

Short Identity and synteny results

Syntenic genes are represented in yellow

➔ *sra07* and *sra18*

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1      10     20     30     40     50
|-----|
sra07  GTCGATTATTTGCCGTARITGTC-----ACCCCTCCCTAR
sra18  CGCCTTTGCCGAGGTGTGGCAGAGTACGTCCARACCCCTCCCA
R.leguminosarum TTGAGGAGATGAGTGCARACTGCGCCARACCCCTCCCA
R.et.li  ....tttgccga.gtgtg.....cagACCCCTCCCA
Consensus .....tttgccga.gtgtg.....cagACCCCTCCCA

51     60     70     80     90     100
|-----|
sra07  CCCCTCCCACRAGGGGGAGGGGCTACTTCTGCCGACCTCGGGGTCCA
sra18  CCCCTCCCACRAGGGGGAGGGGCACTTCTGCCGACCTCTCGGCCAR
R.leguminosarum CCCCTCCCACRAGGGGGAGGGGCTAR-----CCGTGGCCGCTCG
R.et.li  CCCCTCCCACRAGGGGGAGGGGCTTACGTGCGGCTCGCCGATTTCG
Consensus CCCCTCCCACRAGGGGGAGGGGCTaattctgctgCactccccggccca

101    110    120    130    140    150
|-----|
sra07  AAGTCAGCCTTTGCGTCATCGCGACTTGCARATGGGAAAGCGCTAG-
sra18  AAGTCAGCCTTTGCGTCATCTGAGCTTGCARATGGCCGGCGATCGG
R.leguminosarum CAATCAGCCTGCTGATGCCCTGCGCTGGAGATGATGCGCGAGGG
R.et.li  CTCTCGGGCCGACGATATTATGATCCGGCTTGTGTTTTCGAGGGC
Consensus aaaaC.agccctgctcaacc.cgaacctGcaaaIgg.Lg.Gcgtggg

151    160    170    180    190    200
|-----|
sra07  CCGCAGCGCCTAGCCCTTCCCTTGTGGGGAGGGGTTAGGGAGGGCC
sra18  CCCCGGGCCCTAGCCCTCCCACTGTGGGGAGGGGTTGGGAGGGCC
R.leguminosarum CCGC--GCGTTAGTCCCTCCCTTGTGGGGAGGGGTTGGGAGGGCC
R.et.li  GTGCCAGCGCTAGCCCTCCCTTGTGGGGAGGGGTTGGGAGGGCC
Consensus cgcC.agcGcctAGcCcTCCcCtTGTGGGGAGGGGTTgGGGAGGGcc

201    210    220    230    238
|-----|
sra07  TCATCCARCCCGCTGGGAGGGTGGCATCAGCGCAT
sra18  TTATGCGACCGACGATCAGCGCG
R.leguminosarum TT
R.et.li
Consensus tt.....

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	Left	Right
<i>sra07</i>	<i>smc00325</i>	<i>smc00326</i>
<i>sra18</i>	<i>smc03026</i>	<i>flgB</i>
<i>R. etli</i>	<i>RHE_CH01163</i>	<i>RHE_CH01164</i>
<i>R. leguminosarum</i>	<i>RL1293</i>	<i>RL1294</i>

➔ *sra08*

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1      10     20     30     40     50
|-----|
sra08  CTCRACCCAGGCTTACCCCTCCCAACCCCTCCCAACAGGGGGAGGG
R.et.li  ACCCGCCCAACCCCTCCCAACAGGGGGAGGG
R.leguminosarum ACCCGCCCAACCCCTCCCAACAGGGGGAGGG
Consensus .....aCCcC.cCCcAACCCCTCCcCACAGGGGGAGGG

51     60     70     80     90     100
|-----|
sra08  CTTAATCTGCTTACCGTCAACCGCTGCTATCGTTTGGCCGAGAGT
R.et.li  CTTAATCTGCTGACCGCTTTCGATATATCTCGCGTTTCGCGCTAAT
R.leguminosarum CTTAATCTGCTGACCGCTTTCGATATATCTCGCGTTCGCGAG--GAGC
Consensus CTTAATCTGCTGACCGctctc...ca...tctcgggTTLegG.G.gAGc

101    110    120    130    140    150
|-----|
sra08  GCGCGGGGAGGCCCTCCCTTGTGGCCCTTGTGGGGAGGGGTTGGGG
R.et.li  GCGAGGTTGCTCTCCAGGCCCTCC--CCCTTGTGGGGAGGTTGGGG
R.leguminosarum GCGTGGGGCTTACGATATTCCTCCCTCCCTTGTGGGGAGGGGTTG
Consensus Gcg.CGgGcctc.cCa...ccCctct...CCCTTGTGGGGAGGgGTcgggg

151    160    169
|-----|
sra08  AGGGGTTGCGGACGCGAT
R.et.li  AGGGGA
R.leguminosarum
Consensus agggg.....

