

Supplementary Information 2

***Cortinarius steglichii*: a taxonomical and chemical novelty from Chile**

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Alignment 1 - Alignment of *RPB1* & ITS & LSU sequences from *Cortinarius steglichii* and other *Cortinarius* species

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taagcggaggaaaagaaactaactaggattcccttagtaactgcgagtgaaacagggaaaagctcaatttaaatctggcag--tc-ttt--
tagctgtccgagttgtaatctagagaggttatctgcgctggaccgtgtacaagtctcctggaatggagcatcattgaggggtgagaatcccgtctttgacac
ggactgccagggc-

tttgtgatgcgctctcaaagagtcgagttgttgggaatgcagctcaaaatgggtggtaattccatctaaagctaaatattggcgagagaccgatagtgaa
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>10708_C_squameoradicans_TUB_019726

tttgaagtgaagaagatattggaagtatatgtgtcaattgtggaagctcaaaagccgacatcgtgagtcgcgtcgtttaccttctctgctcgtttcgac
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ttcttcacccgtgg-cgggggggtcatatgacgcgcg--tttcggtcgttgatgcgcgcgtcgaccccggtgcat-
ccgctcgggtcaggttggacacgaggttgcgtgggtgaaaaggggggctgaacgaggagtgccgggaaaacc-aaacacagcac-ttgtgc-ct---c-

Alignment 2 Alignment of ITS sequences of *Cortinarius steglichii* and other related *Cortinarius* species

>MH101637 *Cortinarius elaiochrous*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACCCTTTGTAGA-CCTGAA-TATC-TC--TCTGAAT--
GC-TAG----CATTCAGGCTTGA-GGATTGAC-----TTCTTAGTCTCT-CCTGTTATTT-
TCAGGCCTATGTTTC-TTCATAT-ACCC--A-TGTATGT-TATAGAA-TGTAAT-AAACGGG-
CCTTTGTGCCTATAAATC-T---
ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTGATTA--ATA-TATCAACCTCTTTAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGTCAT---T

>OQ065042 *Cortinarius elaiochrous*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACCCTTTGTAGA-CCTGAA-TATC-TC--TCTGAAT--
GC-TAG----CATTCAGGCTTGA-GGATTGAC-----TTCTTAGTCTCT-CCTGTTATTT-
TCAGGCCTATGTTTC-TTCATAT-ACCC--A-TGTATGT-TATAGAA-TGTAAT-AAACGGG-
CCTTTGTGCCTATAAATC-T---
ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTGATTA--ATA-TATCAACCTCTTTAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGTCAT---T

>KJ421160 *Cortinarius caperatus*

CTTGTCGTCCTTTATA--TTTCCACCTTGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-ACACAAGCATTGTTGGGTTTGAGGGGTTGAC-----TTTTTTGGTCTCC-CTTTATATTT-
CCAGGCCTATGTTTCCTTTCATAT-ACCCC-A-CTTGTGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTGTAAAGC-T---
ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGATTA--ATA-TATCAACCTCCTCAA--CTTGTG--
TT---GAGTG-T-TGGATGT--GGGGGTTCTT---T

>NR 157915 *Cortinarius elaiochrous* var. *leontis* Type

CTTGTCATCTTTATA--TCTCCACC-TGTGCACCCTTTGTAGA-CCTGAA-TATC-TC--TCTGAAT--
GC-TAG----CATTCAGGCTTGA-GGATTGAC-----TTCTTRGTCTCT-CCTGTTATTT-
TCAGGCCTATGTTTC-TTCATAT-ACCC--A-TGTATGT-TATAGAA-TGTAAT-AAACGGG-
CCTTTGTGCCTATAAATC-T---
ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTGATTA--ATA-TATCAACCTCTTTAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGGTCAT---T

>AY033099 *Cortinarius elaiochrous*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACCCTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAG----CATTCAGGCTTGA-GGATTGAC-----TTCTTAGTCTCT-CCTGTTATTT-
TCAGGCCTATGTTTC-TTCATAT-ACCC--A-TGTATGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAATC-T---
ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTGATTA--ATA-TATCAACCTCCTTAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGTCAT---T

