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>Seq2 [organism=*Rhodotorula glutinis* ATCC 204091] D-amino acid oxidase gene, complete CDS

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>Seq3 [organism=*Rhodotorula graminis* WP1] D-amino acid oxidase gene, complete CDS

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>Seq5 [organism=Rhodospiridium toruloides NP11] D-amino acid oxidase gene, complete CDS

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>Seq6 [organism=Sporobolomyces roseus] D-amino acid oxidase gene, complete CDS

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>Seq7 [organism=Puccinia triticina] D-amino acid oxidase gene, complete CDS

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>Seq8 [organism=Puccinia graminis] D-amino acid oxidase gene, complete CDS

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>Seq9 [organism=Melampsora laricis-populina] D-amino acid oxidase gene, complete CDS

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>Seq10 [organism=*Rhodotorula minuta*] D-amino acid oxidase gene, complete CDS

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>Seq11 [organism=*Sporobolomyces linderiae*] D-amino acid oxidase gene, complete CDS

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>Seq12 [organism=*Ustilago maydis*] D-amino acid oxidase gene, complete CDS

ttttacatataaaattataactaactagatgaggggtgagcaactgcgtgtggctcgtataggaagatgcaagctccacacacatccagaaacctgaccggtcgtta
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>Seq13 [organism=Sporisorium reilianum] D-amino acid oxidase gene, complete CDS

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(c) Protein sequences of Daol

Feature for Sequence 'Seq1'

gene 2001..3467
/gene='DAO1'
/note='D-amino acid oxidase gene'
CDS join(2001..2040,2149..2261,2326..2396,2456..2573,
2647..2848,2905..3467)
/gene='DAO1'
/EC_number='1.4.3.3'
/codon_start=1
/product='D-amino acid oxidase (Daol)'
/translation='MHSQKRVVVLGSGVIGLSSALILARKGYSVHIVARDLPEDVSSQ
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SSPAYIIPRPGGEVICGGTYGVGDWDLVSNPETVQRILKHCLRLDPSISSDGTIEGIE
VLRHNVGLRPARRGGPRVEAERLVLPLDRSKSPLSLGKGTTRAAKEKEVTLVHAYGFS
SAGYQQSWGAAEDVALLVEEAFQRYHGAARESKL'

Feature for Sequence 'Seq2'

gene 2001..3467
/gene='DAO1'
/note='D-amino acid oxidase gene'
CDS join(2001..2040,2149..2261,2326..2396,2456..2573,
2647..2848,2905..3467)
/gene='DAO1'
/EC_number='1.4.3.3'
/codon_start=1
/product='D-amino acid oxidase (Daol)'
/translation='MHSQKRVVVLGSGVIGLSSALILARKGYSVHIVARDLPEDVSSQ
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VLRHNVGLRPARRGGPRVEAERLVLPLDRSKSPLSLGKGTTRAAKEKEVTLVHAYGFS
SAGYQQSWGAAEDVALLVEEAFQRYHGAARESKL'

Feature for Sequence 'Seq3'

gene 2001..3550
/gene='DAO1'
/note='D-amino acid oxidase gene'
CDS join(2001..2040,2120..2232,2312..2714,2791..2895,

2960..3027,3110..3550)
 /gene='DA01'
 /EC_number='1.4.3.3'
 /codon_start=1
 /product='D-amino acid oxidase (Daol)'
 /translation='MAIDKRVVVLGTGVVGLSCGLVLSRQGYRVHFIARDLPEDSTSQ
 GFASPWAGANWTPFYSRDEGPRQAKWEEATFARWVSLVPSGLAMWLNDTRRYADTDAG
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 RSVSSIEQVFEGQDDIALVVNATGLGAKSIAGIEDSACHPVRGQTVLVKSGCKRCTMD
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 GAPSEAVKREVTLVHAYGFSSAGYQQSWGVAQDVLGLVEGEIGPPRAWWTQRGKL'

