

Fig. 1. PCR to identify *sepA*, *sepB* and *sepC* genes in UC9 and Mor4.1. Lines: 1. 8- HindIII; 2. UC9, *sepA*; 3. UC9, *sepB*; 4. UC9, *sepC*; 5. UC9, *afp18*; 6. UC9, with no primers; 7. Mor4.1, *sepA*; 8. Mor4.1, *sep B*; 9. Mor4.1, *sepC*; 10. Mor4.1, *afp18*; 11. Mor4.1, with no primers; 12. DNA Markers 50 bp DNA ladder (Fermentas). The primers used were: Afp18 F 5' CGT GGT GGA AGG AAA GCA AAG TG and Afp18R 5' GAGCACCAAGTAATCGCTCTGG. The annealing site for Afp18 F was at position 97737 in pADAP.

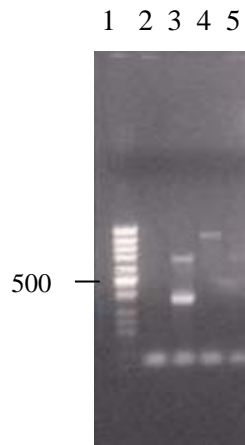



Fig. 2. PCR to identify homolog to tc genes of *P. luminiscens*. Lines: 1. DNA Markers 50 bp DNA ladder (Fermentas); 2. UC9, tccC 8'; 3. Mo4.1, tccC 8'; *Providencia rettgeri*, tccC 8'; *E. coli* ATCC25922, tccC 8'. The primers used were tccC 8'F tccC 8'F (5'-TCA TAA CTG TCA CCG ATC G-3') and tccC 8'R (5'-TAC CAA TTA AGC GCT GGG TC-3' (Tennant, et al., 2005. Infect Immun.73:6860-7. Sequencing of the two DNA fragments in Mor4.1 line showed that the reaction were unspecific since no homology were found to Tc complex. *P. rettgeri* is a nematode-associated bacteria.

Fig. 3. Aligning of 16S rDNA of Mor4.1 to *S. entomophila* DSM12358.

>  [emb|AJ233427.1|SEN233427](https://www.ncbi.nlm.nih.gov/nucl/emb/AJ233427.1|SEN233427) Serratia entomophila 16S rRNA gene (strain DSM 12358)
Length=1516

Score = 2643 bits (1431), Expect = 0.0
Identities = 1457/1469 (99%), Gaps = 4/1469 (0%)
Strand=Plus/Plus

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Query 14   AGGCCTAAC-CATGCAAGTCGAGCGGTAGCACGGGGGAGCTTGCTCCCTGGGTGACGAGC 72
          |||
Sbjct 27   AGGCCTAACACATGCAAGTCGAGCGGTAGCACGGGGGAGCTTGCTCCCTGGGTGACGAGC 86

Query 73   GGCGGACGGGTGAGTAATGTCTGGGAAACTGCCTGATGGAGGGGGATAACTACTGGAAAC 132
          |||
Sbjct 87   GGCGGACGGGTGAGTAATGTCTGGGAAACTGCCTGATGGAGGGGGATAACTACTGGAAAC 146

Query 133  GGTAGCTAATACCGCATAACGTCTACGGACCAAAGTGGGGGACCTTCGGGCCTCACGCCA 192
          |||
Sbjct 147  GGTAGCTAATACCGCATAACGTCTTCGGACCAAAGTGGGGGACCTTCGGGCCTCACGCCA 206

Query 193  TCAGATGTGCCCAGATGGGATTAGCTAGTAGGTGGGGTAATGGCTCACCTAGGCGACGAT 252
          |||
Sbjct 207  TCAGATGTGCCCAGATGGGATTAGCTAGTAGGTGGGGTAATGGCTCACCTAGGCGACGAT 266

Query 253  CCCTAGCTGGTCTGAGAGGATGACCAGCCACACTGGAAGTGGAGACACGGTCCAGACTCCT 312
          |||
Sbjct 267  CCCTAGCTGGTCTGAGAGGATGACCAGCCACACTGGAAGTGGAGACACGGTCCAGACTCCT 326

