Supporting Information

SUPPLEMENTAL METHODS

Bacterial strains and growth conditions. Transformations performed with 2-5 µL of the reaction into 6-15 µL of Alpha Select Gold Efficiency *E. coli* cells (Bioline USA Inc., Taunton, MA, USA) following the manufacturer's protocol. Cells were plated on appropriate antibiotic selective LB agar, supplemented with 80 µL of 20 mg/µL 5-bromo-4-chloro-3-indolyl ß-D-galactopyranoside (X-GAL) and 100 µL of 0.1M isopropyl-ß-D-thiogalactopyranoside (IPTG) (Zymo Research Corp., Irvine, CA, USA). Blue-white screening was used to select colonies which were grown overnight at 37°C in LB supplemented with the appropriate antibiotic.

Basic parts. Basic parts were either amplified from plasmids obtained from BioBricks (http://partsregistry.org/) or Addgene (Addgene, Cambridge, MA, USA) or, if the part was less than 35 bp, were assembled using annealing oligonucleotides containing the appropriate fusion sites and BsaI restriction sequences. PCR reactions were performed as above. Complimentary oligonucleotides were heated to 95°C and cooled at a rate of 0.5°C/minute to a final temperature of 45°C before being diluted for use in a MoClo reaction as above.

Creating destination vectors: The *lacZ* alpha fragment was PCR amplified pMJS2AF (donated by Dr. Michael Smanski) and subsequently cloned into two backbones: DVA vectors used pSB1A2, DVK vectors used pSB1K3. DNA containing the *lacZ* alpha fragment was used as template for PCR reactions (20 fmol). PCR reactions with Phusion DNA polymerase (NEB) following the manufacturer's protocol and were performed as follows: denaturation at 95°C for 1', 30 extension cycles (98°C 20", 61°C 20", 72°C 20"), 5' extension at 72°C, hold 4°C. PCR product was gel extracted and cleaned using QIAquick PCR Purification Kits (Qiagen Inc., Valencia, CA, USA) . LacZ PCR products and pSB1K3 and pSB1A2 vectors were digested with SpeI enzyme (NEB) according to the manufacturer's protocol, cleaned up using the QIAquick PCR Purification Kit (Qiagen). Ligation reactions used T4 DNA ligase (NEB).

Plasmid isolation and sequence analysis. Plasmids were purified using the QIAprep Spin Miniprep kit (Qiagen) following the manufacturers' protocols. Sequences were analyzed using Benchling (San Francisco, CA, USA).

Flow Cytometry: All fluorescent expression devices were characterized using a BD LSRFortessa SORP flow cytometer. RFP fluorescence was measured using a solid-state Coherent Sapphire 561 nm laser at 100 mw strength with a PE-Texas Red 610/20 filter. GFP fluorescence was measured using a solid-state Coherent Sapphire 488 nm laser at 200 mw strength with a FITC 530/30 filter. Clonal colonies were grown overnight on agar with antibiotic and were used to inoculate 200 µL LB broth (Sigma-Aldrich) with the appropriate antibiotic in sterile 96-deep well plates in triplicate grown for 16 hours,37°C shaking, 300 rpm. Cells were then diluted 100-fold into 200 µL of sterile phosphate buffered saline in 96-well round bottom plates before measurement.

