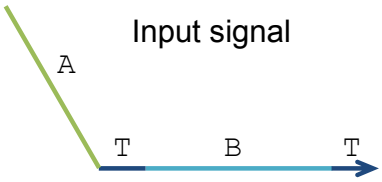
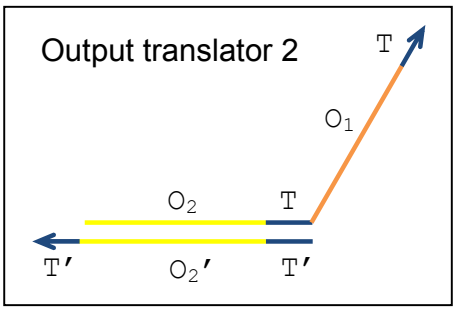
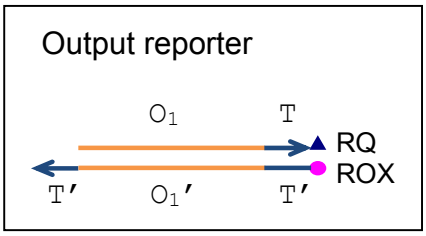
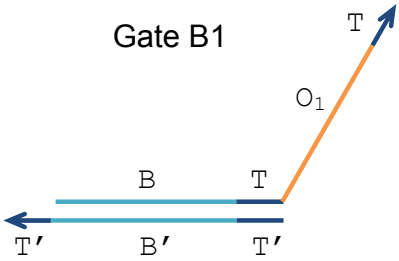
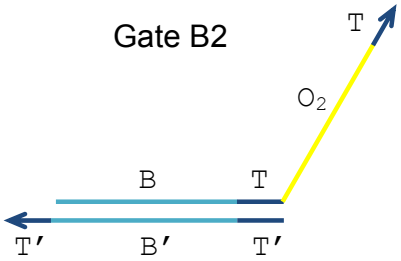
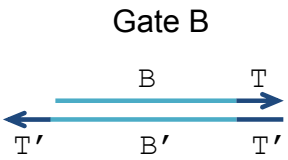