Query 313  ACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATGCAGCCATGCCGC 372
          |||
Sbjct 327  ACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATGCAGCCATGCCGC 386

Query 373  GTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTTCAGCGAGGAGGAAGGGTAGTGTCT 432
          |||
Sbjct 387  GTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTTCAGCGAGGAGGAAGGGTAATGTCT 446

Query 433  TAATACGGCATT-GCATTGACGTTACTCGCAGAAGAAGCACCGGCTAACTCCGTGCCAGC 491
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Sbjct	447	 TAATACGGCATTTCG-ATTGACGTTACTCGCAGAAGAAGCACCGGCTAACTCCGTGCCAGC	505
Query	492	AGCCGCGGTAATACGGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCACGC	551
Sbjct	506	 AGCCGCGGTAATACGGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCACGC	565
Query	552	AGGCGGTTTTGTTAAGTCAGATGTGAAATCCCCGCGCTTAACGTGGGAACTGCATTTGAAA	611
Sbjct	566	 AGGCGGTTTTGTTAAGTCAGATGTGAAATCCCCGCGCTTAACGTGGGAACTGCATTTGAAA	625
Query	612	CTGGCAAGCTAGAGTCTCGTAGAGGGGGGTAGAATTCCAGGTGTAGCGGTGAAATGCGTA	671
Sbjct	626	 CTGGCAAGCTAGAGTCTCGTAGAGGGGGGTAGAATTCCAGGTGTAGCGGTGAAATGCGTA	685
Query	672	GAGATCTGGAGGAATACCGGTGGCGAAGGCGGCCCCCTGGACGAAGACTGACGCTCAGGT	731
Sbjct	686	 GAGATCTGGAGGAATACCGGTGGCGAAGGCGGCCCCCTGGACGAAGACTGACGCTCAGGT	745
Query	732	GCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCTGTAAACGATGT	791
Sbjct	746	 GCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCTGTAAACGATGT	805
Query	792	CGATTTGGAGGTTGTGCCCTTGAGGCGTGGCTTCCGGAGCTAACGCGTTAAATCGACCGC	851
Sbjct	806	 CGATTTGGAGGTTGTGCCCTTGAGGCGTGGCTTCCGGAGCTAACGCGTTAAATCGACCGC	865
Query	852	CTGGGGAGTACGGCCGCAAGGTTAAAACCTCAAATGAATTGACGGGGGCCCGCACAAAGCGG	911
Sbjct	866	 CTGGGGAGTACGGCCGCAAGGTTAAAACCTCAAATGAATTGACGGGGGCCCGCACAAAGCGG	925
Query	912	TGGAGCATGTGGTTTTAATTCGATGCAACGCGAAGAACCTTACCTACTCTTGACATCCAGA	971
Sbjct	926	 TGGAGCATGTGGTTTTAATTCGATGCAACGCGAAGAACCTTACCTACTCTTGACATCCAGA	985
Query	972	GAACTTAGCAGAGATGGTTTGGTGCCTTCGGGAACTCTGAGACAGGTGCTGCATGGCTGT	1031
Sbjct	986	 GAACTTTCCAGAGATGGATTGGTGCCTTCGGGAACTCTGAGACAGGTGCTGCATGGCTGT	1045