Feature for Sequence 'Seq4'
 gene 2001..3461
 /gene='DA01'
 /note='D-amino acid oxidase gene'
 CDS join(2001..2040,2150..2262,2327..2397,2454..2571,
 2641..2842,2899..3461)
 /gene='DA01'
 /EC_number='1.4.3.3'
 /codon_start=1
 /product='D-amino acid oxidase (Daol)'
 /translation='MHSQKRVVVLGSGVIGLSSALILARKGYSVHILARDLPEDVSSQ
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 LLGHWYKDITPNYRPLPSSECPPGAIGVITYDTLSVHAPKYCQYLARELQKLGATFERR
 TVTSLEQAFDGDALVVNATGLGAKSIAGIDDQAAEPIRGQTVLVKSPCKRCTMDSSDP
 ASPAYIIPRPGGEVICGGTYGVGDWDLVSNPETVQRILKHCLRLDPTISSDGTIEGIE
 VLRHNVGLRPARRGPRVEAERIVLPLDRTKSPLSLGRGSARAAKEKEVTLVHAYGFS
 SAGYQQSWGAAEDVAQLVDEAFQRYHGAARESKL'

Feature for Sequence 'Seq5'
 gene 2001..3461
 /gene='DA01'
 /note='D-amino acid oxidase gene'
 CDS join(2001..2040,2150..2262,2327..2397,2454..2571,
 2641..2842,2899..3461)
 /gene='DA01'
 /EC_number='1.4.3.3'
 /codon_start=1
 /product='D-amino acid oxidase (Daol)'
 /translation='MHSQKRVVVLGSGVIGLSSALILARKGYSVHILARDLPEDVSSQ
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 TVTSLEQAFDGDALVVNATGLGAKSIAGIDDQAAEPIRGQTVLVKSPCKRCTMDSSDP
 ASPAYIIPRPGGEVICGGTYGVGDWDLVSNPETVQRILKHCLRLDPTISSDGTIEGIE
 VLRHNVGLRPARRGPRVEAERIVLPLDRTKSPLSLGRGSARAAKEKEVTLVHAYGFS
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Feature for Sequence 'Seq6'
 gene 2001..3749
 /gene='DA01'
 /note='D-amino acid oxidase gene'
 CDS join(2001..2046,2174..2357,2440..2557,2682..2898,
 2996..3100,3205..3272,3372..3749)
 /gene='DA01'
 /EC_number='1.4.3.3'

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/codon_start=1
/product='D-amino acid oxidase (Daol)'
/translation='MPTREPQRVVVLGAGVIGLTCALSLVEQGYTVHVVARLDLPEDTD
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RRYVKSIEEVFRETFFGARNDVFNATGLGAKSIAGVEDQEVPRIRGQTVLIKSDCVRC
TMDSSDPTSSAYIIPRPGGEVICGGSYGVDWDLSPDPHAKRILSHCLRLDPSISRD
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Feature for Sequence 'Seq7'

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gene      2001..3629
          /gene='DAO1'
          /note='D-amino acid oxidase gene'
CDS      join(2001..2210,2328..2453,2539..2610,2693..3363,
          3457..3472,3567..3629)
          /gene='DAO1'
          /EC_number='1.4.3.3'
          /codon_start=1
          /product='D-amino acid oxidase (Daol)'
          /translation='MSAPPSQEPPCIVNVIGSGVLGLTCALELAKQPGSPYRVNVVTA
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          VSLNPIRYLDYLKQLVKYEVQIIHHRLETVSEAFGLGDPKFGIPAAKIVVNASGLGAG
          SLCVSDDELMEPIRGQTILIRPPQPIQLITRDDDCKIYICSRPPTIPGEGEEVILGGS
          YEPGNSSLSIDNGIADRILTEALKLRPDLSDGTSTNGIEILDHIAALRPSRDKGPRVE
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Feature for Sequence 'Seq8'

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gene      2001..3602
          /gene='DAO1'
          /note='D-amino acid oxidase gene'
CDS      join(2001..2183,2295..2420,2506..2577,2656..3332,
          3424..3439,3546..3602)
          /gene='DAO1'
          /EC_number='1.4.3.3'
          /codon_start=1
          /product='D-amino acid oxidase (Daol)'
          /translation='MSNVNVIGSGVLGLTCALELAKQPGSPYRVTVVTAENAMARWSQ
          DPSTKLPVEPDFASPWAGAFFHPFTPQPETELQKRVASWERKSFKPLWEIAEQDPSV
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          DYLRQQLAKYDVRIIHRLETVTEAFEGHPECGLPAAKIVINACGLGAGKIGVSDGM
          MEPIRGQTMILIRPPQPLQLITRDEKCIYICSRPPTIPGEGEEVVLGGSYQPGDSSLE
          IDDQISHRILSEALKIRPDLSDGTVEGVQIVEHVAALRPHKNGPRVEREDFHKIST
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Feature for Sequence 'Seq9'

