E.ADEM v0.0.5.2

2009.8.22

2009.5.3

110 days

2009.8.22

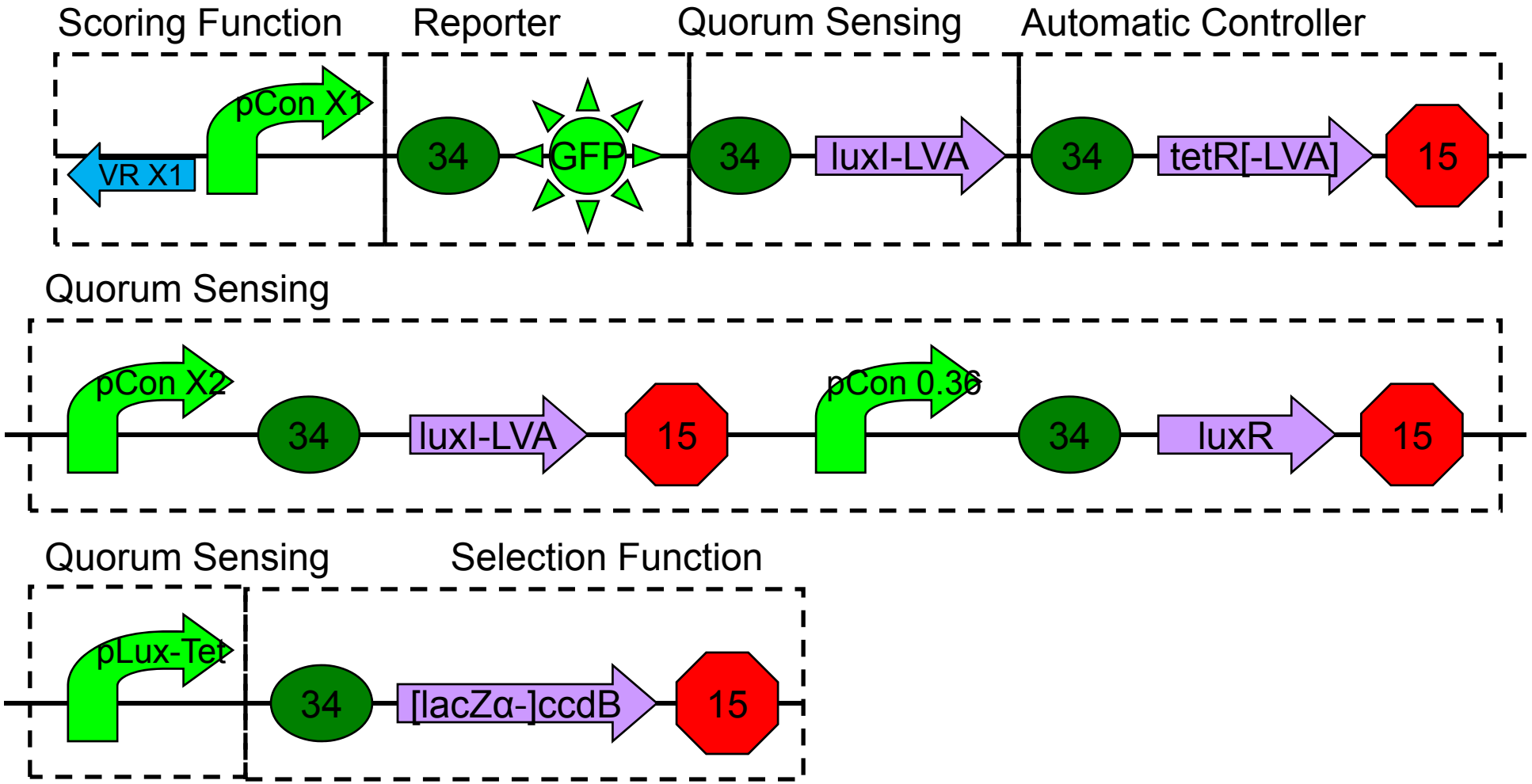
68 days

2009.10.30

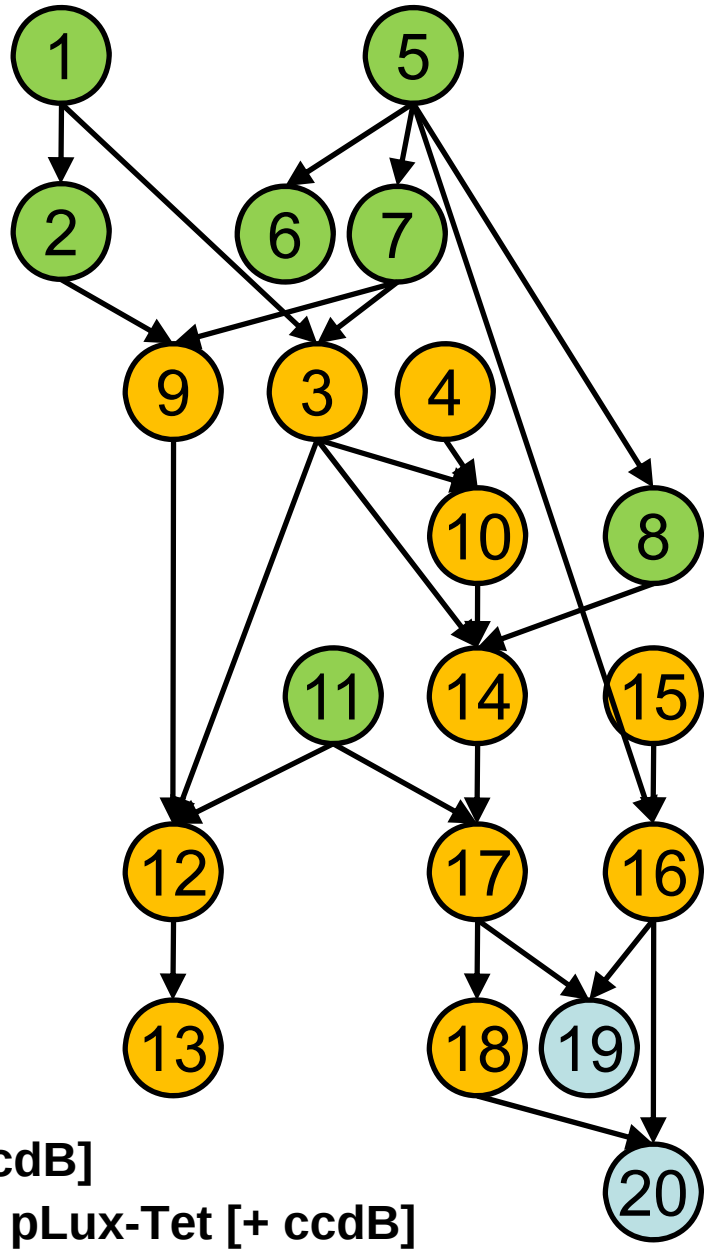
Outline

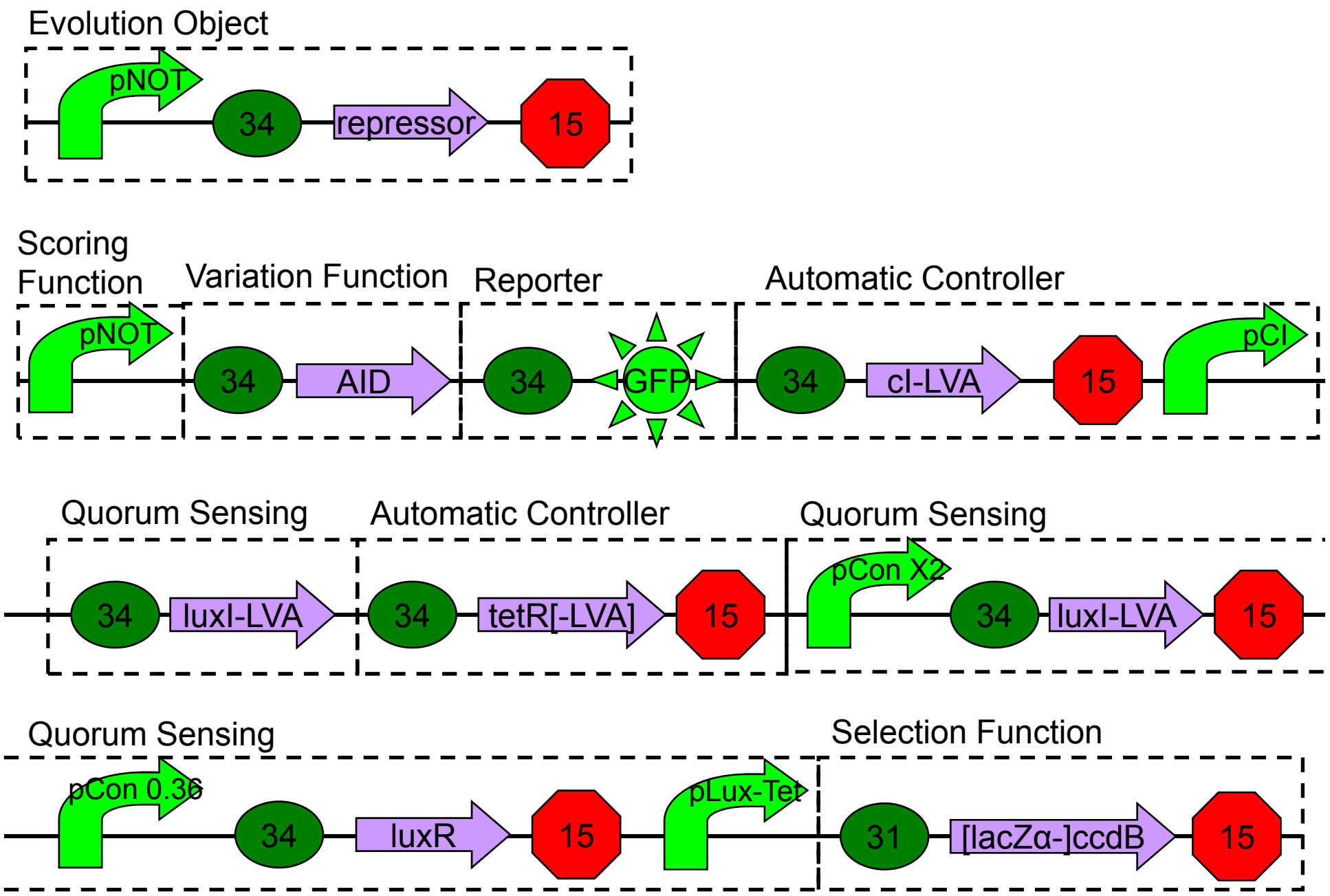
- Assembly
- Measurement
  - General Conditions
  - GFP
  - AHL
  - CcdB
  - LacZα
- Wiki
  - Team project description
  - Notebook
- Instructional Videos

Assembly

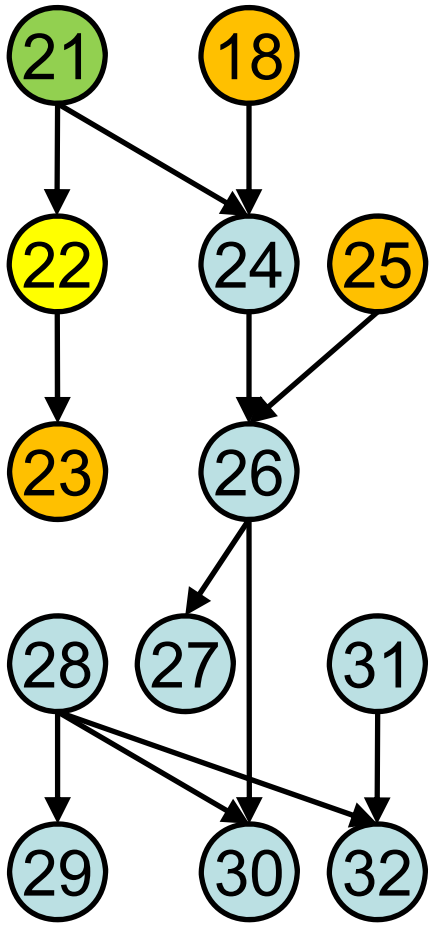

Scoring Function
Reporter
Quorum Sensing
Automatic Controller
pCon X1
VR X1
34
GFP
34
luxI-LVA
34
tetR[-LVA]
15
Quorum Sensing
pCon X2
34
luxI-LVA
15
pCon 0.36
34
luxR
15
Quorum Sensing
Selection Function
pLux-Tet
34
[lacZα-]ccdB
15

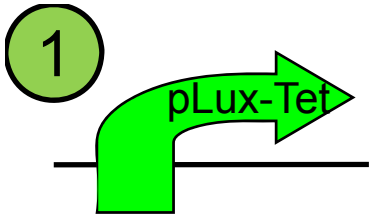
1. pLux-Tet
2. pLux-Tet + GFP
3. pCon + luxR×4 + pLux-Tet
4. ccdB×4
5. pCon×8
6. pCon×8 + GFP
7. pCon + luxR
8. pCon×7 + luxI (AHL detection by 9 or GC-MS ?)
9. pCon + luxR×4 + pLux-Tet + GFP (AHL)
10. pCon + luxR×4 + pLux-Tet + ccdB×4 (AHL)
11. tetR×2
12. tetR×2 + pCon×2 + luxR + pLux-Tet [+ GFP]
13. pCon×4 + tetR×2 + pCon×2 + luxR + pLux-Tet [+ GFP] (AHL/aTc)
14. [pCon×7 +] luxI + pCon×2 + luxR + pLux-Tet [+ ccdB×2]
15. VR×10
16. (VR + pCon)×7
17. tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
18. [GFP +] luxI + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
19. (VR + pCon)×6 + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
20. (VR + pCon)×6 + GFP + luxI + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]



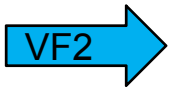

Evolution Object
pNOT
34
repressor
15
Scoring Function
Variation Function
Reporter
Automatic Controller
pNOT
34
AID
34
GFP
34
cI-LVA
15
pCI
Quorum Sensing
Automatic Controller
Quorum Sensing
34
luxI-LVA
34
tetR[-LVA]
15
pCon X2
34
luxI-LVA
15
Quorum Sensing
Selection Function
pCon 0.36
34
luxR
15
pLux-Tet
31
[lacZα-]ccdB
15

21. cI + pCI
22. cI + pCI + GFP
23. (VR + pCon)×7 + cI + pCI + GFP
24. cI + pCI + luxI + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
25. AID
26. [AID +] GFP + cI + pCI + luxI + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
27. (VR + pCon)×7 + GFP + cI + pCI + luxI + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
28. pNOT
29. pNOT + GFP
30. pNOT + [AID +] GFP + cI + pCI + luxI + tetR + pCon + luxI + pCon + luxR + pLux-Tet [+ ccdB]
31. repressor
32. pNOT + repressor



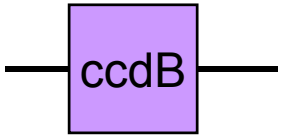


K176000 X+P with nicks
Sequence OK



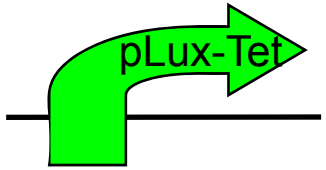
G00100
Synthesis OK

G00101
Synthesis OK



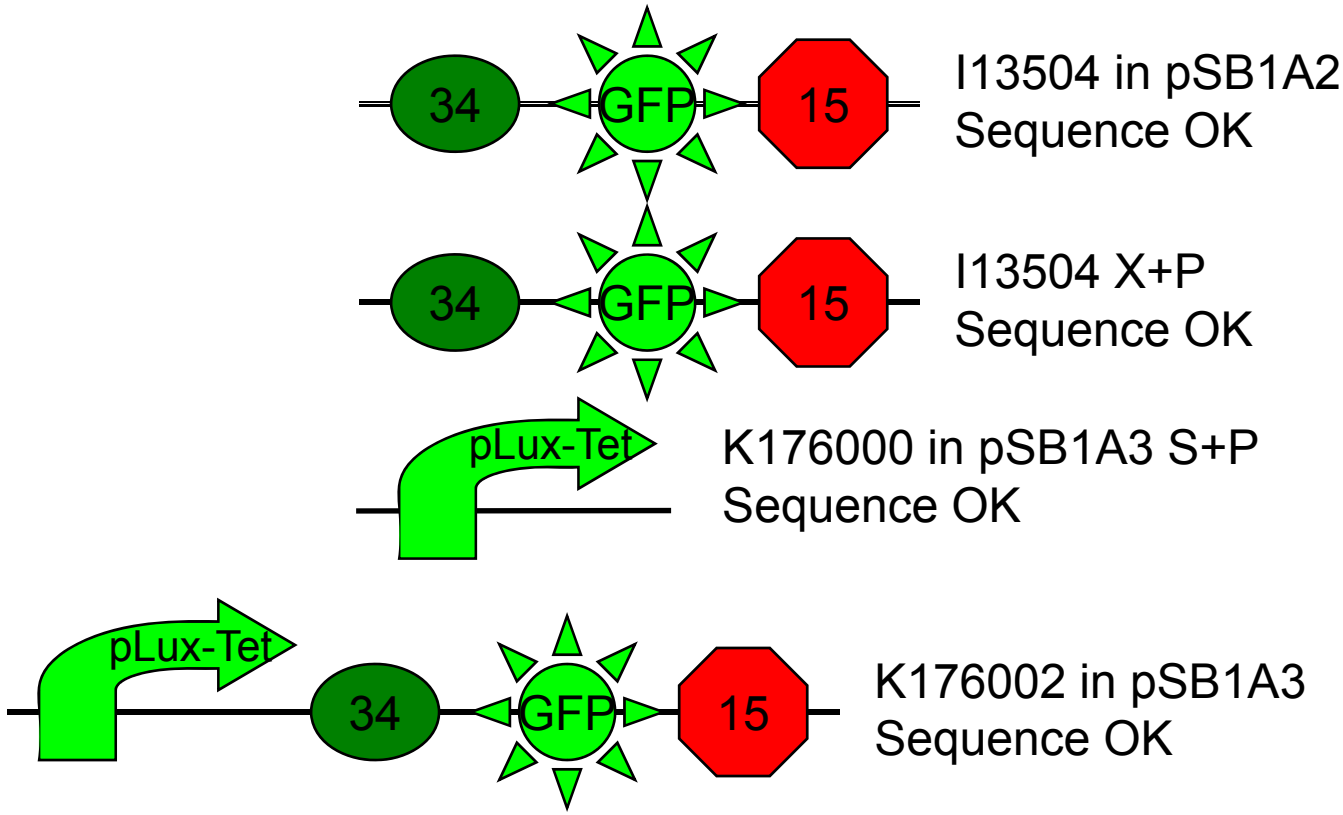
P1010 in pSB1A3 in DB 3.1
Length OK

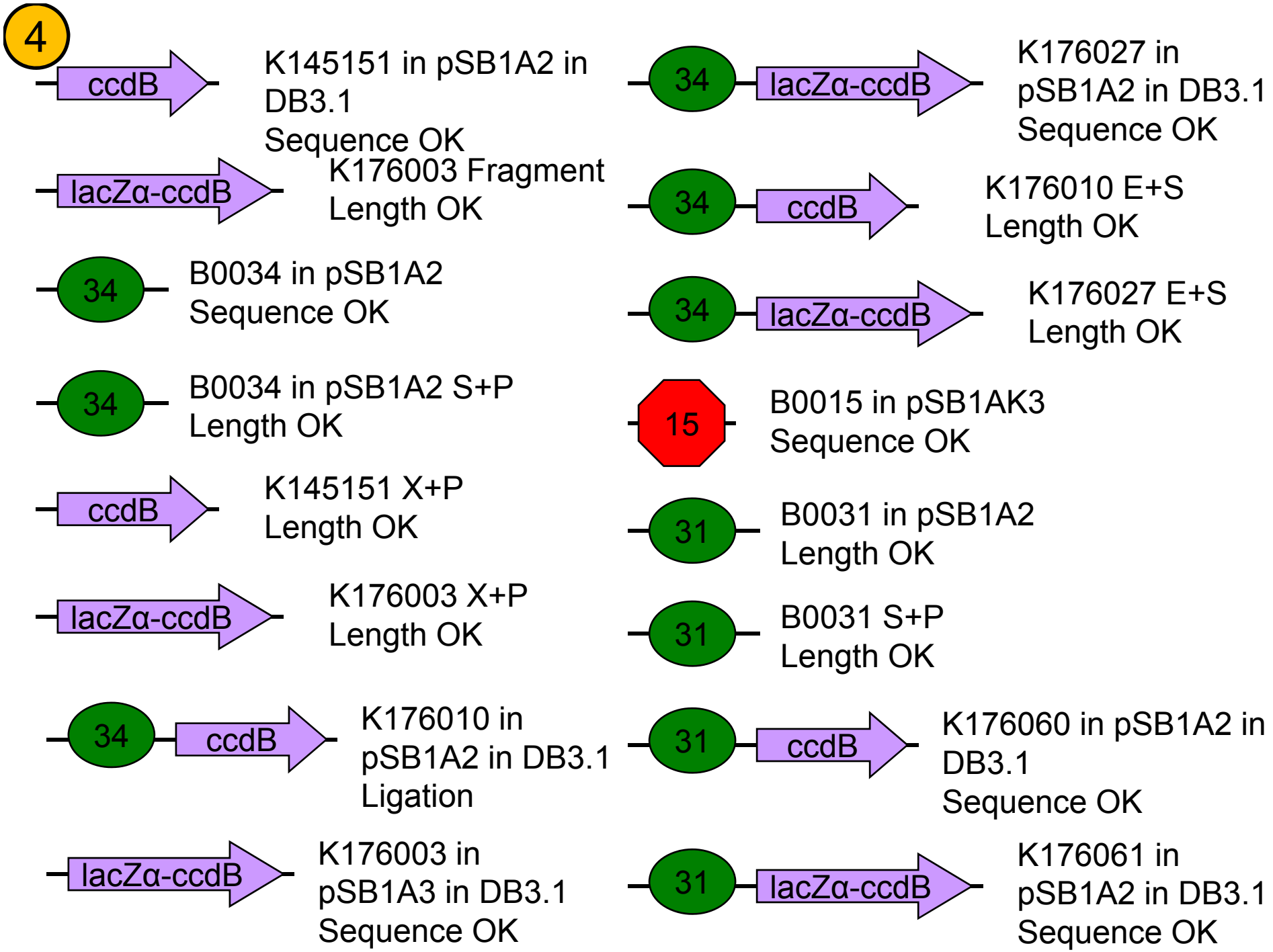
pSB1A3 X+P
Length OK

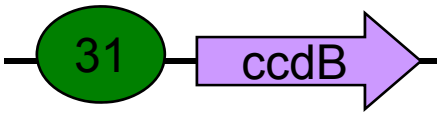


K176000 in pSB1A3
Sequence OK

2


34
GFP
15
I13504 in pSB1A2
Sequence OK
34
GFP
15
I13504 X+P
Sequence OK
pLux-Tet
K176000 in pSB1A3 S+P
Sequence OK
pLux-Tet
34
GFP
15
K176002 in pSB1A3
Sequence OK


4
ccdB
K145151 in pSB1A2 in DB3.1
Sequence OK
lacZα-ccdB
K176003 Fragment
Length OK
34
B0034 in pSB1A2
Sequence OK
34
B0034 in pSB1A2 S+P
Length OK
ccdB
K145151 X+P
Length OK
lacZα-ccdB
K176003 X+P
Length OK
34
ccdB
K176010 in pSB1A2 in DB3.1
Ligation
lacZα-ccdB
K176003 in pSB1A3 in DB3.1
Sequence OK
34
lacZα-ccdB
K176027 in pSB1A2 in DB3.1
Sequence OK
34
ccdB
K176010 E+S
Length OK
34
lacZα-ccdB
K176027 E+S
Length OK
15
B0015 in pSB1AK3
Sequence OK
31
B0031 in pSB1A2
Length OK
31
B0031 S+P
Length OK
31
ccdB
K176060 in pSB1A2 in DB3.1
Sequence OK
31
lacZα-ccdB
K176061 in pSB1A2 in DB3.1
Sequence OK



K176060 E+S
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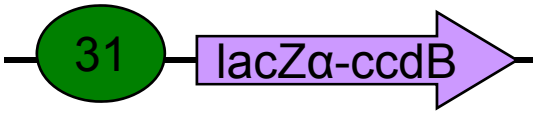

K176061 E+S
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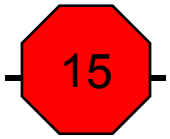
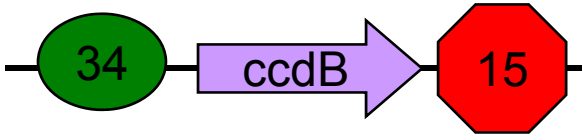
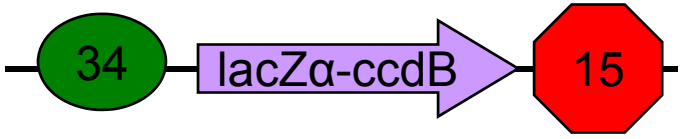


B0015 in pSB1AK3 E+X
Length OK



K176033 in pSB1AK3 in DB3.1
Sequence OK



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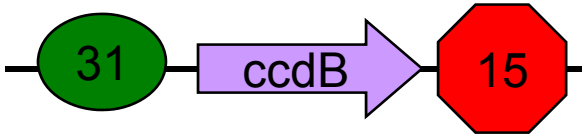
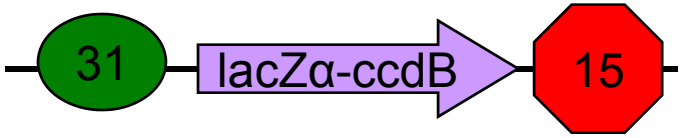
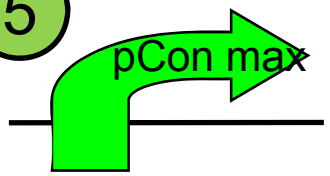


K176062 in pSB1AK3 in DB3.1
Sequence OK

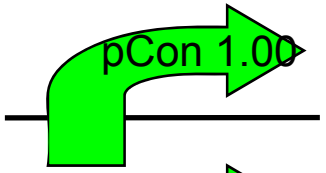


K176063 in pSB1AK3 in DB3.1
Sequence OK

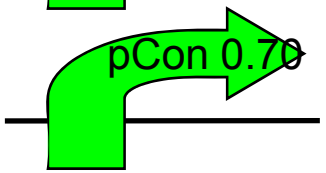
5



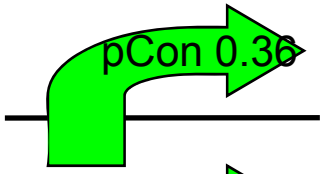
J23119 in pSB1A2
Sequence OK



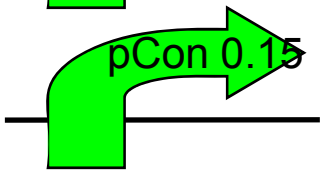
J23100 in J61002
Sequence ?



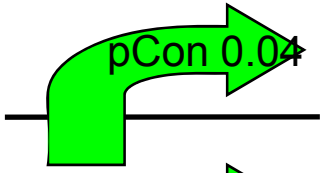
J23101 in J61002
Sequence OK



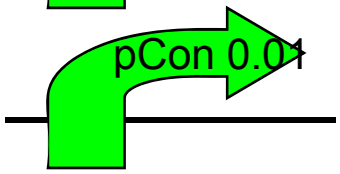
K176009 in J61002
Sequence OK



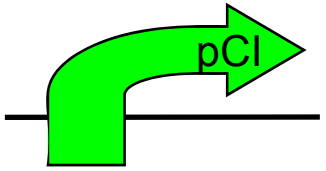
K176008 in J61002
Sequence OK



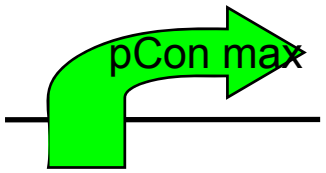
J23109 in J61002
Sequence OK



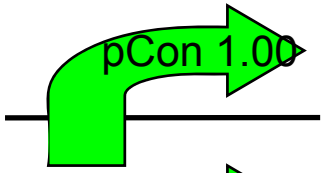
J23103 in J61002
Sequence OK



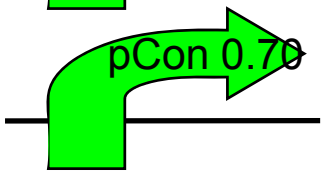
R0051 in pSB1A2
Sequence OK



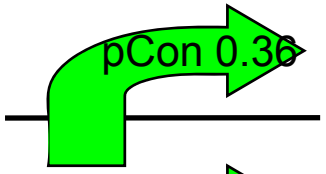
J23119 X+P
Sequence OK



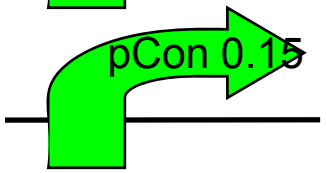
J23100-J61002SF X+P
Sequence ?



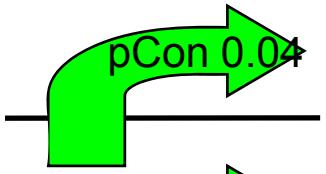
J23101-J61002SF X+P
Sequence OK



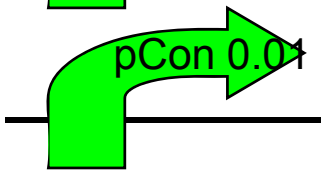
K176009-J61002SF X+P
Sequence OK



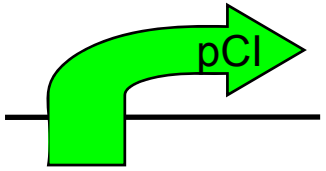
K176008-J61002SF X+P
Sequence OK



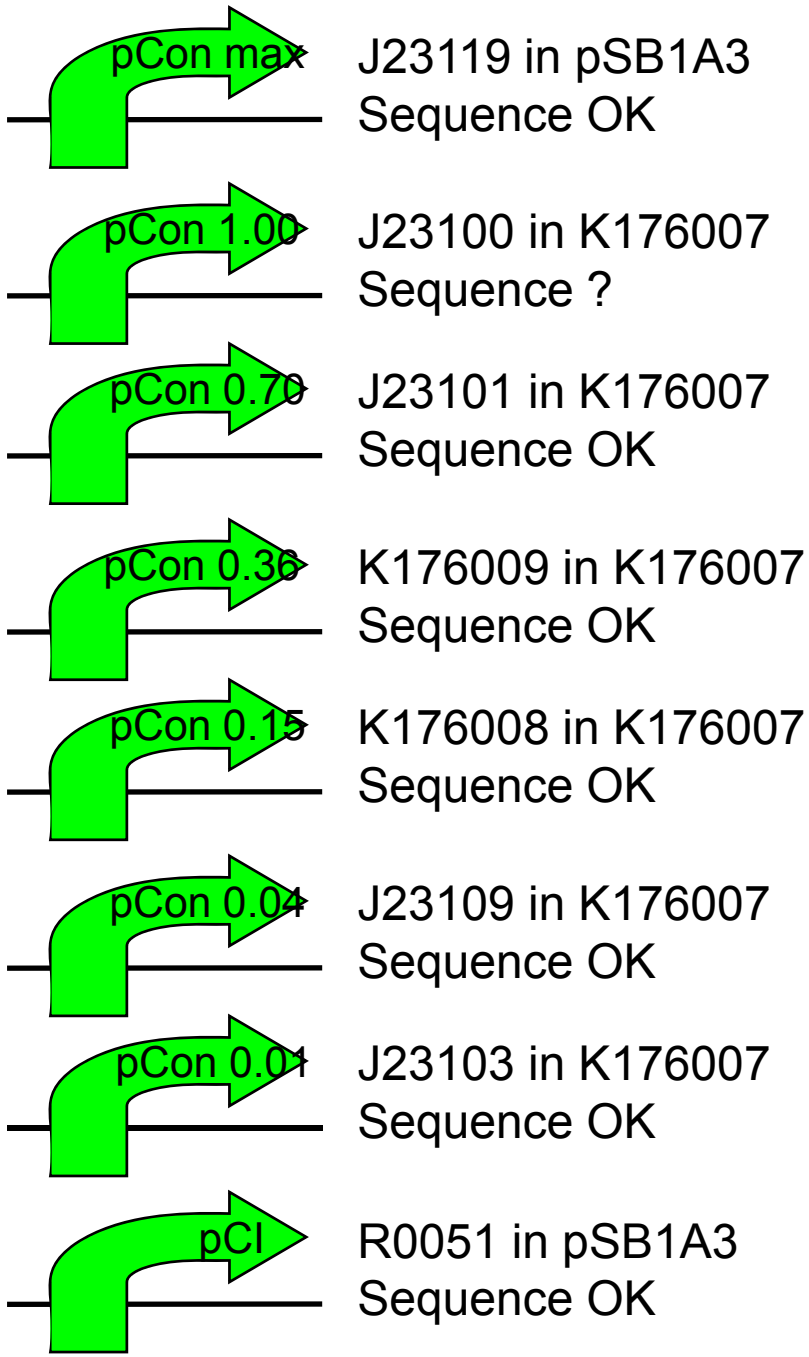
J23109-J61002SF X+P
Sequence OK



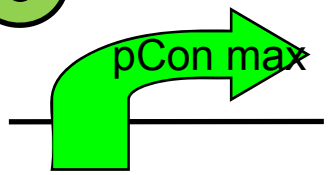
J23103-J61002SF X+P
Sequence OK



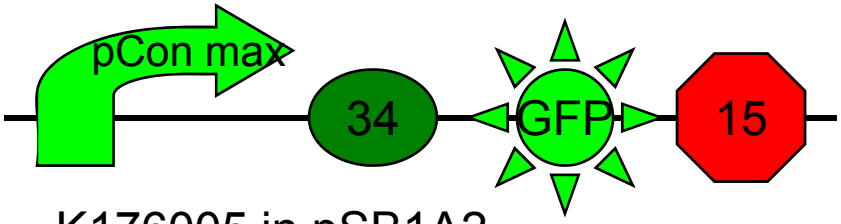
R0051 X+P
Length OK


pCon max
J23119 in pSB1A3
Sequence OK
pCon 1.00
J23100 in K176007
Sequence ?
pCon 0.70
J23101 in K176007
Sequence OK
pCon 0.36
K176009 in K176007
Sequence OK
pCon 0.15
K176008 in K176007
Sequence OK
pCon 0.04
J23109 in K176007
Sequence OK
pCon 0.01
J23103 in K176007
Sequence OK
pCI
R0051 in pSB1A3
Sequence OK

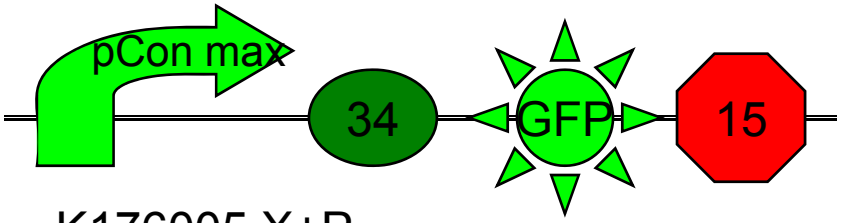
6



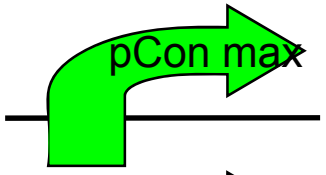
J23119 in pSB1A2 S+P
Sequence OK



K176005 in pSB1A2
Sequence OK



K176005 X+P
Length OK



J23119 in pSB1A3 S+P
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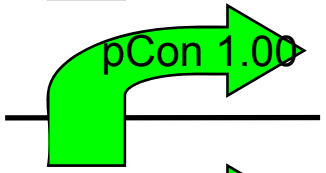