>JX648592 *Cortinarius dulciolens* Type

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGT-CCTGGA-TATC-TC--TCTGAAT--
 GC-TACCTAGCATTTCAGGTATGA-GGATTGAC-----TTTGTAGTCTCT-CCTTGCATTT-
 CCAGGCCTATGTTT-TTTCATAT-ACCC--ATCCCCTGTTTATAGAA-TGTAATAAAATGGG-
 CCTTTGTGCCTATAAACCTTT--
 ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGTAGTGTCTTGA--ATA-
 TATCAACCTCTTCAGATTTTTTTG--TTTGTGCGAGTG-T-TGGACGT-GGGGGTTCTT---T
 >AF325610 *Cortinarius dulciolens*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTCTGTAGT-CCTGGA-TATC-TC--TCTGAAT--
 GC-TACCTAGCATTTCAGGTATGA-GGATTGAC-----TTTGCAGTCTCT-CCTTGCATTT-
 CCAGGCCTATGTTT-TTTCATAT-ACCC--ATCCCCTGTTTATAGAA-CGTAAT-GAATGGG-
 CCTTTGTGCCTATAAACCTTT--
 ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGTAGTGTCTTGA--ATA-
 TATCAACCTCTTCAGATTTTTTTG--TTTGTGCGAGTG-T-TGGACGTGGGGGGTTCTT---T
 >OQ064854 *Cortinarius dulciolens*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACTKTCTGTAGT-CCTGGA-TATC-TC--TCTGAAT--
 GC-TACCTAGCATTTCAGGTATGA-GGATTGAC-----TTTGCAGTCTCT-CCTTGCATTT-
 CCAGGCCTATGTTT-TTTCATAT-ACCC--ATCCCCTGTTTATAGAA-CGTAAT-GAATGGG-
 CCTTTGTGCCTATAAACCTTT--
 ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGTAGTGTCTTGA--ATA-
 TATCAACCTCTTCAGATTTTTTTG--TTTGTGCGAGTG-T-TGGACGTGGGGGGTTCTT---T
 >OQ322007 *Cortinarius caperatus*
 CTTGTCTCTTTATA--TTTCCACCTTGTGCACCTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-ACACAAGCATTGTTGGGTTTGAGGGGTTGAC-----TTTTTGGTCTCC-CTTTATATTT-
 CCAGGCCTATGTTTCTTTCATAT-ACCCC-A-CTTGTGT-TATAGAA-TGTAAT-AAATGGG-
 CCTTTGTGCCTGTAAAGC-T---
 ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTTCYAGGAGCATGCCTGTTTGTAGTGTCTTGA--ATA-TATCAACCTCCTCAA--CTTGTG-
 -TT---GAGTG-T-TGGATGT-GGGGGTTCTT---T
 >OP749826 *Cortinarius caperatus*
 CTTGTCTCTTTATA--TTTCCACCTTGTGCACCTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-ACACAAGCATTGTTGGGTTTGAGGGGTTGAC-----TTTTTGGTCTCC-CTTTATATTT-
 CCAGGCCTATGTTTCTTTCATAT-ACCCC-A-CTTGTGT-TATAGAA-TGTAATAAAATGGG-
 CCTTTGTGCCTGTAAAGC-T---
 ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGTAGTGTCTTGA--ATA-TATCAACCTCCTCAA--CTTGTG--
 TT---GAGTG-T-TGGATGTGGGGGGTTCTT---T
 >AJ238033.2 *Rozites caperatus*
 CTTGTCTCTTTATA--TTTCCACCTTGTGCACCTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-ACACAAGCATTGTTGGGTTTGAGGGGTTGAC-----TTTTTGGTCTCC-CTTTATATTT-
 CCAGGCCTATGTTTCTTTCATAT-ACCCC-A-CTTGTGT-TATAGAATTGTAATAAAATGGG-
 CCTTTGTGCCTGTAAAGC-T---
 ATACAACTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT

GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCCTCAA--CTTGTG--
TT---GAGTG-T-TGGATGT-GGGGGTTCTT---T

>NR 173464 *Cortinarius metallicus*
CTTGTCATCTTTATA--TTTCCACC-TGTGCACCTTTTGTAGACCCTGGA-TATC-TC--
TCTGAATGCGC-TAG----CATTTGGGTTTGA-GGATTGAC-----TTTTTGGTCTCT-CCTTACATTT-
CCAGGTCTATGTTTCTTTCATAT-AACCCCA-CTTATGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAAGCTT---
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTACTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCCTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATTG-TGGGGGTCTT---T

>OK159890 *Cortinarius metallicus*
CTTGTCATCTTTATA--TTTCCACC-TGTGCACCTTTTGTAGACCCTGGA-TATC-TC--
TCTGAATGCGC-TAG----CATTTGGGTTTGA-GGATTGAC-----TTTTTGGTCTCT-CCTTACATTT-
CCAGGTCTATGTTTCTTTCATAT-AACCCCA-CTTATGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAAGCTT---
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTACTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCCTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATTG-TGGGGGTCTT---T

>MW263864 *Cortinarius pseliocaulis*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTTGTAGA-CTTGGA-TATC-TC--
TCTGAATGCGC-TAG----CATTCAGGATTGA-GGATTGAC-----TTTTTGGTCTCT-CCTTACATTT-
CCAGGTCTATGTTTCTTTCATAT-ACCCC-A-TCTATGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGCGCCTATAAAAC-A---
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATTG-TGGGGGTCTT---T

>MH101570 *Cortinarius pseliocaulis*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTTGTAGA-TTTGGA-TATC-TT--TCTGAAT--
GC-TAG----CATTCAGGTTTGA-GGATTGACTTTTTTTTTTTGGTCTCT-CCTTACATTT-
CCAGGTCTATGTTTCTTTCATAT-ACTCC-A-TGTATGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGCGCCTATAAAAC-T---
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGCG-T-TGGATTG-TGGGGGTCTT---T

>KT875174 *Cortinarius achrous*
CTCGTCATCTTTATA--TCTCCACC-AGTGTACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGCTAGCATTCAGGTTTGA-GGATTGAC-----CTTTTGGTCTGT-CCTTACATTT-
CTAGGCCTATGTTTTT-TCATAT-ACCCC-A-TGTATGT-TATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCCATATAAAAC-T---
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATTG-TGGGGGTCTT---T

>KC520544 *Cortinarius peraurantiacus*
CTTGTCATCTTTATA--TCTCCACA-TGTGCACGTTGTGTAGA-CCTGGA-TATC-TC--
TCTGAATGCGCCTAG----CATTCAGGTTTGA-GGATTGAC-----TTTCCAGTCTCT-
CCTTGCATTT-CCGGGCCTATGTTT-TTAAT---ACACC-AACCCCTGTTTATAGAA-TGTAAT--
AATGGG-CCATTGTGCCTATAAACC-

CTTTATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAAT
GCGATAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGC
TCCTTGGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTTA--ATA-TATCAACCTCTTCAG--
ATTTTGTATTTGTGCGAGCG-T-TGGATGTGGGGGTTTCTT---T

>MW187057 *Cortinarius peraurantiacus*

CTTGTCATCTTTATA--TCTCCACA-TGTGCACGTTGTGTAGA-CCTGGA-TATC-TC--
TCTGAATGCGCCTAG----CATTCAGGTTTGA-GGATTGAC-----TTTCCCAGTCTCT-
CCTTGCAATTT-CCGGGCCTATGTTT--TTAAT---ACACC-AACCCCTGTTTATAGAA-TGTAAT--
AATGGG-CCATTGTGCCTATAAACC-
CTTTATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAAT
GCGATAAGTAATRTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGC
TCCTTGGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTTA--ATA-TATCAACCTCTTCAG--
ATTTTGTATTTGTGCGAGCG-T-TGGATGTGGGGGTTTCTT---T