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gene      2001..3585
          /gene='DAO1'
          /note='D-amino acid oxidase gene'
CDS      join(2001..2207,2283..2597,2770..3296,3397..3412,
          3514..3585)
          /gene='DAO1'
          /EC_number='1.4.3.3'
          /codon_start=1
          /product='D-amino acid oxidase (Daol)'
          /translation='MSFNPEHKSEHLNIIGSGVLGLTCALEIAKEKGRYTITITADA

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VQRLAKVFQAIQLCQMGVRIVHRLNSLAFAFEGNNTLQIPRADIVINASGLGAATLLG
VEDKSVHPIRGQLVLVKPPQPICFSTRDSSRKTYIISRPSVDPEIDEEVILGGCYQAD
NFDLSVDPDLTNHILCEAFQTRPDLSSDGTLQGIHVLKEVVALRPAKDGARLEVEKV
VISGENKHAVHCYGIGGAGFQSSYGMAQEALGLIKALREGRETV'

Feature for Sequence 'Seq10'
gene 2001..3866
/gene='DA01'
/note='D-amino acid oxidase gene'
CDS join(2001..2177,2249..2273,2383..2468,2586..2654,
2801..3222,3293..3420,3487..3657,3760..3866)
/gene='DA01'
/EC_number='1.4.3.3'
/codon_start=1
/product='D-amino acid oxidase (Daol)'
/translation='MTLPLEDAPRALDAVIIGAGVTGLSIGLELVKRGYKIAVVAKD
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Feature for Sequence 'Seq11'
gene 2001..3328
/gene='DA01'
/note='D-amino acid oxidase gene'
CDS join(2001..2043,2085..2135,2173..2372,2463..2847,
2884..2947,2983..3114,3151..3328)
/gene='DA01'
/EC_number='1.4.3.3'
/codon_start=1
/product='D-amino acid oxidase (Daol)'
/translation='MAPAASPRVLVIGAGVVGLTTAVEIQRALPEAAVTIFAAQTAED
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RASMRVEDIDVVEHGCGFRPARKGGVRIELDHVAAPDGRSLPLVHNYGHAGAGFQMSI
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Feature for Sequence 'Seq12'
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/gene='DA01'
/note='D-amino acid oxidase gene'
CDS 2001..3098
/gene='DA01'
/EC_number='1.4.3.3'
/codon_start=1
/product='D-amino acid oxidase (Daol)'
/translation='MTNQLHVVLGAGVLGLTDAFELRERGYRVITILARDLPFDSFSQ
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Sequence S2. ACT1 gene sequences (Submitted GenBank sequence record ahead of release)

LOCUS Seq14 2400 bp DNA linear 15-APR-2015
DEFINITION Actin gene (ACT1), complete CDS.
ACCESSION Seq14
VERSION
KEYWORDS .
SOURCE Rhodosporidium toruloides ATCC 10657
ORGANISM Rhodosporidium toruloides ATCC 10657
Unclassified.
REFERENCE 1 (bases 1 to 2400)
AUTHORS Liu,Y., Koh,C.M.J. and Ji,L.
TITLE Engineering an efficient and tight D-amino acid-inducible gene
expression system in Rhodosporidium/Rhodotorula species based on a
D-amino acid oxidase gene promoter
JOURNAL Unpublished
REFERENCE 2 (bases 1 to 2400)
AUTHORS Liu,Y., Koh,C.M.J. and Ji,L.
TITLE Direct Submission
JOURNAL Submitted (15-APR-2015) Biomaterials and Biocatalysts Group,
Temasek Life Sciences Laboratory, 1 Research Link, National
University of Singapore, Singapore, Singapore 117604, Singapore
COMMENT Bankit Comment: TAX: No, not new species/combinations; SEE
ATTACHMENT.
Bankit Comment: ALT EMAIL:hydrolase@gmail.com.
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