

SUPPLEMENTAL MATERIAL

TABLE. S1 Inverse PCR primers for amplification of pEAH23A. The sequences and melting temperature of all the primers used for inverse PCR as designed using SnapGene and NEBase changer.

Primer Name	Sequence (5'-->3')	Tm (°C)
pBRAT_rev	TAAATTGTTATCCGCTCA CAATTC	60°C
pBRAT_fwd_a	AGCTTATGCGTAAAGGA GAAGAAC	60°C
pBRAT_fwd_b	AGCTTGGTGGCACTCTA GAG	58°C
pBRAT_fwd_c	AGCTTTTGTCTTCCTTGA CGTC	58°C
pBRAT_fwd_d	AGCTTGTAGACCACGGC GAA	58°C

TABLE. S2 pEAH23A amplified regions and respective primers. The primer pairs that were utilized to amplify the backbone of pEAH23A to generate each amplicon.

Amplicon Name	Primers	Size (bp)
pBRAT24A	pBRAT_rev, pBRAT_fwd_a	3153
pBRAT24B	pBRAT_rev, pBRAT_fwd_b	3199
pBRAT24C	pBRAT_rev, pBRAT_fwd_c	3420
pBRAT24D	pBRAT_rev, pBRAT_fwd_d	3643

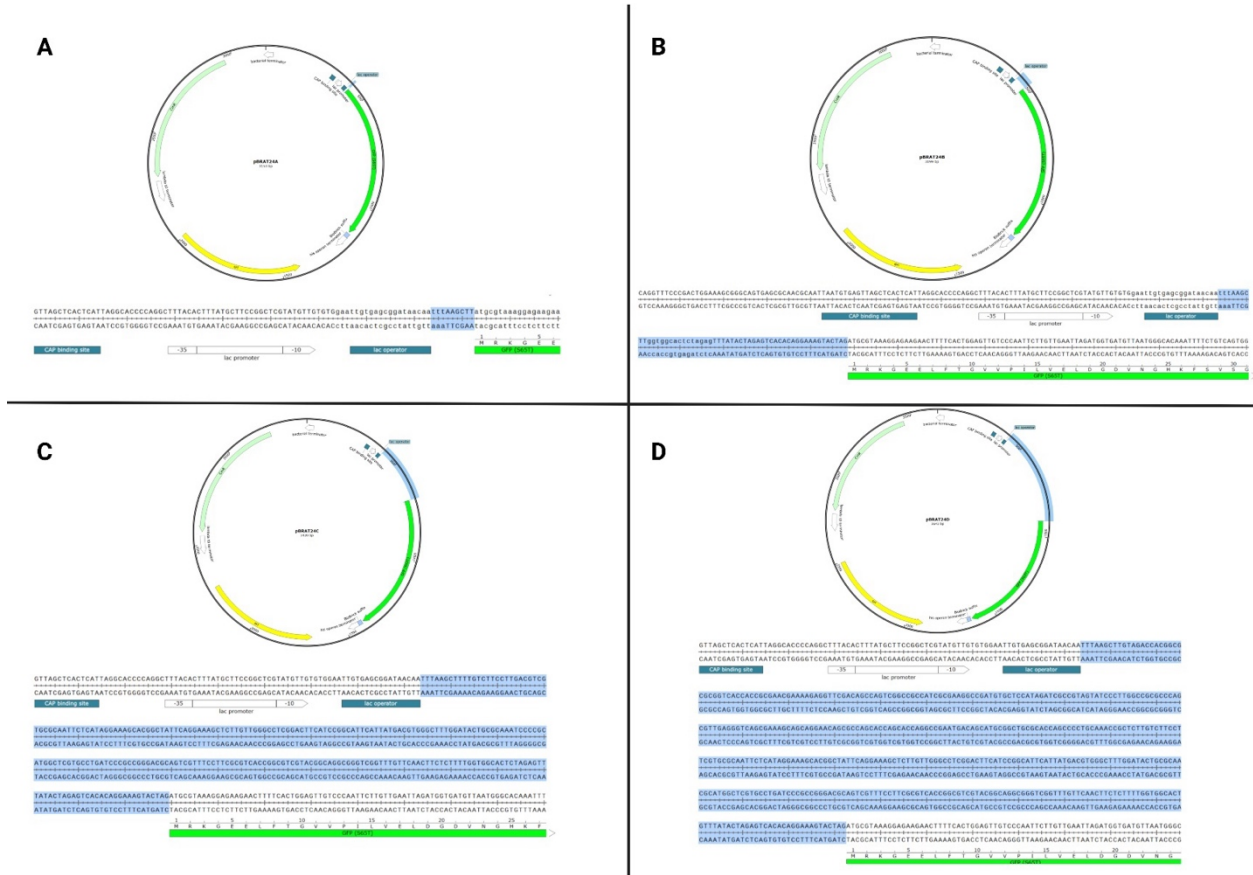


FIG. S1 SnapGene analysis shows varying sequences of interest in the pBRAT24 plasmids. Plasmid maps and the sequences between the *lac* operator and *gfp* for each of the pBRAT24 constructs: (A) pBRAT24A, (B) pBRAT24B, (C) pBRAT24C, (D) pBRAT24D.