>OP749000 *Cortinarius corrugatus*

CTTGTCATCTTTATA--TTTCCACC-TGTGAACACTTTGTAGA-CCTGGA-AATTATC--TCTGAAT-
-GCTTTTTTTGACATTCAGGTTTGA-GGATTGAC-----TCGTCCAGTCTCT-CCTTGCGTTT-
CCGGGCCTATGTTTTTTTCATAC-ACCC--ATTTCTTGTTTTTAGAA-TGTGAT-AAATGGC-
CTTTTGTGCCTATAAACCCTTTTAATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGAT
GAAGAACGCAGCGAAATGCGATAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCT
TTGAACGCACCTTGCGCTCCTTGGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTTA--ATA-
TATCAACCTCTTCAG--ATTTTG--TTTGTGCGAGTG-T-TGGATGTTGGGGGTTTTCT-T

>MZ710566 *Cortinarius corrugatus*

CTTGTCATCTTTATA--TTTCCACC-TGTGAACACTTTGTAGA-CCTGGA-AATTATC--TCTGAAT-
-GCTTTTTTTGACATTCAGGTTTGA-GGATTGAC-----TCGTCCAGTCTCT-CCTTGCGTTT-
CCGGGCCTATGTTTTTTTCATAC-ACCC--ATTTCTTGTTTTTAGAA-TGTGAT-AAATGGC-
CTTTTGTGCCTATAAACCCTTTTAATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGAT
GAAGAACGCAGCGAAATGCGATAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCT
TTGAACGCACCTTGCGCTCCTTGGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTTA--ATA-
TATCAACCTCTTCAG--ATTTTG--TTTGTGCGAGTG-T-TGGATGTTGGGGGTTTTCTKT

>MN751146 *Cortinarius corrugatus*

CTTGTCATCTTTATA--TTTCCACC-TGTGAACACTTTGTAGA-CCTGGA-AATTATC--TCTGAAT-
-GCTTTTTTTGACATTCAGGTTTGA-GGATTGAC-----TCGTCCAGTCTCT-CCTTGCGTTT-
CCGGGCCTATGTTTTTTTCATAC-ACCC--ATTTCTTGTTTTTAGAA-TGTGAT-AAATGGC-
CTTTTGTGCCTATAAACCCTTTTAATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGAT
GAAGAACGCAGCGAAATGCGATAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCT
TTGAACGCACCTTGCGCTCCTTGGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTTA--ATA-
TATCAACCTCTTCAS--ATTTTG--TTTGTGCGAGTG-T-TGGATGTTGGGGGTTTTCT-T

>MG367626 *Cortinarius beeverorum*

CTTGTCGCTTTATA--TCTCCACC-TGTGCACTTTCTGTAGA-CCTGGA-----TATGAAT--
GCCTAG----CATTCAGGTTTGA-GGATTGAC-----TTTTGCAGTCTCT-CCTTGCAATTT-
CCGGGCCTATGTTT-TTTCATAT-ACCC--ATCCCCTGTTTATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACCCTTT--
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTTA--ATA-TCTCAACCTCTTCAGA-TTTTGTG-
-TTTGTGCGAGTG-T-TGGACGT-GGGGGTTCTT---T

>NR 178098 1 *Cortinarius beeverorum* Type

CTTGTCGCTTTATA--TCTCCACC-TGTGCACTTTCTGTAGA-CCTGGA-----TATGAAT--
GCCTAG----CATTCAGGTTTGA-GGATTGAC-----TTTTGCAGTCTCT-CCTTGCAATTT-
CCGGGCCTATGTTT-TTTCATAT-ACCC--ATCCCCTGTTTATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACCCTTT--
ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA

TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TCTCAACCTCTTCAGA-TTTTGTG-
-TTTGTGCGAGTG-T-TGGACGT-GGGGGTTCTT---T

>MW263889 *Cortinarius achrous*

CTCGTCATCTTTATA--TCTCCACC-AGTGTACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGCTAGCATTCAGGTTTGA-GGATTGAC-----CTTTTGGTCTGT-CCTTACATTT-
CTAGGCCTATGTTT-TCTCATAT-ACCCC-A-TGTATGT-TATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCCCATAAAAC-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTGCGAGTG-T-TGGATGT-GGGGGATGTC---T

>MG019355 *Cortinarius phaeomyxa*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACCCCTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAG----CATTCAGGCTTGA-GGATTGAC-----TTCTTAGTCTCT-CCTGTTATTT-
TCAGGCCTATGTTTC-TTCATAT-ACCCC-A-TGTATGT-CATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAATC-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTYAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGTCAT---T

>KP191878 *Cortinarius* sp.

CTTGTCATCTTTATA--TCTCCACC-TGTGCACCCATTGTAGA-CCTGGATTATC-TC--TCTGAAT-
-GCTTTG----CATTCAGGTCTGA-GGATTGAC-----CTCTTAGTCTCT-CCTGTTATTT-
TCAGGTCTATGTTTC-TTCATAT-ACCCC-A-TGTATGT-TATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACC-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTCAATTA--ATATTATCAACCTCTTCAG--CTTTTG-
-CTT-TGGAGTG-T-TGGATGT-GGGGGGTCTT---T

>JX178620 *Cortinarius alboroseus*

CTTGTCGTCTTTATATATCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT-
-GC-TAG----CATTTGGGTTTGA-GGATTGGC-----TTTTAGTCTCT-CCTTATGTTT-
CCAGGCCTATGTTTC-TTAATAT-ACTCC-ATC--ATGT-TATAGAA-TGTAAT--AATGGG-
CCTCTGTGCCTATAAACC-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAATCTCTTCAG--CTTTTG--
CTTGCAGAGTG-T-TGGATGTGGGGGGTATTT---T

>OQ077657 *Cortinarius alboroseus*

CTTGTCGTCTTTATATATCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT-
-GC-TAG----CATTTGGGTTTGA-GGATTGGC-----TTTTAGTCTCT-CCTTATGTTT-
CCAGGCCTATGTTTC-TTAATAT-ACTCC-ATC--ATGT-TATAGAA-TGTAAT--AATGGG-
CCTCTGTGCCTATAAACC-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAATCTCTTCAG--CTTTTG--
CTTGCAGAGTG-T-TGGATGTGGGGGGTATTT---T

>OQ065035 *Cortinarius alboroseus*

CTTGTCGTCTTTATATATCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT-
-GC-TAG----CATTTGGGTTTGA-GGATTGGC-----TTTTAGTCTCT-CCTTATGTTT-
CCAGGCCTATGTTTC-TTAATAT-ACTCC-ATC--ATGT-TATAGAA-TGTAAT--AATGGG-

