

SUPPLEMENTAL MATERIAL

Horizontal Transfer of *lux* Genes in *Vibrionaceae*

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For amplification of *recA*, we used primers:

5'-TGGACGAGAATAAACAGAAGGC-3'

5'-CCGTTATAGCTGTACCAAGCGCCC-3'

Annealing was done at 45°C. The primers were originally reported by Ast and Dunlap (2005).

For amplification of *pyrH*, we used primers:

5'-ATGASNACBAAYCCWAAACC-3'

5'-GTRAABGCNGMYARRTCCA-3' or 5'-GAATCGGCATTTTATGGTCACG-3'. Annealing was done at 48°C or 50°C. Two of the primers were originally reported by Thompson *et al.* (2005).

For amplification of *gyrB*, we used primers:

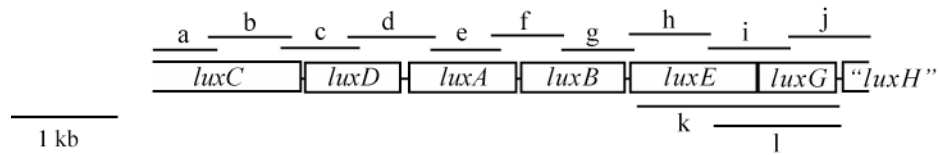
5'-GAAGTTATCATGACGGTACTTC-3'

5'-AGCGTACGAATGTGAGAACC-3'

Annealing was done at 48°C. The primers were originally reported by Ast and Dunlap (2005).

For amplification of sequences of *lux* operon we used primer pairs given below. Annealing temperatures were 45°C, 48°C or 50°C.

Primers used for *lux* operon amplification and sequencing in *V. vulnificus* VVL1 and *V. harveyi* ATCC 14126^T.



a) This primer pair was only used for *V. harveyi* ATCC 14126^T.

5'-GCTCTTGATATGGAAAAACACTTACC-3'

5'-GAGTGTCGTATCCGATGCATGAGG-3'

b) 5'-GCGCTAGCGATGAGCTTTATTGAC-3'

5'-GCTCTATTTTCGACAGATACATCCTTAG-3'

c) 5'-CCAAGAAATATCGAGATGCATTCG-3'

5'-CAGTCGCGAACGAACACTTCAGAACC-3'

d) 5'-CGCTTGGTTTTGATTACCTCAGTTTG-3'

5'-TATCCATGTCTGTACCAAAGACACG-3'

e) 5'-CTACTGGATCAAATGTCAAAAGGACG-3'

5'-TCAGAACCGTTTGCTTCAAAACC-3'

[Note. These primers were originally reported by Wimpee *et al.* (1991).]

f) 5'-TTATCCAGCAAGATATYGATGCGACG-3'

5'-TTCGACGCCATCTAACCACTTCTT-3'

g) 5'-GCATTCACTACTGGGTACTGCCATC-3'

5'-GCTGAGGAGTTCCCATGAAAATCAAG-3'

h) 5'-GCAGCGATGCCCCTTATATCACCATTC-3'

5'-GTTGGTTGACTCGTCTCTATCGAGC-3'

i) This primer pair was only used for *V. harveyi* ATCC 14126^T.

5'-CGAGCAAGGTCAAACCTTCAATGG-3'

5'-GGTTTGACACTCTCATCACGCAGC-3'

j) This primer pair was only used for *V. harveyi* ATCC 14126^T.

5'-CGTTTTTAGAACTCCATATTGGTGG-3'

5'-CCAATTGGCGCGTTCCTCCGTTAAGC-3'

k) This primer pair was only used for *V. vulnificus* VVL1.

5'-GCAGCGATGCCCCCTTATATCACCATC-3'

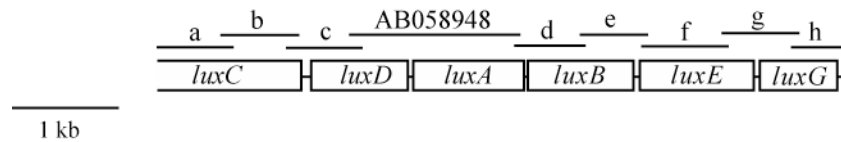
5'-GCCATTTTTTCAGAGCCTCAATCGCTC-3'

l) This primer pair was only used for *V. vulnificus* VVL1.

5'-TCTATCTACTGTGCTGTTTCATGCG-3'

5'-GCCATTTTTTCAGAGCCTCAATCGCTC-3'

Primers used for *lux* operon amplification and sequencing in *V. orientalis* ATCC 33934^T. [Note. Portion of *luxD* and *luxA* sequences of *V. orientalis* ATCC 33934^T was previously sequenced. See GenBank accession number AB058948.]



a) 5'-GCTCTTGATATGGAAAAACACTTACC-3'

5'-CGAGGCGGCTTCTTCTAGATCGGCTG-3'

b) 5'-GCGCTAGCGATGAGCTTTATTGAC-3'

5'-GCTCTATTTTCGACAGATACATCCTTAG-3'

c) 5'-CCAAGAAATATCGAGATGCATTCG-3'