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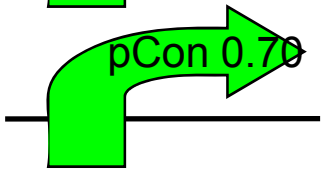

J23101 in pSB1A3 S+P
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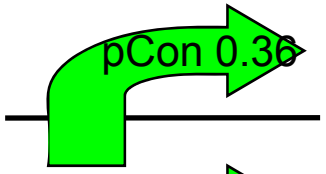
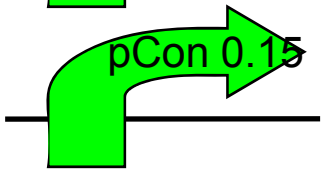
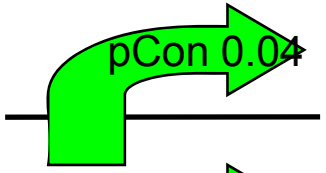


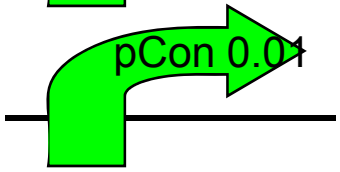
K176009 in pSB1A3 S+P
Length OK



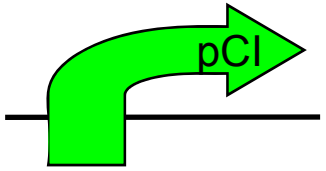
K176008 in pSB1A3 S+P
Length OK



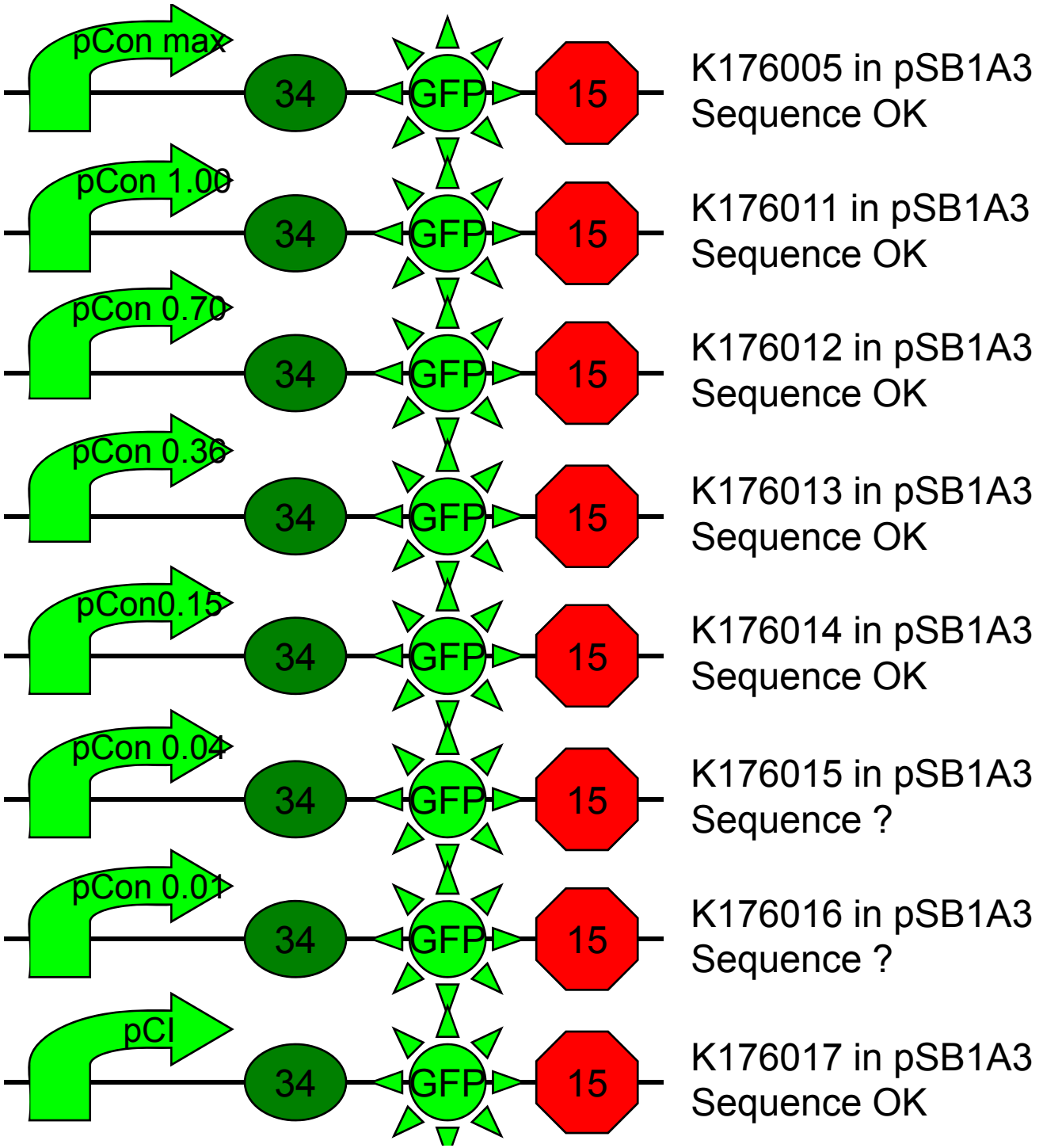
J23109 in pSB1A3 S+P
Length OK

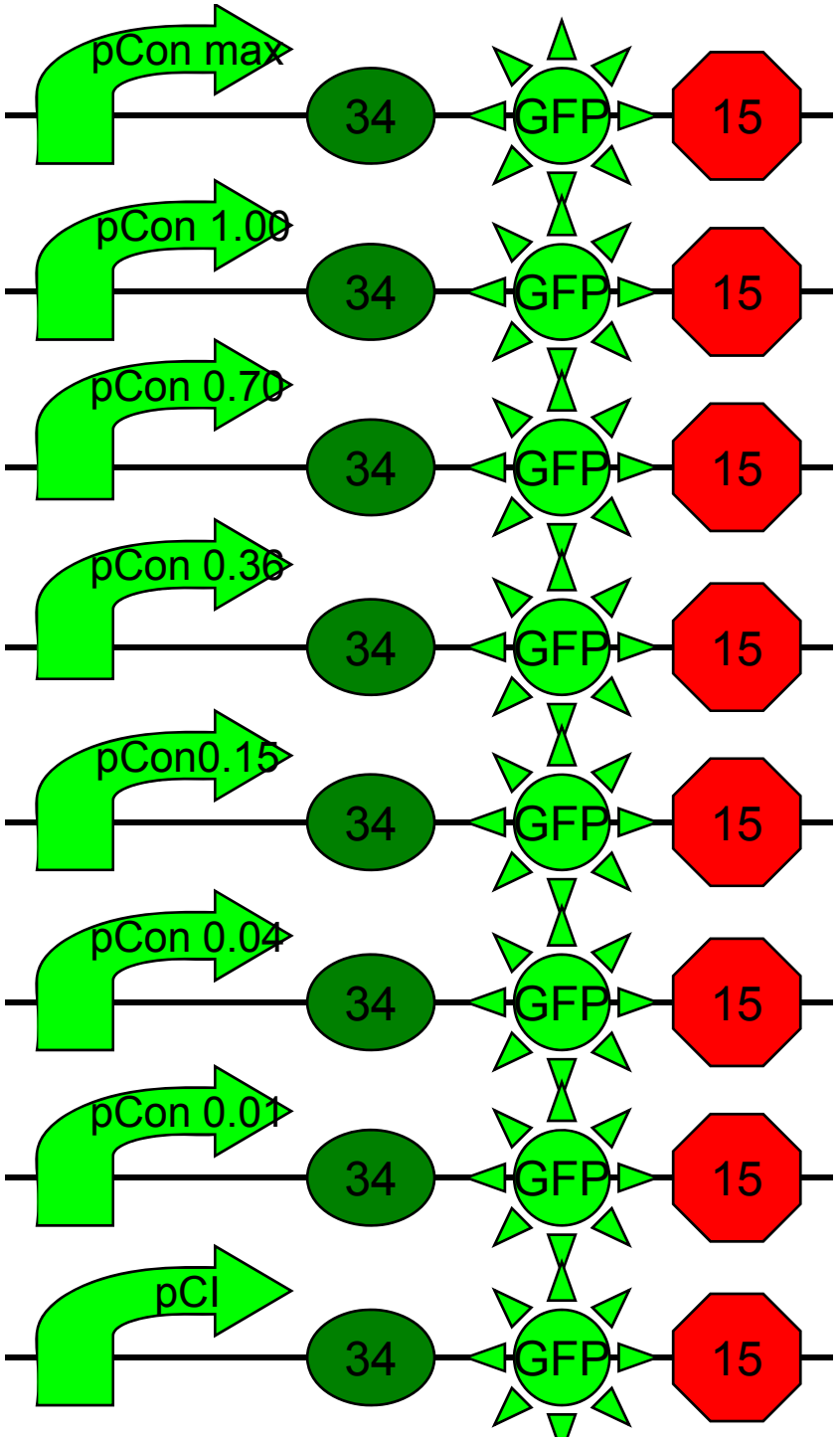


J23103 in pSB1A3 S+P
Length OK



R0051 in pSB1A3 S+P
Length OK


pCon max
34
GFP
15
K176005 in pSB1A3
Sequence OK
pCon 1.00
34
GFP
15
K176011 in pSB1A3
Sequence OK
pCon 0.70
34
GFP
15
K176012 in pSB1A3
Sequence OK
pCon 0.36
34
GFP
15
K176013 in pSB1A3
Sequence OK
pCon0.15
34
GFP
15
K176014 in pSB1A3
Sequence OK
pCon 0.04
34
GFP
15
K176015 in pSB1A3
Sequence ?
pCon 0.01
34
GFP
15
K176016 in pSB1A3
Sequence ?
pCl
34
GFP
15
K176017 in pSB1A3
Sequence OK



K176005 in pSB1A3 in MDS42rB Transformation

K176011 in pSB1A3 in MDS42rB Transformation

K176012 in pSB1A3 in MDS42rB Transformation

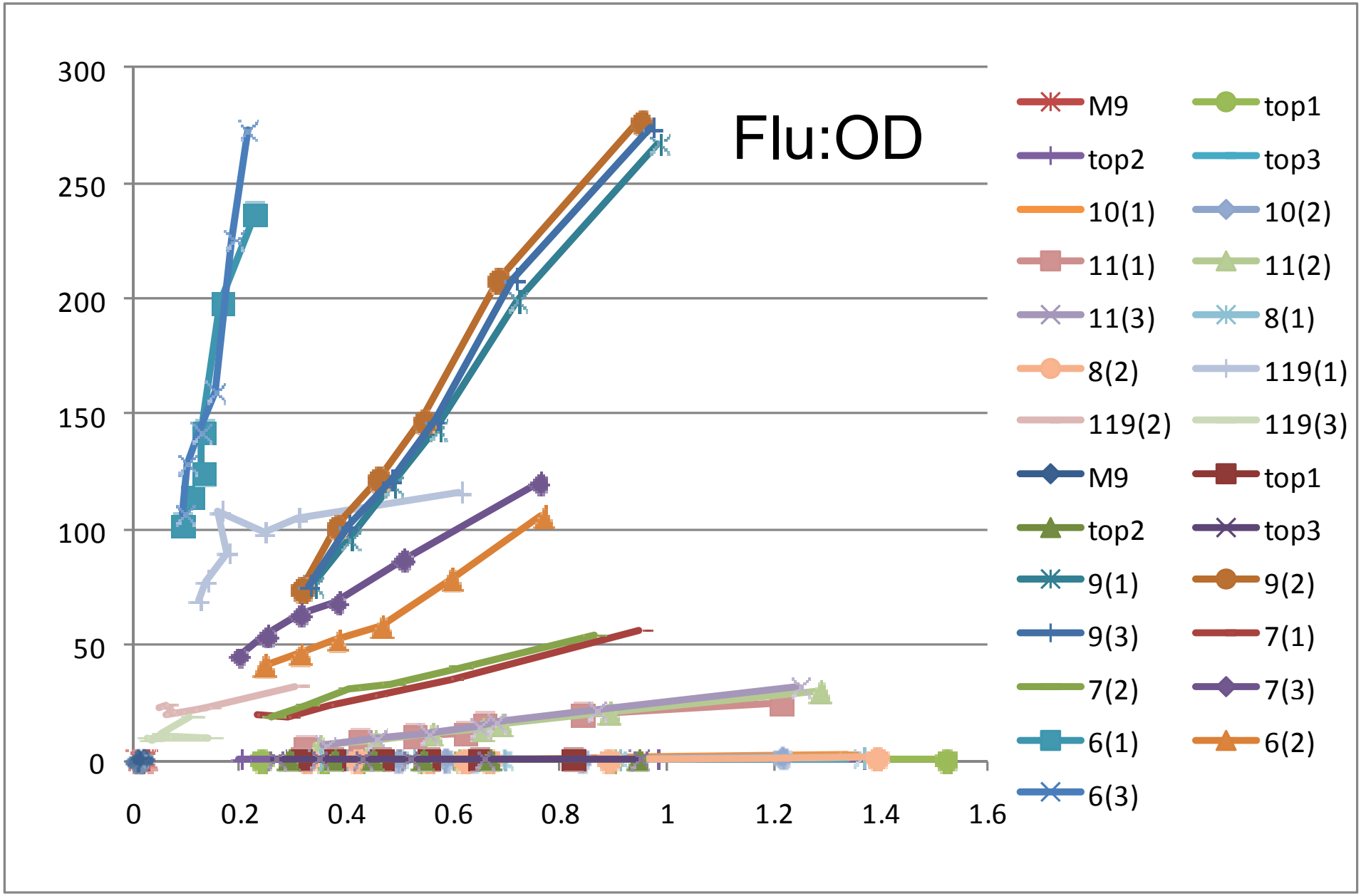
K176013 in pSB1A3 in MDS42rB Transformation

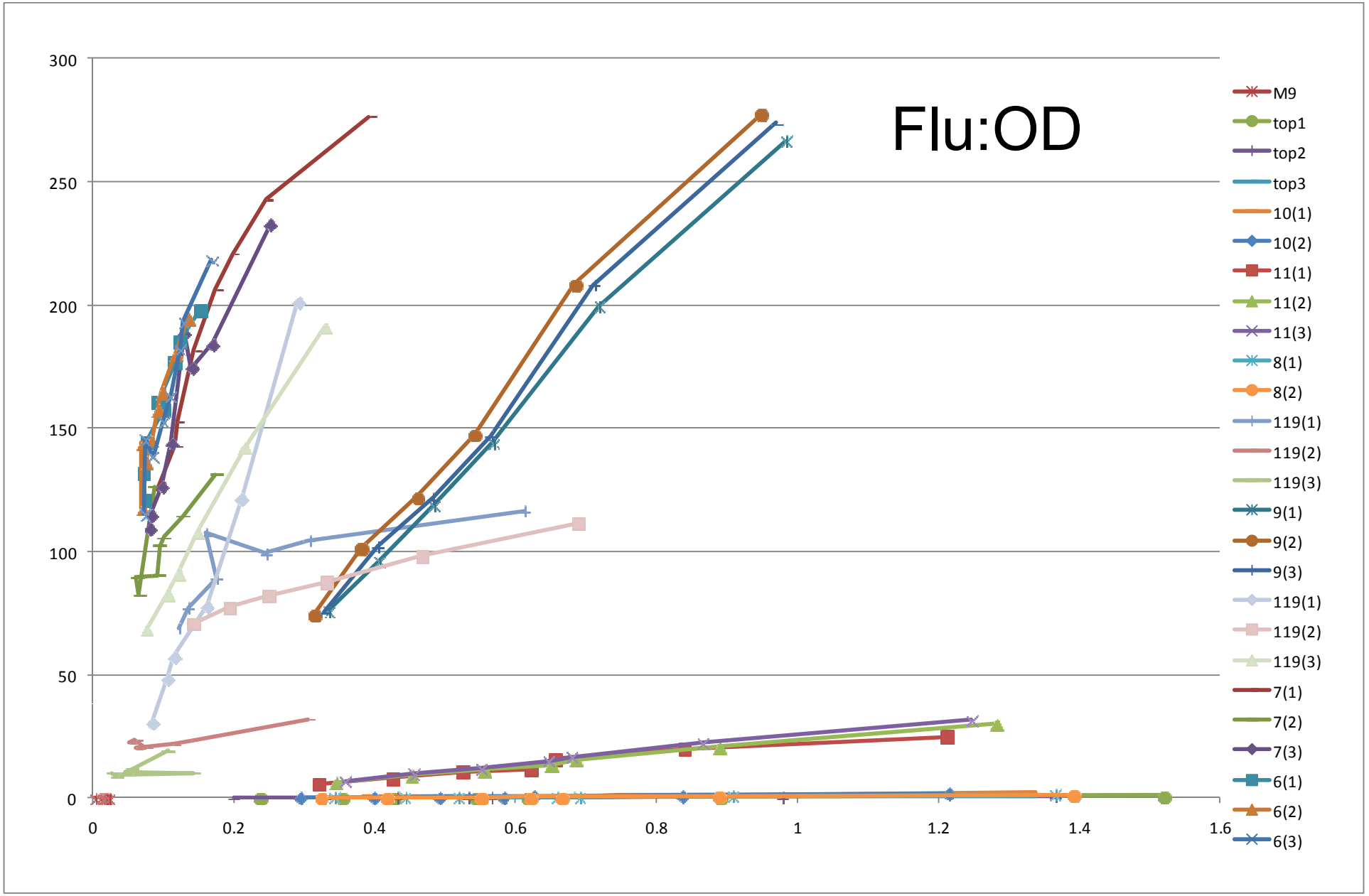
K176014 in pSB1A3 in MDS42rB Transformation

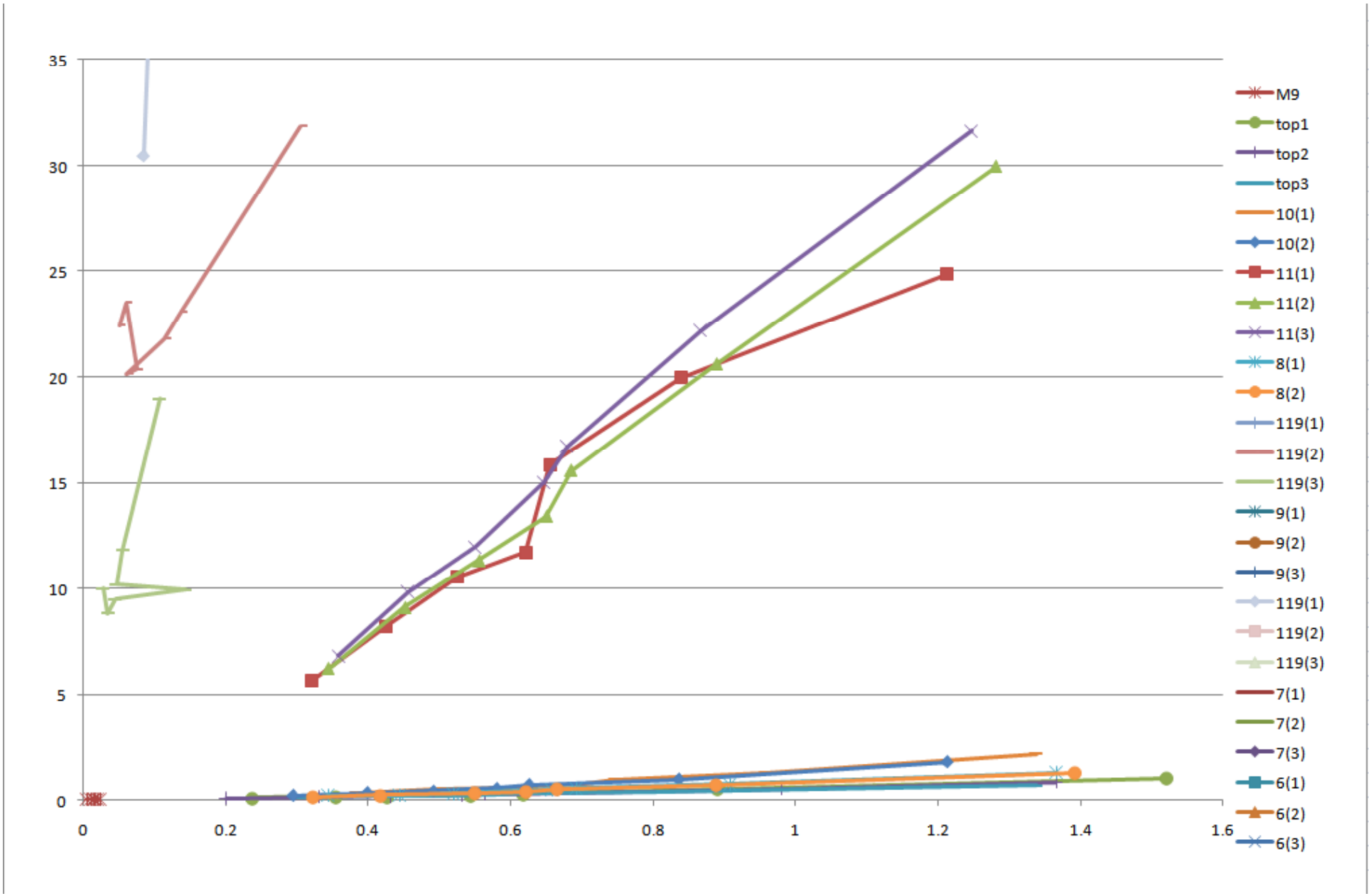
K176015 in pSB1A3 in MDS42rB Transformation

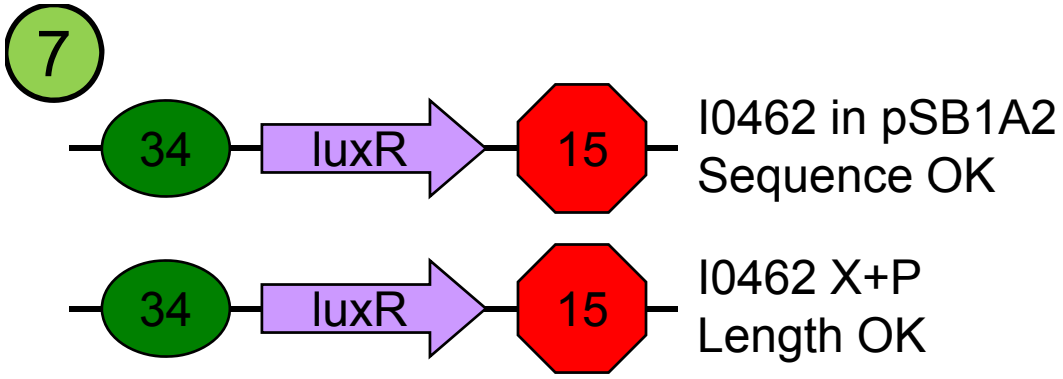
K176016 in pSB1A3 in MDS42rB Transformation

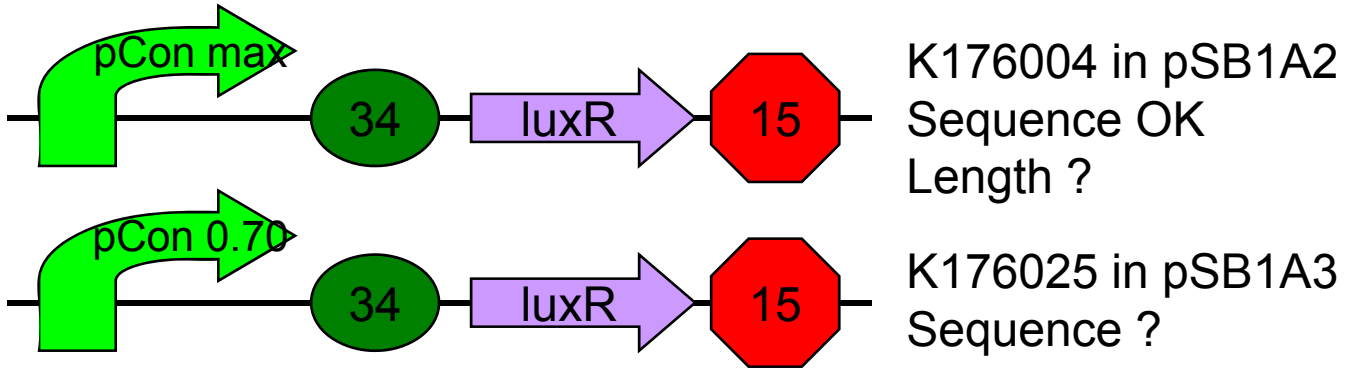
K176017 in pSB1A3 in MDS42rB Transformation


Flu:OD
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
M9
top1
top2
top3
10(1)
10(2)
11(1)
11(2)
11(3)
8(1)
8(2)
119(1)
119(2)
119(3)
M9
top1
top2
top3
9(1)
9(2)
9(3)
7(1)
7(2)
7(3)
6(1)
6(2)
6(3)

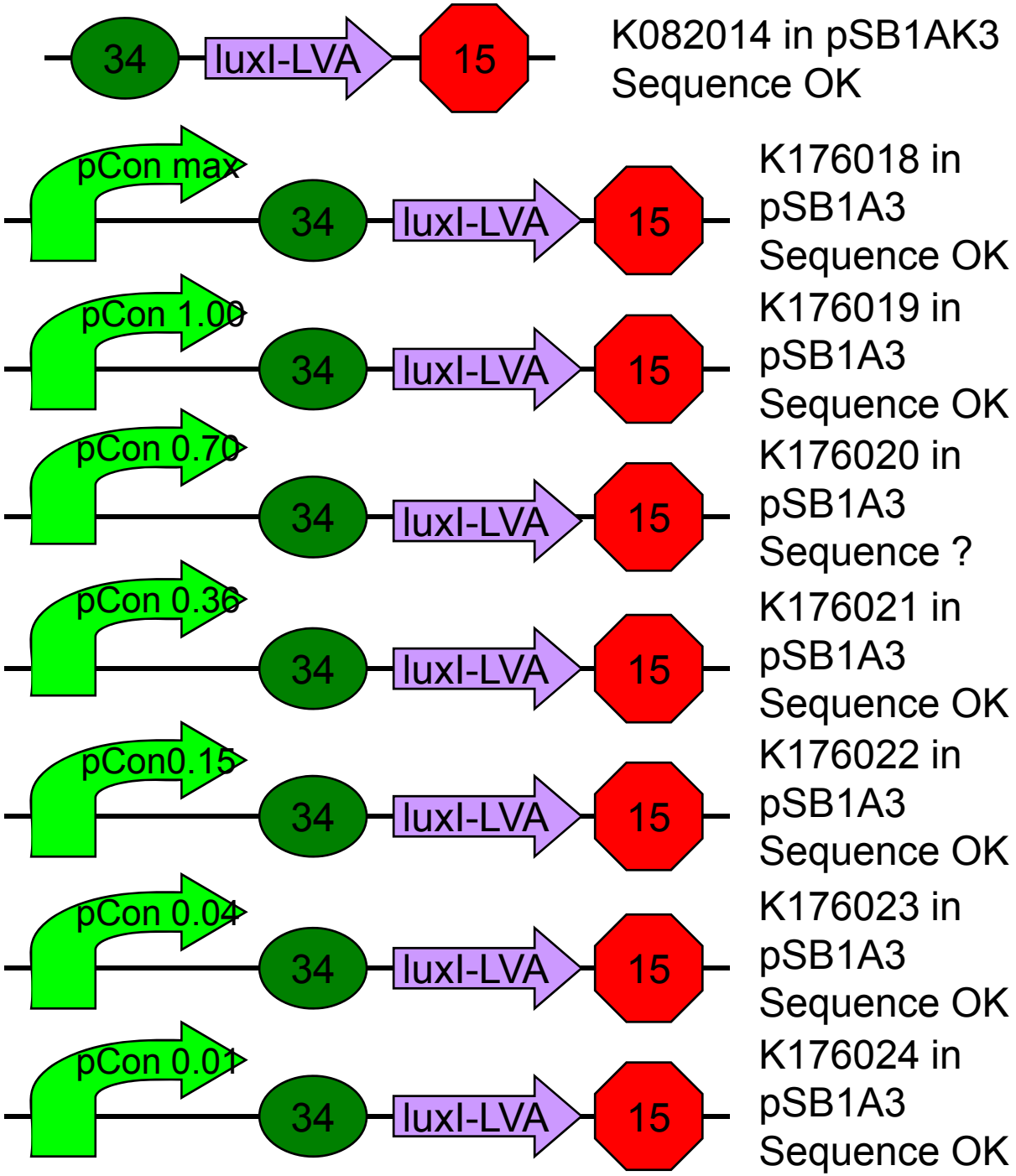

Flu:OD
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
M9
top1
top2
top3
10(1)
10(2)
11(1)
11(2)
11(3)
8(1)
8(2)
119(1)
119(2)
119(3)
9(1)
9(2)
9(3)
119(1)
119(2)
119(3)
7(1)
7(2)
7(3)
6(1)
6(2)
6(3)

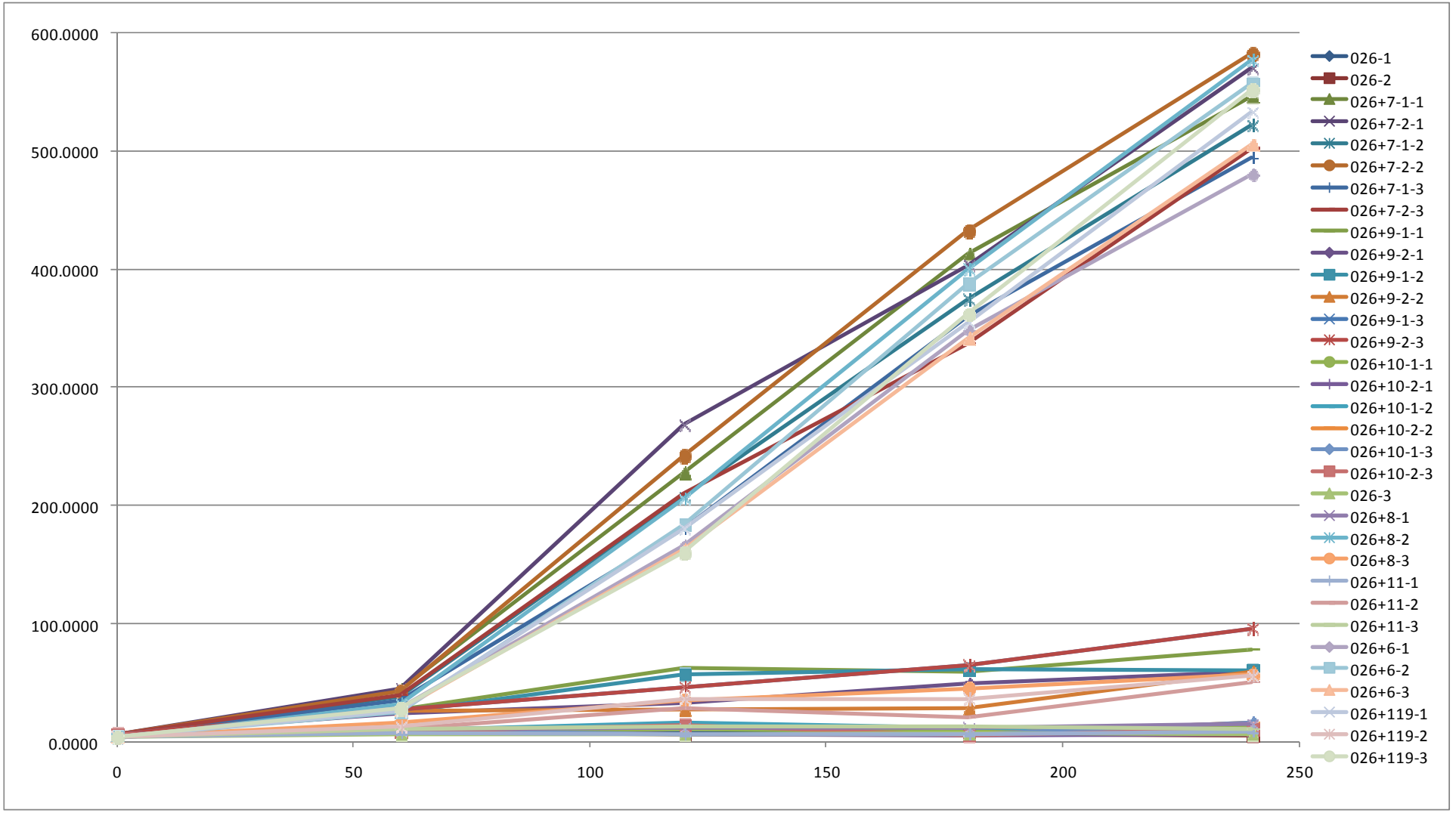

35
30
25
20
15
10
5
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
M9
top1
top2
top3
10(1)
10(2)
11(1)
11(2)
11(3)
8(1)
8(2)
119(1)
119(2)
119(3)
9(1)
9(2)
9(3)
119(1)
119(2)
119(3)
7(1)
7(2)
7(3)
6(1)
6(2)
6(3)

