

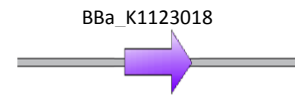
# BBa\_K1123018

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## Basic Information

Basic Function: The expression of POLY(ARGININE-GLYCINE)

Description: This part holds the DNA information for the POLY(ARGININE-GLYCINE) protein, so that it can be placed Behind a promoter and expressed.



Related Parts: BBa\_K1123006

Authors: Ardjan van der Linden

Data Collection: Ardjan van der Linden

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Team: TU-Eindhoven 2013

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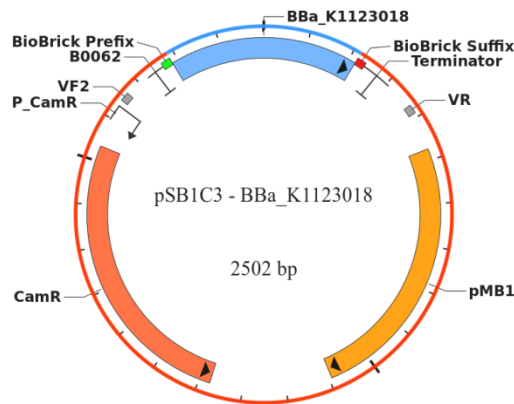
Date Submitted: 31-08-2013

Date Updated: 31-08-2013

Biosafety: Risk Group 1

Availability: Unavailable

Sequence: Confirmed



Additional Comments: This Brick has been tested in the pET28a vector and not the pSB3C1. All experiments were performed in this vector. The part has been tested using this vector to check the protein expression, the protein itself and if expressed properly will then be used functionally in the brick BBa\_K1123007.

Reference:

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## Device Information

Device Name: BBa\_K1123018

Device Type: Coding

Description: Protein sequence

Components: none

Assembly: BioBrick

Protocol: -

Scars: No

Insertion: Plasmid

Vector: pET28a

Additional Comments: The DNA of this part was not submitted to the registry. It was therefore not transferred to the pSB1C3 vector. The biobrick was therefore only tested in the pET28a vector.

Reference:

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## Plate Imaging

### BASIC INFORMATION

Purpose: Control of ligation into pET28a vector

Chassis: E.coli

Strain: NB (NovaBlue)

Protocols: Standard plating procedure

Date: 24/7/13

### GROWTH CONDITIONS

Media Type: Agar + Kanamycin

Antibiotic: Kanamycin (30 $\mu$ L/mL)

Vessel: Petri dish

Incubation: 37°C

Growth Time: 15 hours

### MEASUREMENT INFORMATION

Data Type: Picture

Location: TU-Eindhoven BioLab

Machine Name: Digital Camera

Reporter Used: none



Additional Comments: The growth of colonies was seen simply by photographing the growth plates after incubation.

Reference: None

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## Restriction Mapping

### BASIC INFORMATION

Purpose: Check ligation and PCR results, also used to check protein sequence length.

Chassis: E.coli

Strain: NB (NovaBlue)

Protocols: Standard gel electrophoresis

Date: 08/0813

### MEASUREMENT INFORMATION

Data Type: Gel electrophoresis

Location: TU-Eindhoven BioLab

Machine Name: N/A

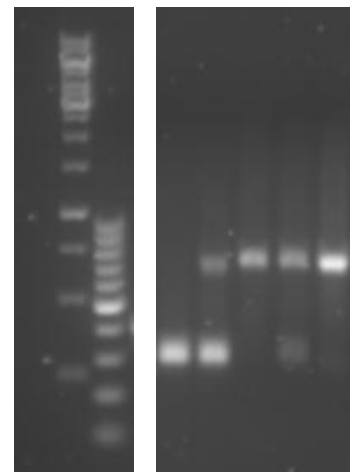
Enzymes Used: PCR primers

Total Time: 60 minutes

Voltage Used: 100 V

Ladder Used: New England Biolabs 100 bp ladder

Ladders  
Kbp | 100bp | Digested samples



Additional Comments: We performed colony PCR on the plates shown above using T7 FW and RW primers. These samples were then run on gel giving an indication of correct ligation into pET28a.

Reference: none

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## Growth Curve

### BASIC INFORMATION

Purpose: To prepare for protein expression.

Chassis: E.coli

Strain: BL21

Protocols: Standard Expression protocol

Date: 20/08/13

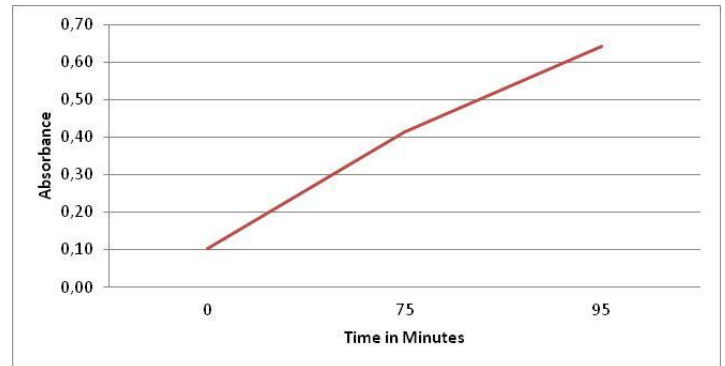
### GROWTH CONDITIONS

Media Type: LB + Kanamycin

Vessel: culture flask

Volume: 400mL

Incubation: 37°C, 250rpm



### MEASUREMENT INFORMATION

Data Type: Growth Curve (OD vs Time)

Location: TU-Eindhoven Biolab

Machine Name: N/A

Time Interval: N/A

Total Time: N/A

Additional Comments: The optical densities were measured up to an optical density of 0.600 as we would then be inducing protein expression.

Reference: None

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## Future Work

This brick will later be used in a composite part, BBa\_K1123006, once in that part, the same protein will be expressed anaerobically. We will need to then perform the same controls on the composite part to show that the expression remains equal, aerobically as well as anaerobically.