Input signal
A
T
B
T

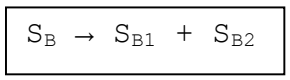

Output translator 2
T
O1
O2
T
T′
O2′
T′

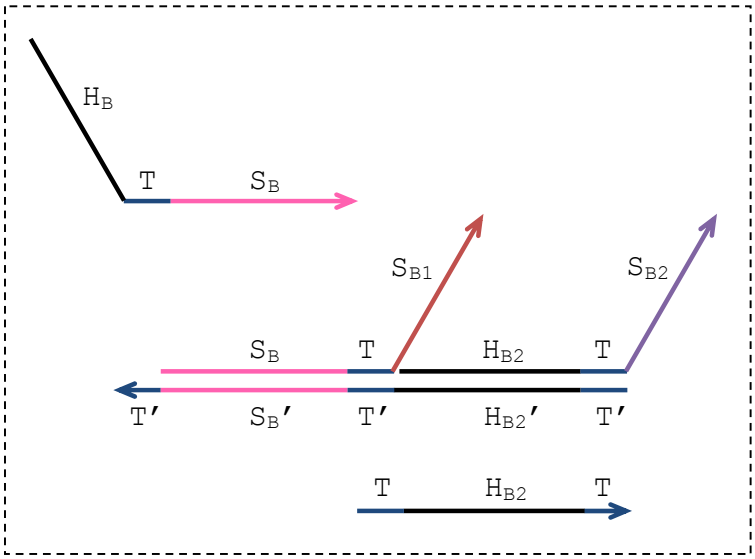

Output reporter
O1
T
RQ
ROX
T′
O1′
T′

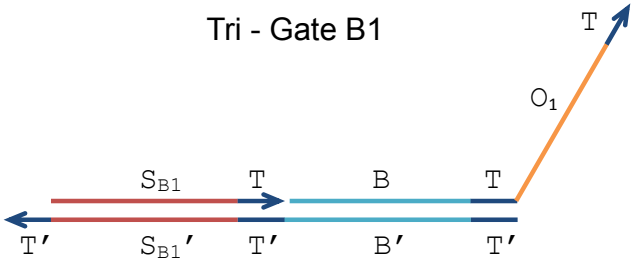

Gate B1
T
O1
B
T
T′
B′
T′

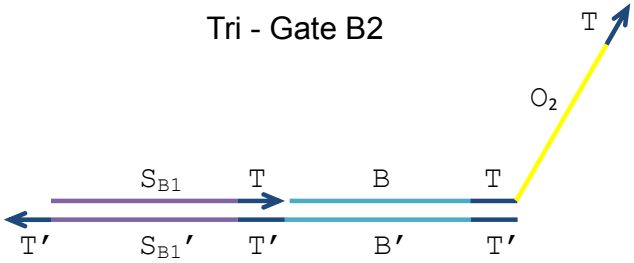

Gate B2
T
O2
B
T
T′
B′
T′

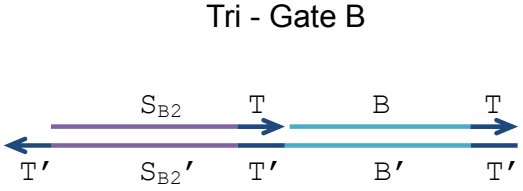

Gate B
B
T
T′
B′
T′


SB → SB1 + SB2


HB
T
SB
SB1
SB2
SB
T
HB2
T
T′
SB′
T′
HB2′
T′
T
HB2
T


Tri - Gate B1
T
O1
SB1
T
B
T
T′
SB1′
T′
B′
T′


Tri - Gate B2
T
O2
SB1
T
B
T
T′
SB1′
T′
B′
T′


Tri - Gate B
SB2
T
B
T
T′
SB2′
T′
B′
T′

|toehold| = 6 |recognition| = 15

T = CTCCTC T′ = GAGGAG

A = CATCCATTCCACTAT B = CCAAACAAAACCTAT S_{B1} = CACCCTAAAATCTAT
B′= ATAGGTTTTGTTTGG S_{B1}′= ATAGATTTTAGGGTG

S_{B2} = AACAAAACAACCACT O_1 = AACCACCAAACTTAT O_2 = CCTAACACAATCACT
S_{B2}′= AGTGGTTGTTTTGTT O_1′= ATAAGTTTGGTGGTT O_2′= AGTGATTGTGTTAGG

H_B = CCACAAAACAAAACT S_B = CCCAAATAAACAACT H_{B2} = CACCATCAAATAACT
S_B′= AGTTGTTTATTTGGG H_{B2}′= AGTTATTTGATGGTG

I = ATBT = CATCCATTCCACTAT CTCCTC CCAAACAAAACCTAT CTCCTC
GB1-up = BTO_1T = CCAAACAAAACCTAT CTCCTC AACCACCAAACTTAT CTCCTC
GB2-up = BTO_2T = CCAAACAAAACCTAT CTCCTC CCTAACACAATCACT CTCCTC
GB-up = BT = CCAAACAAAACCTAT CTCCTC
GB-down = T′B′T′ = GAGGAG ATAGGTTTTGTTTGG GAGGAG
SB = H_BTS_B = CCACAAAACAAAACT CTCCTC CCCAAATAAACAACT
SB1 = S_BTS_{B1} = CCCAAATAAACAACT CTCCTC CACCCTAAAATCTAT
SB2 = H_{B2}TS_{B2} = CACCATCAAATAACT CTCCTC AACAAAACAACCACT
FSB = TH_{B2}T = CTCCTC CACCATCAAATAACT CTCCTC
GSB-down = T′H_{B2}′T′S_B′T′
= GAGGAG AGTTATTTGATGGTG GAGGAG AGTTGTTTATTTGGG GAGGAG
Tri-GB1-up = S_{B1}T = CACCCTAAAATCTAT CTCCTC
Tri-GB1-down = T′B′T′S_{B1}′T′
= GAGGAG ATAGGTTTTGTTTGG GAGGAG ATAGATTTTAGGGTG GAGGAG
Tri-GB2-up = S_{B2}T = AACAAAACAACCACT CTCCTC
Tri-GB2-down = T′B′T′S_{B2}′T′
= GAGGAG ATAGGTTTTGTTTGG GAGGAG AGTGGTTGTTTTGTT GAGGAG
Tra2-up = O_2TO_1T = CCTAACACAATCACT CTCCTC AACCACCAAACTTAT CTCCTC
Tra2-down = T′O_2′T′ = GAGGAG AGTGATTGTGTTAGG GAGGAG
Rep-up = O_1T-RQ = AACCACCAAACTTAT CTCCTC /3IAbRQSp/
Rep-down = ROX-T′O_1′T′ = /56-ROXN/ GAGGAG ATAAGTTTGGTGGTT GAGGAG