGGTGGACTACAAGGAC   1080
AdTDC17      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGATTCGGTGGTGGACTACAAGGAC   1080
AdTDC18      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGATTCGGTGGTGGACTACAAGGAC   1080
AdTDC19      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGATTCGGTGGTGGACTACAAGGAC   1080
AdTDC20      AACCCGGAGTACTTGAGAAACAAACCCAGTGAGTCGGACTCGGTGGTGGACTACAAGGAC   1080
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Achn173261   TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
AdTDC1       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC2       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC3       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC4       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC5       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC6       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC7       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC8       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC9       TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC10      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC11      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
AdTDC12      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
AdTDC13      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
AdTDC14      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
AdTDC15      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
AdTDC16      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC17      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC18      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC19      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGC   1140
AdTDC20      TGGCAAGTGGGTACGGGTCGTCGGTTCAAAGCGCTCCGACTCTGGCTCGTTTTACGTAGT   1140
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Achn173261   TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
AdTDC1       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC2       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
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AdTDC3       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC4       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC5       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC6       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC7       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC8       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC9       TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC10      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC11      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
AdTDC12      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
AdTDC13      TATGGTATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
AdTDC14      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
AdTDC15      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
AdTDC16      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC17      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC18      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC19      TATGGGATCGCCAACCTCCAGAGCCACATCCGGTCCGACGTCAGGATGGCCAAGATGTTC   1200
AdTDC20      TATGGTATCGCCAACCTCCAGAGCCACATCCGGTCCGATGTCAGGATGGCCAAGATGTTC   1200
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Achn173261   GAGGGATTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGGATCTTCTCACTG   1260
AdTDC1       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC2       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC3       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC4       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC5       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC6       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC7       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC8       GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC9       GAGGGGTTCGTGAAGTCCGACCTGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCACTG   1260
AdTDC10      GAGGGGTTCGTGAAGTCCGACCTGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCACTG   1260
AdTDC11      GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGAATCTTCTCACTG   1260
AdTDC12      GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGAATCTTCTCACTG   1260
AdTDC13      GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGAATCTTCTCACTG   1260
AdTDC14      GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGAATCTTCTCACTG   1260
AdTDC15      GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGAATCTTCTCACTG   1260
AdTDC16      GAGGGGTTCGTGAAGTCCGACCTGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC17      GAGGGGTTCGTGAAGTCCGACCTGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC18      GAGGGGTTCGTGAAGTCCGACCTGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC19      GAGGGGTTCGTGAAGTCCGACCTGCGATTCGAGTTGGTCGTGCCCCGGATCTTCTCATTG   1260
AdTDC20      GAGGGGTTCGTGAAGTCCGACCCGCGATTCGAGTTGGTTGTGCCCCGAATCTTCTCACTG   1260
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Achn173261   GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
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AdTDC1       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC2       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC3       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC4       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC5       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC6       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC7       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC8       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTACCTGGAGCTTCTAAAC   1320
AdTDC9       GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC10      GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC11      GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC12      GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC13      GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC14      GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC15      GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGGTTACCTGGAGCTTTTAAAC   1320
AdTDC16      GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTATCTGGAGCTTCTAAAC   1320
AdTDC17      GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTATCTGGAGCTTCTAAAC   1320
AdTDC18      GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTATCTGGAGCTTCTAAAC   1320
AdTDC19      GTTTGCTTCCGGTTAAACCCGCACCCGGGATCATACCCGGATTATCTGGAGCTTCTAAAC   1320
AdTDC20      GTTTGCTTTCGTTTAAACCCGCACCCGGGATCATACCCGGATTATCTGGAGCTTCTAAAC   1320
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Achn173261   AAAAAGCTACTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC1       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC2       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC3       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC4       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC5       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC6       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC7       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC8       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC9       AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC10      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC11      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC12      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC13      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC14      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC15      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC16      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC17      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC18      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC19      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
AdTDC20      AAAAAGCTCCTTGAGTGGGTCAACTCAACGGGTGGACTCTACATGACCCACACAGTAGCG   1380
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Achn173261   GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC1       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC2       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC3       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC4       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC5       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC6       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC7       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC8       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC9       GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC10      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC11      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC12      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC13      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC14      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC15      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC16      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC17      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC18      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC19      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
AdTDC20      GGTGGACTCTACATGCTGAGGTTTGCGGTGGGGGCTACACTCACAGAAGAGTGTCACGTA   1440
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Achn173261   GTCGCCGCTTGGAAGATAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC1       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC2       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC3       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC4       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC5       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC6       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC7       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC8       GTCGCCGCTTGGAATTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC9       GTCGCCGCTTGGAAGTTAATTAAGGAGGGTGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC10      GTCGCCGCTTGGAAGTTAATTAAGGAGGGTGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC11      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC12      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC13      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC14      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC15      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC16      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC17      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC18      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
AdTDC19      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT   1500
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AdTDC20      GTCGCCGCTTGGAAGTTAATTAAGGAGGGAGCTGATGTTTTGCTCAGGTCAAAGGATGCT    1500
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Achn173261   ACATAG         1506
AdTDC1       ACATAG         1506
AdTDC2       ACATAG         1506
AdTDC3       ACATAG         1506
AdTDC4       ACATAG         1506
AdTDC5       ACATAG         1506
AdTDC6       ACATAG         1506
AdTDC7       ACATAG         1506
AdTDC8       ACATAG         1506
AdTDC9       ACATAG         1506
AdTDC10      ACATAG         1506
AdTDC11      ACATAG         1506
AdTDC12      ACATAG         1506
AdTDC13      ACATAG         1506
AdTDC14      ACATAG         1506
AdTDC15      ACATAG         1506
AdTDC16      ACATAG         1506
AdTDC17      ACATAG         1506
AdTDC18      ACATAG         1506
AdTDC19      ACATAG         1506
AdTDC20      ACATAG         1506
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Figure S3: Clustal Omega alignment of the candidate *Actinidia deliciosa TDCs*. The number after AdTDC represents the cultivated *Escherichia coli* colony. Achn173261 is the *TDC* sequence of *Actinidia chinensis*.