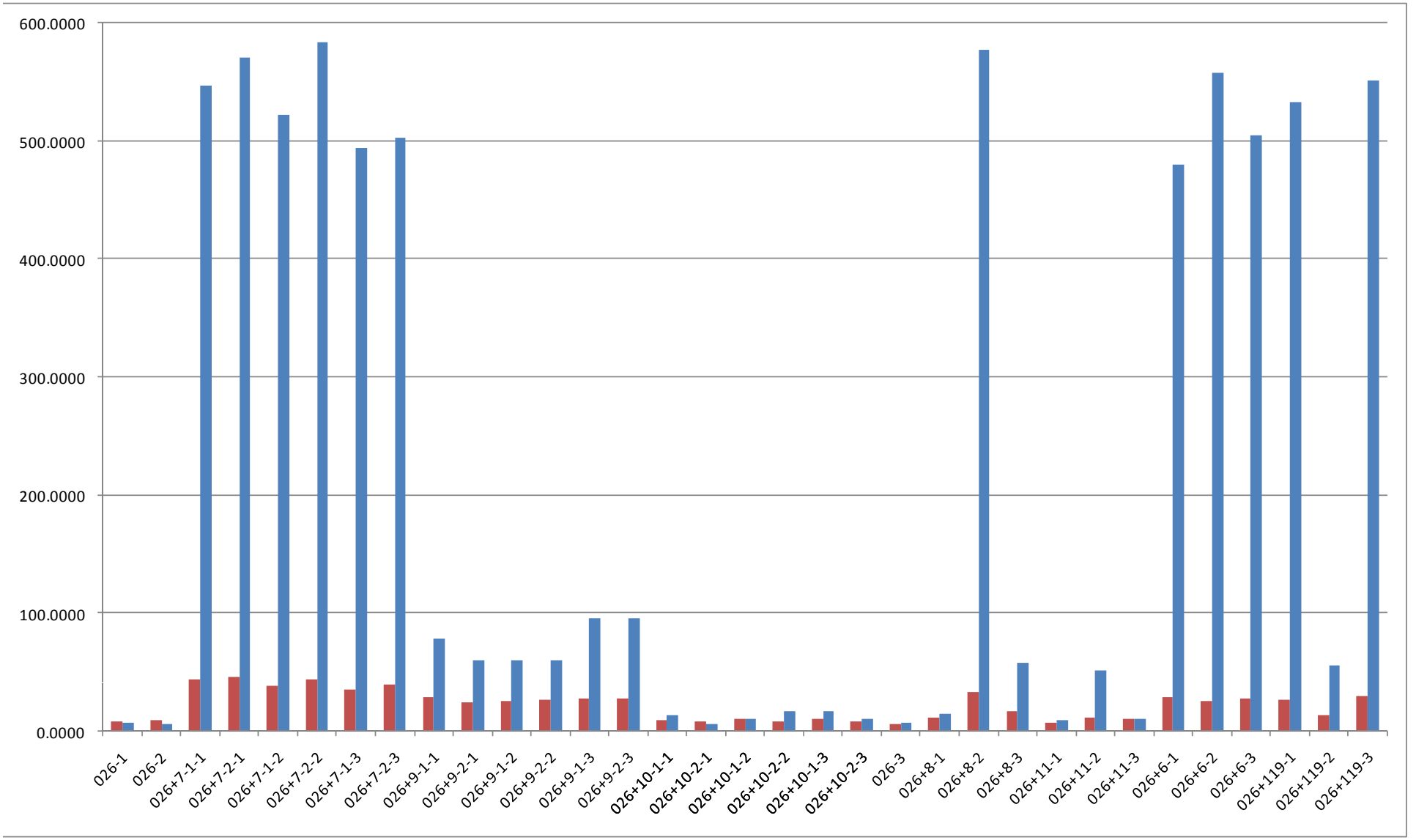

7
34
luxR
15
I0462 in pSB1A2
Sequence OK
34
luxR
15
I0462 X+P
Length OK

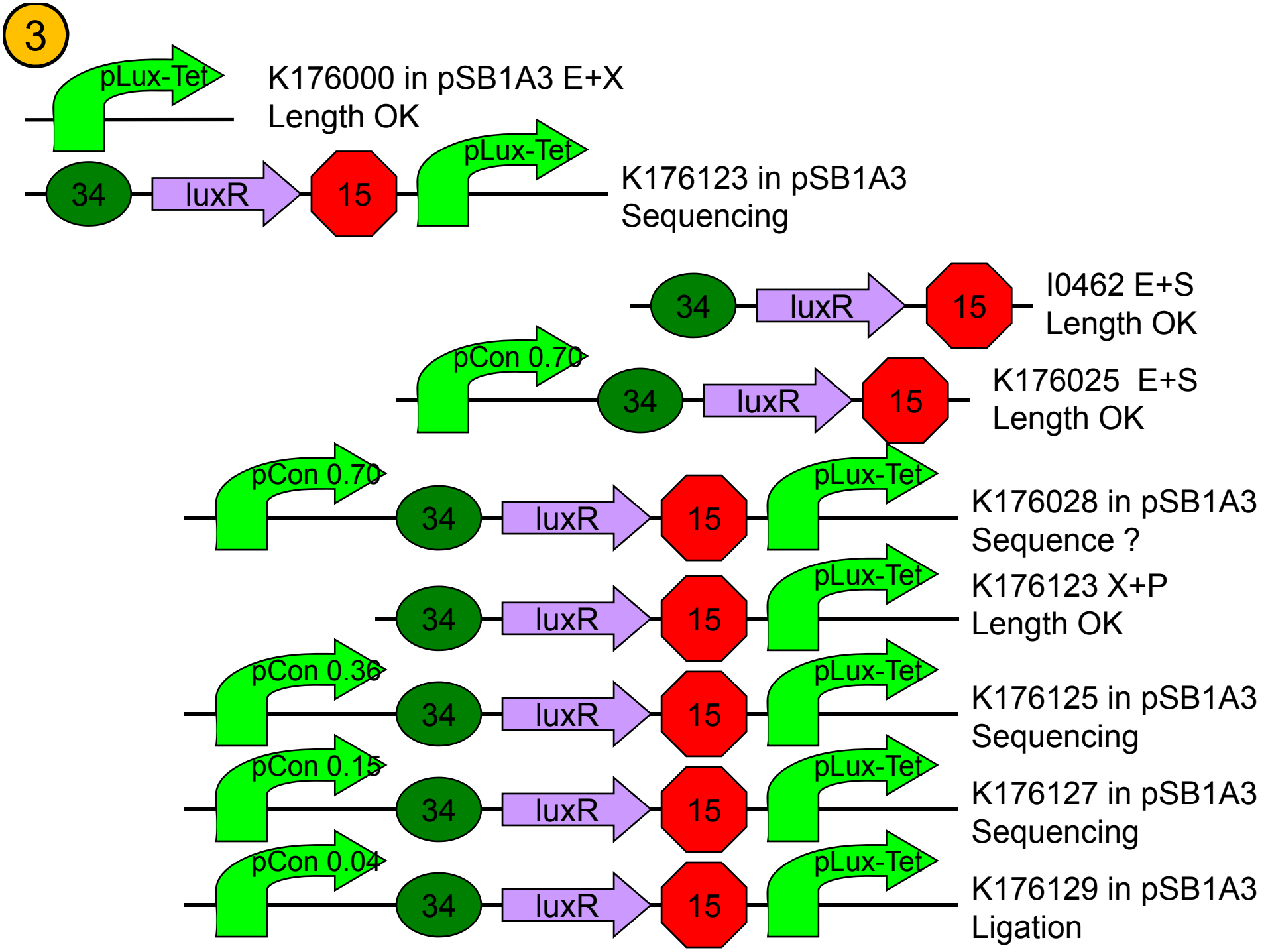

pCon max
34
luxR
15
K176004 in pSB1A2
Sequence OK
Length ?
pCon 0.70
34
luxR
15
K176025 in pSB1A3
Sequence ?

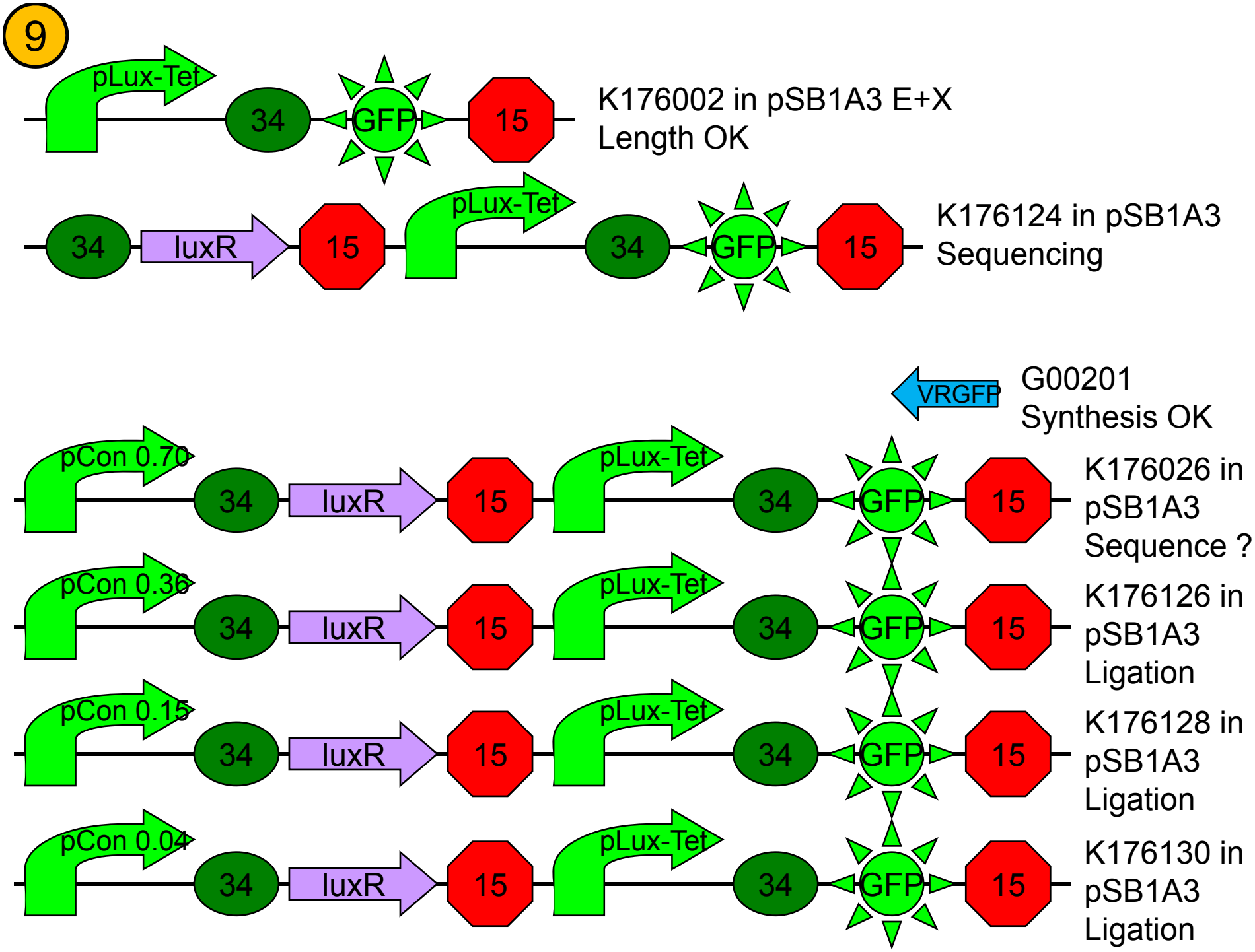
8


34
luxI-LVA
15
K082014 in pSB1AK3
Sequence OK
pCon max
34
luxI-LVA
15
K176018 in
pSB1A3
Sequence OK
pCon 1.00
34
luxI-LVA
15
K176019 in
pSB1A3
Sequence OK
pCon 0.70
34
luxI-LVA
15
K176020 in
pSB1A3
Sequence ?
pCon 0.36
34
luxI-LVA
15
K176021 in
pSB1A3
Sequence OK
pCon0.15
34
luxI-LVA
15
K176022 in
pSB1A3
Sequence OK
pCon 0.04
34
luxI-LVA
15
K176023 in
pSB1A3
Sequence OK
pCon 0.01
34
luxI-LVA
15
K176024 in
pSB1A3
Sequence OK


600.0000
500.0000
400.0000
300.0000
200.0000
100.0000
0.0000
0
50
100
150
200
250
026-1
026-2
026+7-1-1
026+7-2-1
026+7-1-2
026+7-2-2
026+7-1-3
026+7-2-3
026+9-1-1
026+9-2-1
026+9-1-2
026+9-2-2
026+9-1-3
026+9-2-3
026+10-1-1
026+10-2-1
026+10-1-2
026+10-2-2
026+10-1-3
026+10-2-3
026-3
026+8-1
026+8-2
026+8-3
026+11-1
026+11-2
026+11-3
026+6-1
026+6-2
026+6-3
026+119-1
026+119-2
026+119-3

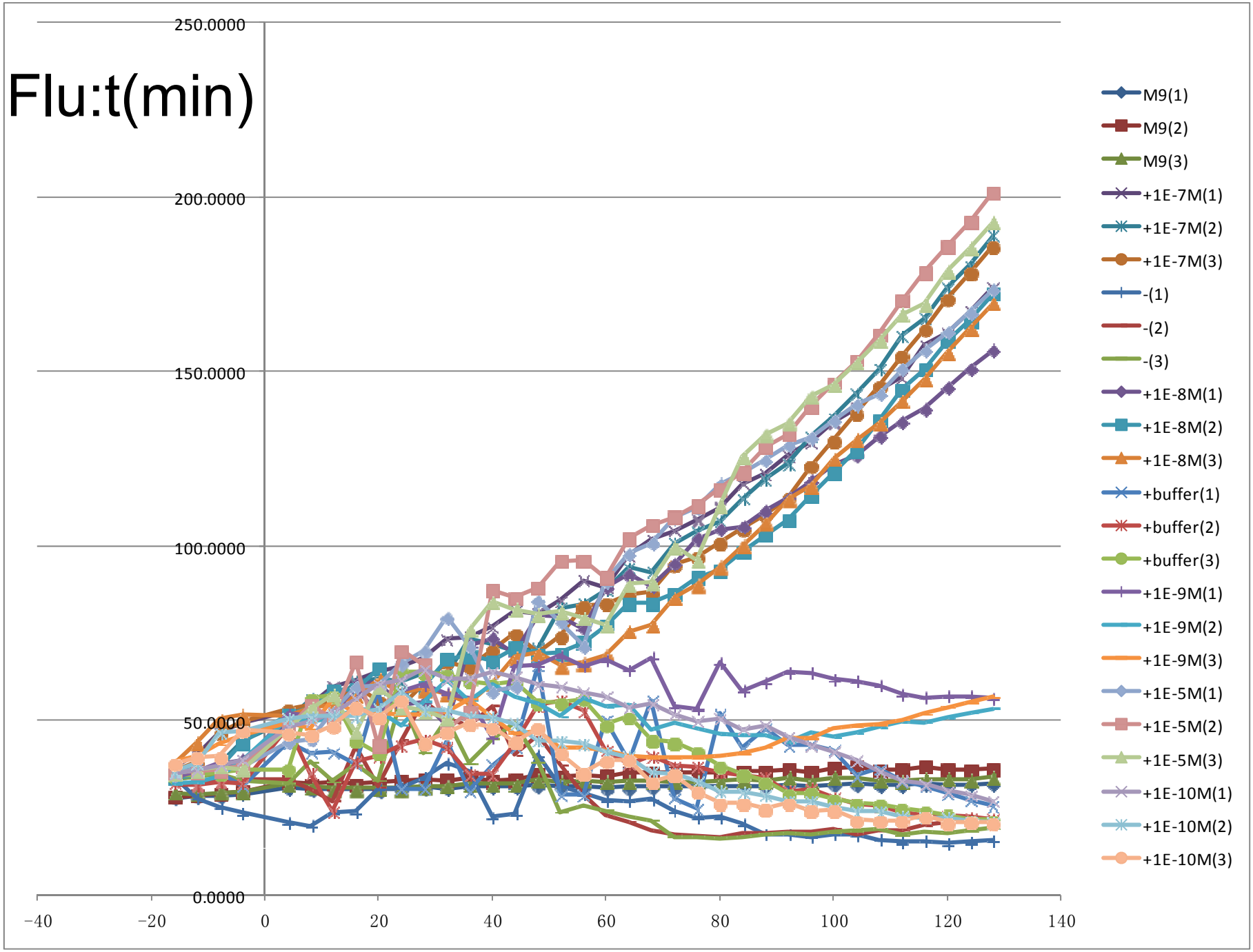

600.0000
500.0000
400.0000
300.0000
200.0000
100.0000
0.0000
026-1
026-2
026+7-1-1
026+7-2-1
026+7-1-2
026+7-2-2
026+7-1-3
026+7-2-3
026+9-1-1
026+9-2-1
026+9-1-2
026+9-2-2
026+9-1-3
026+9-2-3
026+10-1-1
026+10-2-1
026+10-1-2
026+10-2-2
026+10-1-3
026+10-2-3
026-3
026+8-1
026+8-2
026+8-3
026+11-1
026+11-2
026+11-3
026+6-1
026+6-2
026+6-3
026+119-1
026+119-2
026+119-3

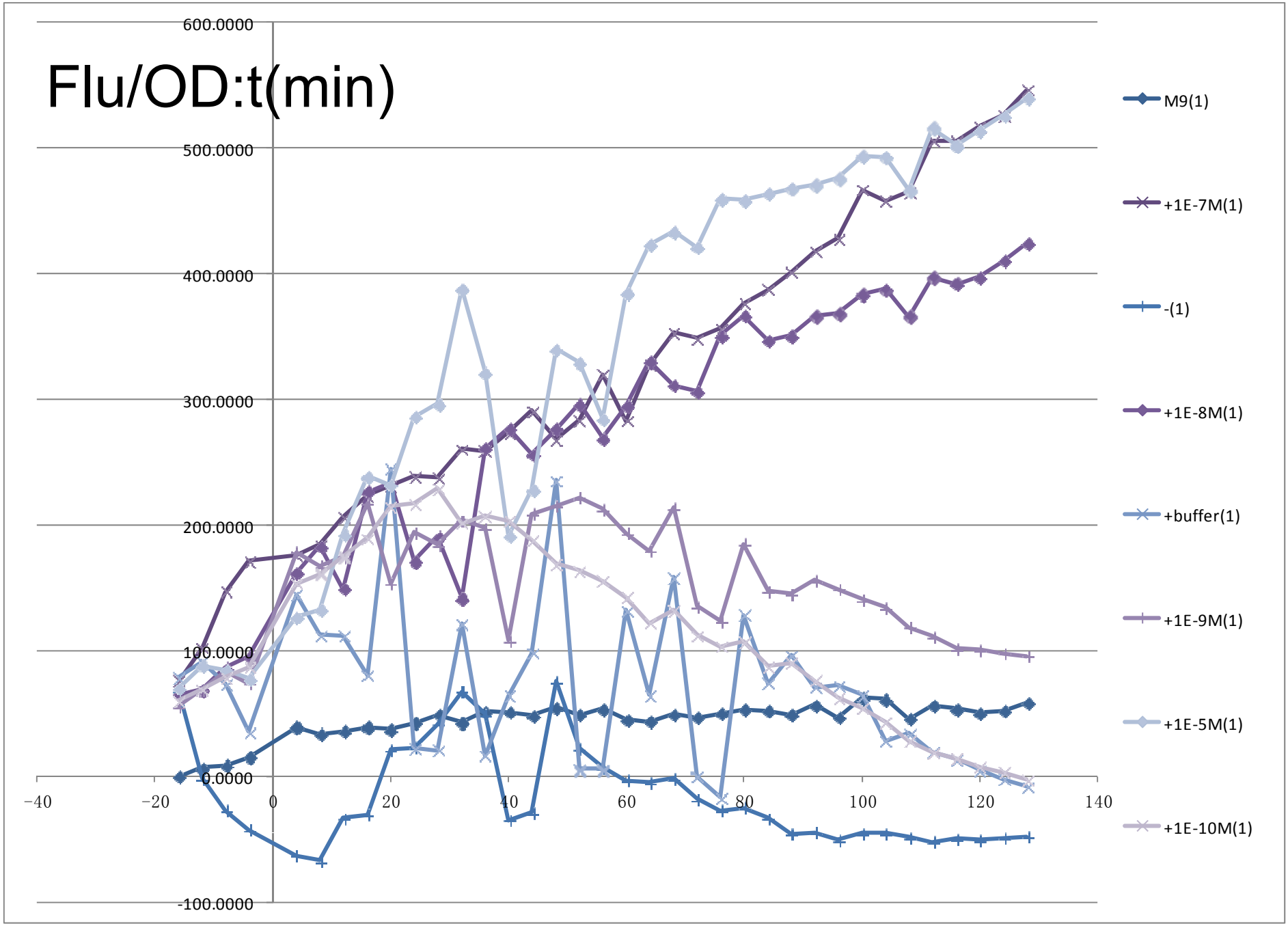

3
pLux-Tet
K176000 in pSB1A3 E+X
Length OK
34
luxR
15
pLux-Tet
K176123 in pSB1A3
Sequencing
34
luxR
15
I0462 E+S
Length OK
pCon 0.70
34
luxR
15
K176025 E+S
Length OK
pCon 0.70
34
luxR
15
pLux-Tet
K176028 in pSB1A3
Sequence ?
34
luxR
15
pLux-Tet
K176123 X+P
Length OK
pCon 0.36
34
luxR
15
pLux-Tet
K176125 in pSB1A3
Sequencing
pCon 0.15
34
luxR
15
pLux-Tet
K176127 in pSB1A3
Sequencing
pCon 0.04
34
luxR
15
pLux-Tet
K176129 in pSB1A3
Ligation

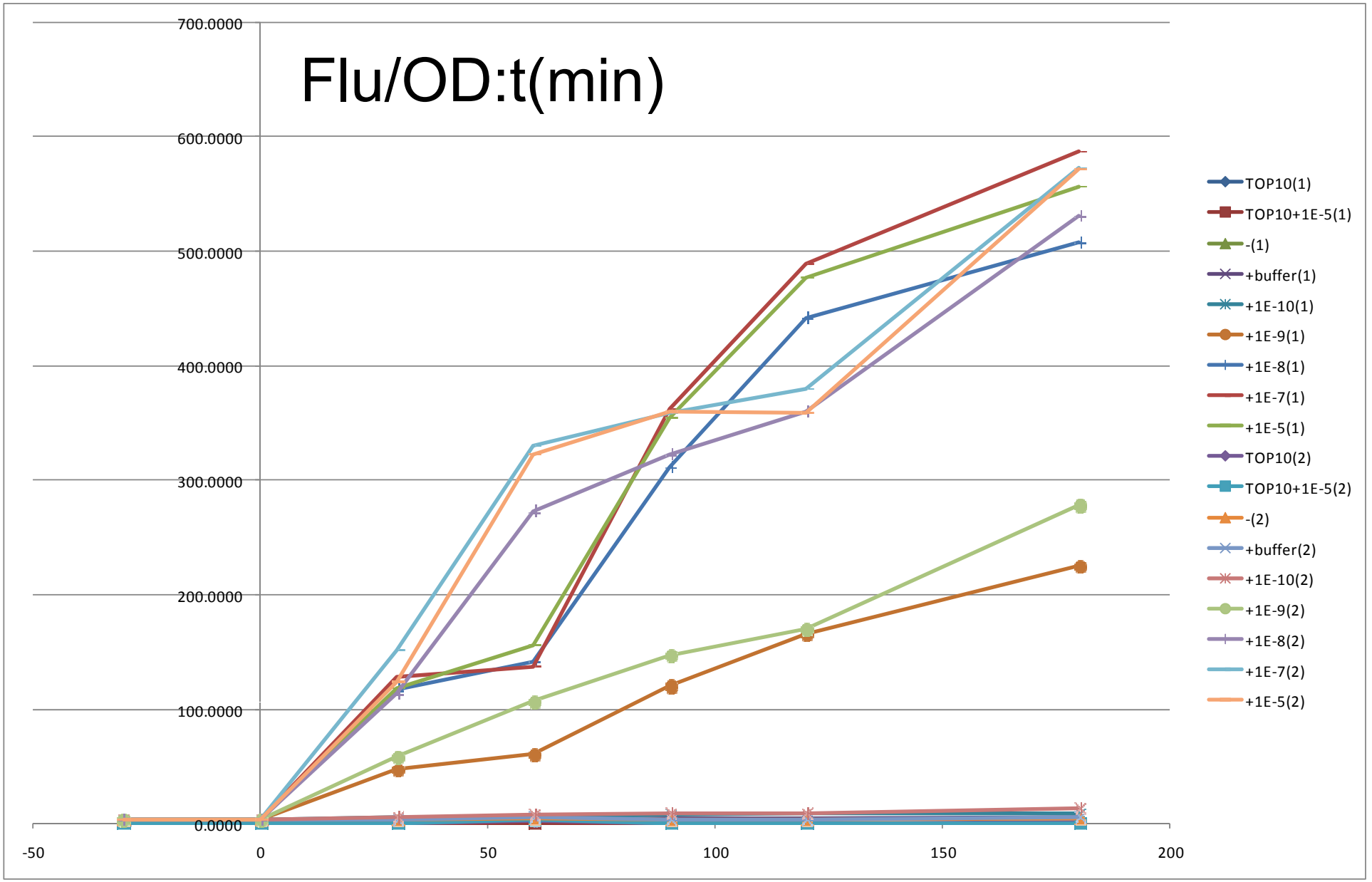

9
pLux-Tet
34
GFP
15
K176002 in pSB1A3 E+X
Length OK
34
luxR
15
pLux-Tet
34
GFP
15
K176124 in pSB1A3
Sequencing
VRGFP
G00201
Synthesis OK
pCon 0.70
34
luxR
15
pLux-Tet
34
GFP
15
K176026 in
pSB1A3
Sequence ?
pCon 0.36
34
luxR
15
pLux-Tet
34
GFP
15
K176126 in
pSB1A3
Ligation
pCon 0.15
34
luxR
15
pLux-Tet
34
GFP
15
K176128 in
pSB1A3
Ligation
pCon 0.04
34
luxR
15
pLux-Tet
34
GFP
15
K176130 in
pSB1A3
Ligation

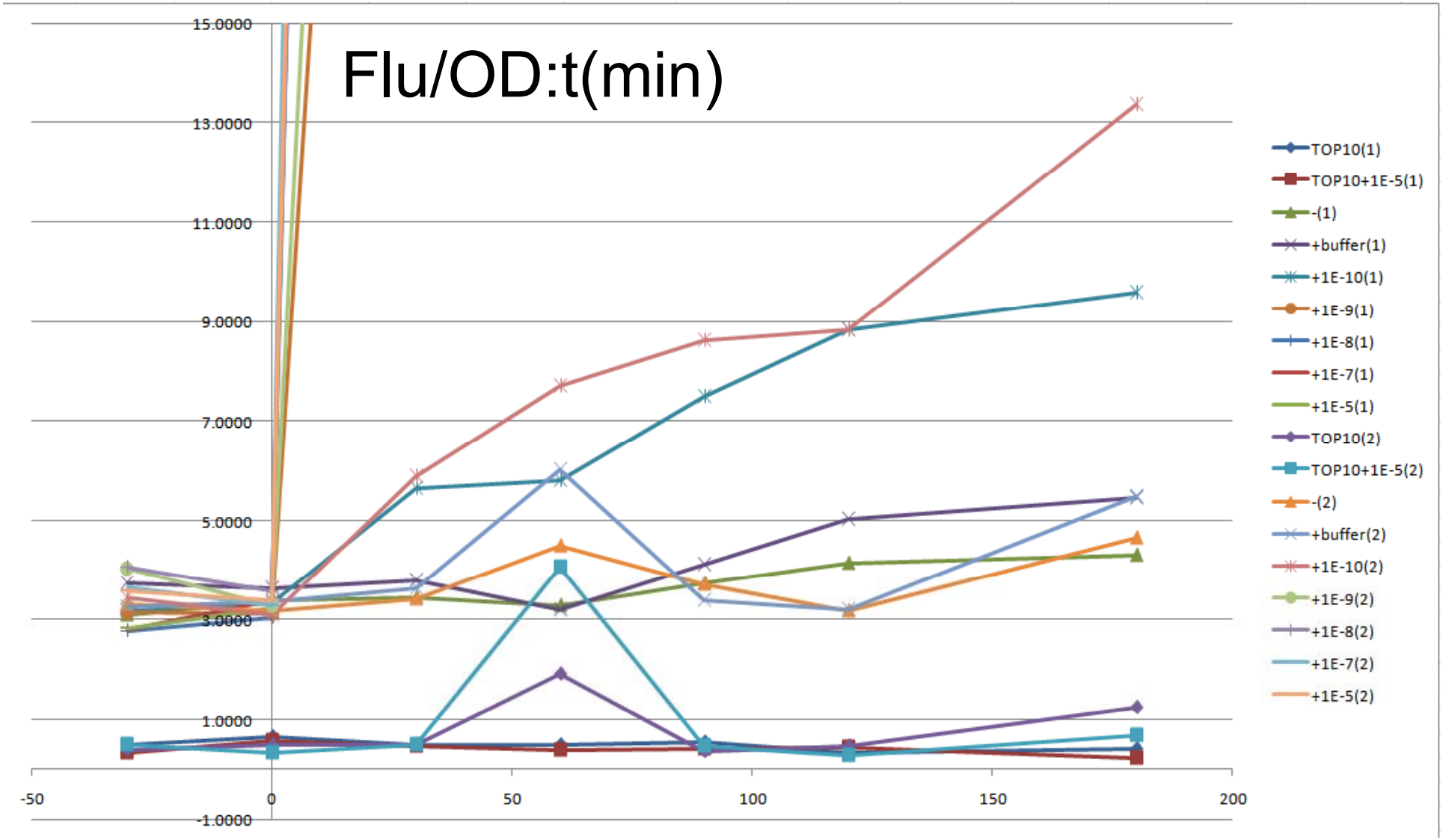
Methods

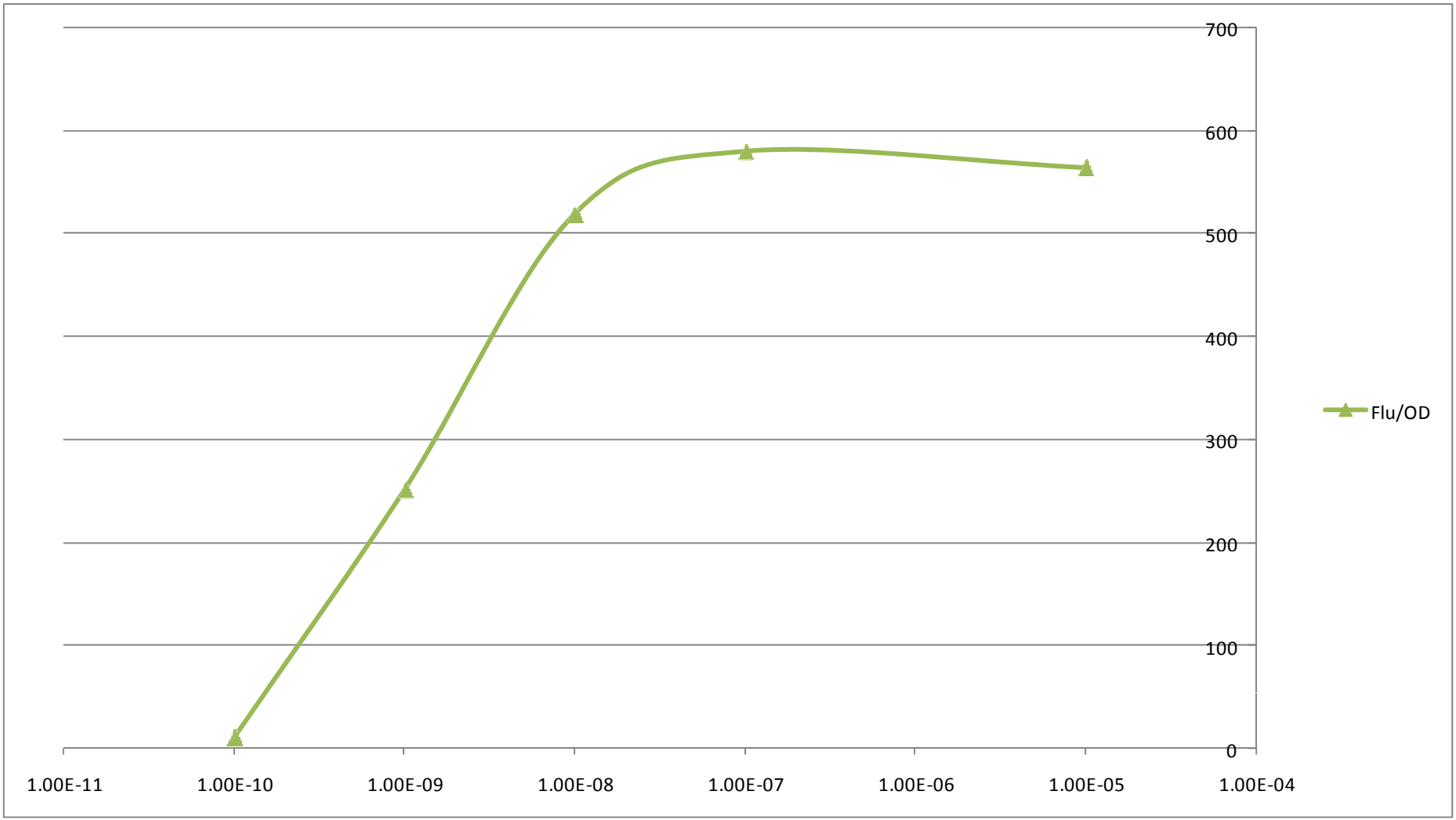
- Plate Reader
- Spectrophotometer


Flu:t(min)
250.0000
200.0000
150.0000
100.0000
50.0000
0.0000
-40
-20
0
20
40
60
80
100
120
140
M9(1)
M9(2)
M9(3)
+1E-7M(1)
+1E-7M(2)
+1E-7M(3)
-(1)
-(2)
-(3)
+1E-8M(1)
+1E-8M(2)
+1E-8M(3)
+buffer(1)
+buffer(2)
+buffer(3)
+1E-9M(1)
+1E-9M(2)
+1E-9M(3)
+1E-5M(1)
+1E-5M(2)
+1E-5M(3)
+1E-10M(1)
+1E-10M(2)
+1E-10M(3)

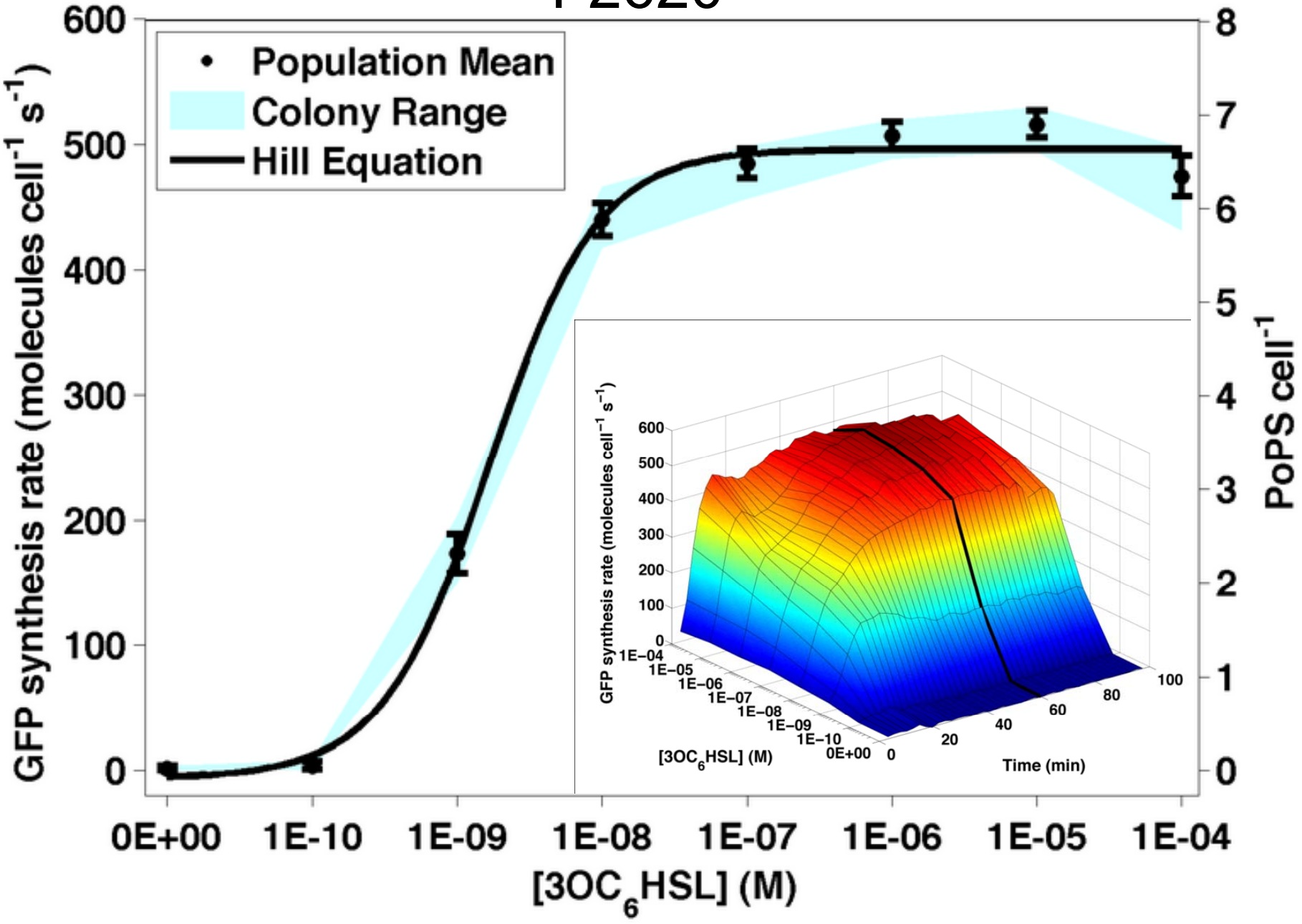

Flu/OD:t(min)
600.0000
500.0000
400.0000
300.0000
200.0000
100.0000
0.0000
-100.0000
-40
-20
0
20
40
60
80
100
120
140
M9(1)
+1E-7M(1)
-(1)
+1E-8M(1)
+buffer(1)
+1E-9M(1)
+1E-5M(1)
+1E-10M(1)