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	Left	Right
<i>sra08</i>	<i>cfal</i>	<i>smc00359</i>
<i>R. etli</i>	<i>kupch1</i>	<i>RHE_CH00862</i>
<i>R. leguminosarum</i>	<i>cheW</i>	<i>RL3290</i>

➔ *sra15*

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1      10     20     30     40     50
|-----|
R.neliloti  GGGTGCATCGGTCAATGAAATCCCGCTATCGGTGGTT
A.tumefaciens GATAGCTCAGTTGTAGAGCAGCGATTGAAATCCCGCTATCGGTGGTT
M.loti  GACTGAAATCCCGCTATCGGTGGTT
Consensus .....ggt...a.c.g..gATGAAATCCCGCTgTCGGTGGTT

51     60     70     80     88
|-----|
R.neliloti  CAATCCGCTTATGGGACCATTTCTTTTTGGGGG
A.tumefaciens CAATCCGCTCGGGACCATTTCTTC
M.loti  CAATCCGCTTGGGACCATTTCTTC
Consensus CAATCCGcctctGGGACCATtctcTtt.t.....

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	Left	Right
<i>sra15</i>	<i>smc04432</i>	<i>tRNA-phe</i>
<i>A.tumefaciens</i>	<i>AGR_C_892</i>	<i>tRNA-phe</i>
<i>M. loti</i>	<i>mll6432</i>	<i>mll6433</i>

➔ **sra21**

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1      10     20     30     40     50
sra21  ATCGCTCAGTCCCCCAAAGCTCGCGCTGATCTGCTGCTAATCTATACCGG
agro   TCCGCAATATTCCGAC
Consensus .....TCCcCAAaaTcgCGCaC.....

51     60     70     80     90     100
sra21  TAACCGGTAGATATACCAATCACGGCATTGTGATCGCAGCTTTGGCGCAG
agro   .....
Consensus .....

101    110    120    130    140    150
sra21  GAACGCATGCACAGCCCGCAATGTTCCGGAAAGCCCGACGGCGCGGTCTC
agro   .....CGGAAATCCAGCGCGCGCTGCC
Consensus .....CGGAAAcCCgcACceGCGGcTccC

151    160    170    180    190    200
sra21  GCGGCTGTTCGCGCCCTTGGCCGCCCTGCCATGATCCGGTAGGGAAAGC
agro   GCGGCTTCTTTTCGCGCTTGGCCGCCACGCCATGAT-----GGATGTG
Consensus GCGGCTTcTcgCGCcTtGGCCGCCaCcGCCATGAT.....GGAaGgc

201    210    220    23832
sra21  ACCGACCAAGCTTGAAGTCCGGATGCTTCA
agro   AACCTC
Consensus AaCcaC.....

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	Left	Right
<i>sra21</i>	<i>smc00931</i>	<i>hisS</i>
<i>A.tumefaciens</i>		<i>AGR_C_3323</i>

➔ **sra31**

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1      10     20     30     40     50
sra31  TGCATGCCCCCAAAGTGTGCAGCGGTTTTGGGATACGACATGCATGA
R.leguminosarum TGCTGTCCGCCAAAGTGTGCAGCGGTTTTGGGACACGACATGCATCA
H.loti TGCTGTCCGCCAAAGTGTGCAGCGGTTTTGGGAGACGACATGCATCA
R.etli TGCTGTAGCCCAAAGTGTGCAGCGGTTTTGGGAGACGACATGCATCA
Consensus TGCaTtGcGCCAAAGTGTGCAGCGGTTTTGGGagACGACATGCATCa

51     60     70     80     91
sra31  T---AAGCACTACAGCGCGCGCCTTTATGCTTAGGCC
R.leguminosarum AG-CAGGACCTGAGCGCGTCCGCTTTAGA
H.loti AAACAAAGAGCTAAGCGCATCGCC
R.etli A---AAGACCTCAGCGCTCGCA
Consensus a...AAGgacTaaAGCGcgtCGc.....