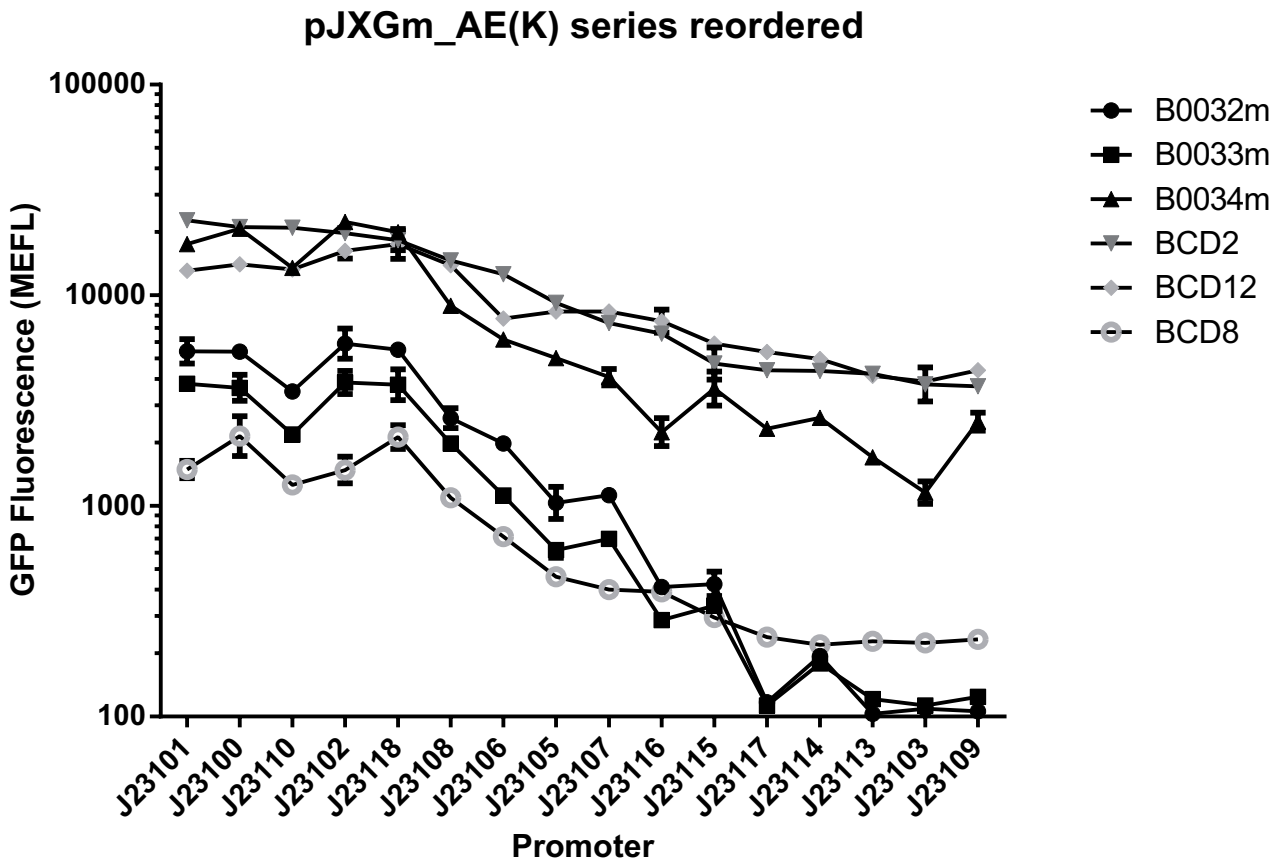
Supplemental Figure 1 | Array of GFP expression plasmids with varied promoter and RBS parts.
An array of 96 plasmids each containing a specific GFP expressing transcriptional unit were analyzed by flow cytometry and normalized using SpheroTech RCP-30-5-A beads to provide MEFL units. The x-axis is ordered by relative promoter strength. This array provided an estimate of promoter and RBS strength which was used to determine which promoters and RBS parts to include in the library.

Supplemental Figure 2 | Multiplex MoClo (MMC) cloning efficiency and expression data.
Modularity of the MoClo parts allows for simultaneous assembly of combinatorial designs through part multiplexing. Any part type can be multiplexed by adding multiple different parts of the same type such that the total concentration of each part type is equimolar. This is demonstrated in (a) where five promoters were combined with a single RBS, CDS, terminator and vector to create five variant transcriptional units. Likewise, in (b), 5 promoters and 5 RBS parts were combined to produce twenty-five iterations of the same fluorescent transcriptional unit. Data for (a) and (b) can be seen in panel (c) where randomly chosen clones from each multiplex reaction were selected, grown overnight and screened by flow cytometry to demonstrate the range of expression available with a simple multiplex assembly. pJXB2Gm contains five different promoter and the BCD2 RBS part driving GFP with while the pJXRBSRm reaction used five different promoters and five different RBS parts to control expression of RFP. Points represent single clonal populations isolated from multiplex plates and each clone contains a single promoter:RBS combination. These points are spread laterally for viewing ease. Fluorescence is recorded in MEFL units.

Supplemental Table 1 | CIDAR optimized MoClo protocols.
Three protocols have been developed to optimize reaction time and cloning efficiency. The Standard Protocol provides >80% efficiency (>80% of all clones are correct with more than 200 colonies per plate in an 82.5 minute reaction time. It is ideal for simple 4-part + vector assemblies. The Troubleshooting protocol is used for more 6 part + vector reactions and in Multiplexed MoClo to provide a larger number of correctly assembled clones. The Rapid protocol was designed for quickly assembling basic parts from PCR product or annealed oligos where only one part is being ligated to a vector. The longer initial digestion time could also be adopted in the Standard and Troubleshooting protocols to increase efficiency if needed.

