Errata for

Design and Construction of a Double Inversion Recombination Switch for Heritable Sequential Genetic Memory

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Update November 6, 2008

In Figure 1b, 1' and 3' in state 3 are reversed.

Corrected Table 1:

Primer Set	**Description**	**Primer Used**	**PCR Product Length**
E	State 0	337, 339	Short
F	States 1 and 4	337, 1006	State 1: Short, State 4: Long
G	States 2 and 3	339, APS1	State 2: Short, State 3: Long
H	State 5	338, 339	Short

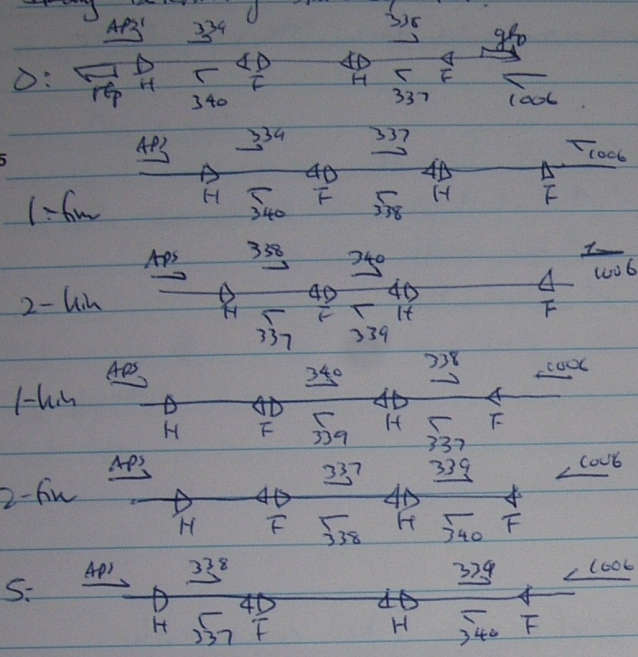
Corrected Figure 3 Inset Legend
E: State 0
F: State 1, 4
G: State 2, 3
H: State 5

Corrected Figure 3 Caption
.... Because of the possible arrangements of DNA, lanes F and G could result in either short or long PCR products, indicating states {1, 4} and {2, 3} respectively....

Further clarification:
See Notebook #5, P 208 (Dec 8, 2006), Notebook #6, p. 29 (Feb 20, 2007), p. 32 (Feb 23, 2007) (See End of document for images). Note that p.29 “length map” is for a particular construct, and not for the results of Figure 3, so it is only for relative lengths (short vs long) only.

[1]

Finding Determining state by PCR.



(339, 337) short (340, APS1) short

(337, APS1) long (338, 1006) short (339, 1006) long

(340, APS) s (338, APS1) s (339, 1006) l

(337, 1006) l (339, 338) s

(339, APS1) (337, APS1)

(338, 1006) (340, 1006), (338, 339)

(339, APS) (337, APS) (340, 1006)

(338, 1006) (340, 337).

(338, APS) (340, APS) (337, 1006)

(339, 1006) (337, 340).

(337, APS) (338, 340), (338, 1006)

(339, 1006) (340, APS1)

(337, 339) : 0.

(337, APS) : 0, 2-h, 1-h, 5.

(337, 1006) : 1-f, 2-f.

(337, 340) : 1-h, 2-f.

(338, 1006) : 0; 2-h, 1-h, 5.

(338, APS) ; 1-f, 2-f,

(338, 339). 1-f, 2-h.

(339, 1006). 0, 1-f, 5, 2-f.

(339, APS) 2-h, 1-h

(340, APS1) 0, 1-f, 2-f, 5.

(340, 1006) 2-h, 1-h,

(338, 340) 5.

Work continued to Page Notebook 6

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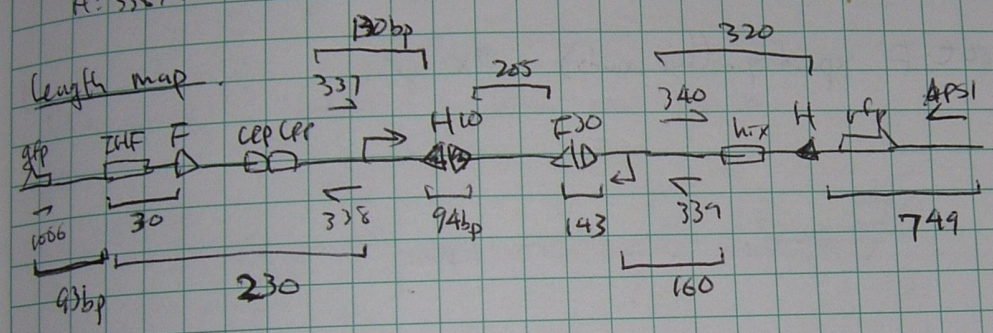
[2]

Pretty add? or repeated?
Common traits: almost no state 0. Small amount of Fm2 with?. Previously unobserved ~~fm~~ hm band.