CCTCTGTGCCTATAAACC-T---
 ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCCA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAATCTCTTCAG--CTTTTG--
 CTTGCAGAGTG-T-TGGATGTGGGGGGTATTT---T
 >AY669629 *Cuphocybe* sp.
 CTTGTCGTCTTTATA--TCTCCACC-TGTGCACCTATTGTAGA-CCTGGA-TAAC-TC--TCTGAAT--
 GC-TAG----CATTCAGGTTTGA-GGACTGAC-----TTTCTGTCTGT-CCTTRCATT-
 CCAGGCCTATGTT-CTTTCATATAACCTC-AATGTATGT-TATTGAA-TGTAATAMAATGGG-
 CCTTTGTGCCTATAAACCCTT---
 ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCCA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTCAAG--CTTTTG--
 CTTGTTGAGTG-TATGGATGT-GGGGGTTATT---T
 >AY669625 *Cuphocybe* sp.
 CTTGTCGTCTTTATA--TCTCCACC-TGTGCACCTATTGTAGA-CCTGGA-TAAT-TC--TCTGAAT--
 GG-TAG----CATTCAGGTTTGA-GGACTGAC---TGACTTTCTGTCTTT-CCTTACCTTT-
 TCAGGCCTATGTT-CTTTCATATWACCTC-AATGTATGT-TATGGAA-
 TGTAATACAATGGGCCCTCTGTGCCTATAAACC-T---
 ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCCA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAAMCTCTCAAG--CTTTTG-
 -CTTGTTGAGTGGTATGGATGT-GGGGGTTATT---T
 >NR 157858 *Cortinarius collariatus* Type
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TAAC-TC--TCTGAAT--
 GC-TAG----CATTCAGGTTTGA-GGATTGAC-----TTGTGTCTTT-CCTTACATT-
 TCAGGCCTATGTCT-TTTCATAT-AACCC-AATGTATGT-TATAGAA-TGTAATAAAATGGG-
 CCTTTGTGCCTATAAACCCTT---
 ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCCA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
 CTTGTTGAGTG-TTTGGATGT--GGGGGTC-----T
 >NR 157857 *Cortinarius paradoxus* Type
 CTTGTCATCTTTATATCTCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT-
 -GC-TAG----CATTCAGGTTTGA-GGTTTGAC-----C-TTTTGGTCTCT-CCTTACATT-
 CCAGGCCTATGTTTC-TTCATAT-ACCCC--TTGTATGT-TATAGAA-TGTAAT-AAATGGG-
 CCTTTGTGCCTATAAAAC-T---
 ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCCA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
 CTTGTTGAGCG-T-TGGATGT--GGGGGTCTT---T
 >KJ421160 *Cortinarius caperatus*
 CTTGTCGTCTTTATA--TTTCCACCTTGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-ACACAAGCATTGTTGGTTTGAAGGGGTTGAC-----TTTTTGGTCTCC-CTTTATATTT-
 CCAGGCCTATGTTTCTTTCATAT-ACCCC-A-CTTGTGT-TATAGAA-TGTAAT-AAATGGG-
 CCTTTGTGCCTGTAAAGC-T---
 ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCCA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCCTCAA--CTTGTG--
 TT---GAGTG-T-TGGATGT-GGGGGTTCTT---T
 >AY669576 *Cortinarius emodensis*

CTTGTCGTCCTTTATA--TTTCCACCTTGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-ACACAAGCATTGTTGGGTTTGAGGGGTTGAC-----TTTTTGGTCTCT-CTTTATATTT-
 CCAGGCCTATGTTTCTTTCATAT-ACCCC-A-CTTGTGT-TATAGAA-TGTAAT-AAATGGG-
 CCTTTGCGCCTGTAAAGC-T---
 ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGATTA--ATA-TATCAACCTCTTCAG-----
 CTTGTTGAGTG-T-TGGATGT-GGGGGTTCTT---T
 >AY669606 *Protophloeum luteum*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTGTAGA-CCTGGA-TACC-TC--TCTGAAT--
 GC-TAA--GGCATTTCAGGTTTGA-GGATTGGC-----TTTCCAGCCTCT-CCTTGCATT-
 GCCGGGCCTATGTTT-TTTCATAC-ACCCC-A-TCCCTGTTTATAGAA-TGTAAT-AAATGGG-
 CCTCTGTGCCTATAAACCTTT--
 ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGATTA--ATA-
 TATCAACCTCTTCAGATTTTGTG--TTTGTGAGTG-T-TGGATGT-GGTGGTGCTT---C
 >DQ328197 *Protophloeum luteum*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-TAGC--GCATTTCAGGTTTGA-GGATTGGC-----
 TTTCCAGCCTCTCCCTTGCATTTGCCGGGCCTATGTTT-TTTCATAC-ACCC--A-
 TCCCTGTTTATAGAA-TGTAAT---AAGGG-CCTTTGTGCCTATAAACCTTT--
 ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGATTAATATA-
 TATCAACCTCTTCAGATTTTGTGT-TTTGTGAGTG-T-TGGATGTGGGGGGTTCTT---T
 >MW263892 *Cortinarius lubricanescens*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-TAG----CATTTCAGGTTTGA-GGATTGAC---TTTTTTTTGTTTCT-CCTTACATTT-
 CCAGGCCTATGTTT-TTCATAT-ACCCC-AATGTATGT-TATAGAA-TGTAAT-ACATGGG-
 CCTTTGTGCCTAAAAACC-T---
 ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGTCTGTTTGAGTGTGATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
 CTTATGGAGTG-T-TGGATGT--GGGGGTCTT---T
 >JX178611 *Cortinarius lubricanescens*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
 GC-TAG----CATTTCAGGTTTGA-GGATTGAC---TTTTTTTTGTTTCT-CCTTACATTT-
 CCAGGCCTATGTTT-TTCATAT-ACCCC-AATGTATGT-TATAGAA-TGTAAT-ACATGGG-
 CCTTTGTGCCTATAAACCTT---
 ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT
 GGTATTCCGAGGAGCATGTCTGTTTGAGTGTGATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
 CTTATGGAGTG-T-TGGATGT--GGGGGTCTT---T
 >MH101637 *Cortinarius elaiochrous*
 CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTTGTAGA-CCTGAA-TATC-TC--TCTGAAT--
 GC-TAG----CATTTCAGGCTTGA-GGATTGAC-----TTCTTAGTCTCT-CCTGTTATTT-
 TCAGGCCTATGTTT-TTCATAT-ACCC--A-TGTATGT-TATAGAA-TGTAAT-AAACGGG-
 CCTTTGTGCCTATAAATC-T---
 ATACAACCTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
 TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCCTCCTT

GGTATTCCGAGGAGTATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTTAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGTCAT---T

>OQ065042 *Cortinarius elaiochrous*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTAGA-CCTGAA-TATC-TC--TCTGAAT--
GC-TAG----CATTCAGGCTTGA-GGATTGAC-----TTCTTAGTCTCT-CCTGTTATTT-
TCAGGCCTATGTTTC-TTCATAT-ACCC--A-TGTATGT-TATAGAA-TGTAAT-AAACGGG-
CCTTTGTGCCTATAAATC-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCACTCCTT
GGTATTCCGAGGAGTATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTTAG--CTTTTG--
CTT-TAGAGTG-T-TGGATGT--GGGGGTCAT---T

>MN855086 *Cortinarius glutinopallens*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTAGA-CCTGGA-TATC-TCCTTCTGAAT-
-GC-TAG----CATTCAGGTTTGA-GGATTGAC-----TTTTCTGTCTTT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-AACGTATGT-TATAGAA-TGTAAT-AAATGG--
CCTTTGTGCCTATAAACA-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATGT--GGGGGTCTT---T

>MN855071 *Cortinarius glutinopallens*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTAGA-CCTGGA-TATC-TCCTTCTGAAT-
-GC-TAG----CATTCAGGTTTGA-GGATTGAC-----TTTTCTGTCTTT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-AACGTATGT-TATAGAA-TGTAAT-AAATGG--
CCTTTGTGCCTATAAACA-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATGT--GGGGGTCTT---T

>MN855051 MES 2429 *Cortinarius glutinopallens*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTAGA-CCTGGA-TATC-TCCTTCTGAAT-
-GC-TAG----CATTCAGGTTTGA-GGATTGAC-----TTTTCTGTCTTT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-AACGTATGT-TATAGAA-TGTAAT-AAATGG--
CCTTTGTGCCTATAAACA-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATGT--GGGGGTCTT---T

>KY462295 *Cortinarius glutinopallens*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTAGA-CCTGGA-TATC-TCCTTCTGAAT-
-GC-TAG----CATTCAGGTTTGA-GGATTGAC-----TTTTCTGTCTTT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-AACGTATGT-TATAGAA-TGTAAT-AAATGG--
CCTTTGTGCCTATAAACA-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTGCTTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATGT--GGGGGTCTT---T