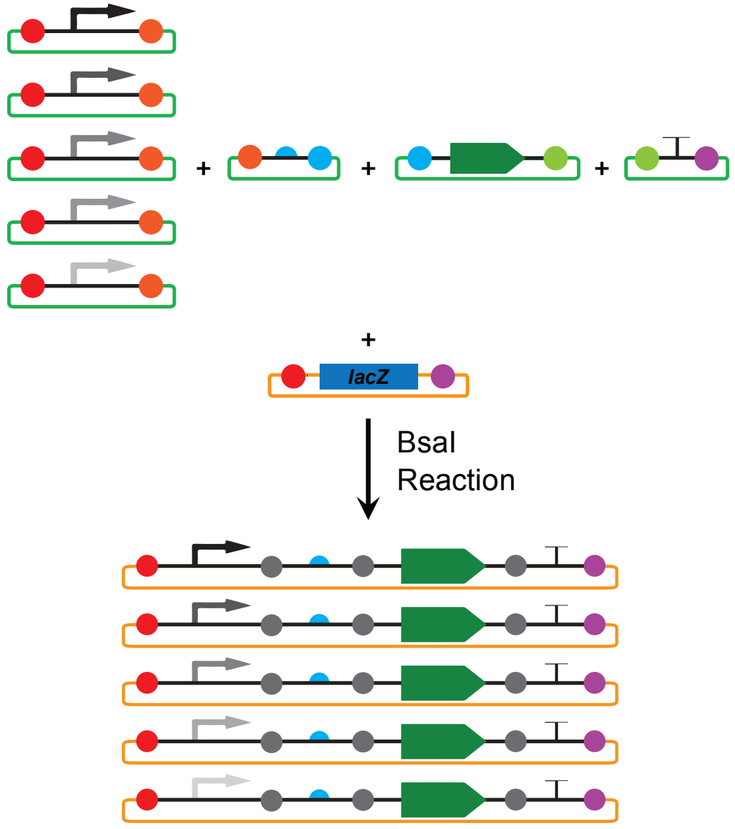
Supplemental Table 2 | List of all parts and vectors contained in the CIDAR MoClo Library. Lower case "m" at the end of a part ID denotes modifications to the source sequence. In the case of the RBS parts, this indicates 4 bp upstream and 5 bp downstream of the part to mimic the BioBricks scar to conserve behavior. Coding sequences have occasionally been modified to remove illegal restriction sites (BbsI or BsaI) which interfere with cloning. In all cases, synonymous mutations are used to disrupt the recognition sequence without changing the amino acid sequence. DVA also contains a modification from the pSB1A2 sequence to change an illegal site in the bla (ampicillin resistance) coding sequence. The Backbone is described as either DVA or DVK indicating either ampicillin or kanamycin resistance respectively, and all vectors are based on a pMB1 origin of replication. Plasmids containing transcriptional units are given abbreviated names which indicate their components. In the case of the fluorescent reporters listed here, pJ024m indicates a plasmid containing J23102, B0034m, and either RFP

(Rm, E1010m), GFP (Gm, E0040m), or both. The BCD parts listed here are not true RBS parts as they contain a small transcriptional unit and secondary RBS to decouple transcriptional and translational control as described in Mutalik et al.[12]. They are treated as RBS parts within this assembly methodology. More information on these parts can be found at www.cidar-ice.org and in a public Benchling folder (https:// benchling.com/siverson/f_/B94YxDHhQh-cidar-moclo-library). New DVAs and DVKs can be created using empty DVA and DVK stocks provided in this kit with a SpeI digestion of the vector and a PCR amplified LacZa fragment flanked by the desired fusion sites.


pJXGm_AE(K) series reordered
GFP Fluorescence (MEFL)
100000
10000
1000
100
J23101
J23100
J23110
J23102
J23118
J23108
J23106
J23105
J23107
J23116
J23115
J23117
J23114
J23113
J23103
J23109
Promoter
B0032m
B0033m
B0034m
BCD2
BCD12
BCD8