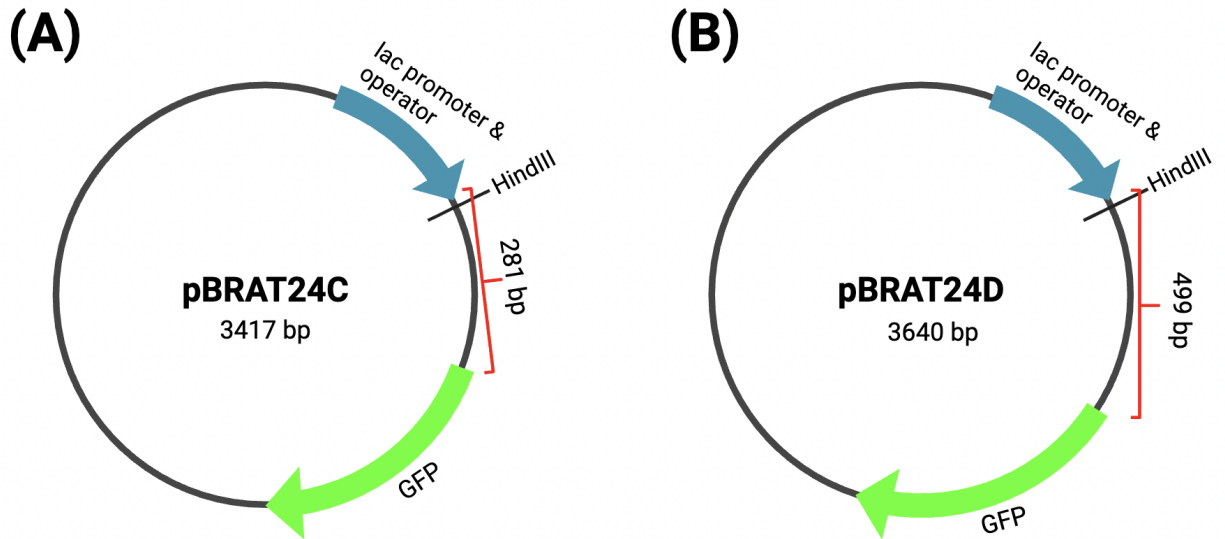


FIG. S2 Plasmidsaurus sequencing shows successful construction of pBRAT23C and pBRAT24D. Diagrams depicting a simplified representation of the Plasmidsaurus sequencing results of (A) pBRAT24C diluted to 30 ng/ μ L and (B) pBRAT24D diluted to 30 ng/ μ L.

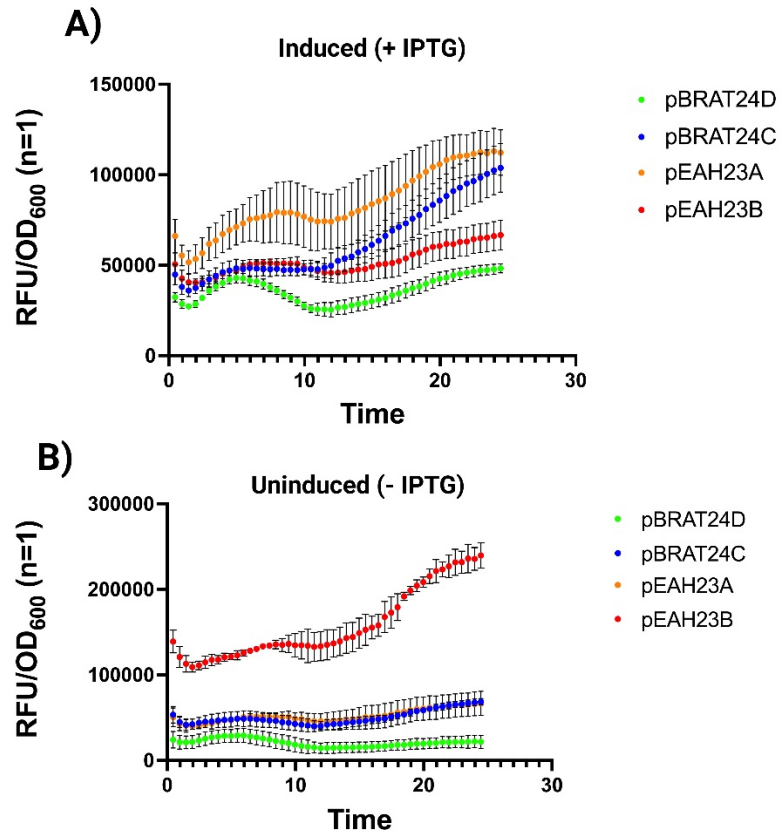


FIG. S3 Intermediate deletions of pEAH23A led to no increase in RFU/OD600 over time. Results of (A) IPTG or (B) distilled water induction of overnight liquid cultures as measured by a fluorescent plate reader (*BioTek*). Colonies from pEAH23A, pEAH23B, pBRAT24C, pBRAT24D, and pDO6935 were initially grown overnight at 37°C. All overnight cultures were then seeded into a 96 well plate with either IPTG or distilled water in triplicate and grown again at 37 °C. GFP measurements were normalized to OD600 and standardized to the negative control: pDO6935. Each dot represents a time point in which fluorescence was measured. Results were plotted in GraphPad Prism™. Error bars show standard error mean of triplicate measurements (n=1).