Query	1032	CGTCAGCTCGTGTTGTGAAATGTTGGGTAAAGTCCCGCAACGAGCGCAACCCTTATCCTT	1091
Sbjct	1046	CGTCAGCTCGTGTTGTGAAATGTTGGGTAAAGTCCCGCAACGAGCGCAACCCTTATCCTT	1105
Query	1092	TGTTGCCAGCGATTCCGGTCGGGAACTCAAAGGAGACTGCCGGTGATAAACCGGAGGAAGG	1151
Sbjct	1106	TGTTGCCAGCGATTCCGGTCGGGAACTCAAAGGAGACTGCCGGTGATAAACCGGAGGAAGG	1165
Query	1152	TGGGGATGACGTCAAGTCATCATGGCCCTTACGAGTAGGGCTACACACGTGCTACAATGG	1211
Sbjct	1166	TGGGGATGACGTCAAGTCATCATGGCCCTTACGAGTAGGGCTACACACGTGCTACAATGG	1225
Query	1212	CGTATACAAAGAGAAGCGAACTTGCGAGAGTAAGCGGACCTCATAAAGTACGTCGTAGTC	1271
Sbjct	1226	CGTATACAAAGAGAAGCGAGCTCGCGAGAGTAAGCGGACCTCATAAAGTACGTCGTAGTC	1285
Query	1272	CGGATTGGAGTCTGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAATCGTAGATCAGA	1331
Sbjct	1286	CGGATTGGAGTCTGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAATCGTAGATCAGA	1345
Query	1332	ATGCTACGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTGG	1391
Sbjct	1346	ATGCTACGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTGG	1405
Query	1392	GTTGCAAAAAGAAGTAGGTAGCTTAACTTCGGGAGGGCGCTTACCACTTTGTGATTCATG	1451
Sbjct	1406	GTTGCAAAAAGAAGTAGGTAGCTTAACTTCGGGAGGGCGCTTACCACTTTGTGATTCATG	1465
Query	1452	ACTGGGGTGAAGTCGTAACAAG-TAGCCG	1479
Sbjct	1466	ACTGGGGTGAAGTCGTAACAAGGTAACCG	1494

Fig. 4. Sequence of 16s rDNA Mor4.1

>5960 sequence exported from 5960[1].SeMor41.ab

CTTTTAACGTGGGAGGCCTAACCATGCAAGTCGAGCGGTAGCACGGGGGAGCTTGCTCCC
TGGGTGACGAGCGGCCGACGGGTGAGTAATGTCTGGGAAACTGCCTGATGGAGGGGGATA
ACTACTGGAAACGGTAGCTAATACCGCATAACGTCTACGGACCAAAGTGGGGGACCTTCG
GGCCTCACGCCATCAGATGTGCCAGATGGGATTAGCTAGTAGGTGGGGTAATGGCTCAC
CTAGGCGACGATCCCTAGCTGGTCTGAGAGGATGACCAGCCACACTGGAAGTGGAGACACG
GTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATG
CAGCCATGCCGCGTGTGTGAAGAAGGCCCTTCGGGTTGTAAAGCACTTTCAGCGAGGAGGA
AGGGTAGTGTCTTAATACGGCATTGCATTGACGTTACTCGCAGAAGAAGCACCGGCTAAC
TCCGTGCCAGCAGCCGCGGTAATACGGAGGGTGAAGCGTTAATCGGAATTACTGGGCGT
AAAGCGCACGCAGGCGGTTTGTAAAGTCAGATGTGAAATCCCCGCGCTTAACGTGGGAAC
TGCATTTGAAACTGGCAAGCTAGAGTCTCGTAGAGGGGGGTAGAATTCCAGGTGTAGCGG
TGAAATGCGTAGAGATCTGGAGGAATACCGGTGGCGAAGGCGGCCCCCTGGACGAAGACT
GACGCTCAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCT
GTAAACGATGTTCGATTTGGAGGTTGTGCCCTTGAGGCGTGGCTTCCGGAGCTAACGCGTT
AAATCGACCGCTGGGGAGTACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGGGCC
CGCACAAGCGGTGGAGCATGTGGTTTAATTGATGCAACGCGAAGAACCTTACCTACTCT
TGACATCCAGAGAACTAGCAGAGATGGTTTGGTGCCTTCGGGAACTCTGAGACAGGTGCTGCATGGCTGTCCG
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TTGCCAGCGATTCCGGTCGGGAACTCAAAGGAGACTGCCGGTGATAAACCGGAGGAAGGTG
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TATACAAAGAGAAGCGAACTTGCGAGAGTAAGCGGACCTCATAAAGTACGTCGTAGTCCG
GATTGGAGTCTGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAATCGTAGATCAGAAT
GCTACGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTGGGT
TGCAAAGAAGTAGGTAGCTTAACCTTCGGGAGGGCGCTTACCCTTTGTGATTCATGAC
TGGGGTGAAGTCGTAACAAGTAGCCGACGAGACT

Fig.5. Blast phylogenetic analysis of 16S rDNA of Mor4.1