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	Left	Right
<i>sra31</i>	<i>smc01806</i>	<i>smc01807</i>
<i>R. etli</i>	<i>RHE_CH02389</i>	<i>RHE_CH02390</i>
<i>R. leguminosarum</i>	<i>RL0960</i>	<i>RL0961</i>
<i>M. loti</i>	<i>mll0880</i>	<i>mll0883</i>

➔ **sra34**

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1      10     20     30     40     50
sra34  TTCCGTTTCGATCGGACTTCGACCCCGCGGGCACCAGCGGGGTTTTTC
nezo   GAATTCGGACCCCGCGGGCACCAGCGGGGTTTTTC
et.li  TCCCAATCAGGAGACCCCGCTGGAAACAGCGGGGTTTTTC
leguminosarum CLGCAATTAAGAGACCCCGCTGGAAACAGCGGGGTTTTTC
Consensus .....ccacaat.aat.gaaaACCCcGcg6aaAACAGcGgGGTTTTTC

51     60     70     80     88
sra34  TTTTGGCGATTACAGAAC
nezo   CATTTCGTAGTACAGCTGCCTACTATGCGAGCGAGT
et.li  GTTTTGTATG
leguminosarum ATTTTCAATGA
Consensus .tTTtgcTag.....

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	Left	Right
<i>sra34</i>	<i>tufA</i>	<i>smc01325</i>
<i>R. etli</i>	<i>tufB</i>	<i>RHE_CH01659</i>
<i>R. leguminosarum</i>	<i>tufB2</i>	<i>RL1758</i>
<i>M. loti</i>	<i>mllr4028</i>	<i>mll4029</i>

➔ **sra36**

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1      10     20     30     40     50
R.meliloti GGGTGCATCGTCAATGAAATCCCGTATCGGTGGTT
A.tumefaciens GATAGCTCAGTTGGTAGACAGCGGATGAAATCCCGGTGTCGGTGGTT
M.loti GACTGAAATCCCGGTGTCGGTGGTT
Consensus .....ggt...a.c.g...gATGAAATCCCGGTGTCGGTGGTT

51     60     70     80     88
R.meliloti CAATCCGCTTATGGGCACCAATTTCTTTTGGGGGG
A.tumefaciens CAATCCGCTTATGGGCACCAATTTCTTC
M.loti CGAATCCGCTTATGGGCACCAATCCCTTCTTC
Consensus CaAATCCGcTctGGGCACCAAtLtcTt.t.....

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	Left	Right
<i>sra15</i>	<i>smc04432</i>	<i>tRNA-phe</i>
<i>A.tumefaciens</i>	<i>AGR_C_892</i>	<i>tRNA-phe</i>
<i>M. loti</i>	<i>mll6432</i>	<i>mll6433</i>

➔ **sra37**

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1      10     20     30     40     50
sra37  GGTATCCACGCTTATAGCGGTGTGAAATGTGACGATTCAGCACACAT
R.leguminosarum CGATCGCAGACAAATCGCGTCCAAATTTGTGACGATTCAGCACACAT
R.etli TTGTGACGATTCAGCACACAT
Consensus .ggt...c.a.c...at...cg.t....tGTGACGATTCAGCACaAT

51     60     70     80     90     100
sra37  TTCTGCTACGCTTGTCTACTATCCGACCCGGTCCGATATGTCCATTTCT
R.leguminosarum TTT-TACAGCTTTGGCGTATGGTGCBCAAGGCGAATTTGTCCATTTCT
R.etli TTT-TACAGATGAAATGGCGTATGGTGCBCATGGCGAATTTGTCCATTTCT
Consensus TtL..TaCgAcG.tTgGcTaTggtgGcgccgGGgCGAaTtGTCCATTTCT

101    110    120    126
sra37  CCGCCACAAATGAGAGCGGCGATA
R.leguminosarum CCGCCACAAAGAGGGCGGCGCTAT
R.etli CCGCCACAA
Consensus CCGCCACAAa...g.g.gcagcg.ta.

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	Left	Right
<i>sra37</i>	<i>smc02079</i>	<i>exoR</i>
<i>R. etli</i>		<i>RHE_CH01813</i>
<i>R. leguminosarum</i>	<i>RL2036</i>	<i>exoR</i>

➔ **sra42**

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1       10      20      30      40      50
|-----|
sra42   GGGAARATGGCGACGCATGGANAGGGCCCGTGTGCTTCCGGCAGTC
R.et.li GTTACCSCAGCATATAGAGTCCCTGTCTCCGGCGGCATTG
M.lot.i          CCTTCCGGCAGTC
Consensus .....g..g..cgca....aa..g...cc....tgCtTCCGGCAGTC

51      60      70      80      90      100
|-----|
sra42   GAGCAATGGCGAGGGCTACCCGGTATGGTCCGGCCCTGTCACCAAAATC
R.et.li GGAACAGTGGCAACCGACAGAGGCCCGGCTTGTCCGAAATGGAAATC
M.lot.i CTTGAGTGCACAAAGGCCAGCGCTGTGCGCTGGCCGGTACGACGAATC
Consensus g...cAGTgCAaagGcCgAC..cG....GGctggcCegt..ac..acaAAATc

101     110     120     130 134
|-----|
sra42   GCACGTTGCCGCAAGGCACCCCTGGAAATCG
R.et.li GCACGGCCCGCAAGAGACGCGCCCTGTAT
M.lot.i GCACACCGCCGCAAGGCACCTGCCGT
Consensus GCACg.cCGCGcAGGcAaCcGCctGt.....