>KJ421052BW *Cortinarius ponderosus*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACCTTTGTAGA-CCTGGA-TATC-TT--TCTGAAT--
GC-TAGT---CACTCAGGTTTGA-GGATTGAC----TCTTTTGTGTCTCT-CCTTATATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCT-AATGTATGT-AACAGAA-TGTAAT-TCATGGG-
CCTTTGTGCCTATAAATT-A---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCAAGGAGCATGCCTGTTTGAGTGTCAATTATTATA-TATCAACCTCTT-----TTG--
TTTGTAGAGTG-T-TGGATGTGGGGGGTCTT---T

>CONCF1849 *Cortinarius steglichii*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T

>IBP-CH 13/2019 *Cortinarius steglichii*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T

>IPB-CH 62/2018 *Cortinarius steglichii*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T

>IBF20220095 *Cortinarius steglichii*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGNNNNNNNNNNNNNN---N

>CONCF1849 *Cortinarius steglichii*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T

>CONCF2171 *Cortinarius isteglichii*

CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-

CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T
>IBF20220071 *Cortinarius steglichii*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGNNNNNNNNNNNNNN---N
>IPB-CH 81/2019 *Cortinarius steglichii*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T
>CONCF2083 *Cortinarius steglichii*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T
>CONCF2110 *Cortinarius steglichii*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTCTCTGAAT-
-GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTCT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCCC-ATTGTATGTTTATAGAA-TGTAAT-GAATGGG-
CCTTTGTGCCTATAAACT-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCA-----G--
CTTGTCGAGTG-T-TGGATGT-GGGGGGTCTT---T
>*Cortinarius steglichii*
CTTGTCATCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TCTTTCTGAAT-
-GC-TAG----CATTCAGGTTTGA-GGATTGAC-----TTTTCTGTCTTT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-AACGTATGT-TATAGAA-TGTAAT-AAATGG--
CCTTTGTGCCTATAAACA-T---
ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCAATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTCGAGTG-T-TGGATGT--GGGGGTCTT---T
>MN855077 *Cortinariarius sp*

CTTGTCGTCCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTGT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-A-TGTATGTTTATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTAAGAGTG-T-TGGATGTGGGGGGTTCTT---T

>MG554222 *Cortinarius* sp

CTTGTCGTCCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTGT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-A-TGTATGTTTATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTAAGAGTG-T-TGGATGT-GGGGGTTCTT---T

>MN855028 *Cortinarius* sp

CTTGTCGTCCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTGT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACGCC-A-TGTATGTTTATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTAAGAGTG-T-TGGATGT-GGGGGTTCTT---T

>MN855010 *Cortinarius* sp

CTTGTCGTCCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTGT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACCCC-A-TGTATGTTTACAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTAAGAGTG-T-TGGATGT-GGGGGTTCTT---T

>MN854998 *Cortinarius* sp

CTTGTCGTCCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTGT-CCTTACATTT-
CCAGGCCTATGTTTC-TTCATAT-ACGCC-A-TGTATGTTTATAGAA-TGTAAT-AAATGGG-
CCTTTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT
GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCTATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTAAGAGTG-T-TGGATGT-GGGGGTTCTT---T

>MN855012 *Cortinarius* sp

CTTGTCGTCCTTTATA--TCTCCACC-TGTGCACTTTTTGTAGA-CCTGGA-TATC-TC--TCTGAAT--
GC-TAGC---CATTCAGGTTTGA-GGATTGAC-----TTTCCGGTCTGT-CCTTACATTT-
CTAGGCCTATGTTTC-TTCATAT-ACCC--A-TGTATGTCTATAGAA-TGTAAT-AAATGGG-
CCTNTGTGCCTATAAACT-T---

ATACAACTTTTCAGCAACGGATCTCTTGGCTCTCGCATCGATGAAGAACGCAGCGAAATGCGA
TAAGTAATGTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACCTTGCGCTCCTT

GGTATTCCGAGGAGCATGCCTGTTTGAGTGTCATTA--ATA-TATCAACCTCTTCAG--CTTTTG--
CTTGTAGAGTG-T-TGGATGT-GGGGGTTCTT---T