

First device assembly

BBa\_K119009 - p.(cI + RcnR) + rcnA on pBBR1MCS-5

| STEPS                                     | DETAILS   | PROBLEMS                   |
|---|---|----------------------------|
| Primer design                             | To assemble our designed device: p.(cI + RcnR) + rcnA   |                            |
| Genomic DNA extraction                    | From k12 strain   |                            |
| PCR                                       | Add the restriction sites and cI promoter to the natural part   | Delay on primeres delivery |
| Chek                                      | Check our PCR product with electrophoresis on agarose gel   |                            |
| Cloning into pJET                         | Blunting PCR product. pJET vector is already blunted<br>Ligation:Using rapid ligation protocol, T4 DNA ligase and blunt-end ligation  |                            |
| Transformation                            | Transformation: E. Coli - DH5a by heat-shock  |                            |
| Check                                     | Extraxt plasmid for selected colonies<br>Restriction digest of all colony extractions<br>PCR with specific primers for our device<br>Check the Restriction products and PCR on agarose gel  |                            |
| Extraction                                | Plasmid extraction from confirmed colonies  |                            |
| Purification                              | Doble restriction digest of plasmids to extract our cloned device<br>Gel band purification of restricted BBa_k119009 biopart  |                            |
| Cloning into pBBR1MCS-5                   | Restriction Digest of pBBR1MCS-5 vector<br>Ligation: pBBR1MCS-5 + BBa_K119009 biobrick  |                            |
| Transformation                            | Transformation: E. Coli - DH5a by heat-shock  |                            |
| Extraction                                | Extract plasmid for selected colonies (Xgal control)  |                            |
| Check                                     | Restriction digest of all colony extractions<br>PCR with specific primers for our device<br>Check the Restriction products and PCR on agarose gel   |                            |
| Purification                              | Plasmid extraction from confirmed colonies<br>Gel band purification of pBBR1MCS-5 + BBa_K119009   |                            |
| Transformation of the final receptor cell | Transformation of E. Coli Yoh- with the asembled device   |                            |
| Check                                     | Extraxt plasmid for selected colonies<br>Restriction digest of all colony extractions<br>PCR with specific primers for our device<br>Check the Restriction products and PCR on agarose gel<br>Add suffix and prefix<br>Clonate the device in a standard plasmid<br>Get sequence of our final construction |                            |