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	Left	Right
<i>sra42</i>	<i>SMc01197</i>	<i>SMc01196</i>
<i>R. etli</i>	<i>RHE_CH02373</i>	
<i>M. loti</i>	<i>mlr1783</i>	

➔ **sra44**

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1       10      20      30      40      50
|-----|
sra44   GTCGTTCCCAATCTCGCCGGATCCAGGTCGGCAGCTTGTCAATACGA
R.leguminosarum TCATTCCCAATCTCGCCGGATCCAGGTCGGCAGCTTGTAGCGTTTG
Consensus .TCaTTCTCCCAATCTCGCCGGATcAAGGTCGGCAGCTTGTaaagcga

51      60      70      80      90      100
|-----|
sra44   TGCAAGTATTCGCGCACCCTTATGTAA--GGCTAAAGGCGTTTTTCAC
R.leguminosarum GGCARTTGT--CTTGCCCTTATGTAAAGGCCAAAGGCGTTTTTCAG
Consensus gCRAgTat...CgcaCCctTATGTAAg..GGcAAAGGcAcTTTTCAc

101     110     120     130 140 150
|-----|
sra44   CCCATTTCGCAAGCGGAATTTGCTTTCCGCAATTTCTTCARTCTCT
R.leguminosarum CCCAATTGGCAAGCGGAATTTGCAATTTCCGCAATTTCTTCARTCTCT
Consensus CCCAaTTGcAAGCGGAaATTTGCaTTTCcCAaGTTTcaga.....

15155
sra44   |---|
R.leguminosarum CCGCT
Consensus .....

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	Left	Right
<i>sra44</i>	<i>smc00530</i>	<i>nifS</i>
<i>R. etli</i>	<i>sufB</i>	<i>nifSCH</i>
<i>R. leguminosarum</i>	<i>sufB</i>	<i>nifS</i>
<i>A.tumefaciens</i>	<i>AGR_C_3348p</i>	<i>nifS</i>

➔ **sra67**

```

1       10      20      30      40      50
|-----|
sra67   GCCGGTAGCGCTCAAAACAGCCGGCGTCTCATCGACCCGGCTGACGCA
R.et.li   GCCGGTAGCGCTCAAAACAGCCGGCGTCTCATCGACCCGGCTG-GCCG
R.leguminosarum GCCGGTAGCGCTCAAAACAGCCGGCGTCTCATCGACCCGGCTG-GCCG
A.tumefaciens AGCCGGTAGCGCTCAATGAGCCGGGTGTCATCGACCCGGCTGAGACG
Consensus .GCCGGTAGcgctCaAAaAcAGCCGGcGTCTcATCGACCCGGCTg.gcTg

51      60      70      80      90      100
|-----|
sra67   CCGCAAGGTTCAAAAGCCAGACTTCARAGGGGAGATGGGGCGATACCCAA
R.et.li   TACAGGTTCAAGTCCAGAAAC-----AGGGGAGATGGGGCGCATCTCC
R.leguminosarum TATCAGGTTCAAGTCCAGAAAC-----AGGGGAGATGGGGCGCATCTCC
A.tumefaciens TATCAGGTTCAAGTCCAGAAAC-----AGGGGAGATGGGGCGCATCTCC
Consensus t.atCAgGtTcaagtCaagaAaAC.....AGGGGAGATGGGGcgcAcCaa

101     110     120     131
|-----|
sra67   CTCCCCTTTTGCATGCTGGAGGAGAAC
R.et.li   CCTTTTT
R.leguminosarum CTCCCCTTTT
A.tumefaciens CccccTtltt.....

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	Left	Right
<i>sra67</i>	<i>rpmA</i>	<i>smc03773</i>
<i>R. etli</i>	<i>rpmA</i>	<i>RHE_CH04064</i>
<i>R. leguminosarum</i>	<i>rpmA</i>	<i>rl4678</i>
<i>A.tumefaciens</i>	<i>rpmA</i>	<i>Atu2783</i>