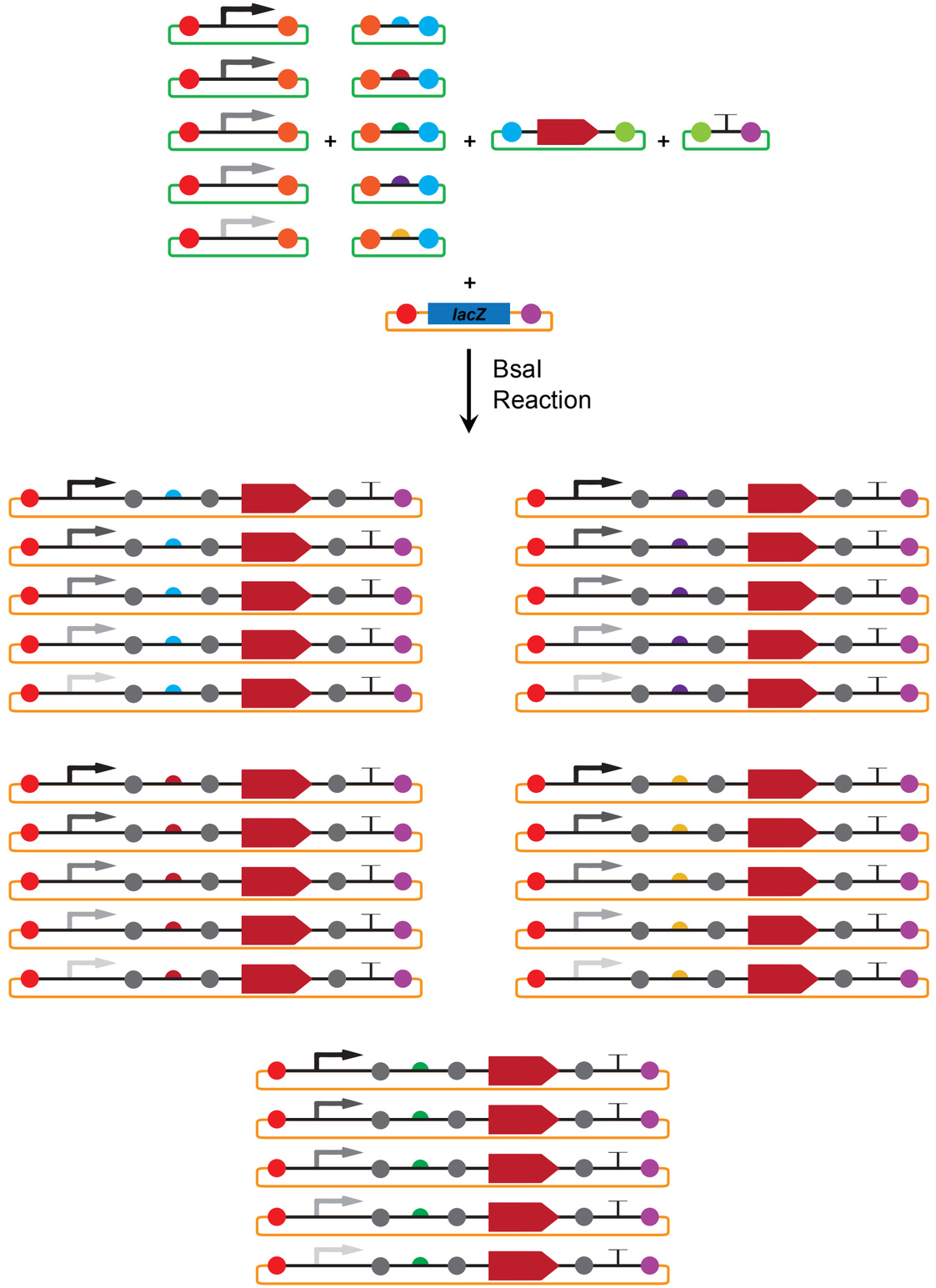
a

pJXB2Gm - MMCL1-6



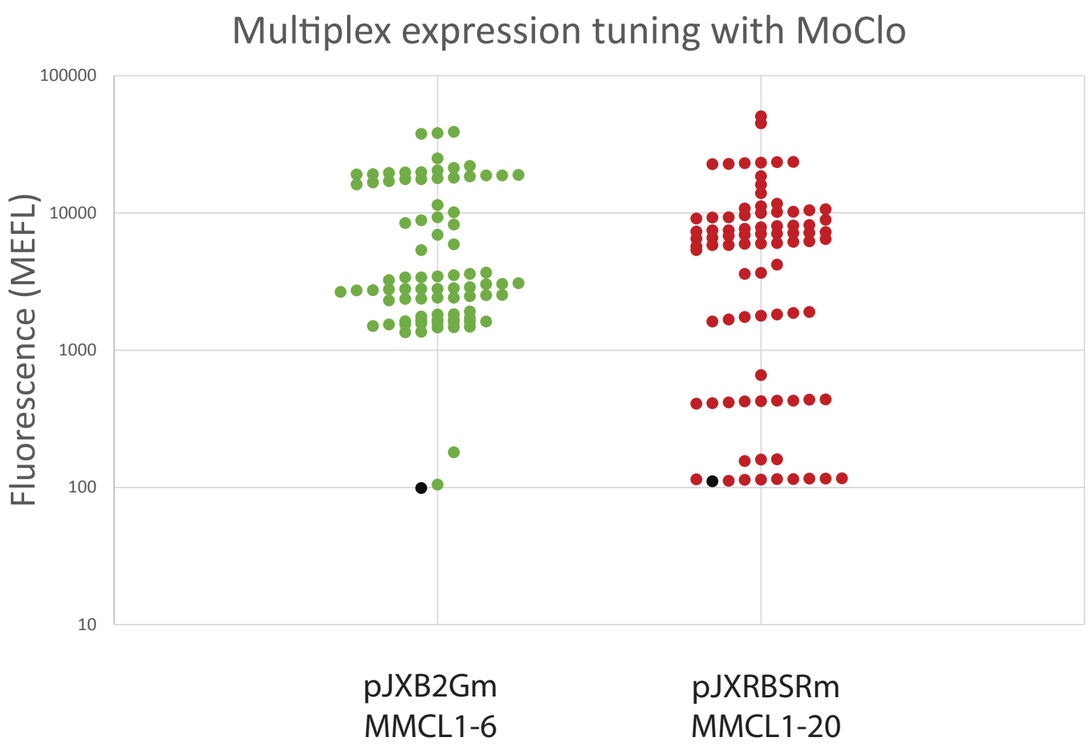
b

pJXRBSRm - MMCL1-20



Each possible transcriptional unit has an equal probability of assembly in a Multiplex MoClo assuming eqimolar concentration of each promoter and each RBS part.

C



CIDAR MoClo Protocols

	Step	Temp	Time (min)
Standard protocol	Step 1	37°C	1.5
	Step 2	16°C	3
	Cycle 1-2	x15	
	Step 3	50°C	5
	Step 4	80°C	10
	Total time		82.5

Troubleshooting protocol	Step 1	37°C	1.5
	Step 2	16°C	3
	Cycle 1-2	x25	
	Step 3	50°C	5
	Step 4	80°C	10
	Total time		127.5

Rapid protocol	Step 1	37°C	20
Ideal for new basic parts	Step 2	37°C	1.5
	Step 3	16°C	3
	Cycle 2-3	x5-10	
	Step 4	50°C	5
	Step 5	80°C	10
	Total time		37.5-60

<u>Reaction Conditions</u>

Basic Part or Device (DVA Reactions)

10 fmol each part
1x Promega Ligase buffer
20 U/rxn T4 Ligase (NEB or Promega)
10 U/rxn BbsI
Total Volume: 10 -20uL

Transcriptional Unit (DVK Reactions)

10 fmol each part
1x Promega Ligase buffer
20 U/rxn T4 Ligase (NEB or Promega)
10 U/rxn BsaI
Total Volume: 10 -20uL