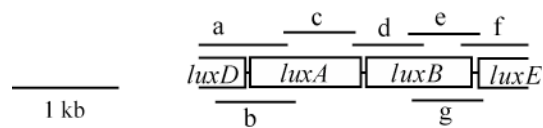
5'-CAGTCGCGAACGAACACTTCAGAACC-3'

d) 5'-TTATCCAGCAAGATATYGATGCGACG-3'

5'-TTCGCAGCCCATCTAACCACTTCTT-3'

- e) 5'-GCATTCACTACTGGGTACTGCCATC-3'
5'-GCTGAGGAGTTCCCATGAAAATCAAG-3'
- f) 5'-GCAGCGATGCCCTTATATCACCATTC-3'
5'-GTTGGTTGACTCGTCTCTATCGAGC-3'
- g) 5'-TCTATCTACTGTGCTGTTTCATGCG-3'
5'-GGTTTGACACTCTCATCACGCAGC-3'
- h) 5'-CGTTTTTAGAACTCCATATTGGTGG-3'
5'-GCCATTTTTTCAGAGCCTCAATCGCTC-3'

Primers used for *lux* operon amplification and sequencing in *V. chagasii* SB52 and *V. chagasii* 21-N12.



- a) This primer pair was only used for *V. chagasii* 21N-12.

5'-CGCTTGGTTTTGATTACCTCAGTTTG-3'

5'-TATCCATGTCTGTACCAAAGACACG-3'

- b) This primer pair was only used for *V. chagasii* SB-52.

5'-CATAAGCTTGGTTCTGAAGTG-3'

5'-ATCAAGTCATACCAACAATCCATC-3'

- c) 5'-CTACTGGATCAAATGTCAAAAGGACG-3'

5'-TCAGAACCGTTTGCTTCAAACC-3'

[Note. These primers were originally reported by Wimpee *et al.* (1991).]

- d) 5'-TTATCCAGCAAGATATYGATGCGACG-3'

5'-TTCGCAGCCCATCTAACCACTTCTT-3'

- e) This primer pair was only used for *V. chagasii* 21N-12.

5'-CTYGACCARATGAGTGAAGG-3'

5'-GAATGGTGATATAAGGGGCATC-3'

f) This primer pair was only used for *V. chagasii* 21N-12.

5'-CCTCAGTRACAGTAAATGCGGTCG-3'

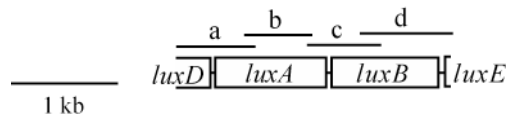
5'-GAGCTGTTGTCAGAAAATGCCATCG-3'

g) This primer pair was only used for *V. chagasii* SB-52.

5'-CTYGACCARATGAGTGAAGG-3'

5'-GCTGAGGAGTTCCCATGAAAATCAAG-3'

Primers used for *lux* operon amplification and sequencing in *V. cholerae* manz.1.1 and *V. cholerae* manz.1.2.



a) 5'-CAGAGCCTTGTGTCATGCCTGTCG-3'

5'-CTCGATCCCTTTCATTGCGTTTACCG-3'

b) 5'-CTACTGGATCAAATGTCAAAAGGACG-3'

5'-TCAGAACCGTTTGCTTCAAACC-3'

[Note. These primers were originally reported by Wimpee *et al.* (1991).]

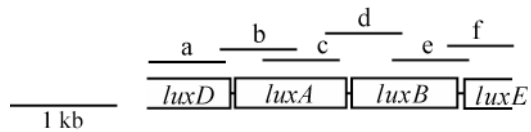
c) 5'-GACTTTAATAAAGGGCAATGGC-3'

5'-CTATAAAAGTCATTATTTGGATGGC-3'

d) 5'-CAGTGATTGTGAAAACCGCGACG-3'

5'-GTCAGCATTGTTCTGATAGTGCC-3'

Primers used for *lux* operon amplification and sequencing in *P. damsela* BT-6.



- a) 5'-ATTGGTGATAACCGTTATATTCGAGT-3'
5'-ACCTAGACGCTAGCCAATTCATCT-3'
- b) 5'-TTCAGATGGCGATGATTGGGTTTGCC-3'
5'-TTCTAATTGTGCTACTTTTTCACTGAT-3'
- c) 5'-GTTTTAGATCAACTGTCTAAAGGRCG-3'
5'-TCAGAACCATTTCGCTTCAAATCCAAC-3'
- d) 5'-TACAATGARRTTGCRGCWGARCATGG-3'
5'-TCRTARCANGCTTCRAATTGYSGYTG-3'
- e) 5'-CTCTCTGAATCAGGTAATTACAAC-3'
5'-TAATATCATCTATTTCTGTACTCAC-3'
- f) 5'-AATGTTGATCATCAATTCCCGCTACTG-3'
5'-AAATAAAATACGGAGGGCCAATTAAAC-3'

Primers used for *lux* operons amplification and sequencing in *P. mandapamensis* *ajpao.4.20* are the same as reported by Ast *et al.* (2007).

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- Ast, J. C., H. Urbanczyk, and P. V. Dunlap.** 2007. Natural merodiploidy of the *lux-rib* operon of *Photobacterium leiognathi* from coastal waters of Honshu, Japan. *J. Bacteriol.* **189**:6148-6158.
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