Tues Feb 20, 2007.
Some theories: Something is unidirectional, that is, the fm reaction is not reversible. This implies the inserts are not what they seem. Maybe Fm ZRC30 isn't really double facing?

E: 337, 339 (0)
F: 337, 1006 (1f, 2f)
G: 339, APSI (1h, 2h)
H: 338, 340 (5).

Length map.



→ I should PCR and sequence the f1, h1 pieces. PCR from dead cells then gel extract.

2.5 µl 10x buff
0.2 µl dNTP's
0.2 µl taq
21.1 µl H_2O
0.5 µl primers x2
25 µl.

PCR FG, w/ 60t, 60r, 60tr, 60rt.

xG.

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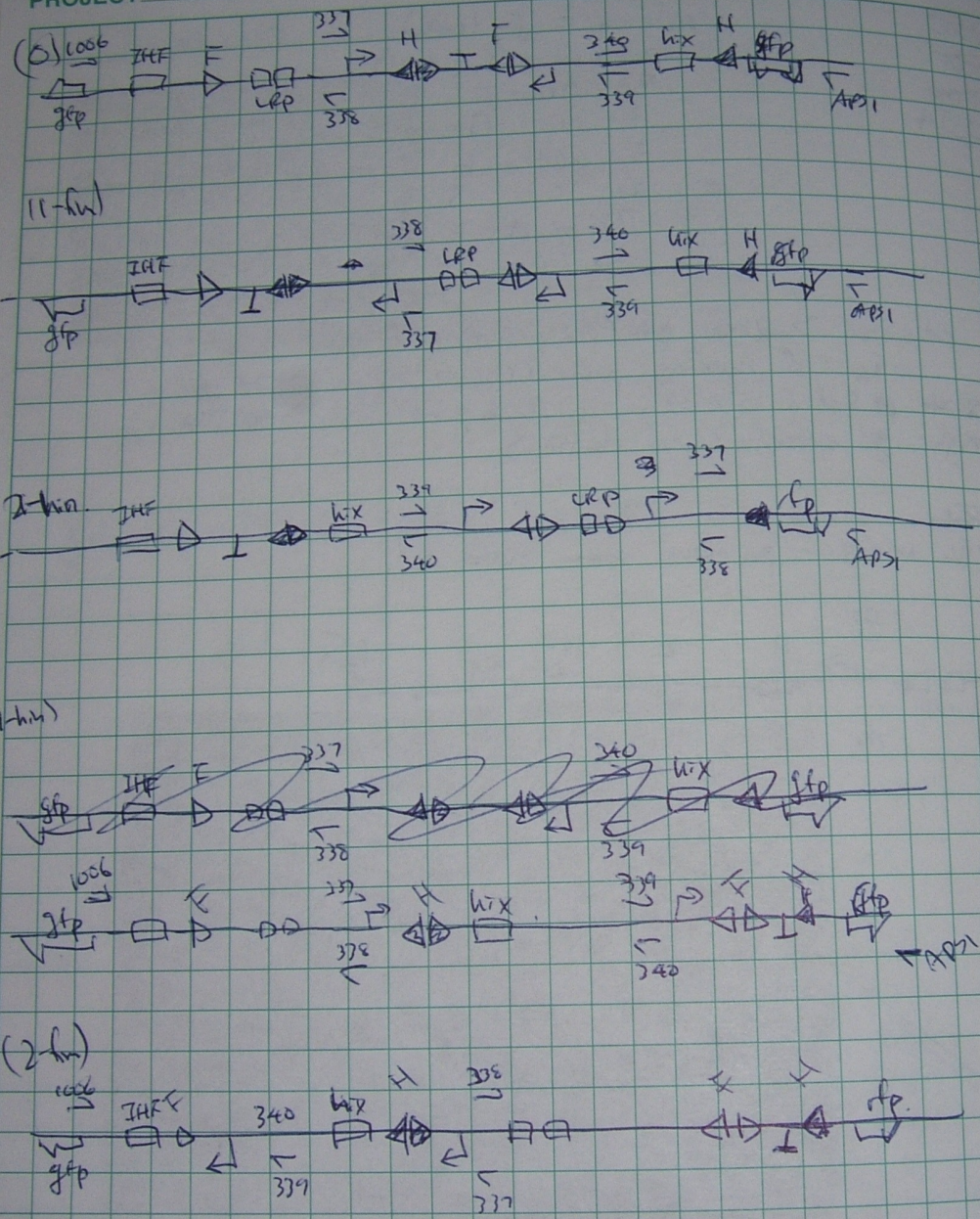
[3]



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