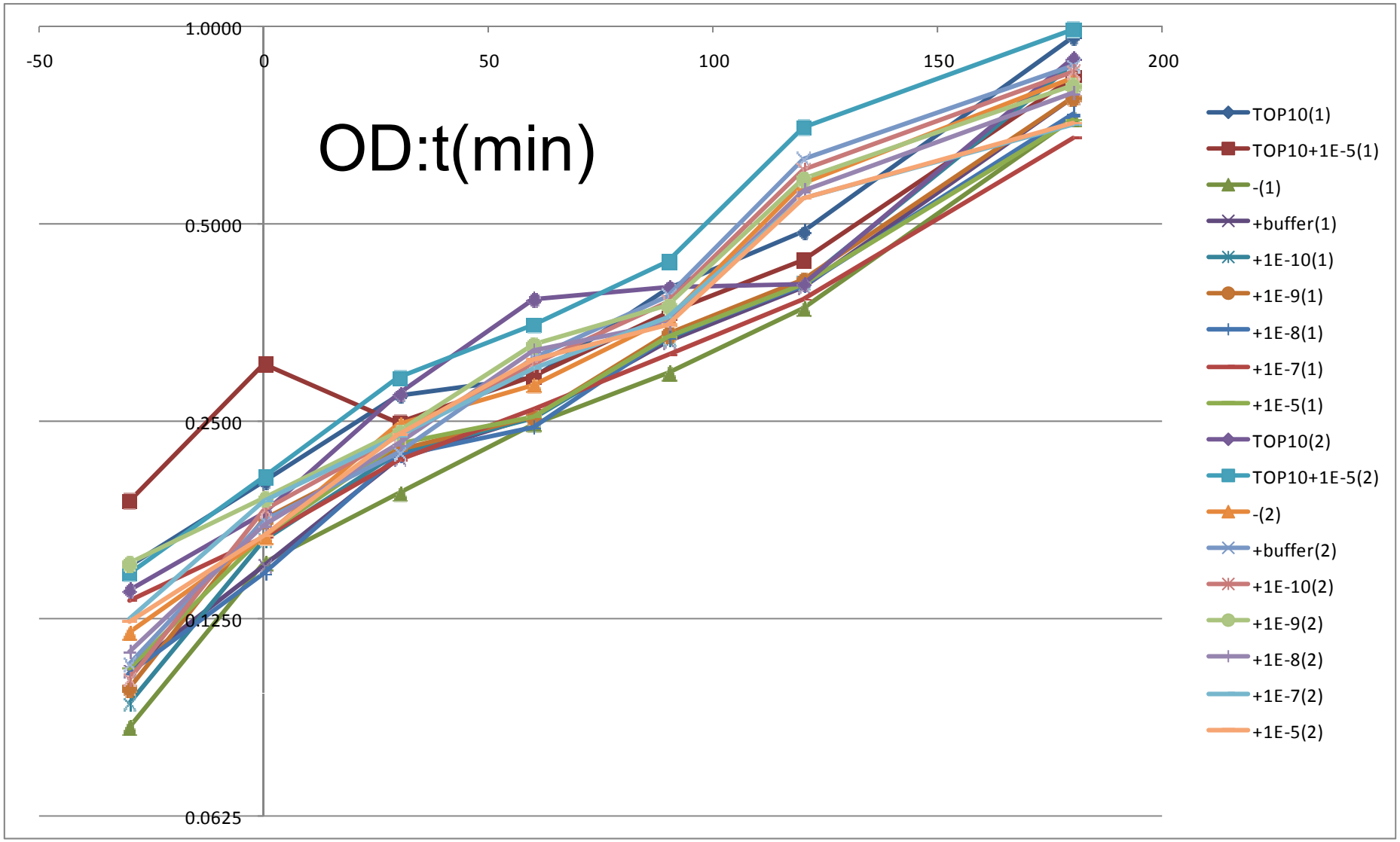

Flu/OD:t(min)
700.0000
600.0000
500.0000
400.0000
300.0000
200.0000
100.0000
0.0000
-50
0
50
100
150
200
TOP10(1)
TOP10+1E-5(1)
-(1)
+buffer(1)
+1E-10(1)
+1E-9(1)
+1E-8(1)
+1E-7(1)
+1E-5(1)
TOP10(2)
TOP10+1E-5(2)
-(2)
+buffer(2)
+1E-10(2)
+1E-9(2)
+1E-8(2)
+1E-7(2)
+1E-5(2)

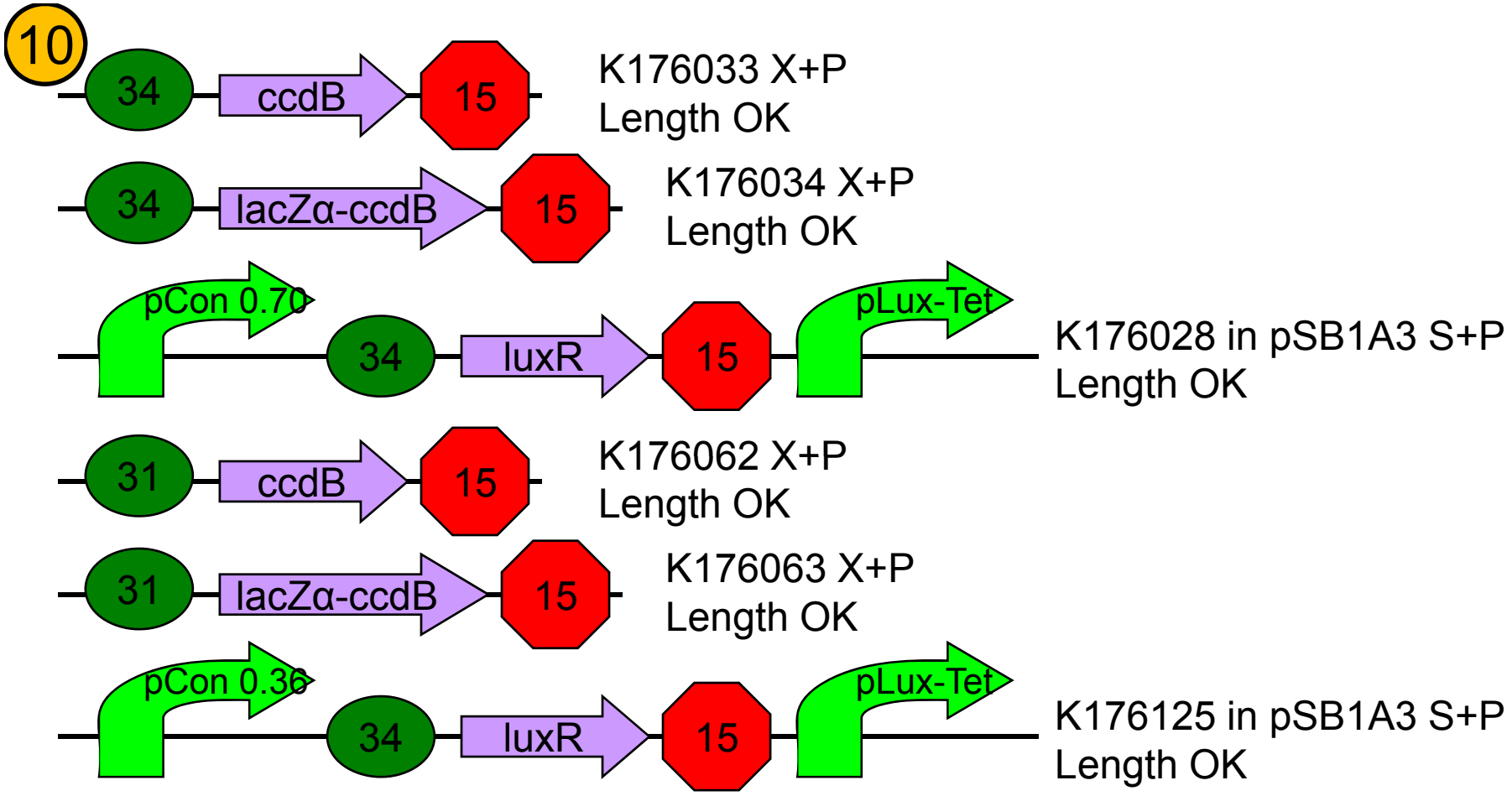

Flu/OD:t(min)
15.0000
13.0000
11.0000
9.0000
7.0000
5.0000
3.0000
1.0000
-1.0000
-50
0
50
100
150
200
TOP10(1)
TOP10+1E-5(1)
-(1)
+buffer(1)
+1E-10(1)
+1E-9(1)
+1E-8(1)
+1E-7(1)
+1E-5(1)
TOP10(2)
TOP10+1E-5(2)
-(2)
+buffer(2)
+1E-10(2)
+1E-9(2)
+1E-8(2)
+1E-7(2)
+1E-5(2)

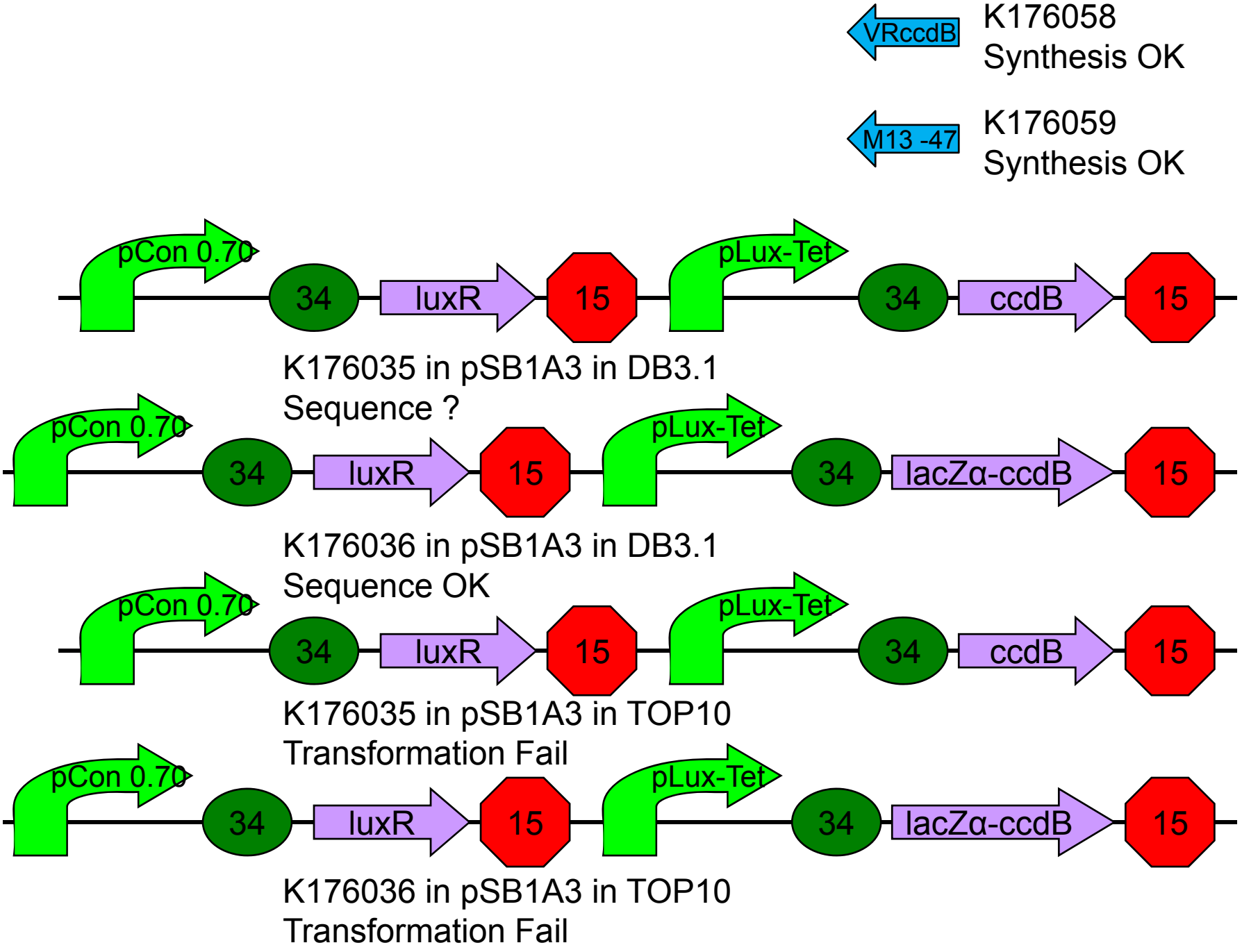

700
600
500
400
300
200
100
0
1.00E-11
1.00E-10
1.00E-09
1.00E-08
1.00E-07
1.00E-06
1.00E-05
1.00E-04
Flu/OD

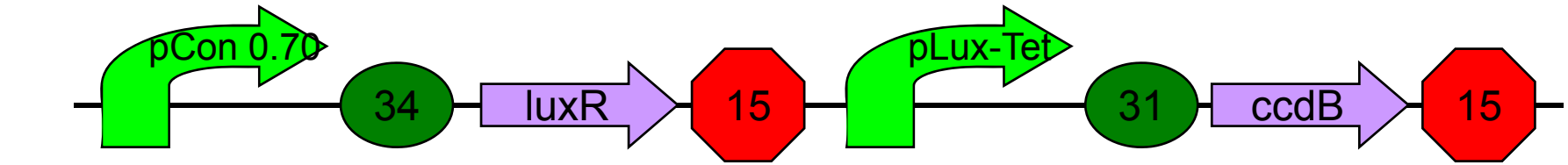
F2620


Population Mean
Colony Range
Hill Equation
GFP synthesis rate (molecules cell^{-1} s^{-1})
PoPS cell^{-1}
[3OC$_6$HSL] (M)
0E+00
1E-10
1E-09
1E-08
1E-07
1E-06
1E-05
1E-04
0
100
200
300
400
500
600
0
1
2
3
4
5
6
7
8
GFP synthesis rate (molecules cell^{-1} s^{-1})
[3OC$_6$HSL] (M)
Time (min)
0
20
40
60
80
100

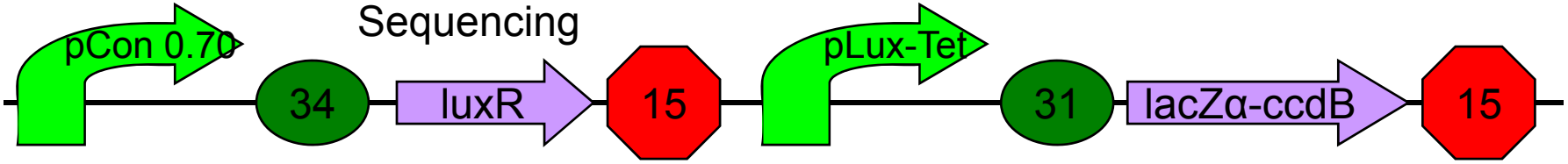

OD:t(min)
1.0000
0.5000
0.2500
0.1250
0.0625
-50
0
50
100
150
200
TOP10(1)
TOP10+1E-5(1)
-(1)
+buffer(1)
+1E-10(1)
+1E-9(1)
+1E-8(1)
+1E-7(1)
+1E-5(1)
TOP10(2)
TOP10+1E-5(2)
-(2)
+buffer(2)
+1E-10(2)
+1E-9(2)
+1E-8(2)
+1E-7(2)
+1E-5(2)


10
34
ccdB
15
K176033 X+P
Length OK
34
lacZα-ccdB
15
K176034 X+P
Length OK
pCon 0.70
34
luxR
15
pLux-Tet
K176028 in pSB1A3 S+P
Length OK
31
ccdB
15
K176062 X+P
Length OK
31
lacZα-ccdB
15
K176063 X+P
Length OK
pCon 0.36
34
luxR
15
pLux-Tet
K176125 in pSB1A3 S+P
Length OK

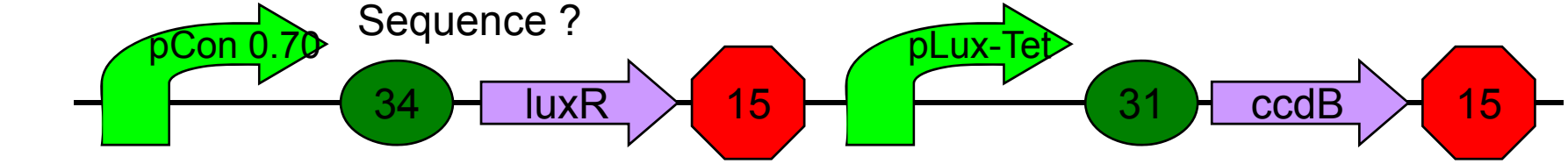

VRccdB
K176058
Synthesis OK
M13 -47
K176059
Synthesis OK
pCon 0.70
34
luxR
15
pLux-Tet
34
ccdB
15
K176035 in pSB1A3 in DB3.1
Sequence ?
pCon 0.70
34
luxR
15
pLux-Tet
34
lacZα-ccdB
15
K176036 in pSB1A3 in DB3.1
Sequence OK
pCon 0.70
34
luxR
15
pLux-Tet
34
ccdB
15
K176035 in pSB1A3 in TOP10
Transformation Fail
pCon 0.70
34
luxR
15
pLux-Tet
34
lacZα-ccdB
15
K176036 in pSB1A3 in TOP10
Transformation Fail



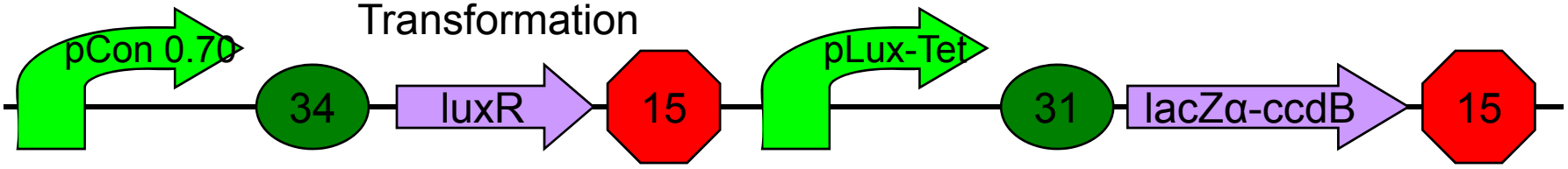
K176089 in pSB1A3 in DB3.1
Sequencing



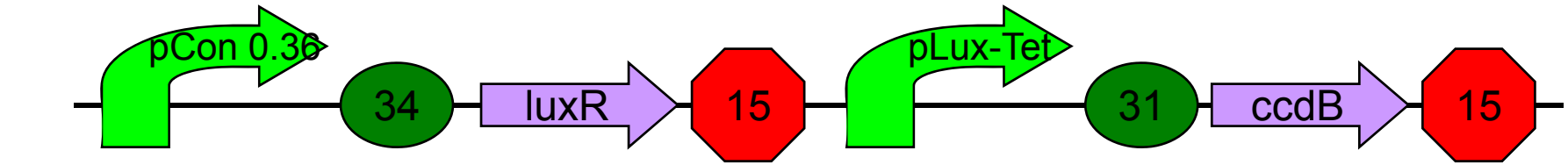
K176090 in pSB1A3 in DB3.1
Sequence ?



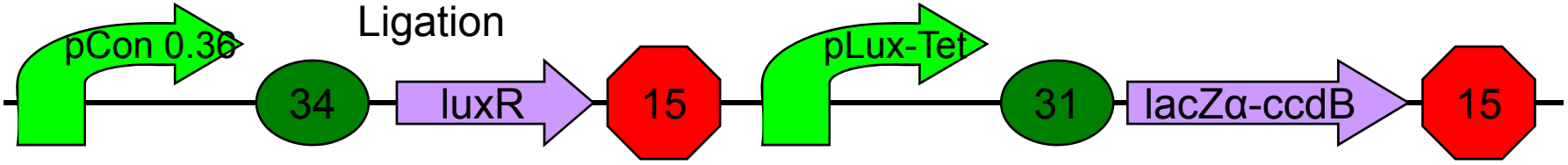
K176089 in pSB1A3 in TOP10
Transformation



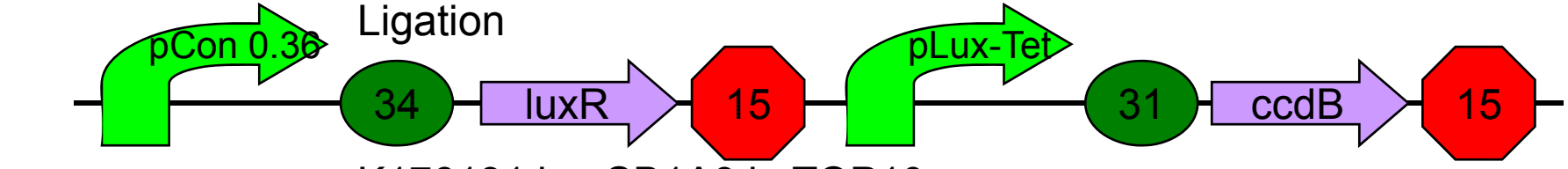
K176090 in pSB1A3 in TOP10
Transformation



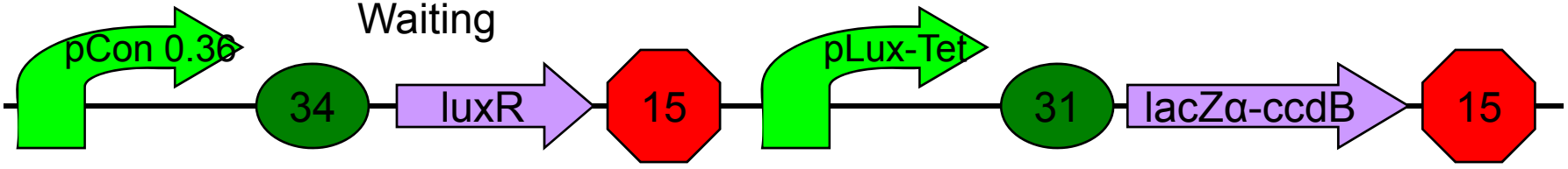
K176131 in pSB1A3 in DB3.1
Ligation



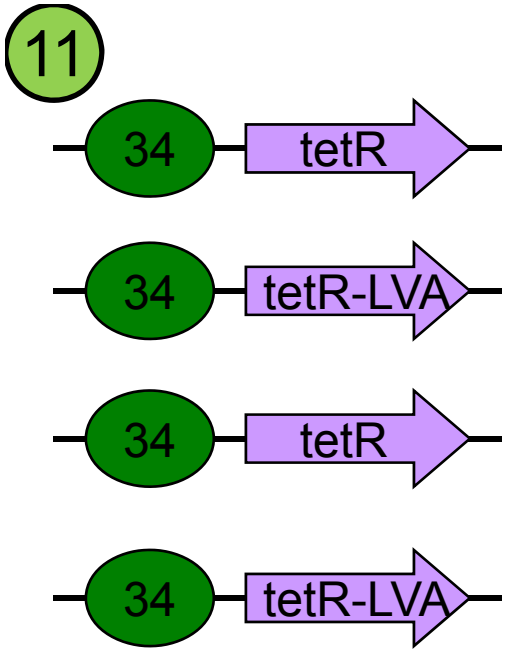
K176132 in pSB1A3 in DB3.1
Ligation



K176131 in pSB1A3 in TOP10
Waiting



K176132 in pSB1A3 in TOP10
Waiting

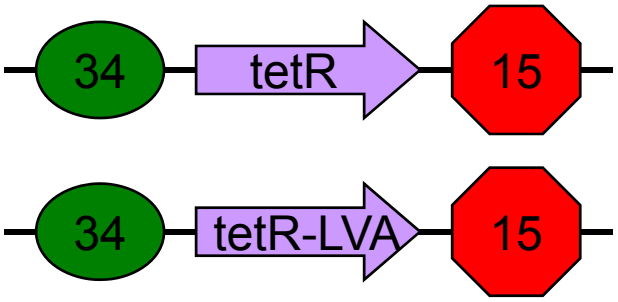


I732081 in pSB1A3
Sequence OK

S0101 in pSB1A2
Sequence OK

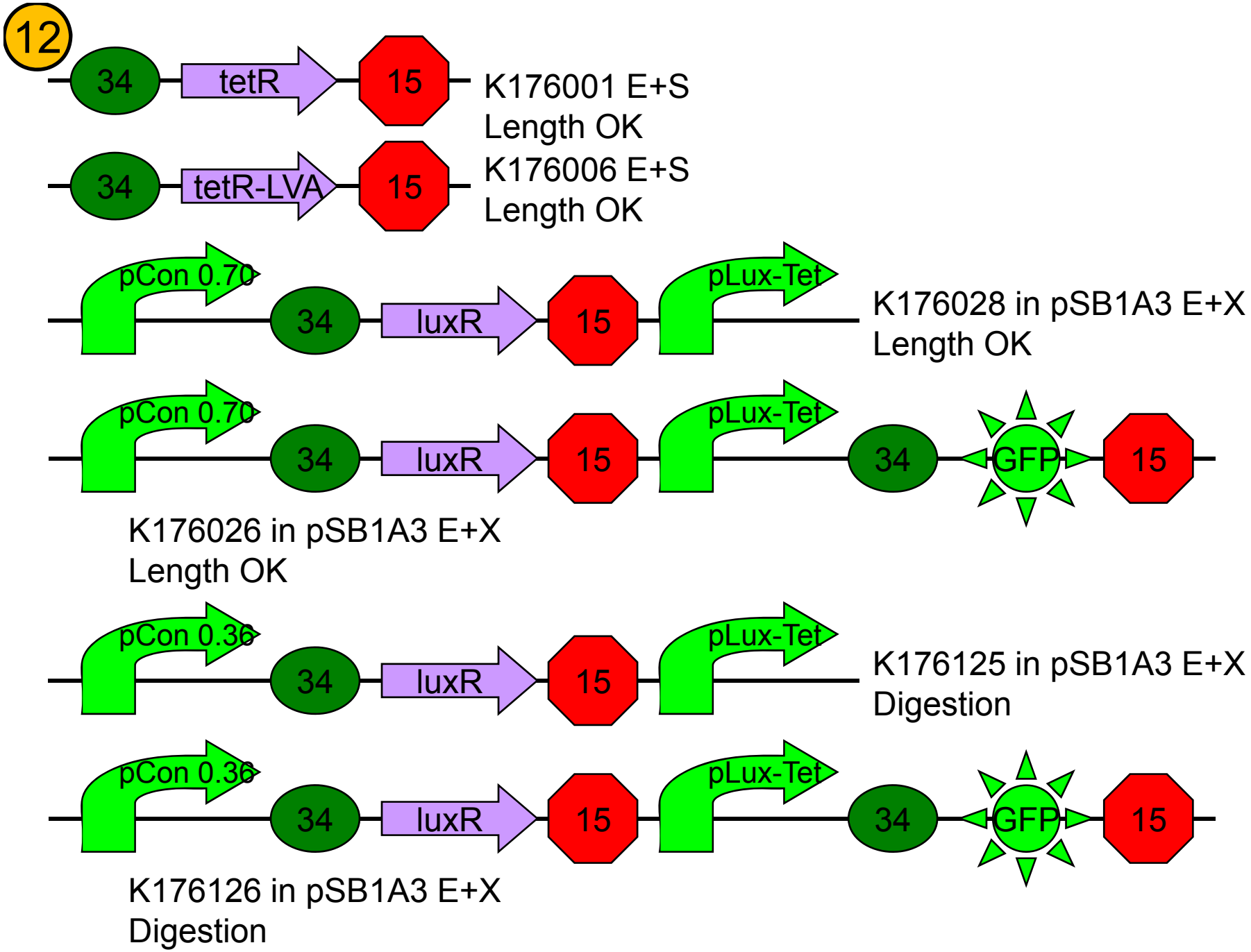
I732081 E+S
Sequence OK

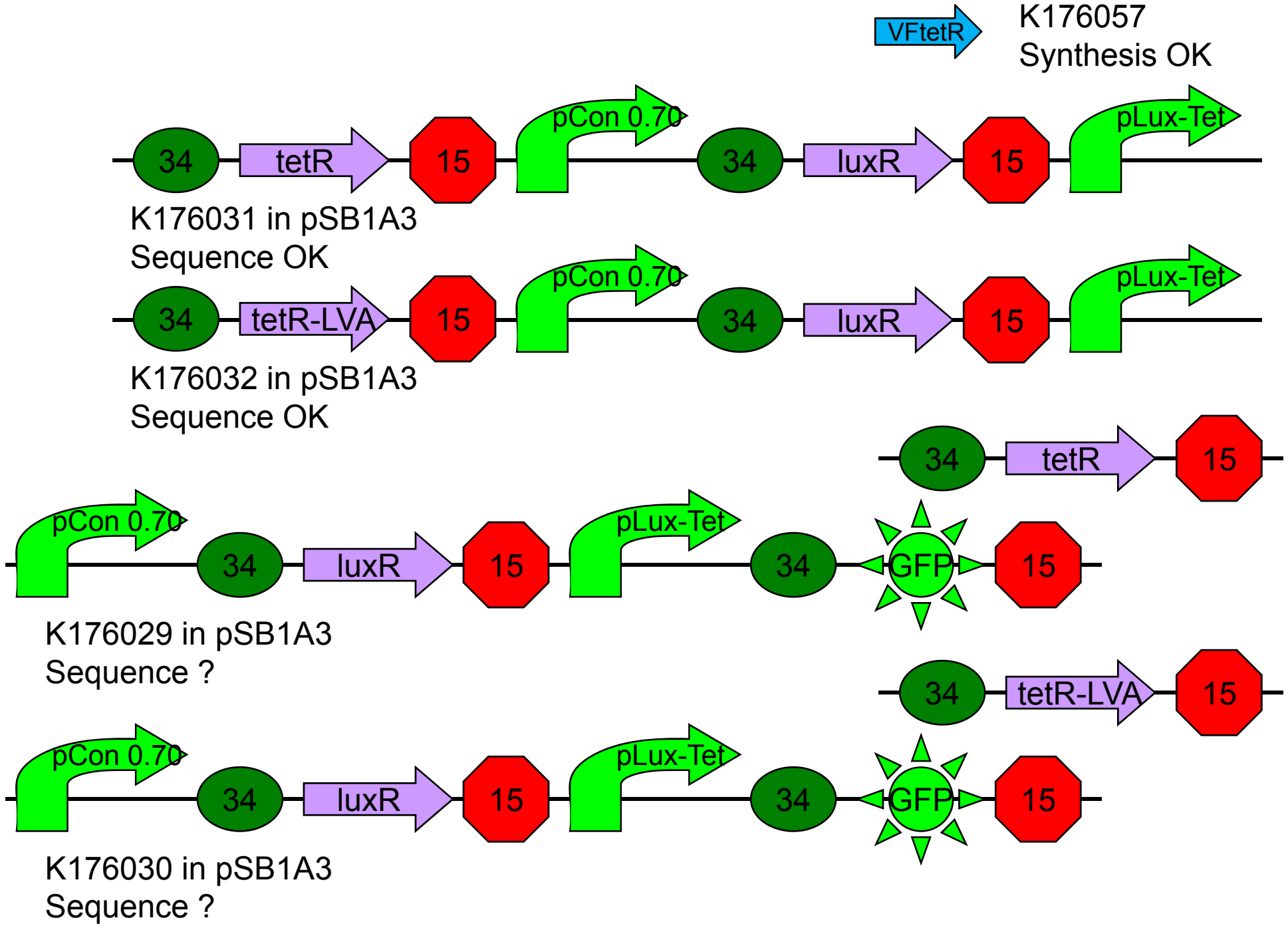
S0101 E+S
Sequence OK

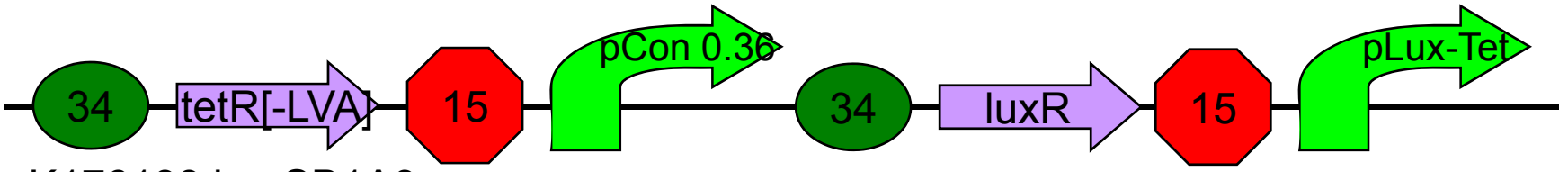


K176001 in pSB1AK3
Sequence OK

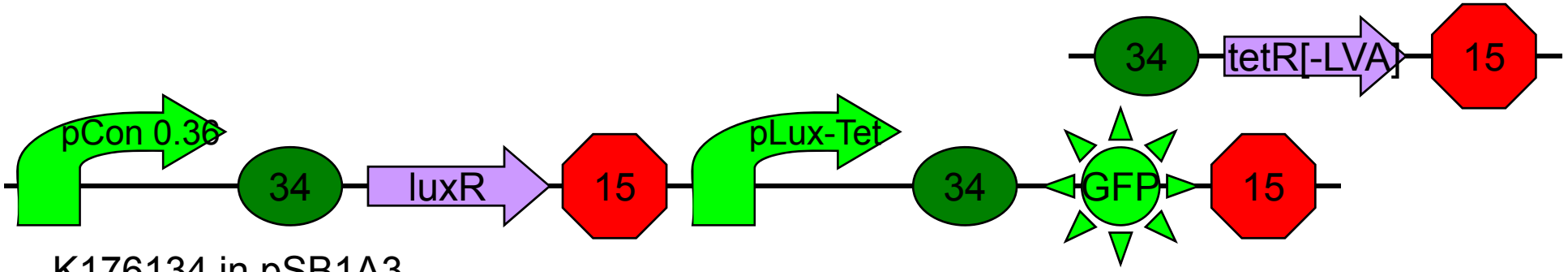
K176006 in pSB1AK3
Sequence OK


12
34
tetR
15
K176001 E+S
Length OK
34
tetR-LVA
15
K176006 E+S
Length OK
pCon 0.70
34
luxR
15
pLux-Tet
K176028 in pSB1A3 E+X
Length OK
pCon 0.70
34
luxR
15
pLux-Tet
34
GFP
15
K176026 in pSB1A3 E+X
Length OK
pCon 0.36
34
luxR
15
pLux-Tet
K176125 in pSB1A3 E+X
Digestion
pCon 0.36
34
luxR
15
pLux-Tet
34
GFP
15
K176126 in pSB1A3 E+X
Digestion


VFtetR
K176057
Synthesis OK
34
tetR
15
pCon 0.70
34
luxR
15
pLux-Tet
K176031 in pSB1A3
Sequence OK
34
tetR-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176032 in pSB1A3
Sequence OK
34
tetR
15
pCon 0.70
34
luxR
15
pLux-Tet
34
GFP
15
K176029 in pSB1A3
Sequence ?
34
tetR-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
34
GFP
15
K176030 in pSB1A3
Sequence ?

