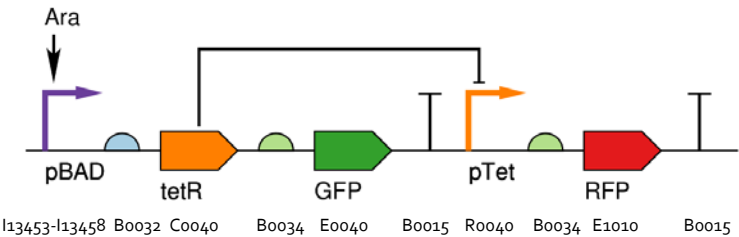


BBa_K783067

This device is specified to act as a logical inverter as a function of [L-arabinose]. GFP expression should increase as L-arabinose concentration increases and RFP expression should decrease. Characterization finds behavior consistent with specification.

Author(s): Evan Appleton, Monique Freitas, Sonya Iverson
Data Collection: Evan Appleton, Monique Freitas
Affiliation: Boston University (Densmore Lab)



Contact: eapple@bu.edu
Related Parts: BBa_13453, BBa_Coo40, BBa_Roo40
Date: 9/20/2012

Additional Comments: SI built device, EA and MF characterized device.

Chassis: *E. coli*

Strain: Bioline™ α-Gold

PRE-INDUCTION GROWTH CONDITIONS

Media Type: Luria Broth (LB)
Vessel: 5 mL tubes
Volume: 2 mL
Incubation: 37°C, 300 rpm
Time (min): 420

INDUCTION GROWTH CONDITIONS

Media Type: Luria Broth
Vessel: 500 µL tubes
Volume: 200 µL
Incubation: 37°C, 300 rpm
Time (min): 870

MEASUREMENTS TECHNOLOGIES:

(1) Flow Cytometer

Data Type: Single-cell fluorescence
Location: Boston University Center for Advanced Biotech
Machine Name: SORP 4B-2YG-1BV, ACDU (FACSAriaII)
Data Format: FCS 3.0 data files
Additional Info: Lasers:(Filters) 445nm, 40mW:(515/20nm); 488nm, 50mW: (488/10, 515/20, 545/35, 610/20, 710/50nm); 561nm, 40mW:(610/20, 660/20nm);

(2) Restriction Mapping

Data Type: Gel electrophoresis (DNA size bands)
Location: Boston University Center for Advanced Biotech
Machine Name: (N/A)
Data Format: Gel pictures
Additional Info: 1% TAE gel; Sybr dye used for staining

Device Name: BBa_K783067
Device Type: Inverter
Description: pBad-pTet inverter
Components: BBa_13453-BBa_13458-BBa_B0032-BBa_Coo40-BBa_B0034-BBa_E0040-BBa_B0015-BBa_Roo40-BBa_B0034-BBa_E1010-BBa_B0015

Assembly: BioBricks™
Protocol: BU BioBricks assembly protocol
Scars: Yes; 6bp scars between each part
Insertion: Plasmid
Vector: pSB1A3

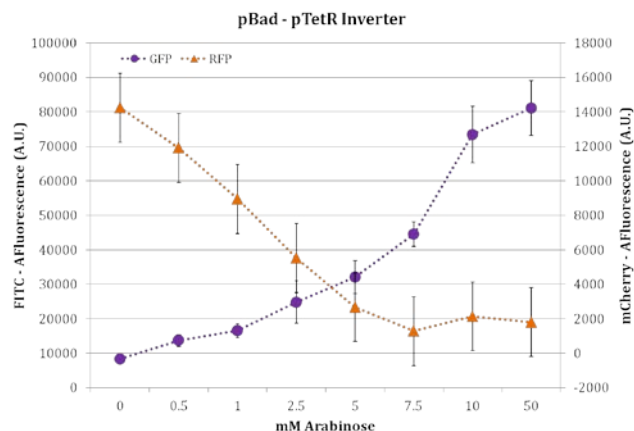


FIGURE 1: Flow cytometry measurements at variable L-arabinose concentrations. Three device clones were tested to obtain error bars. GFP fluorescence measured on 488nm laser, 515/20nm filter. RFP fluorescence measured on 561nm laser, 610/20nm filter.

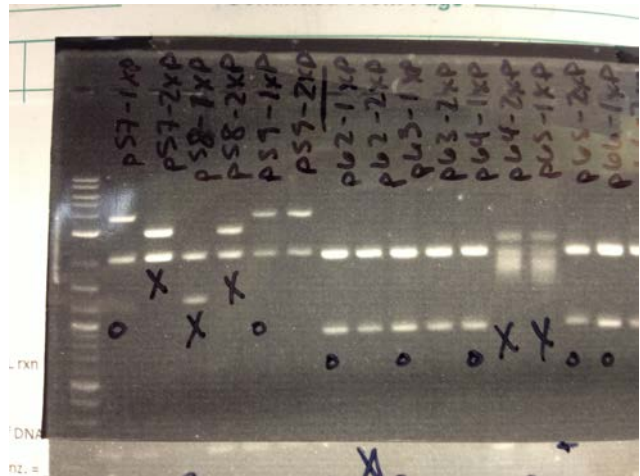


FIGURE 2: Restriction mapping for BBa_K783067 (seen here as pSI59-1) has the correct part length according to the marker, indicating the proper construction of the device.