

ATGAGCTGTCCCGTGAGATCAAAA **GATGCCGCACAAGATGGGGAACAGCTTGGAGAGGAAGCAGGTATGC** 70
 M S C P V R S K D A A Q D G E Q L G E E A G M
TCTATGGTGAAGTACTTGGATGTTGGATAAAAGTTTTGGGCGCCCAAAGACTATTGAGCCAGCAGAATAATCA 140
 L Y G E Y L M L D K V L G A Q R L L S Q Q N N Q
ACCGGTGCACGATGAGCATTATTTATTTATGTTACACATCAAGCGTACGAATTGTGGTTCAAACAAATATT 210
 P V H D E H L F I V T H Q A Y E L W F K Q I I
TATGAGTTGGATTCCGATTAGAGACGTTTTTCAGTGAAGTACTGGAGGAATCTCAAACACTTGAAATTTAA 280
 Y E L D S I R D V F S E V L E E S Q T L E I L
AGAGGCTGAACAGAAATCGTTTCTCATTCTGAAGGTTCTGGTAGATCAAGTATGATTTTTAGAAAACCATGAC 350
 K R L N R I V L I L K V L V D Q V M I L E T M T
ACCATTAGACTTTTATGGAGTTTAGAAACTATCTACGACCGGCTTCTGGATTCCAAAGTCTTCAATTCAGA 420
 P L D F M E F R N Y L R P A S G F Q S L Q F R
CTTCTTGAGAACAAGCTTGGCGTCCGACAAGAAAATAGAGTGAAGTACAATAAGAATTATACAAAAGTCT 490
 L L E N K L G V R Q E N R V K Y N K N Y T K V
TTGGAATAATGAGGATGCCACCAAGCAAATAGAGGAATCCGAGGCGGAACCTTCTCTAACAGACTTAGT 560
 F G N N E D A T K Q I E E S E A E P S L T D L V
TCAGCGATGGTTGGAGAGGACACCAGGATTGGAAGTGAAGGGTTCAATTTTGGGGGAAATACCAACGA 630
 Q R W L E R T P G L E L E G F N F W G K Y Q R
GCAGTTGAAGTTTTATTAGAAGAACAAGAATTCTAGCTGACGACGAAAAGACGGAGAGCATTAGGCAGT 700
 A V E V L L E E Q R I L A D D E K T E S I R Q
ATCGGCTTACCGATATTGAGAAGAGAAGAGAAGTCTATGAGTCCATATTCAACCCGAAATACATCGAGC 770
 Y R L T D I E K R R E V Y E S I F N P E I H R A
TTAATAACAAGAGGAGAGAGGAGATTTCCCATAGGCTTTACAAGGTGCCATCATGATTACTTTCTAC 840
 L I T R G E R R F S H K A L Q G A I M I T F Y
AGGATGAACCAGATTTAGCCAACCTCATCAAATCCTTACTCTTCTGATGGACATAGACTCTCTATAA 910
 R D E P R F S Q P H Q I L T L L M D I D S L I
CAAATGGAGATACATCATGTTCTTATGGTACAAAGGATGATAGGGTCATCACAACCTGGGAAACAGGAGG 980
 T K W R Y N H V L M V Q R M I G S S Q L G T G G
ATCTTCAGGATATCAATATTTAAGGTCAACTTTGAGTATCGGTACAAGGTATTTCGTAGACCTTTCAAC 1050
 S S G Y Q Y L R S T L S D R Y K V F V D L F N
TTATCTACTTTCTTAATACCACGGGCTTACATACCTCCGCTCACCTCCGCCATGAGAAGCCATCTGTGTC 1120
 L S T F L I P R A Y I P P L T S A M R S H L C
 TTTGGGGAACGAAAAAATCTGCATTCAAAAACAGCAAACGGTGAAAATGGAAAAGTGGTGGAAAATGG 1190
 L W G N E K N L H S K T A N G E N G K V V E N G
 ACAAGTAGTAGAAAACGGAATAGTGCTAGAAAATGGTAAACATGAATATGTGGATTCATTGTAA
 Q V V E N G I V L E N G K H E Y V D S L *

Figure S1. Nucleotide and protein sequences for *M. alternatus TDO*. Nucleic acids translation initiation start from the methionine in the open reading frame. The highly conserved region, Trp_dioxygenase, is highlighted. The asterisk indicates translation stop codons.