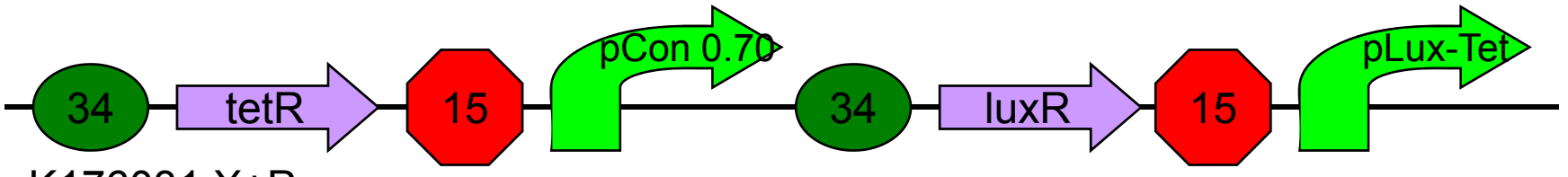


K176133 in pSB1A3
Waiting

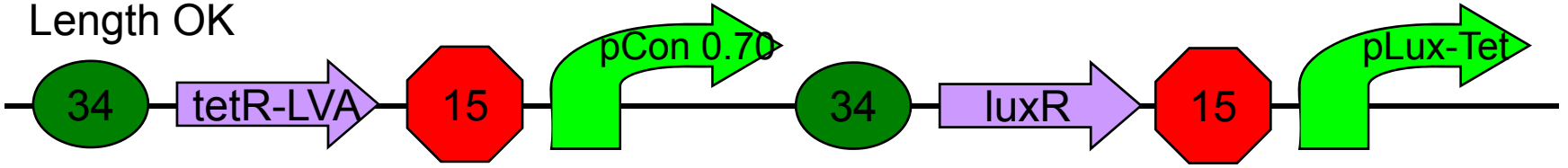


K176134 in pSB1A3
Waiting

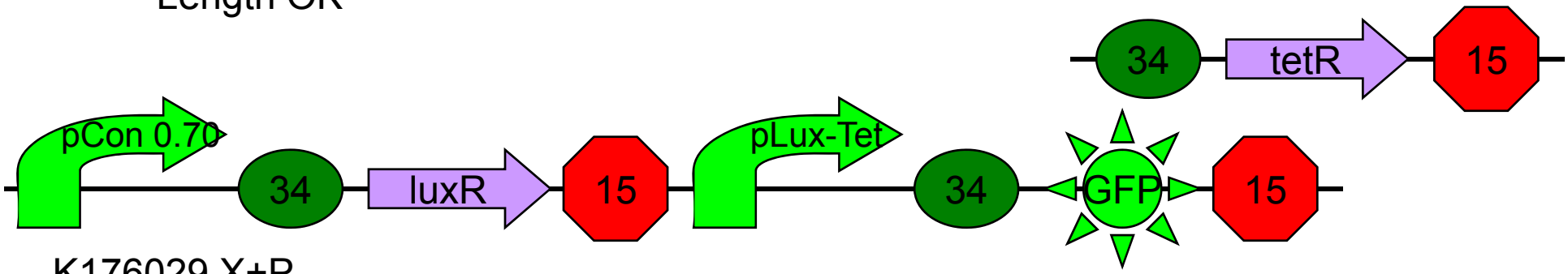
13



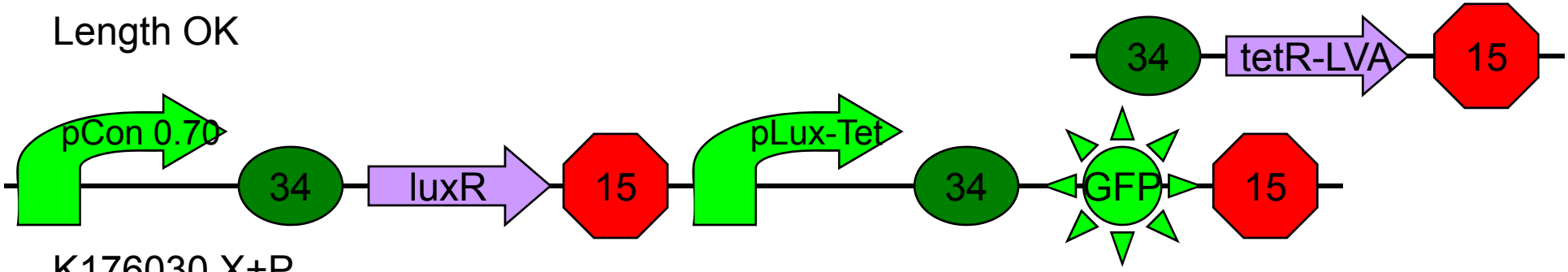
K176031 X+P
Length OK



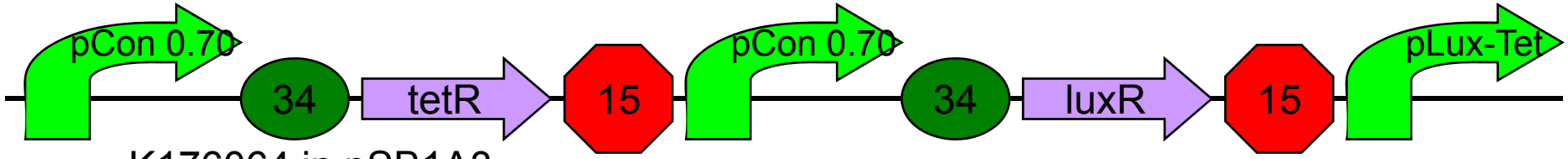
K176032 X+P
Length OK



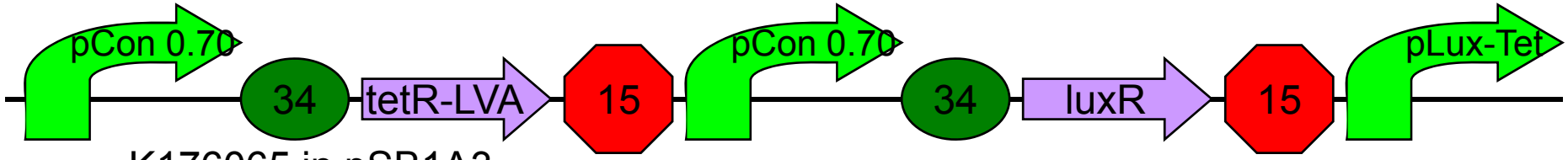
K176029 X+P
Length OK



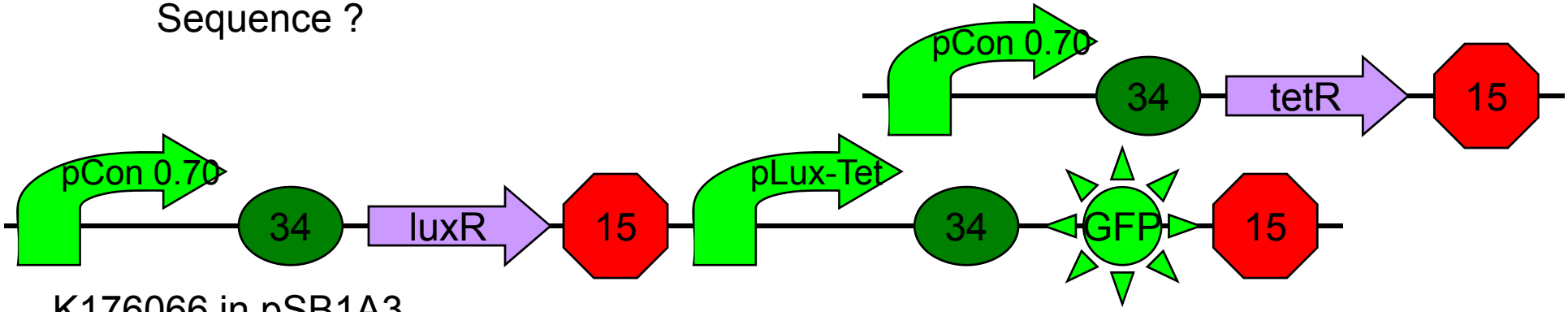
K176030 X+P
Length OK



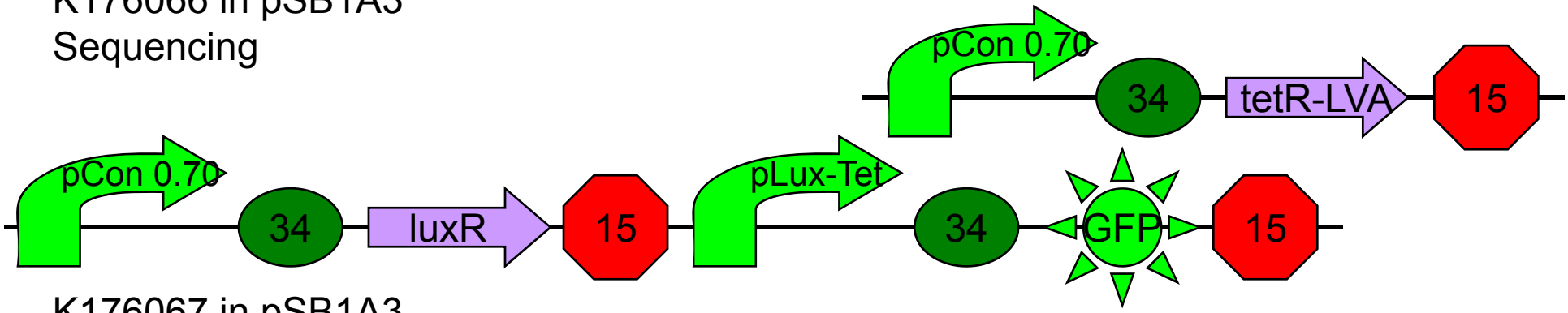
K176064 in pSB1A3
Ligation



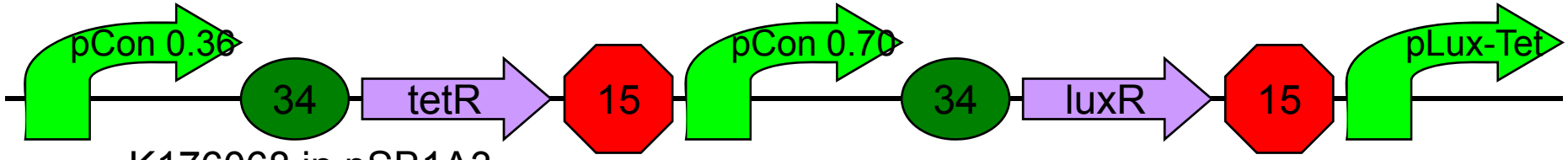
K176065 in pSB1A3
Sequence ?



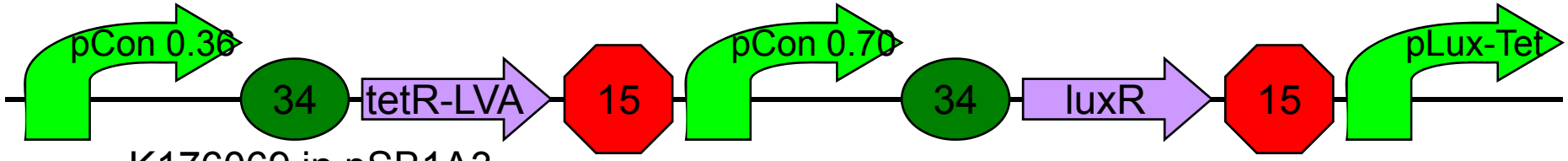
K176066 in pSB1A3
Sequencing



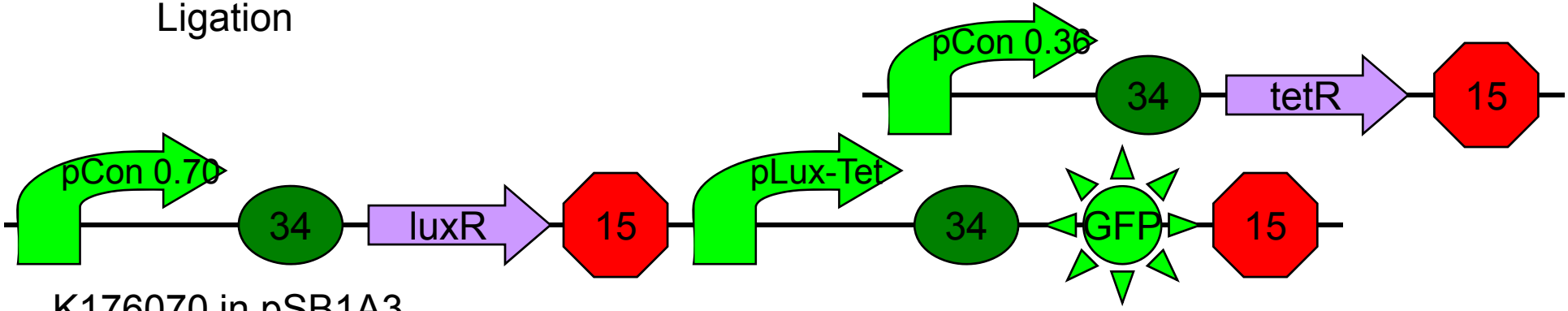
K176067 in pSB1A3
Sequence ?



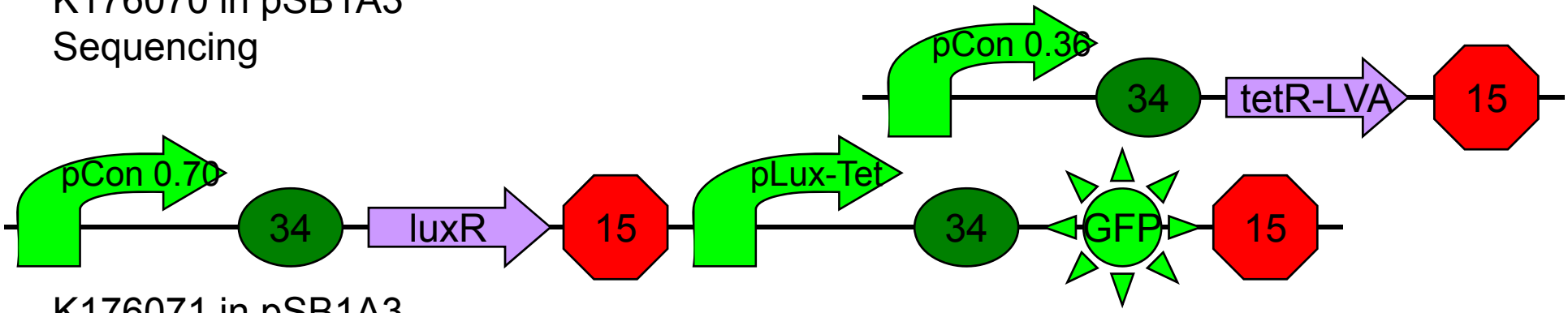
K176068 in pSB1A3
Ligation



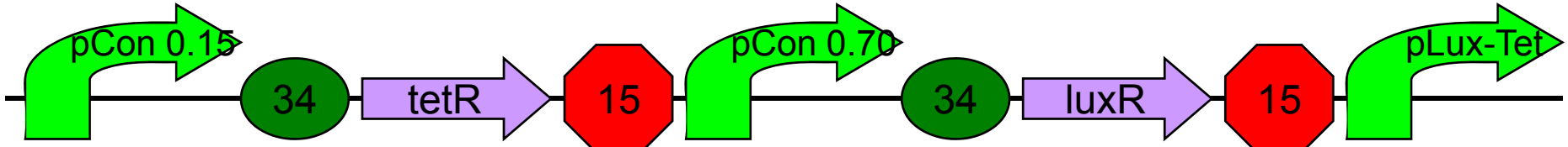
K176069 in pSB1A3
Ligation



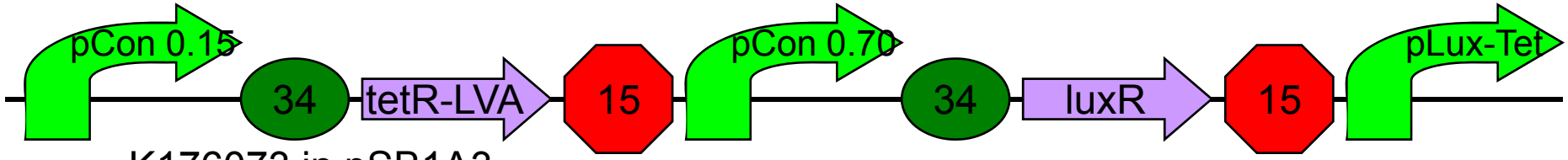
K176070 in pSB1A3
Sequencing



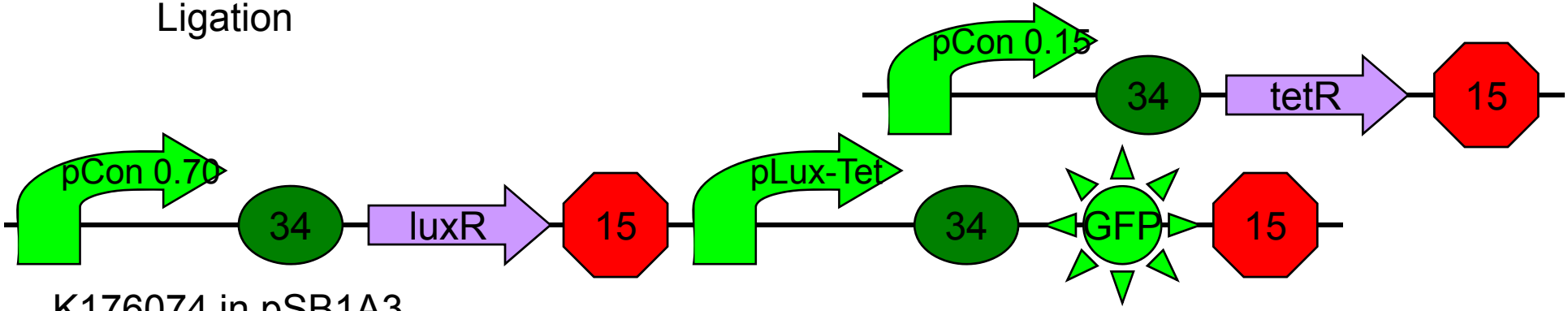
K176071 in pSB1A3
Sequence ?



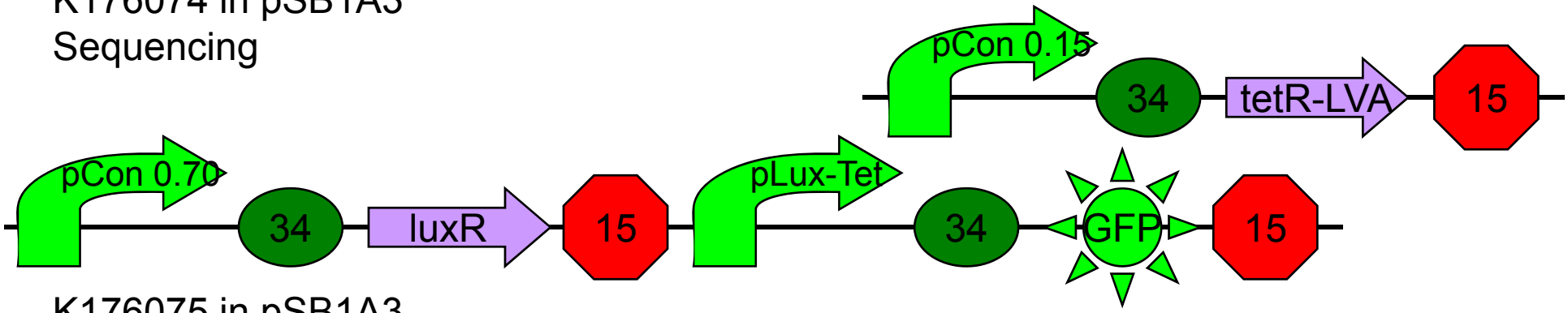
K176072 in pSB1A3
Ligation



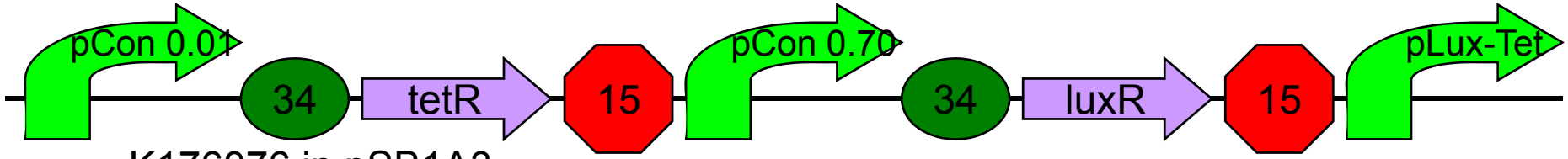
K176073 in pSB1A3
Ligation



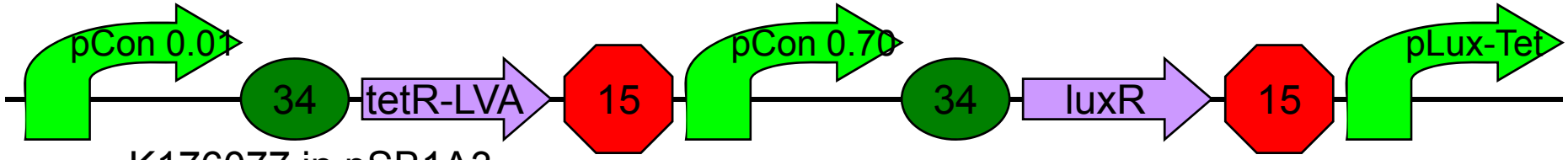
K176074 in pSB1A3
Sequencing



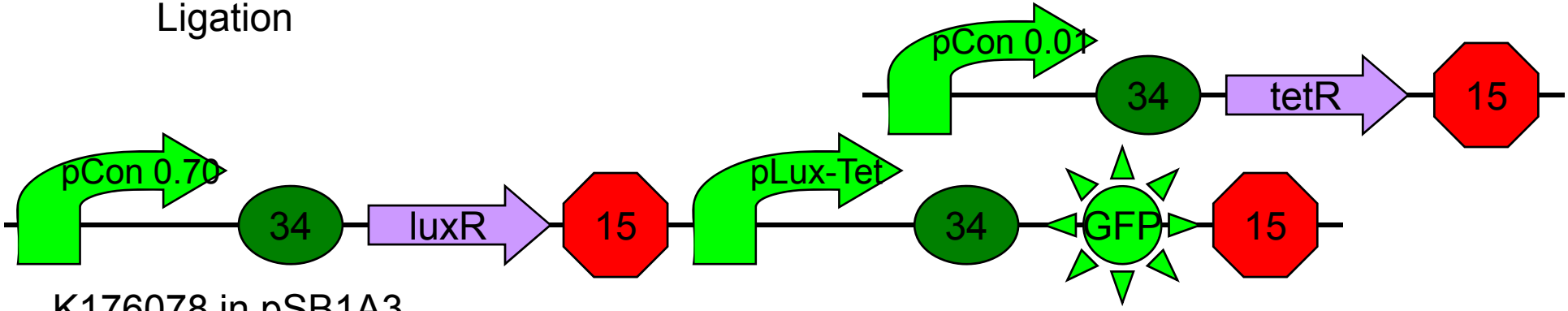
K176075 in pSB1A3
Sequencing



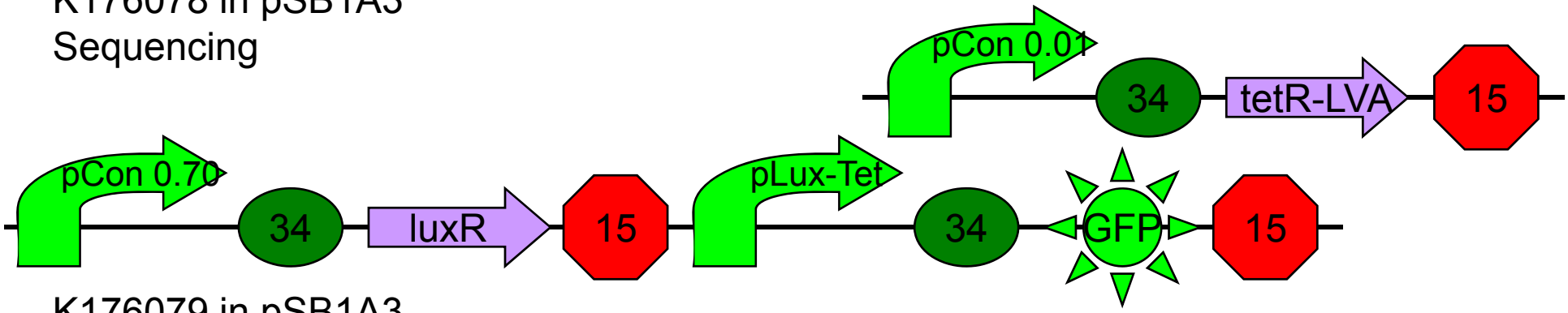
K176076 in pSB1A3
Ligation



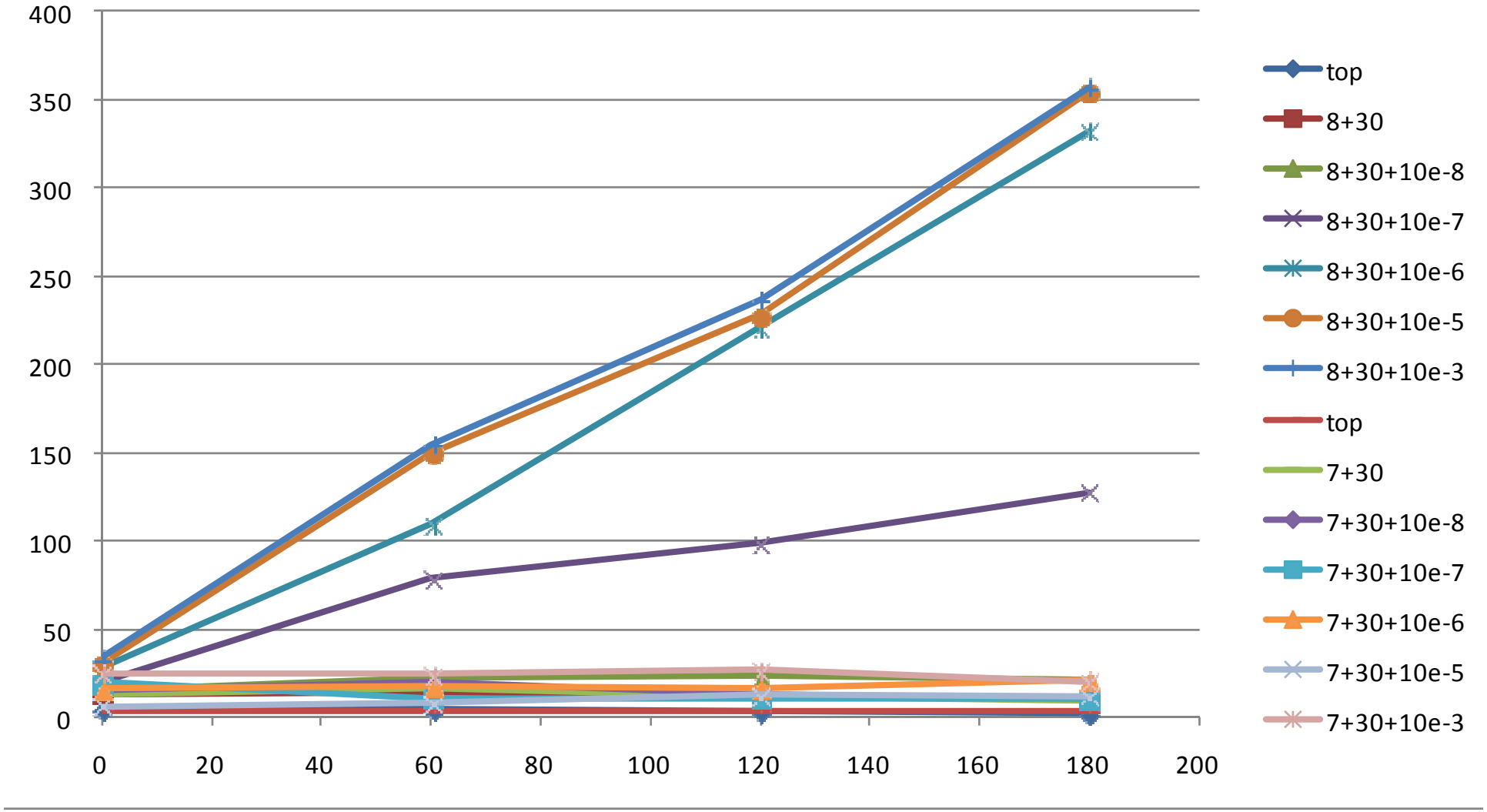
K176077 in pSB1A3
Ligation



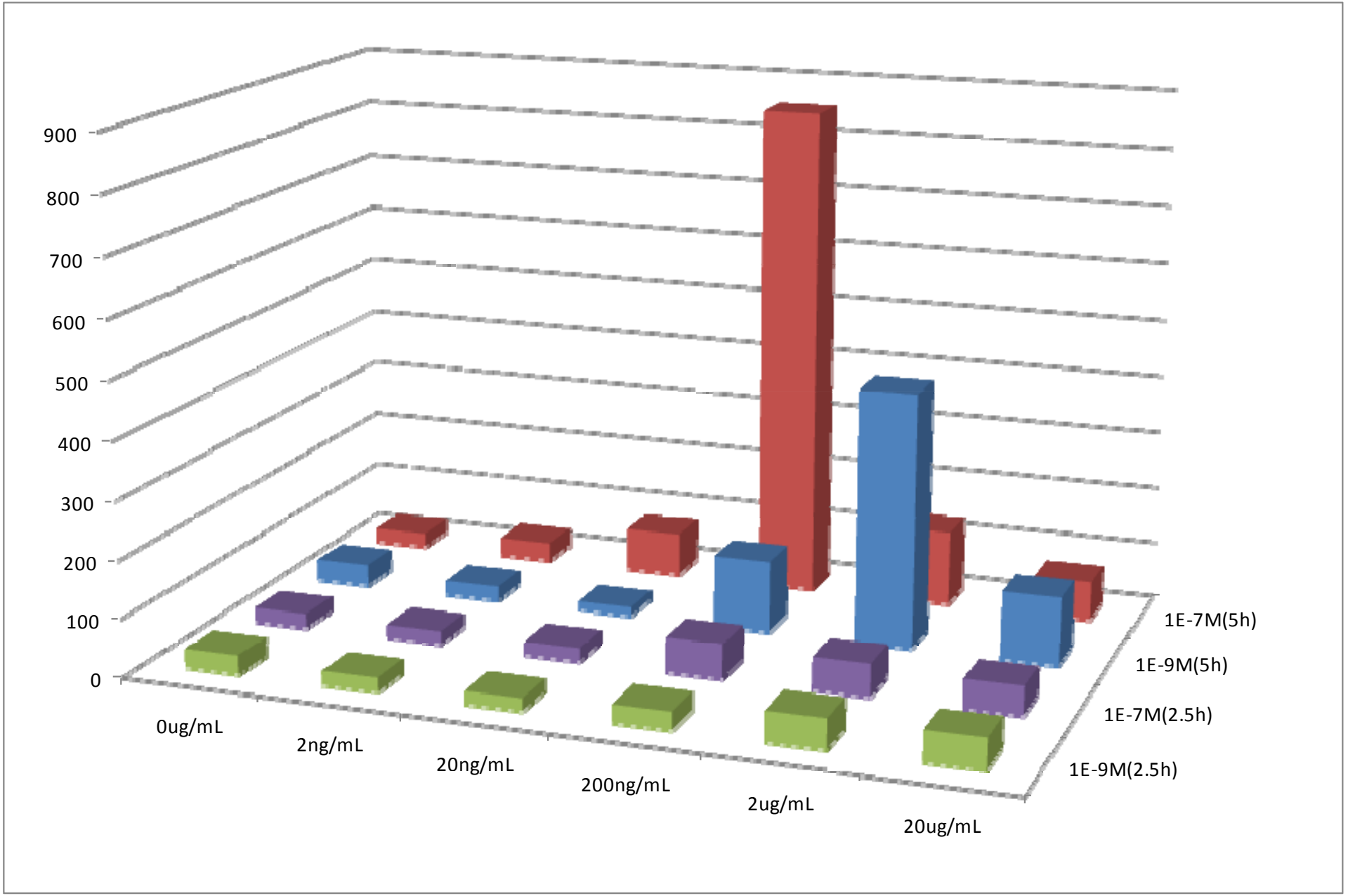
K176078 in pSB1A3
Sequencing



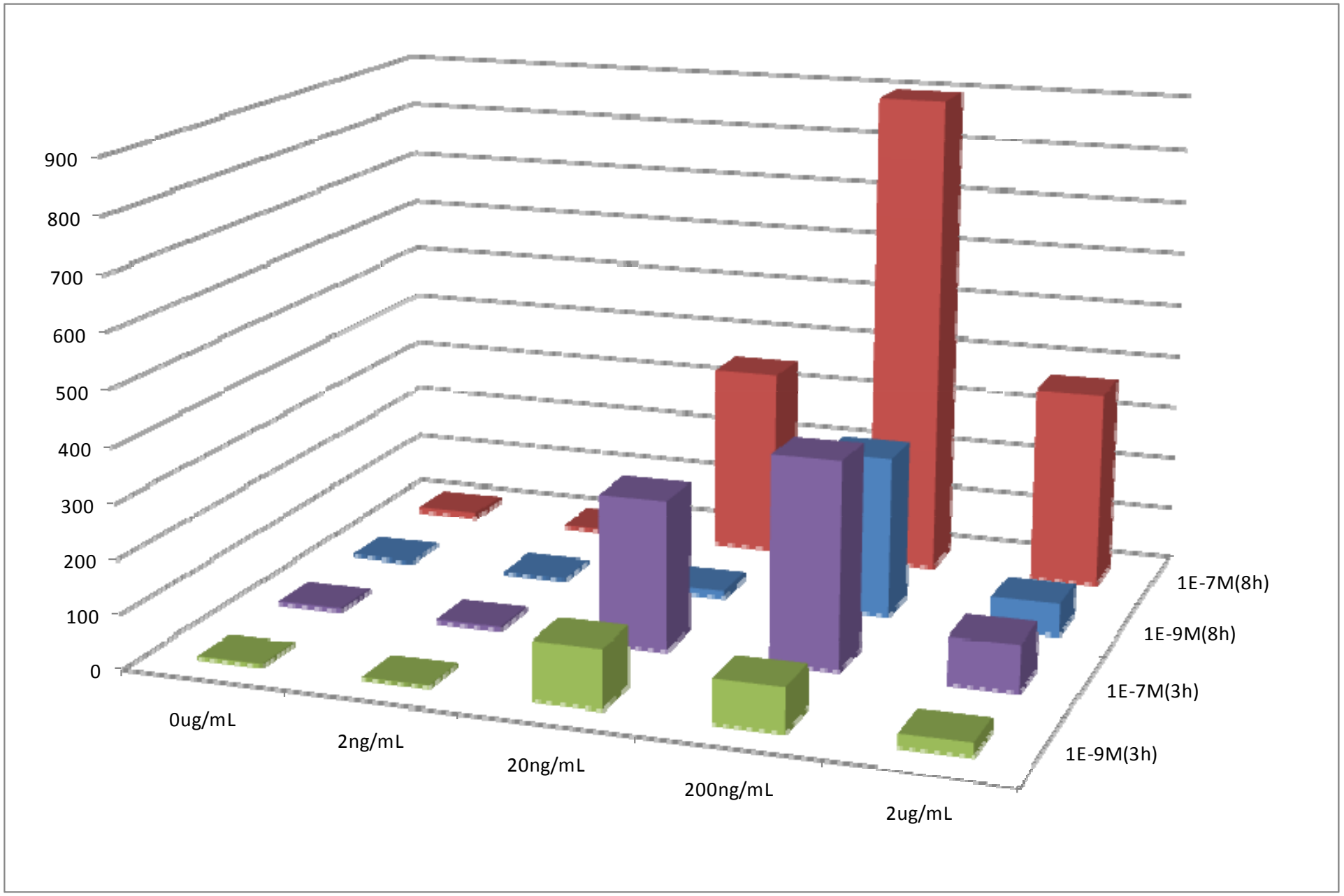
K176079 in pSB1A3
Sequence ?


