BBa_K1179002

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This part encodes for the constitutive expression of a Cas9-VP16 fusion protein.

The Cas9 has been mutated in such a way as to remove its nuclease activity while retaining its ability to selectively bind DNA mediated by an appropriate guide RNA

(gRNA). The Cas9-VP16 complexes with an expressed gRNA and together target a DNA sequence as defined by the gRNA. Once the Cas9-VP16 is bound, the VP16

domain can activate a downstream inducible promoter like minimal CMV.

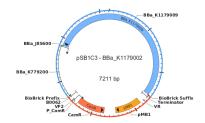
Part Type Composite Part

Pigeon Image

Part Summary



Plasmid Map



Designer Information

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Design Details

Type Generator

Design Components

K779200, J85600, K1179009

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Assembly Information

Assembly Gateway Technologies Method(s)

Chassis Homo sapiens

Strain Human Embryonic Kidney 293

Scars

Flow Cytometry Experiment

Purpose Characterization

Location Massachusetts Institute of Technology

see activation when all components of the system are present, and increasing the Transfer **Curve Caption**

amount of transfected guide RNA increased the ability of the Cas9- VP16 to bind to the synthetic upstream Cr9 regulatory sites of the reporter construct. The graph indicates that saturation hasn't occurred, but due to limitations of the Lipofectamine transfection protocol, transfecting the amount needed for saturation would

On the Y axis, we see the output fluorescence in the FITC channel and our transfection marker fluorescence in the Pacific A channel on the X axis. As expected, we

likely be toxic to the cells.

Transfer Curve Graph