400
350
300
250
200
150
100
50
0
0
20
40
60
80
100
120
140
160
180
200
top
8+30
8+30+10e-8
8+30+10e-7
8+30+10e-6
8+30+10e-5
8+30+10e-3
top
7+30
7+30+10e-8
7+30+10e-7
7+30+10e-6
7+30+10e-5
7+30+10e-3

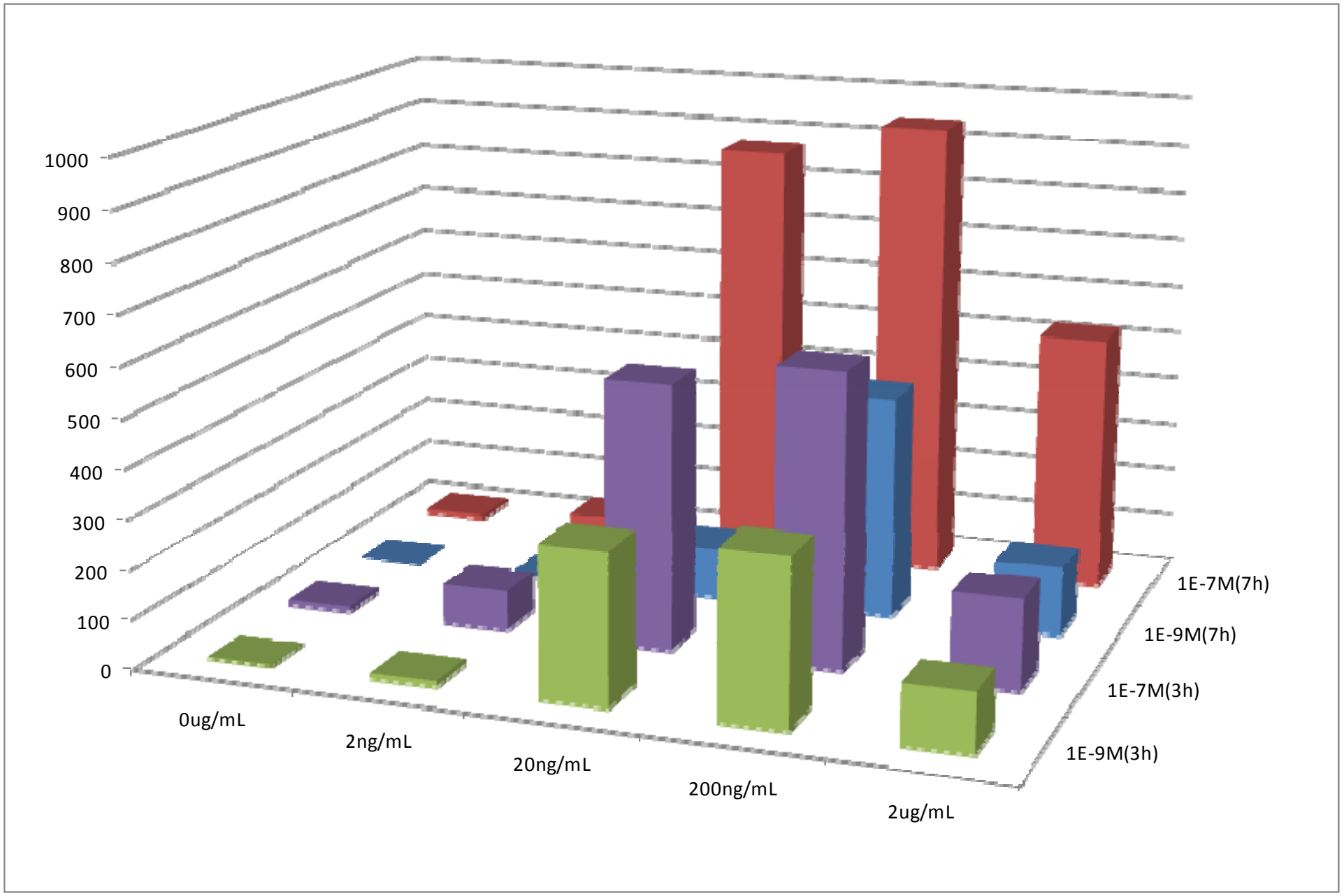
K176067 (7+30)

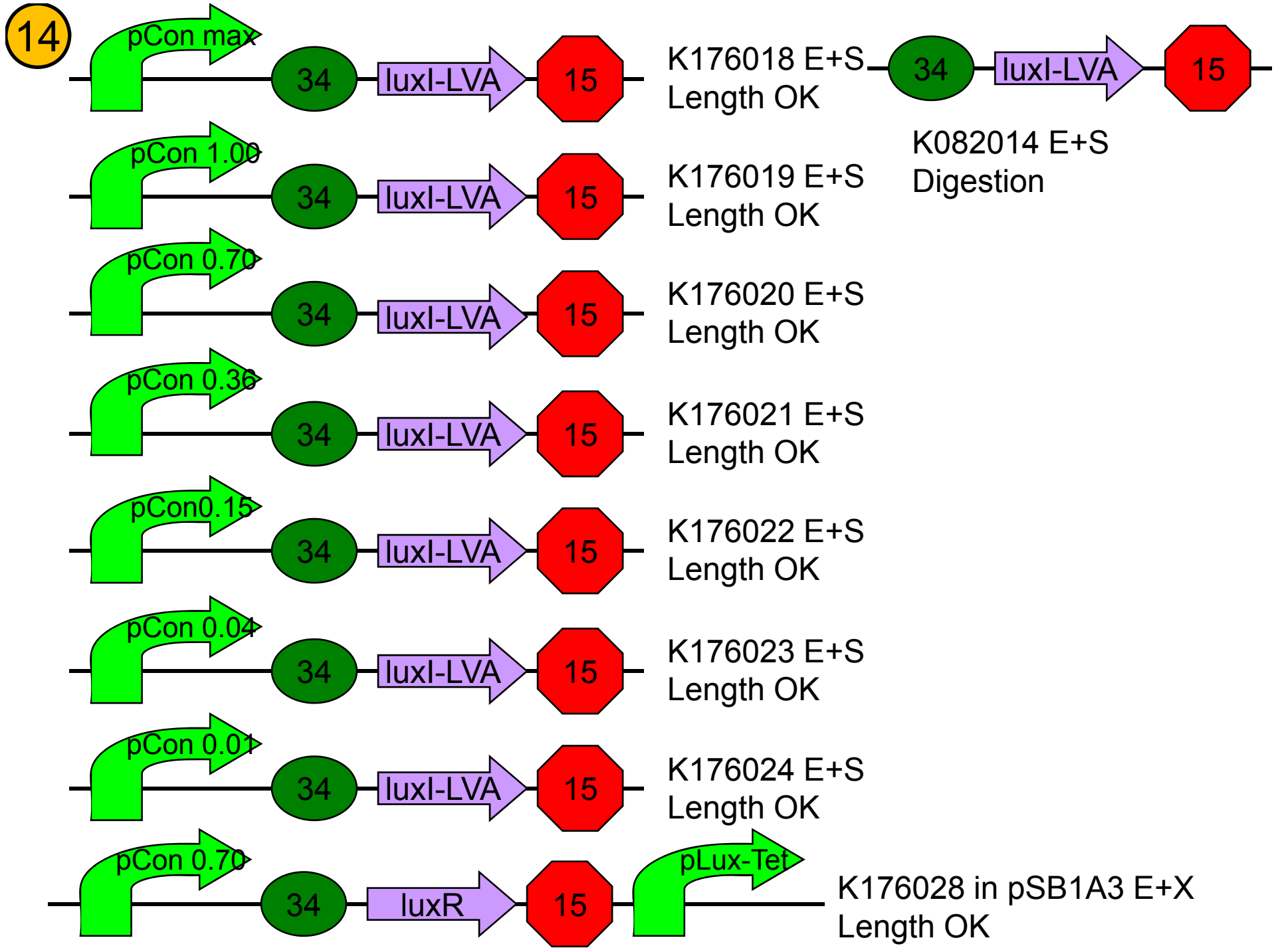

900
800
700
600
500
400
300
200
100
0
0ug/mL
2ng/mL
20ng/mL
200ng/mL
2ug/mL
20ug/mL
1E-7M(5h)
1E-9M(5h)
1E-7M(2.5h)
1E-9M(2.5h)

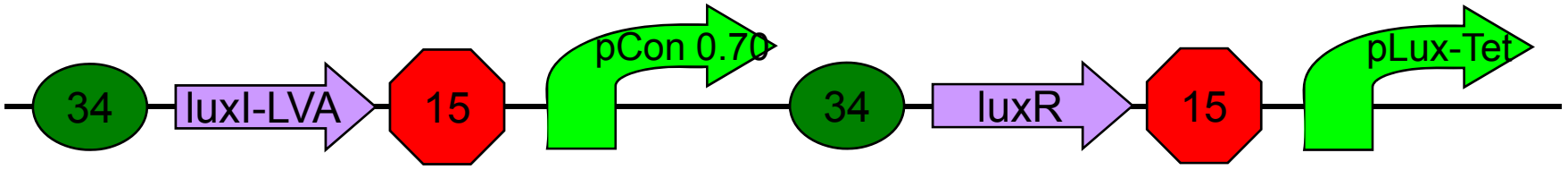
K176070 (9+29)


900
800
700
600
500
400
300
200
100
0
0ug/mL
2ng/mL
20ng/mL
200ng/mL
2ug/mL
1E-7M(8h)
1E-9M(8h)
1E-7M(3h)
1E-9M(3h)

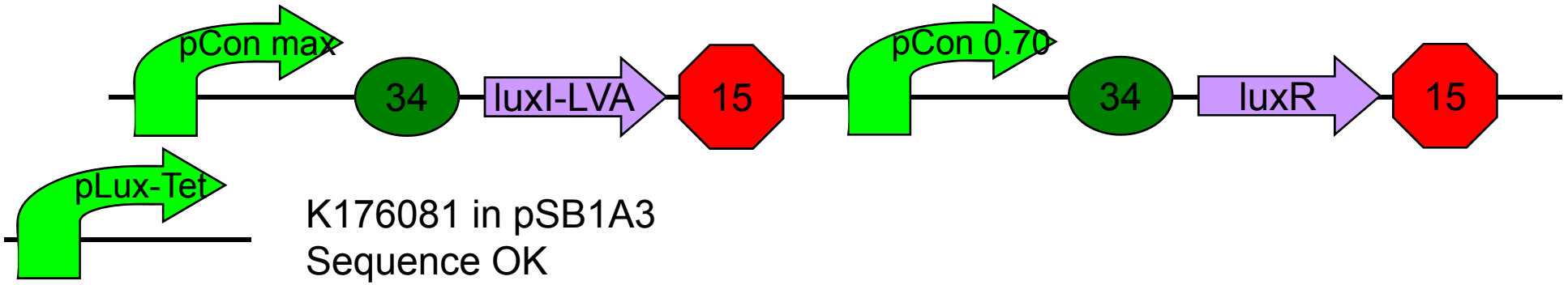
K176071 (9+30)


1000
900
800
700
600
500
400
300
200
100
0
0ug/mL
2ng/mL
20ng/mL
200ng/mL
2ug/mL
1E-7M(7h)
1E-9M(7h)
1E-7M(3h)
1E-9M(3h)

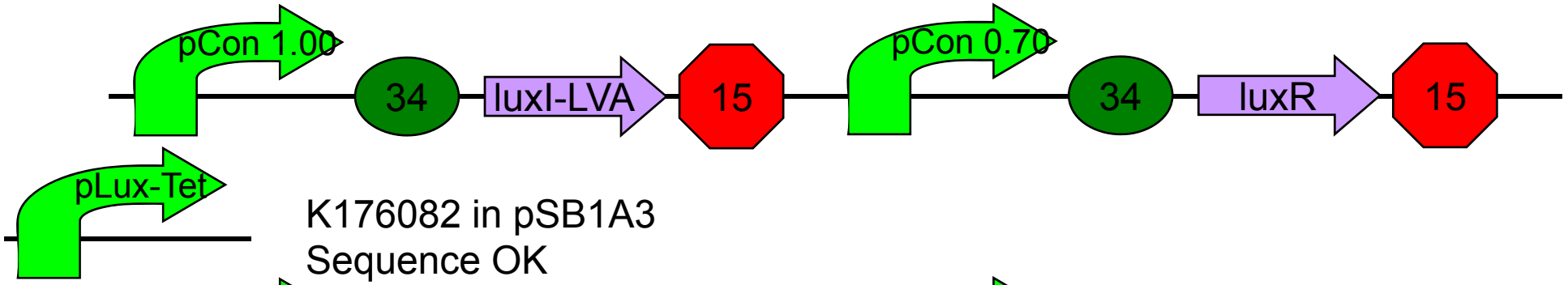

14
pCon max
34
luxI-LVA
15
K176018 E+S
Length OK
34
luxI-LVA
15
K082014 E+S
Digestion
pCon 1.00
34
luxI-LVA
15
K176019 E+S
Length OK
pCon 0.70
34
luxI-LVA
15
K176020 E+S
Length OK
pCon 0.36
34
luxI-LVA
15
K176021 E+S
Length OK
pCon0.15
34
luxI-LVA
15
K176022 E+S
Length OK
pCon 0.04
34
luxI-LVA
15
K176023 E+S
Length OK
pCon 0.01
34
luxI-LVA
15
K176024 E+S
Length OK
pCon 0.70
34
luxR
15
pLux-Tet
K176028 in pSB1A3 E+X
Length OK



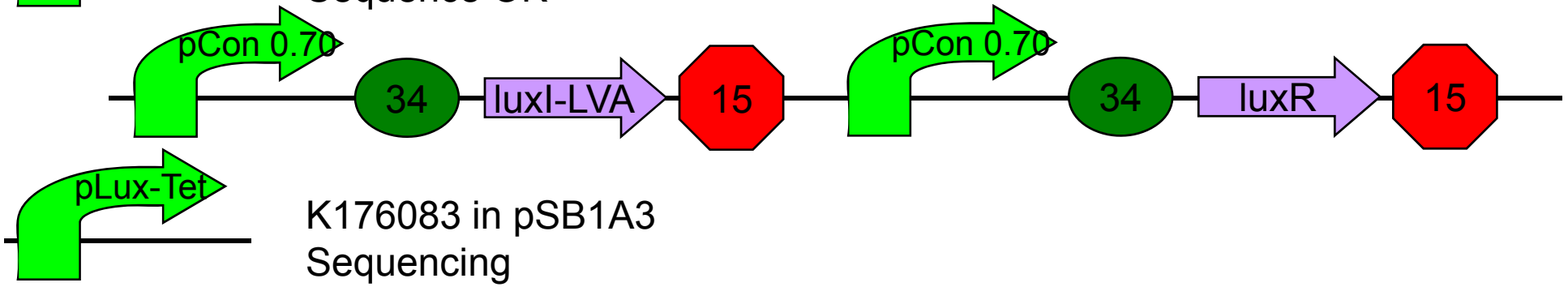
K176080 in pSB1A3
Waiting



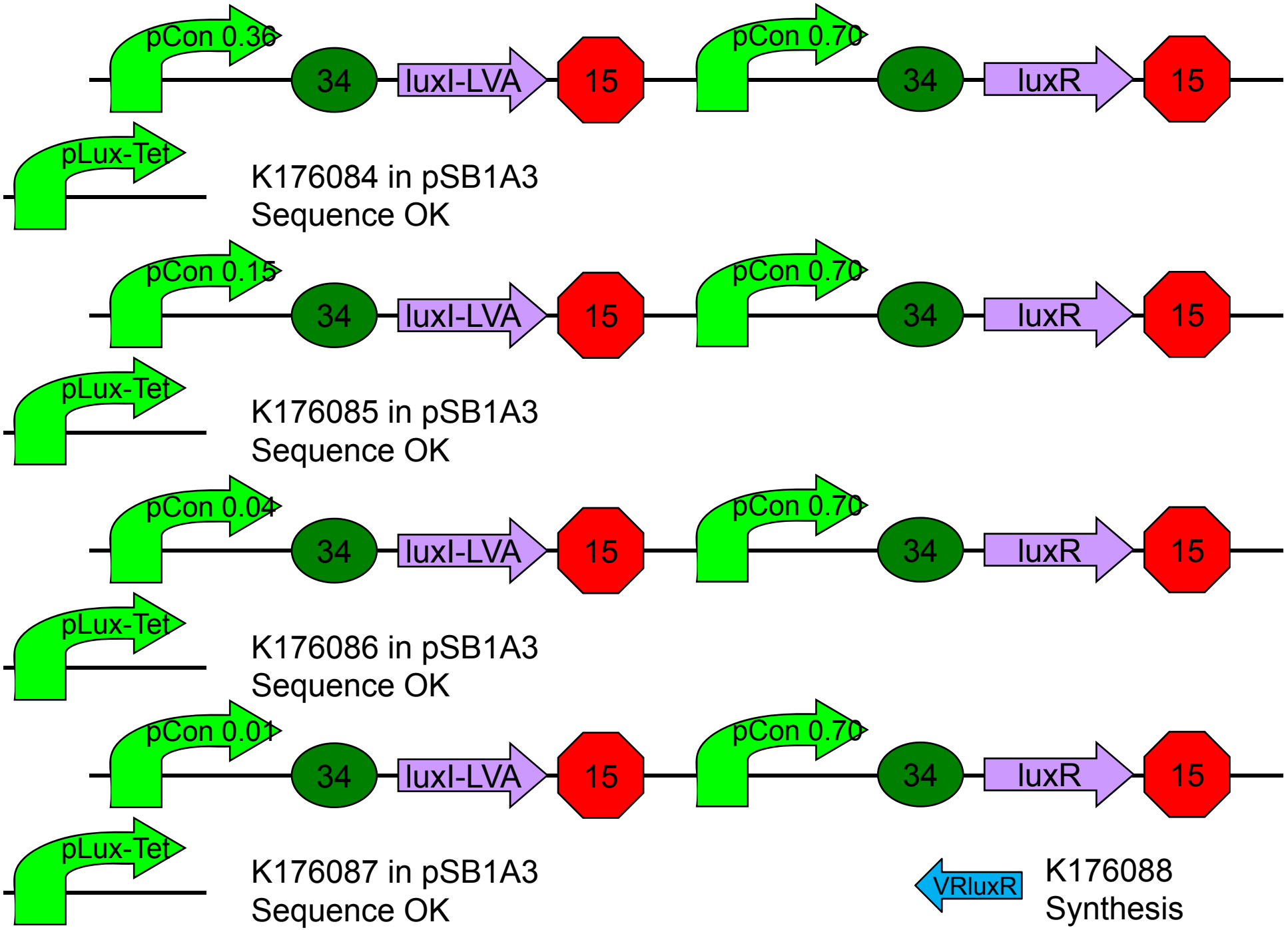
K176081 in pSB1A3
Sequence OK

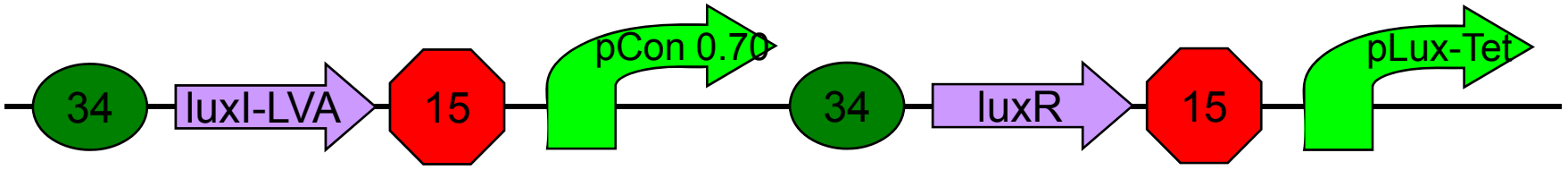


K176082 in pSB1A3
Sequence OK

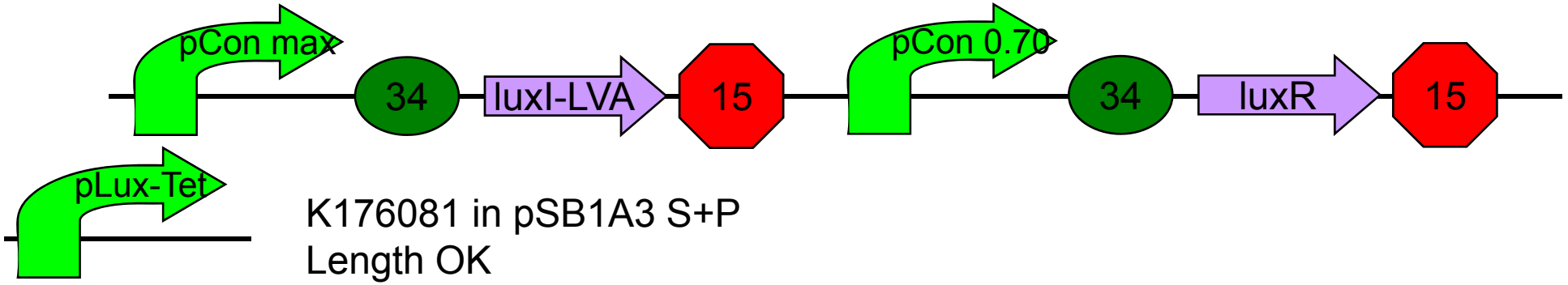


K176083 in pSB1A3
Sequencing

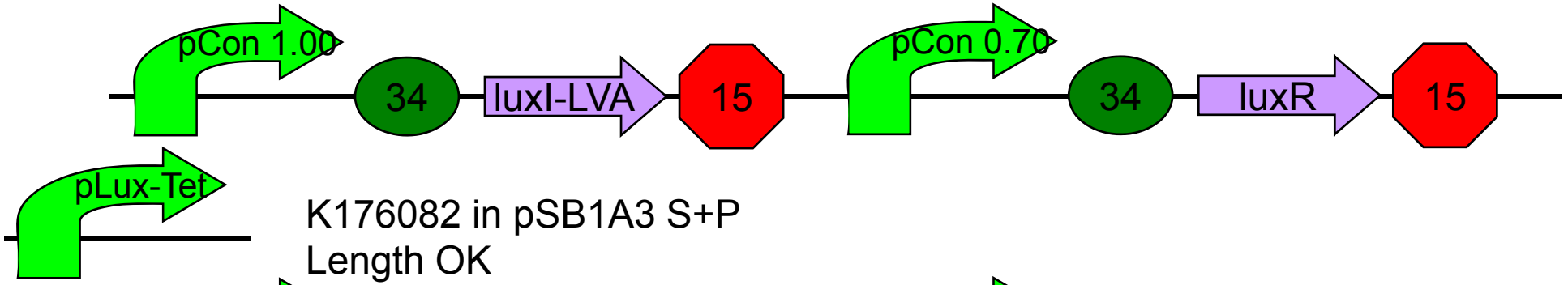

pCon 0.36
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176084 in pSB1A3
Sequence OK
pCon 0.15
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176085 in pSB1A3
Sequence OK
pCon 0.04
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176086 in pSB1A3
Sequence OK
pCon 0.01
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176087 in pSB1A3
Sequence OK
VRluxR
K176088
Synthesis



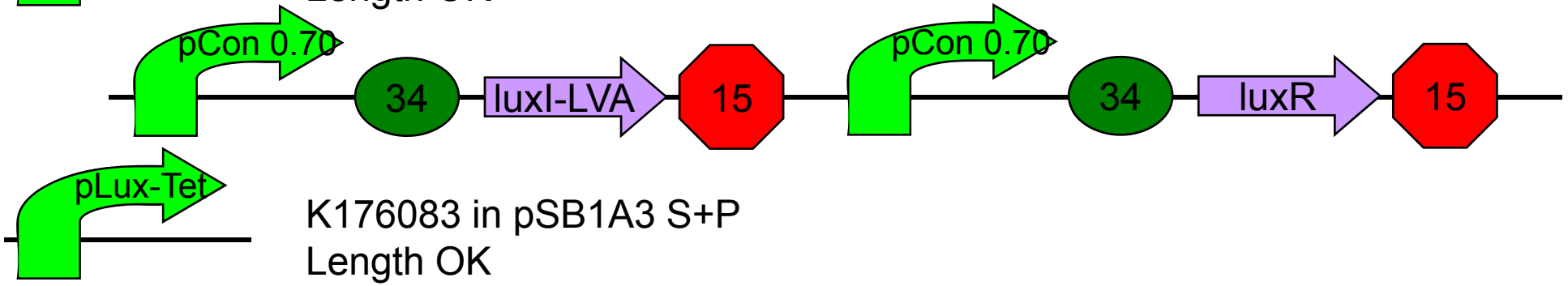
K176080 in pSB1A3 S+P
Waiting



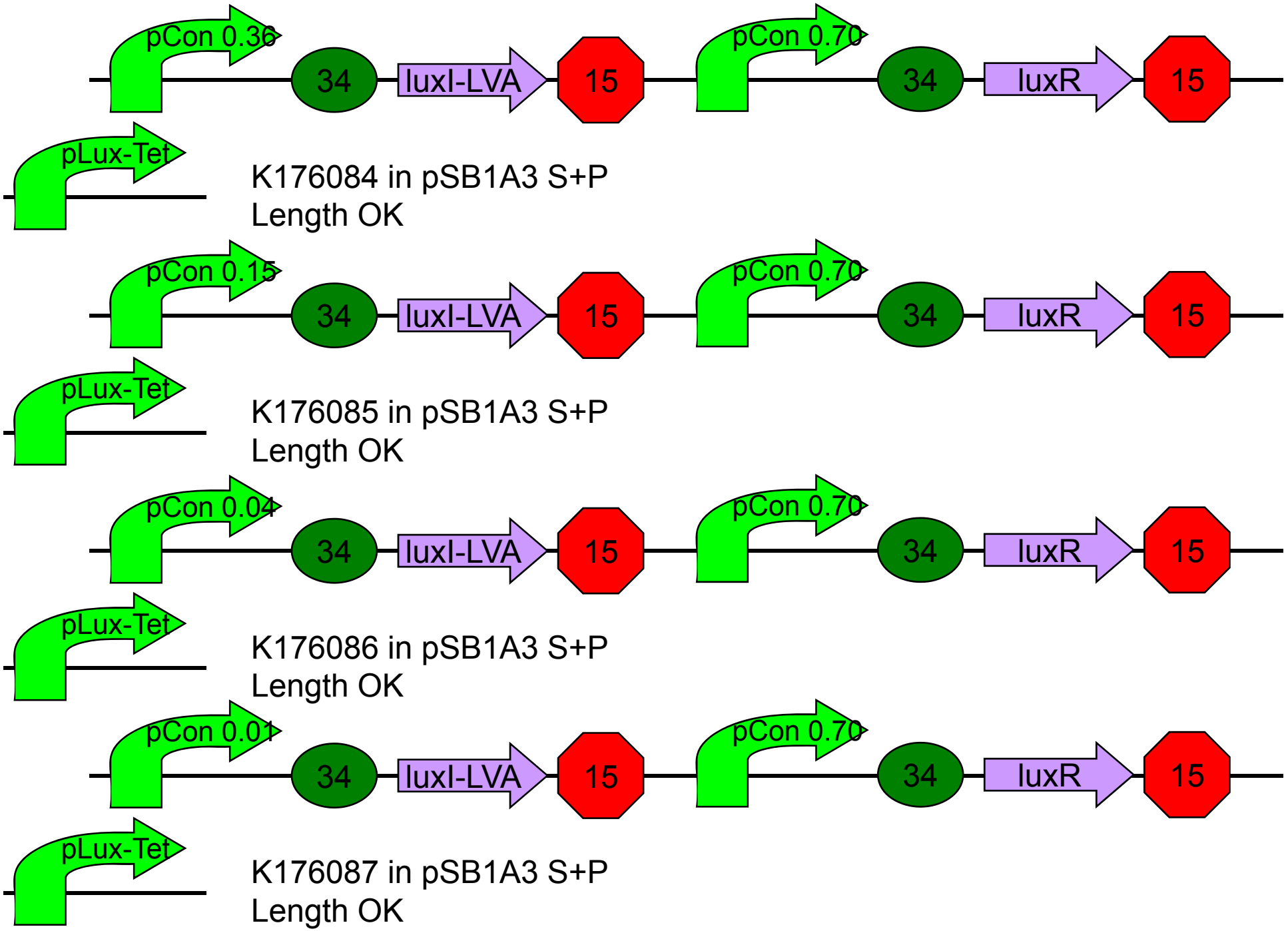
K176081 in pSB1A3 S+P
Length OK

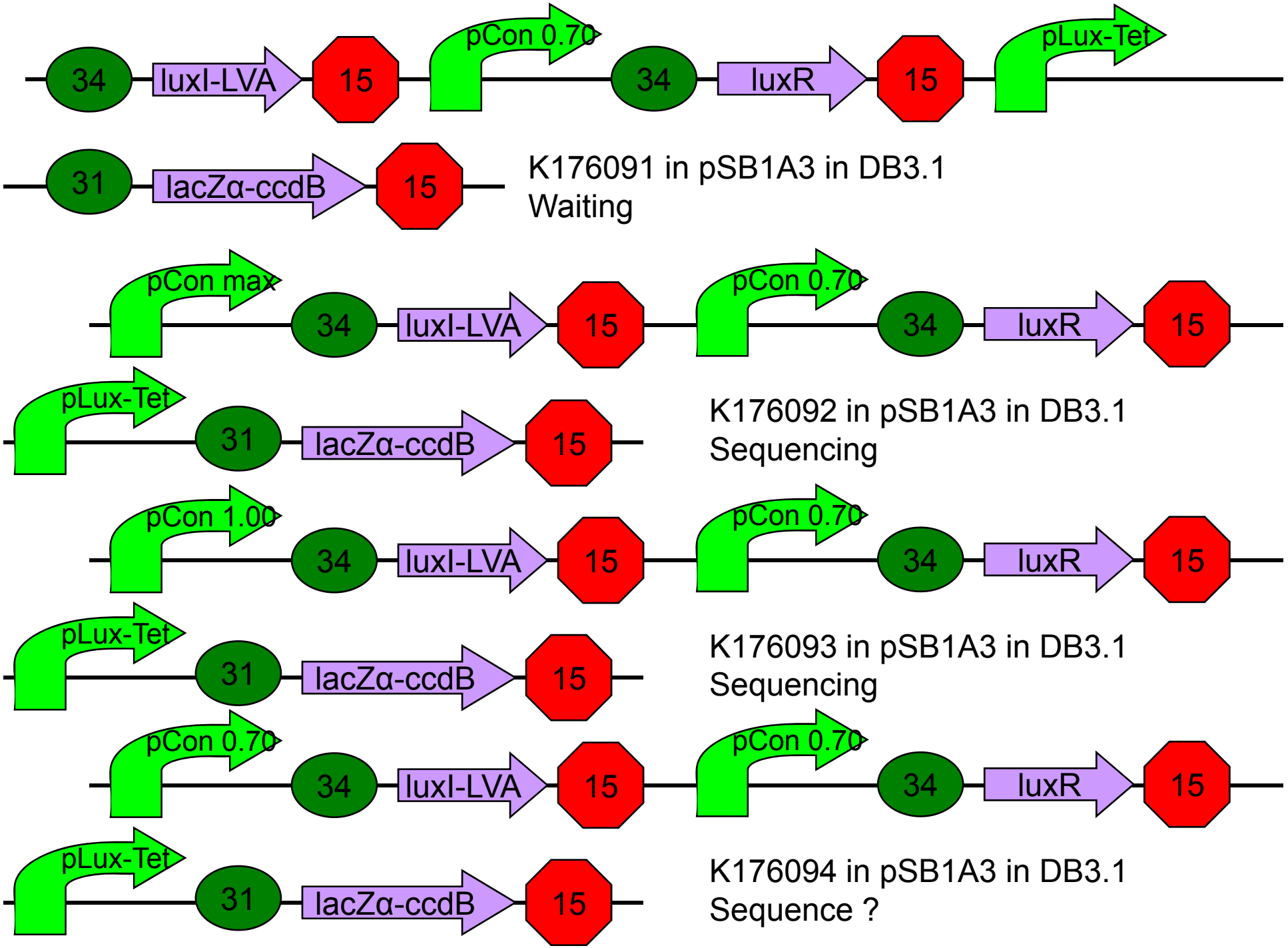


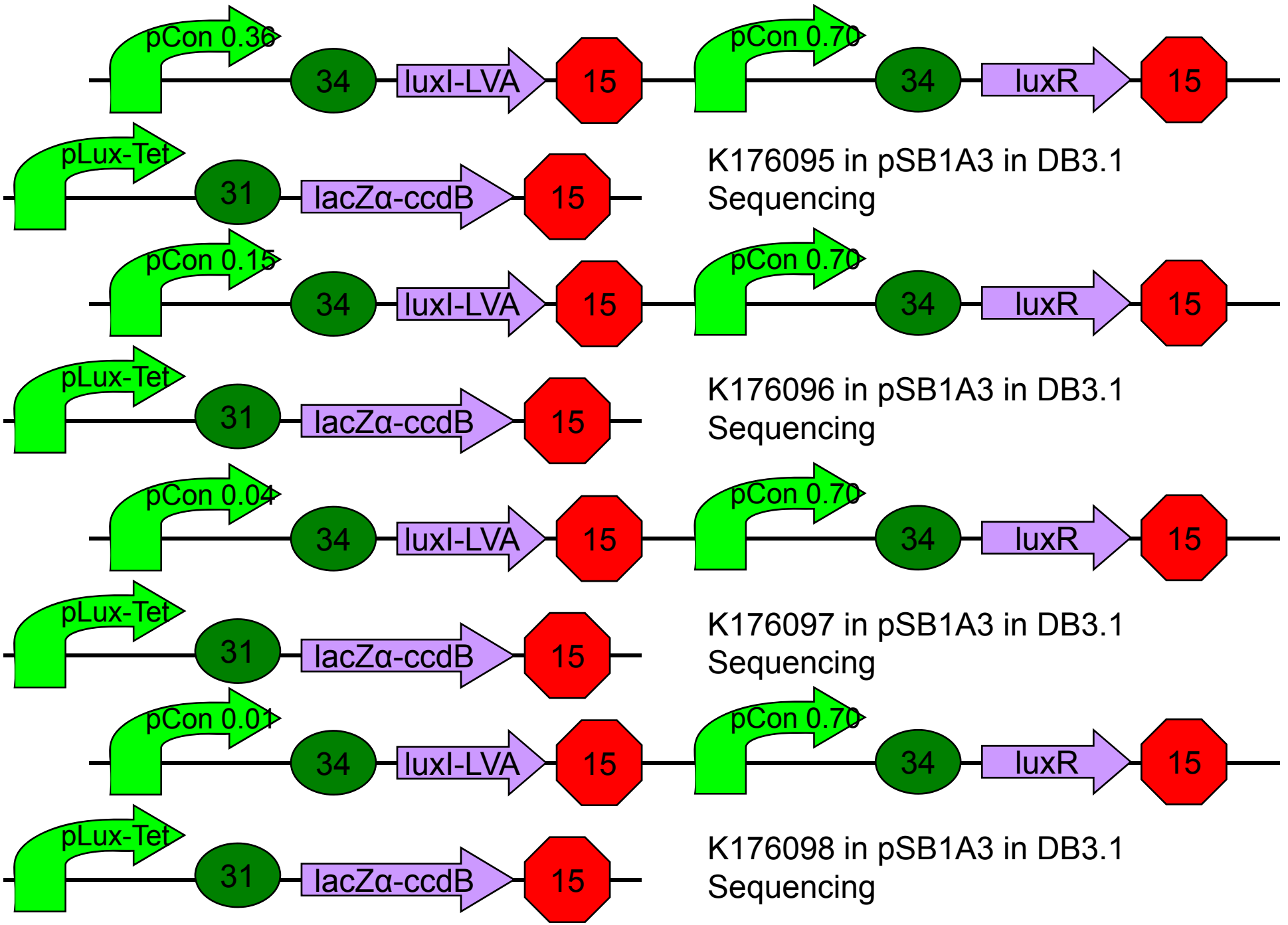
K176082 in pSB1A3 S+P
Length OK

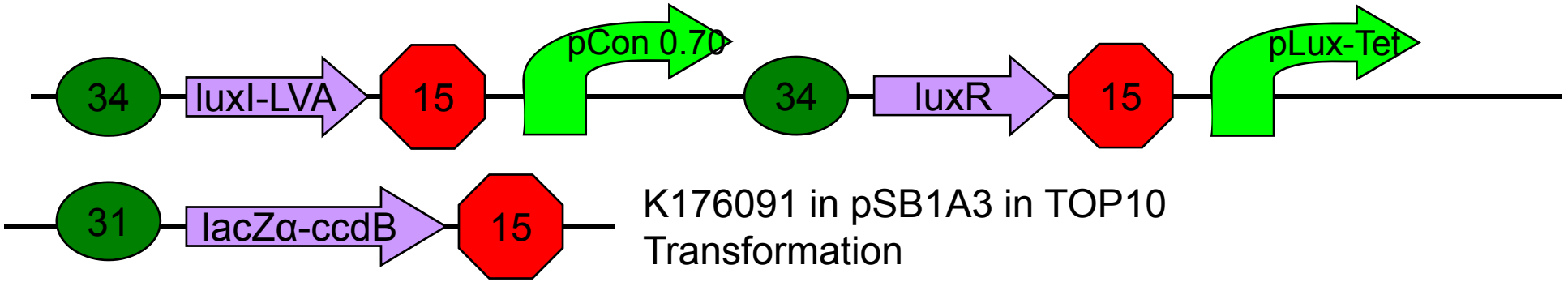


K176083 in pSB1A3 S+P
Length OK

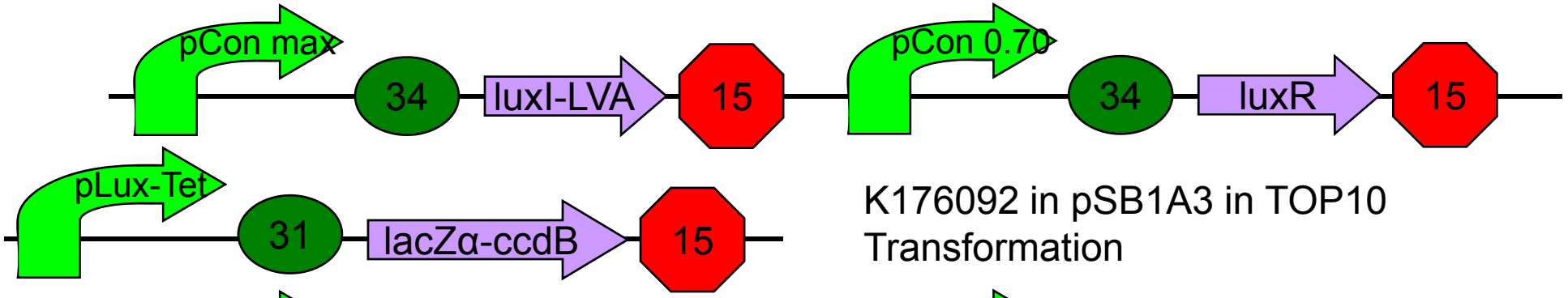

pCon 0.36
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176084 in pSB1A3 S+P
Length OK
pCon 0.15
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176085 in pSB1A3 S+P
Length OK
pCon 0.04
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176086 in pSB1A3 S+P
Length OK
pCon 0.01
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
K176087 in pSB1A3 S+P
Length OK


34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176091 in pSB1A3 in DB3.1
Waiting
pCon max
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176092 in pSB1A3 in DB3.1
Sequencing
pCon 1.00
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176093 in pSB1A3 in DB3.1
Sequencing
pCon 0.70
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176094 in pSB1A3 in DB3.1
Sequence ?

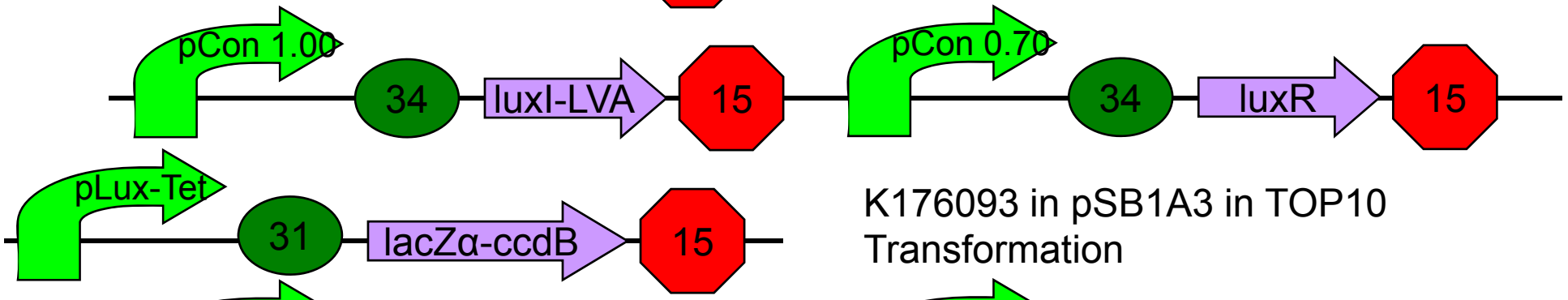

pCon 0.36
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176095 in pSB1A3 in DB3.1
Sequencing
pCon 0.15
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176096 in pSB1A3 in DB3.1
Sequencing
pCon 0.04
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176097 in pSB1A3 in DB3.1
Sequencing
pCon 0.01
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176098 in pSB1A3 in DB3.1
Sequencing



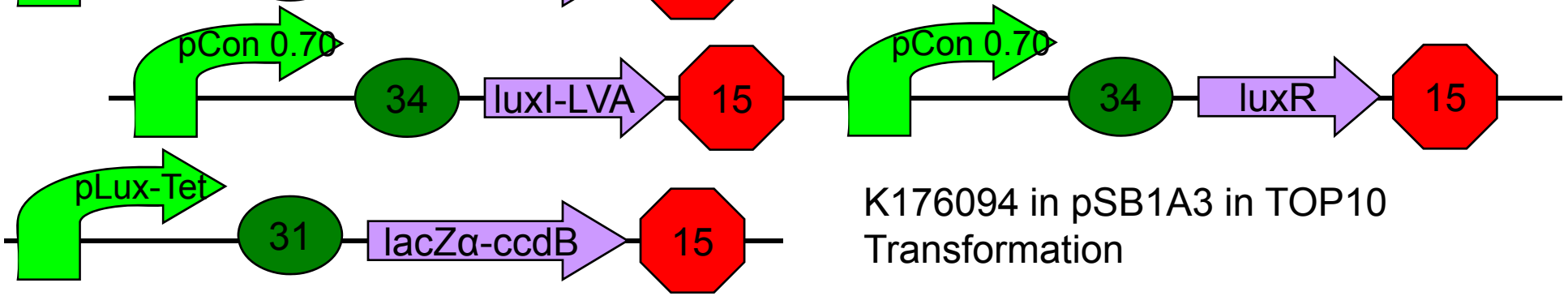
K176091 in pSB1A3 in TOP10 Transformation



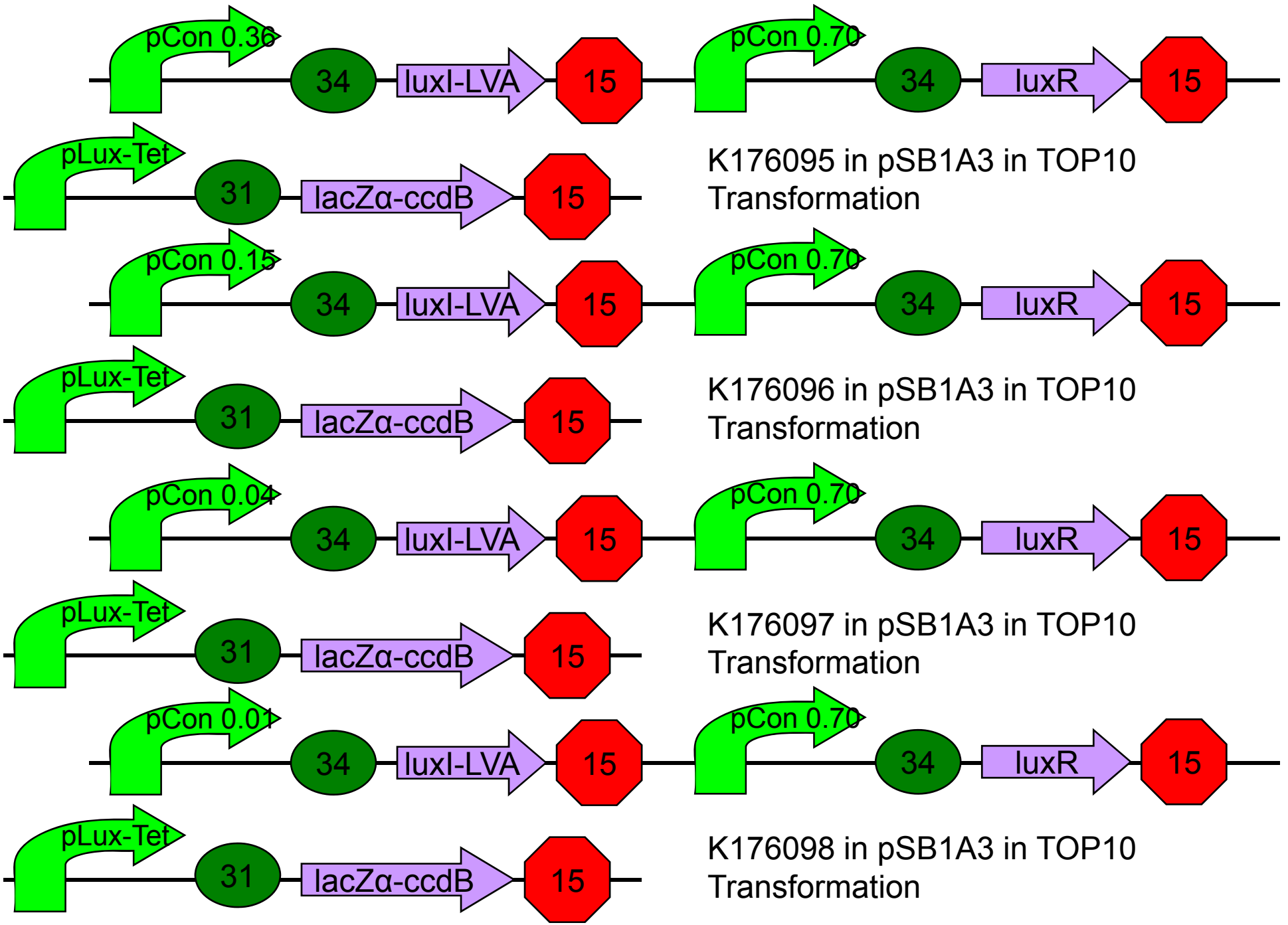
K176092 in pSB1A3 in TOP10 Transformation

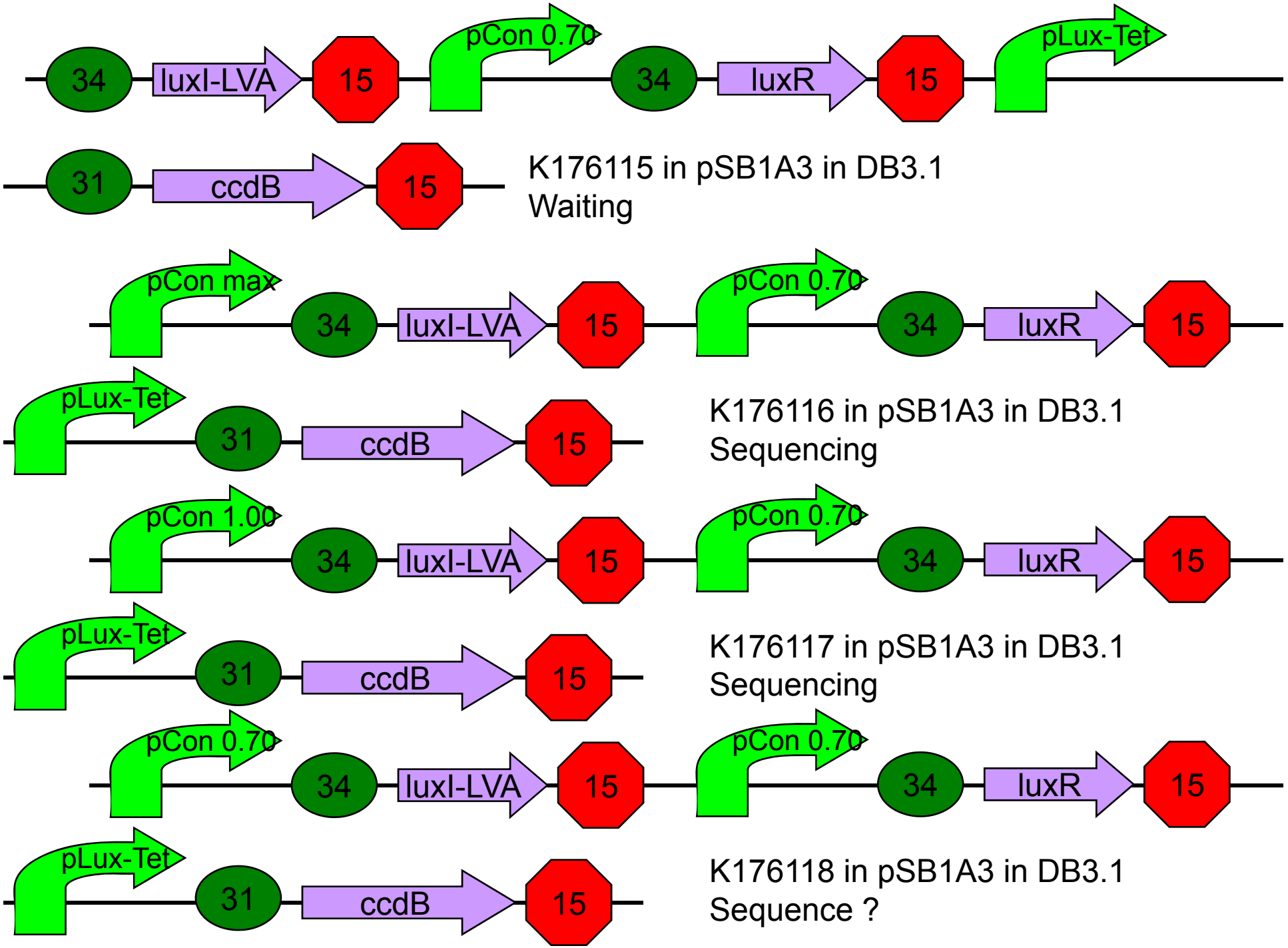


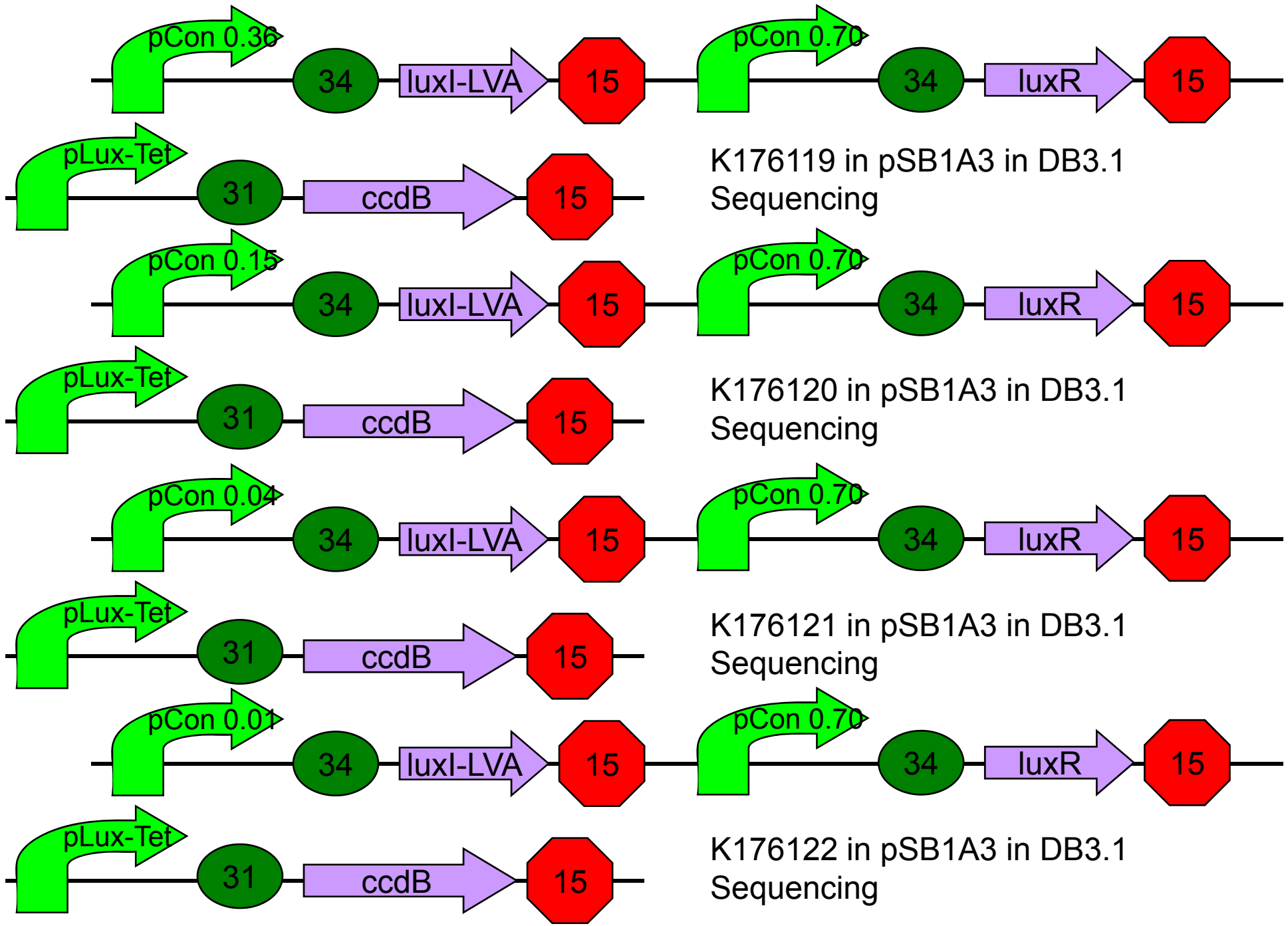
K176093 in pSB1A3 in TOP10 Transformation

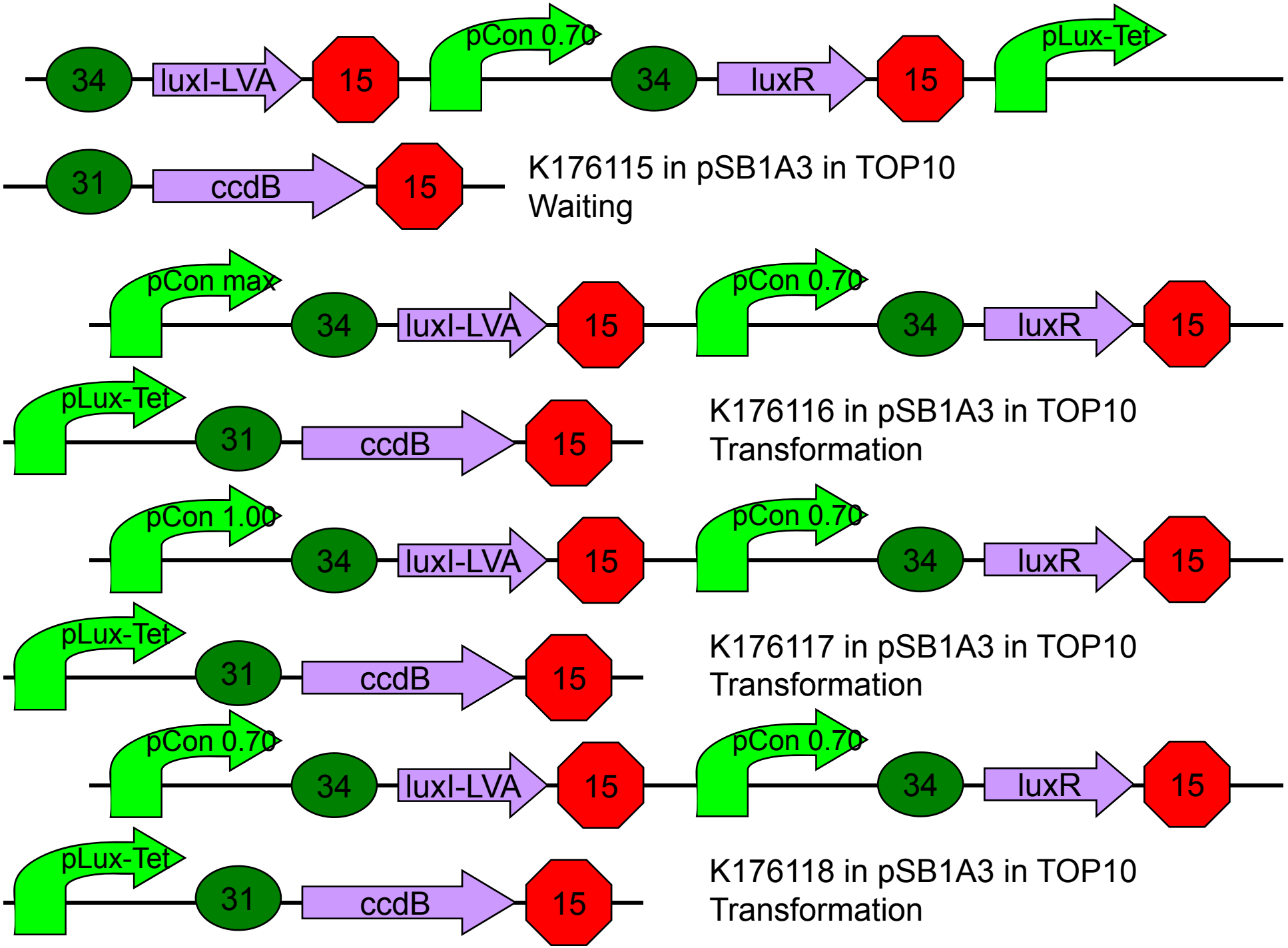


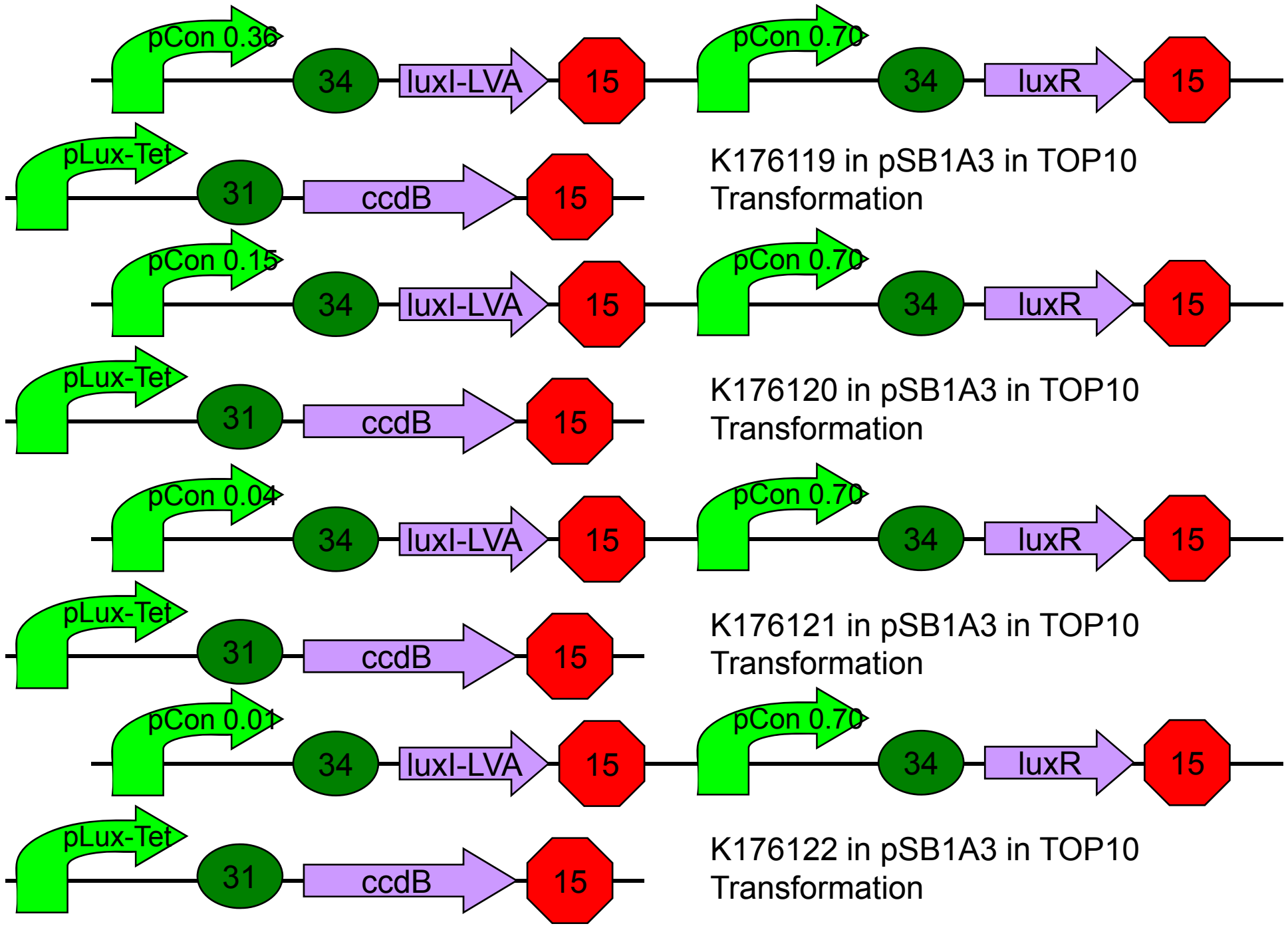
K176094 in pSB1A3 in TOP10 Transformation

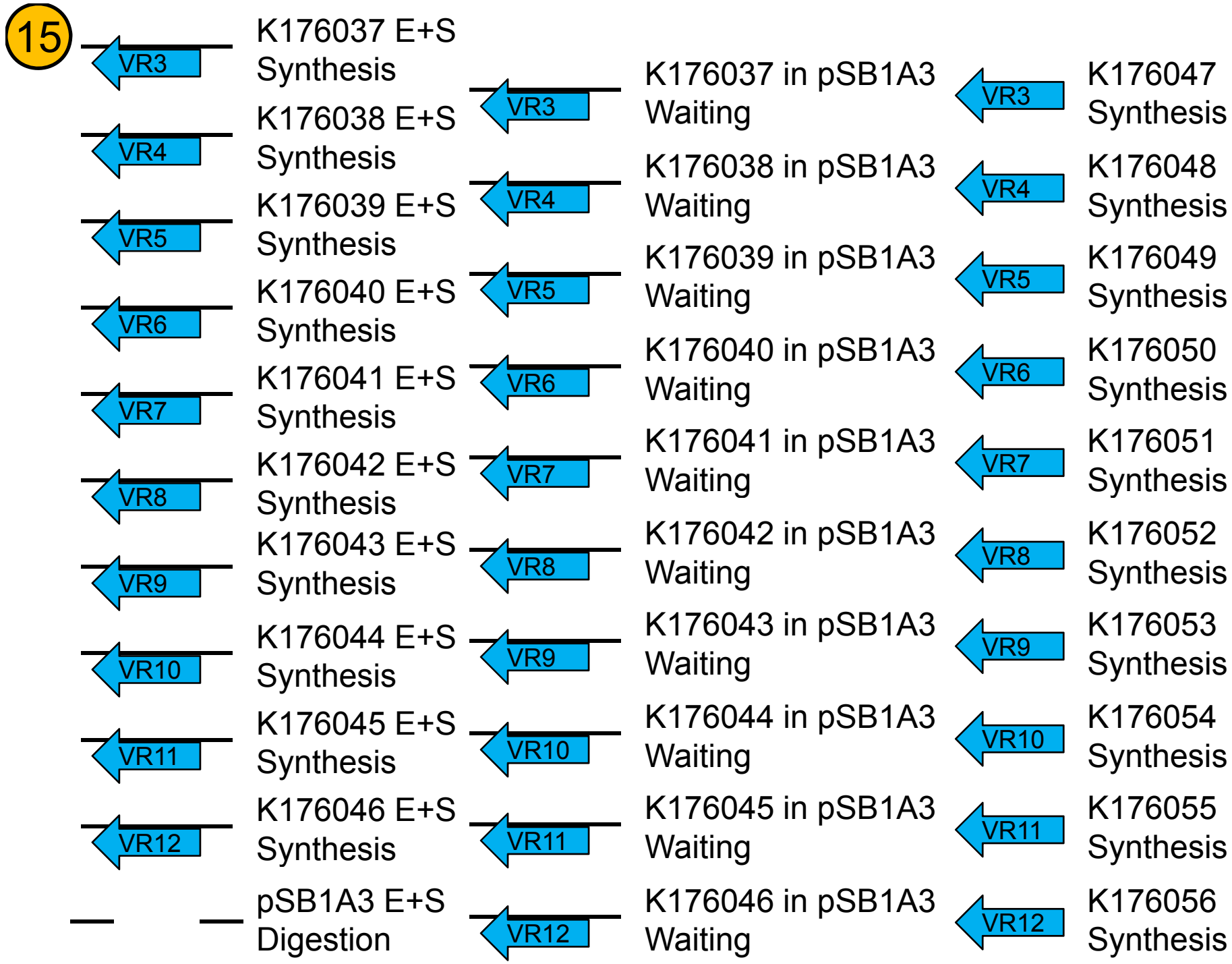

pCon 0.36
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176095 in pSB1A3 in TOP10 Transformation
pCon 0.15
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176096 in pSB1A3 in TOP10 Transformation
pCon 0.04
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176097 in pSB1A3 in TOP10 Transformation
pCon 0.01
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
lacZα-ccdB
15
K176098 in pSB1A3 in TOP10 Transformation


34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176115 in pSB1A3 in DB3.1
Waiting
pCon max
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176116 in pSB1A3 in DB3.1
Sequencing
pCon 1.00
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176117 in pSB1A3 in DB3.1
Sequencing
pCon 0.70
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176118 in pSB1A3 in DB3.1
Sequence ?

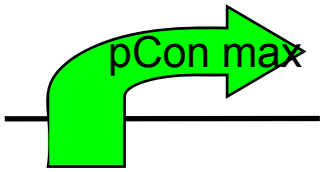

pCon 0.36
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176119 in pSB1A3 in DB3.1
Sequencing
pCon 0.15
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176120 in pSB1A3 in DB3.1
Sequencing
pCon 0.04
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176121 in pSB1A3 in DB3.1
Sequencing
pCon 0.01
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176122 in pSB1A3 in DB3.1
Sequencing


34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176115 in pSB1A3 in TOP10
Waiting
pCon max
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176116 in pSB1A3 in TOP10
Transformation
pCon 1.00
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176117 in pSB1A3 in TOP10
Transformation
pCon 0.70
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176118 in pSB1A3 in TOP10
Transformation

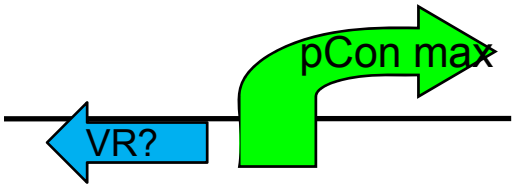

pCon 0.36
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176119 in pSB1A3 in TOP10
Transformation
pCon 0.15
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176120 in pSB1A3 in TOP10
Transformation
pCon 0.04
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176121 in pSB1A3 in TOP10
Transformation
pCon 0.01
34
luxI-LVA
15
pCon 0.70
34
luxR
15
pLux-Tet
31
ccdB
15
K176122 in pSB1A3 in TOP10
Transformation


15
VR3
K176037 E+S Synthesis
VR4
K176038 E+S Synthesis
VR5
K176039 E+S Synthesis
VR6
K176040 E+S Synthesis
VR7
K176041 E+S Synthesis
VR8
K176042 E+S Synthesis
VR9
K176043 E+S Synthesis
VR10
K176044 E+S Synthesis
VR11
K176045 E+S Synthesis
VR12
K176046 E+S Synthesis
pSB1A3 E+S Digestion
VR3
K176037 in pSB1A3 Waiting
VR4
K176038 in pSB1A3 Waiting
VR5
K176039 in pSB1A3 Waiting
VR6
K176040 in pSB1A3 Waiting
VR7
K176041 in pSB1A3 Waiting
VR8
K176042 in pSB1A3 Waiting
VR9
K176043 in pSB1A3 Waiting
VR10
K176044 in pSB1A3 Waiting
VR11
K176045 in pSB1A3 Waiting
VR12
K176046 in pSB1A3 Waiting
VR3
K176047 Synthesis
VR4
K176048 Synthesis
VR5
K176049 Synthesis
VR6
K176050 Synthesis
VR7
K176051 Synthesis
VR8
K176052 Synthesis
VR9
K176053 Synthesis
VR10
K176054 Synthesis
VR11
K176055 Synthesis
VR12
K176056 Synthesis

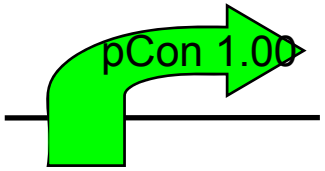
16



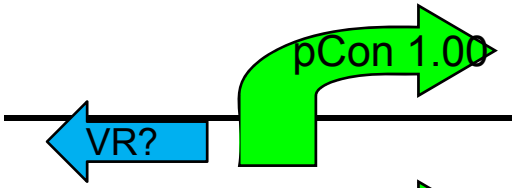
J23119 in pSB1A3 E+X
Digestion



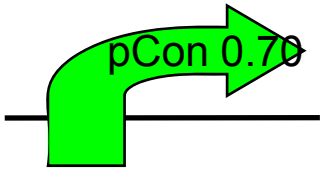
K176099 in pSB1A3
Waiting



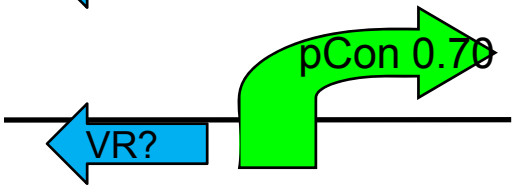
J23100 in K176007 E+X
Digestion



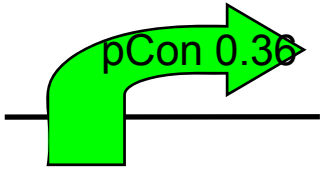
K176100 in K176007
Waiting



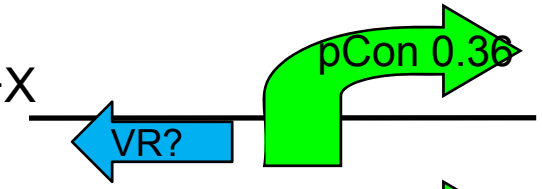
J23101 in K176007 E+X
Digestion



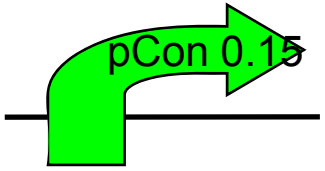
K176101 in K176007
Waiting



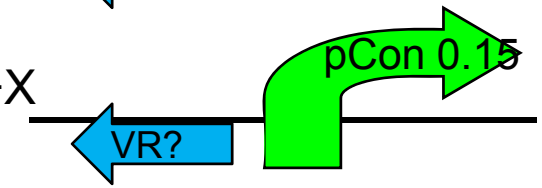
K176009 in K176007 E+X
Digestion



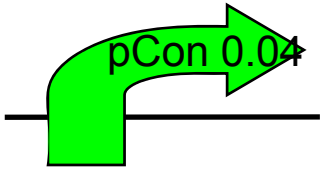
K176102 in K176007
Waiting



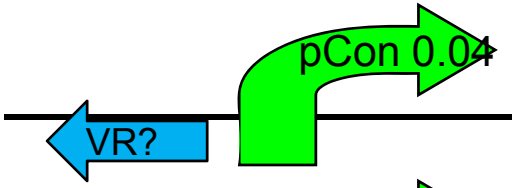
K176008 in K176007 E+X
Digestion



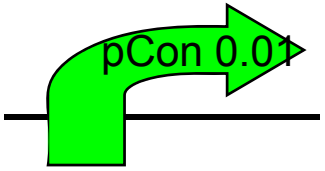
K176103 in K176007
Waiting



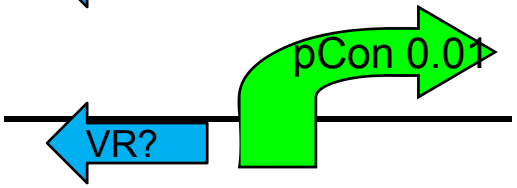
J23109 in K176007 E+X
Digestion



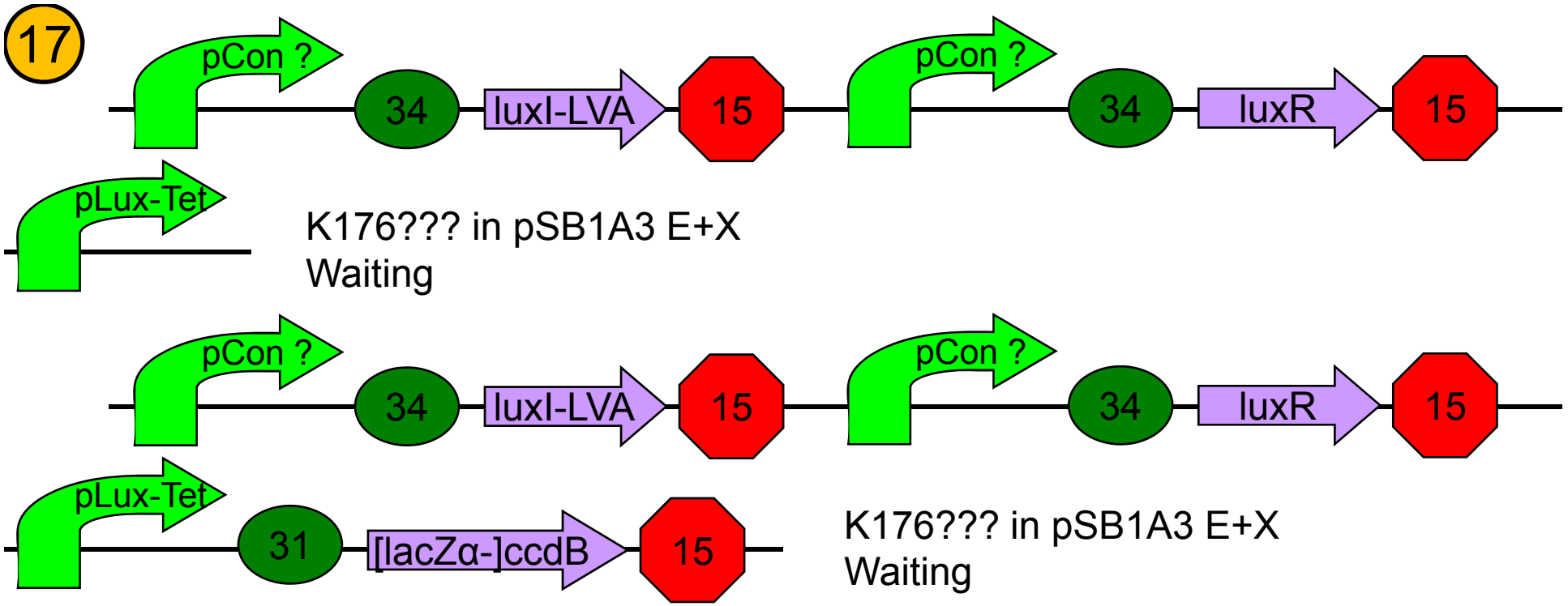
K176104 in K176007
Waiting

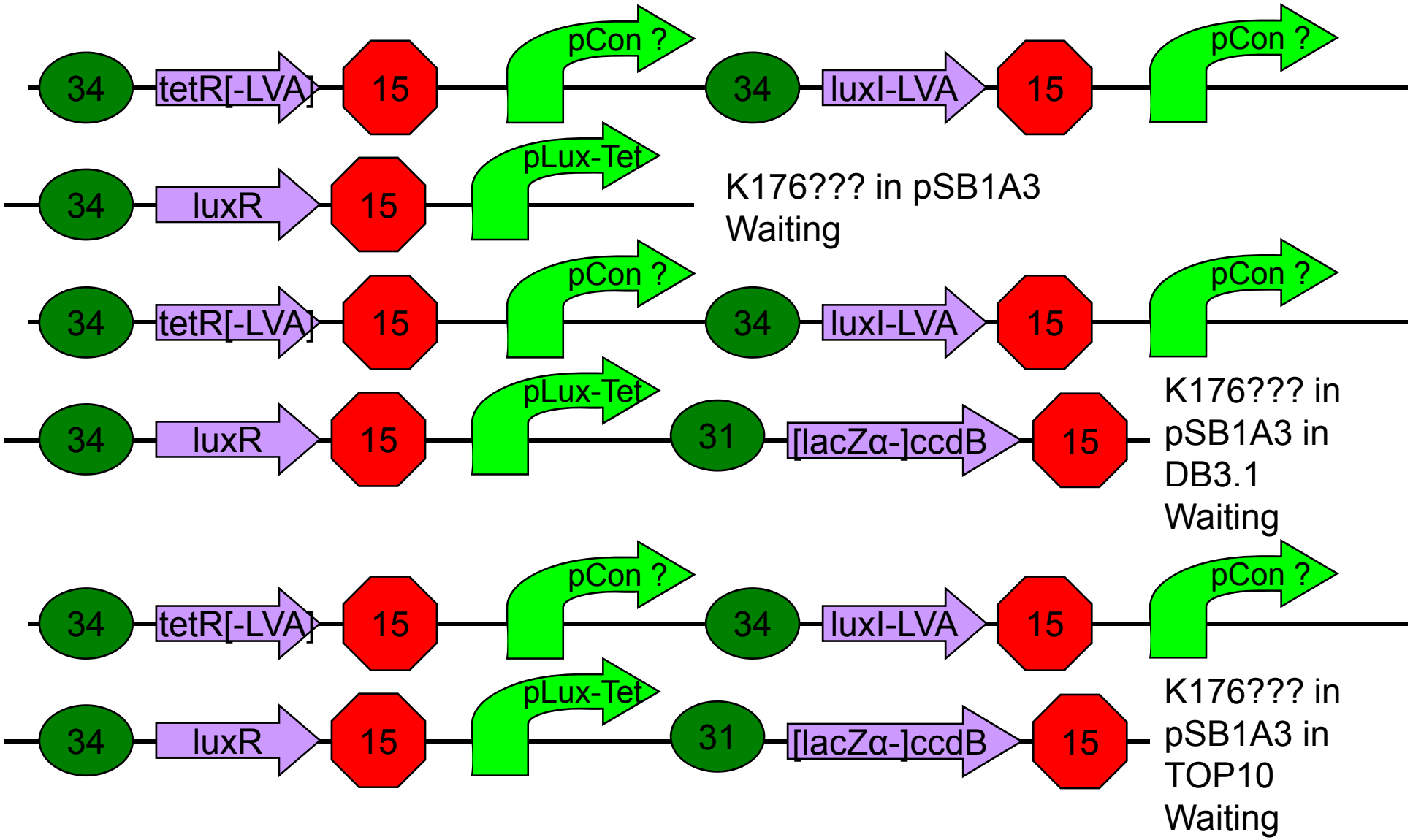


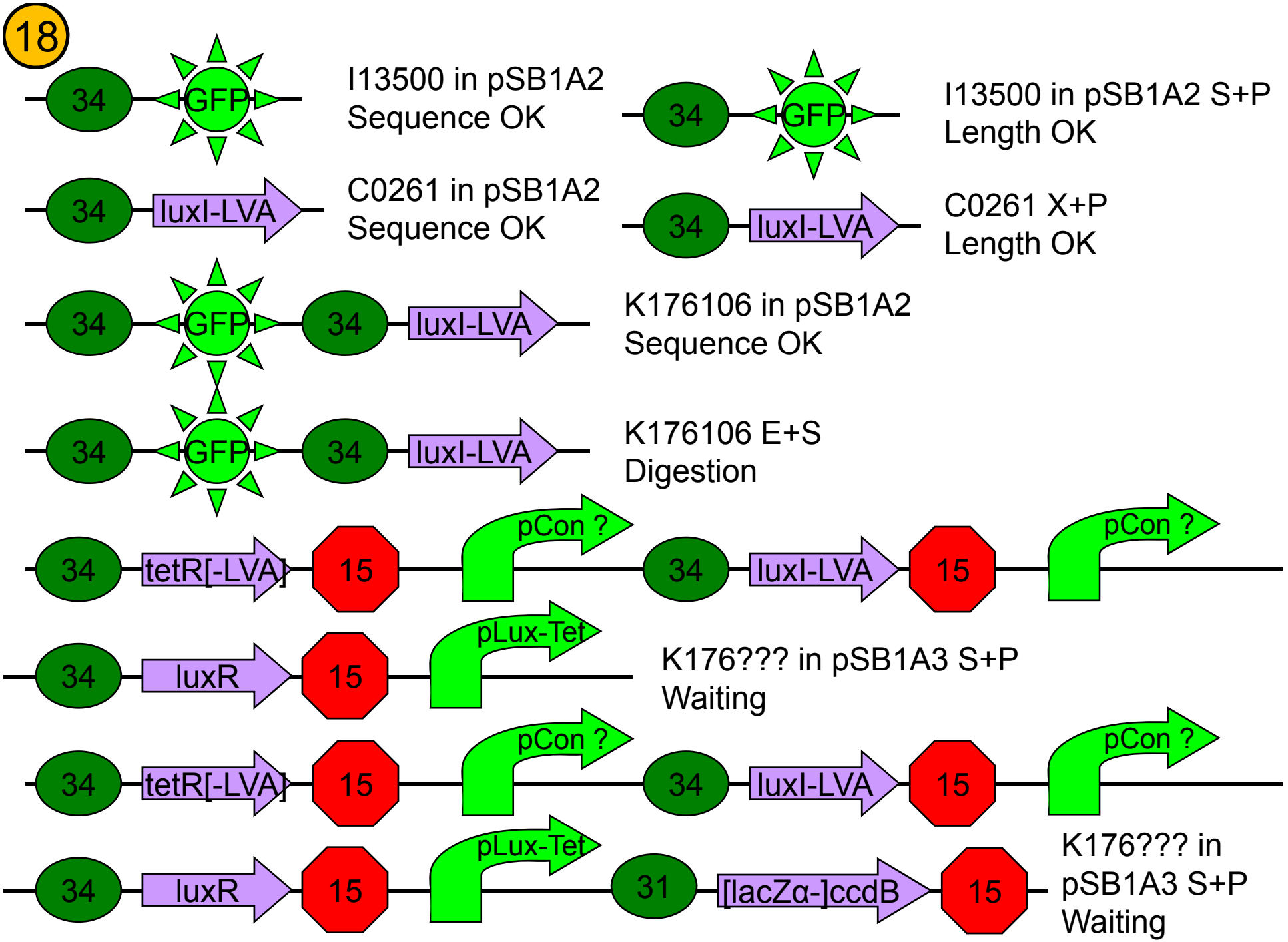
J23103 in K176007 E+X
Digestion

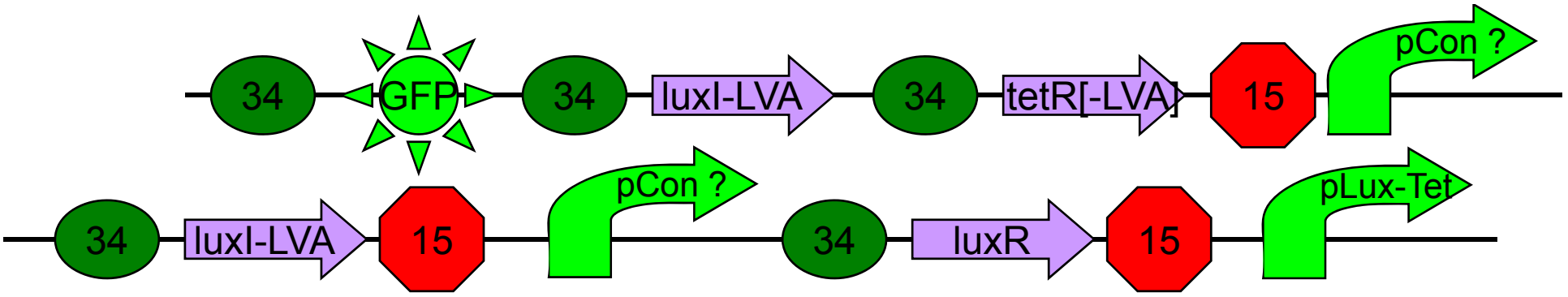


K176105 in K176007
Waiting

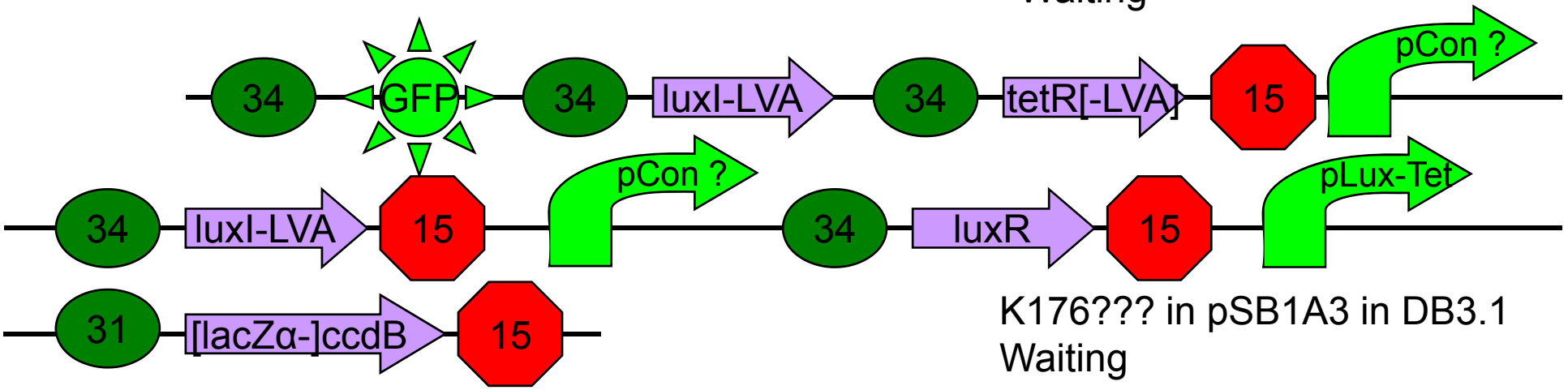

17
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
K176??? in pSB1A3 E+X
Waiting
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
31
[lacZα-]ccdB
15
K176??? in pSB1A3 E+X
Waiting


34
tetR[-LVA]
15
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
K176??? in pSB1A3
Waiting
34
tetR[-LVA]
15
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
31
[lacZα-]ccdB
15
K176??? in
pSB1A3 in
DB3.1
Waiting
34
tetR[-LVA]
15
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
31
[lacZα-]ccdB
15
K176??? in
pSB1A3 in
TOP10
Waiting

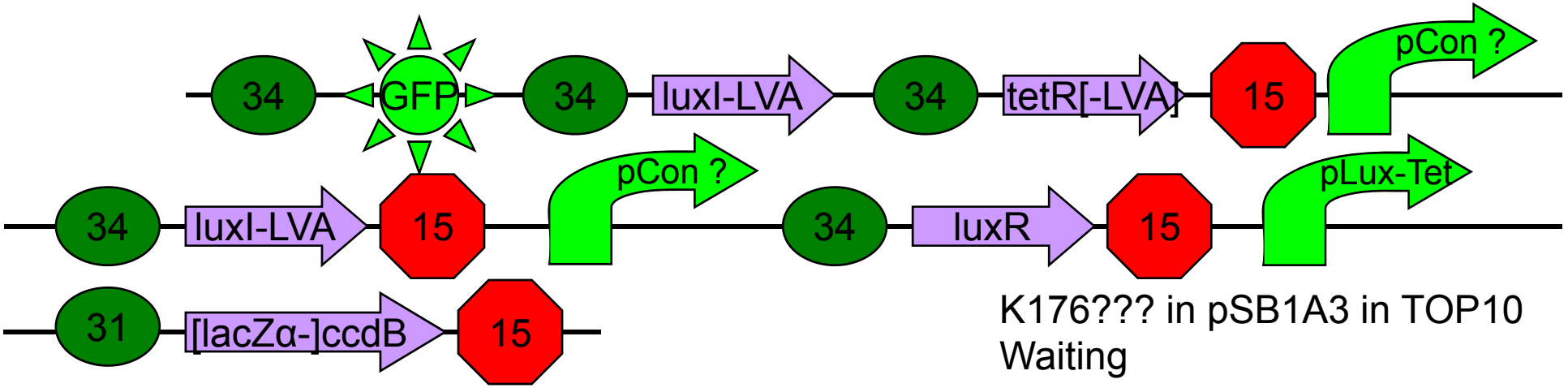

18
34
GFP
I13500 in pSB1A2
Sequence OK
34
GFP
I13500 in pSB1A2 S+P
Length OK
34
luxI-LVA
C0261 in pSB1A2
Sequence OK
34
luxI-LVA
C0261 X+P
Length OK
34
GFP
34
luxI-LVA
K176106 in pSB1A2
Sequence OK
34
GFP
34
luxI-LVA
K176106 E+S
Digestion
34
tetR[-LVA]
15
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
K176??? in pSB1A3 S+P
Waiting
34
tetR[-LVA]
15
pCon ?
34
luxI-LVA
15
pCon ?
34
luxR
15
pLux-Tet
31
[lacZα-]ccdB
15
K176??? in
pSB1A3 S+P
Waiting



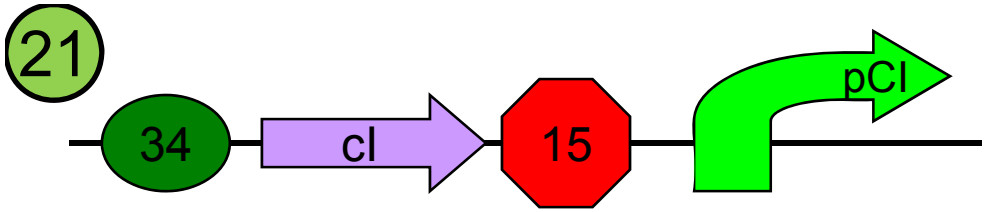
K176??? in pSB1A3
Waiting



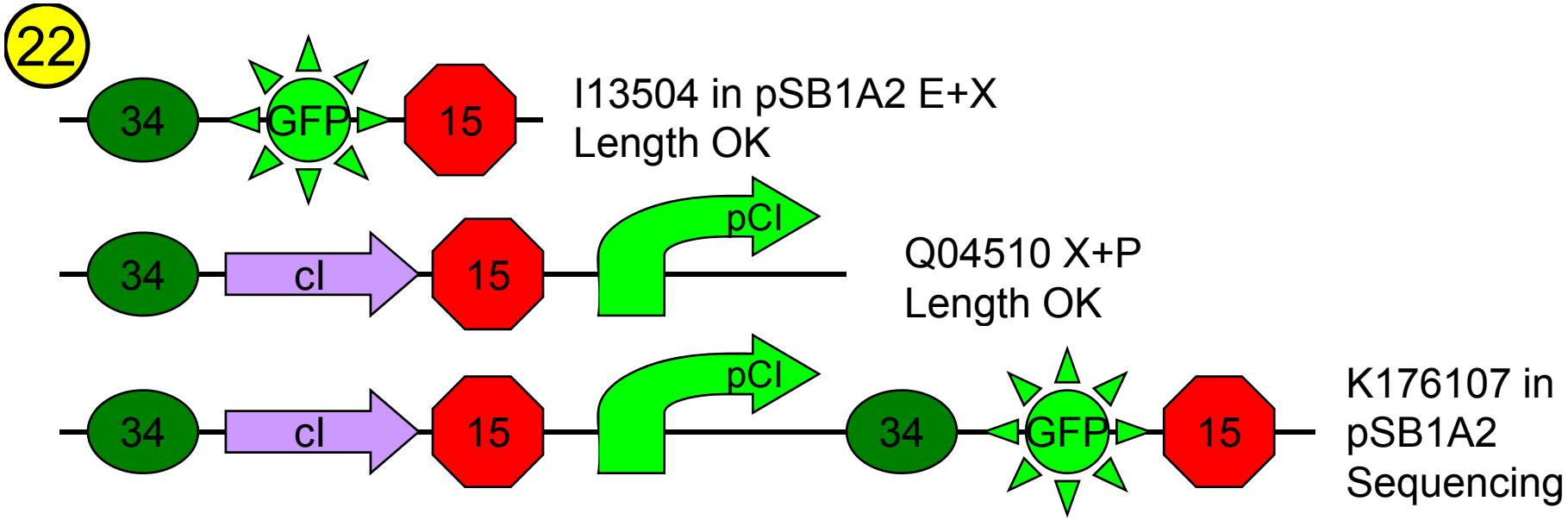
K176??? in pSB1A3 in DB3.1
Waiting

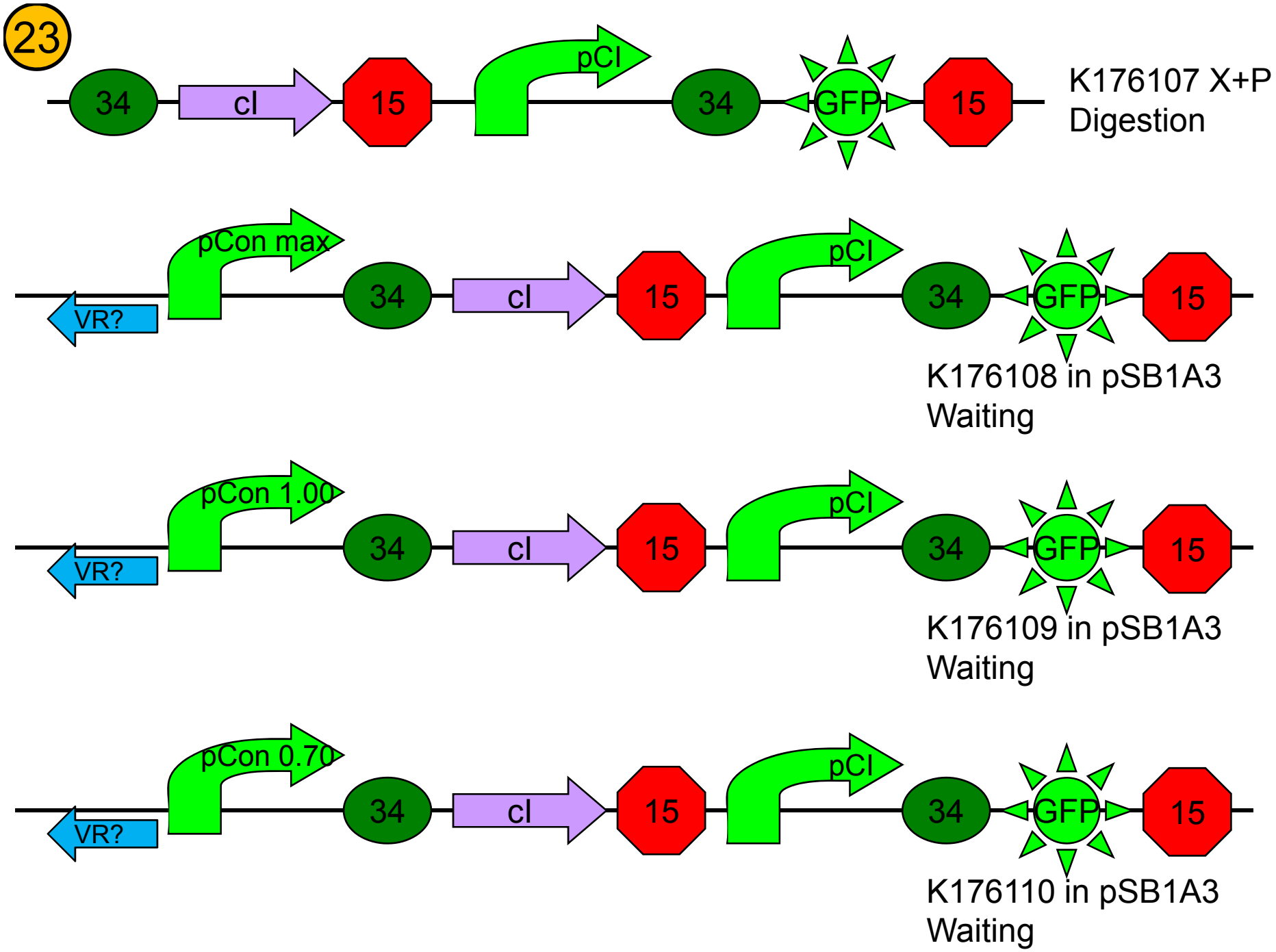


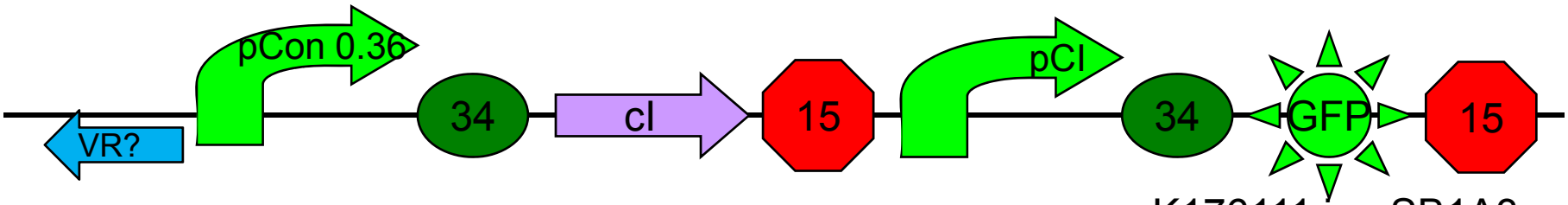
K176??? in pSB1A3 in TOP10
Waiting



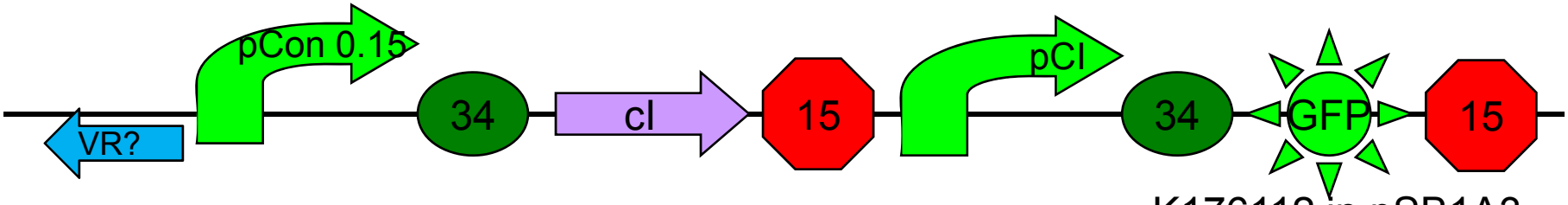
Q04510 in pSB2K3
Sequence OK


22
34
GFP
15
I13504 in pSB1A2 E+X
Length OK
34
cI
15
pCI
Q04510 X+P
Length OK
34
cI
15
pCI
34
GFP
15
K176107 in
pSB1A2
Sequencing

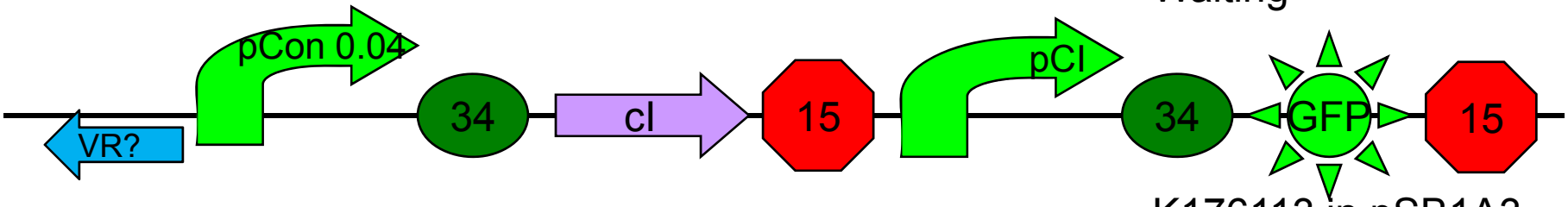

23
34
cI
15
pCI
34
GFP
15
K176107 X+P
Digestion
pCon max
VR?
34
cI
15
pCI
34
GFP
15
K176108 in pSB1A3
Waiting
pCon 1.00
VR?
34
cI
15
pCI
34
GFP
15
K176109 in pSB1A3
Waiting
pCon 0.70
VR?
34
cI
15
pCI
34
GFP
15
K176110 in pSB1A3
Waiting



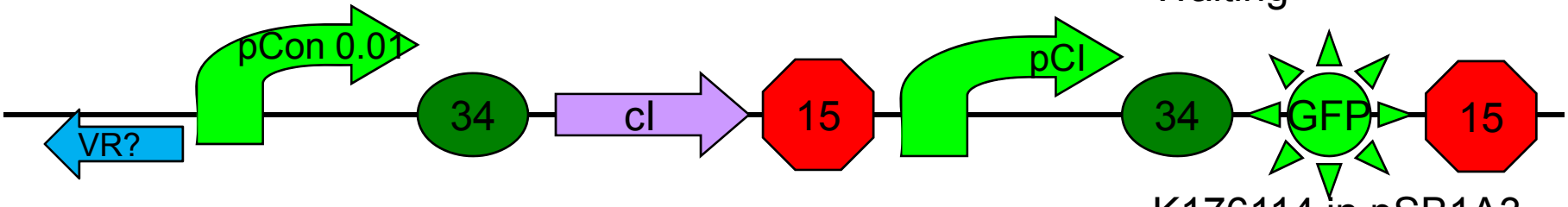
K176111 in pSB1A3
Waiting



K176112 in pSB1A3
Waiting



K176113 in pSB1A3
Waiting



K176114 in pSB1A3
Waiting

Measurement

- Strain
  - TOP10
  - DH5α
  - MG1655
  - MDS 42 recA Blue
- Plasmid
- Medium
  - LB
  - M9
    - Minimal
    - Supplemented
  - EZ Rich Define
  - pH-buffered TBK
  - pH-buffered LBK
- pH
- Temperature
  - 37℃
  - 30℃
  - 34℃
- Pre-warm
- Shake
- Dilution
- Wash

Wiki

- Team project description
- Notebook
  - Meetings
  - Lab Work
  - Sample Naming Sheets
- Logo
- Team
- Other pages

Thank You