Transform 2-5 uL per reaction

Plasmid	*Part Description*	*Seq Source*	*Backbone*	*Addgene Cat# (addgene.org)*	*ICE ID (cidar-ice.org)*	*Benchling (benchling.com)*
J23100_AB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23100	DVA	65980	CIDAR_490	https://benchling.com/s/gS6lXC3X/edit
J23100_EB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23100	DVA	65981	CIDAR_491	https://benchling.com/s/aq8Gxp2O/edit
J23100_FB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23100	DVA	65982	CIDAR_492	https://benchling.com/s/rTzq9ToN/edit
J23100_GB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23100	DVA	65983	CIDAR_493	https://benchling.com/s/5yn5Zy6g/edit
J23102_AB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23102	DVA	65984	CIDAR_494	https://benchling.com/s/aQOLd1xr/edit
J23102_EB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23102	DVA	65985	CIDAR_495	https://benchling.com/s/zOCQC6dM/edit
J23102_FB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23102	DVA	65986	CIDAR_496	https://benchling.com/s/1pfiY4NG/edit
J23102_GB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23102	DVA	65987	CIDAR_497	https://benchling.com/s/LmBWThyt/edit
J23103_AB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23103	DVA	65988	CIDAR_498	https://benchling.com/s/9KEsWqta/edit
J23103_EB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23103	DVA	65989	CIDAR_499	https://benchling.com/s/ynovZBP9/edit
J23103_FB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23103	DVA	65990	CIDAR_500	https://benchling.com/s/oZSwbWfi/edit
J23103_GB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23103	DVA	65991	CIDAR_501	https://benchling.com/s/4qwyO9ja/edit
J23106_AB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23106	DVA	65992	CIDAR_502	https://benchling.com/s/riO8LQFW/edit
J23106_EB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23106	DVA	65993	CIDAR_503	https://benchling.com/s/ljtaz48p/edit
J23106_FB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23106	DVA	65994	CIDAR_504	https://benchling.com/s/b8wazW5M/edit
J23106_GB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23106	DVA	65995	CIDAR_505	https://benchling.com/s/UqDZklx7/edit
J23107_AB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23107	DVA	65996	CIDAR_506	https://benchling.com/s/G8ouTflM/edit
J23107_EB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23107	DVA	65997	CIDAR_507	https://benchling.com/s/SGzIA9lZ/edit
J23107_FB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23107	DVA	65998	CIDAR_508	https://benchling.com/s/0mSZV0LM/edit
J23107_GB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23107	DVA	65999	CIDAR_509	https://benchling.com/s/InUihbMF/edit
J23116_AB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23116	DVA	66000	CIDAR_510	https://benchling.com/s/1mQPZFtM/edit
J23116_EB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23116	DVA	66001	CIDAR_511	https://benchling.com/s/xqAO8tJl/edit
J23116_FB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23116	DVA	66002	CIDAR_512	https://benchling.com/s/o8lvrIdJ/edit
J23116_GB	Basic Part - Promoter (Constitutive)	parts.igem.org/Part:Bba_J23116	DVA	66003	CIDAR_513	https://benchling.com/s/YYNkGLBV/edit
R0010_AB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0010	DVA	66004	CIDAR_514	https://benchling.com/s/etg7OrN6/edit
R0010_EB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0010	DVA	66005	CIDAR_515	https://benchling.com/s/FamBps3h/edit
R0010_FB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0010	DVA	66006	CIDAR_516	https://benchling.com/s/oi1T00L0/edit
R0010_GB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0010	DVA	66007	CIDAR_517	https://benchling.com/s/Yw6bgPjg/edit
R0040_AB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0040	DVA	66008	CIDAR_518	https://benchling.com/s/3RYAjD6u/edit
R0040_EB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0040	DVA	66009	CIDAR_519	https://benchling.com/s/SNZHRImR/edit
R0040_FB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0040	DVA	66010	CIDAR_520	https://benchling.com/s/nyzVqekN/edit
R0040_GB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0040	DVA	66011	CIDAR_521	https://benchling.com/s/473M59P8/edit
R0063_AB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0063	DVA	66012	CIDAR_522	https://benchling.com/s/EUFuZKHP/edit

R0063_EB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0063	DVA	66013	CIDAR_523	https://benchling.com/s/PN1VmcWg/edit
R0063_FB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0063	DVA	66014	CIDAR_524	https://benchling.com/s/xnA98Y5U/edit
R0063_GB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_R0063	DVA	66015	CIDAR_525	https://benchling.com/s/jHQHwAaD/edit
I13453_AB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_I13453	DVA	66016	CIDAR_526	https://benchling.com/s/HE4joK6k/edit
I13453_EB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_I13453	DVA	66017	CIDAR_527	https://benchling.com/s/YC8NeyAe/edit
I13453_FB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_I13453	DVA	66018	CIDAR_528	https://benchling.com/s/c4zFwYww/edit
I13453_GB	Basic Part - Promoter (Controllable)	parts.igem.org/Part:Bba_I13453	DVA	66019	CIDAR_529	https://benchling.com/s/i9YCgIRi/edit
B0032m_BC	Basic Part - RBS (RBS)	parts.igem.org/Part:Bba_B0032	DVA	66020	CIDAR_530	https://benchling.com/s/jwIsLDg9/edit
B0033m_BC	Basic Part - RBS (RBS)	parts.igem.org/Part:Bba_B0033	DVA	66021	CIDAR_531	https://benchling.com/s/FQFaG78R/edit
B0034m_BC	Basic Part - RBS (RBS)	parts.igem.org/Part:Bba_B0034	DVA	66022	CIDAR_532	https://benchling.com/s/kBNYDAHo/edit
BCD12_BC	Basic Part - RBS (BiCistronic Design (BCD))	www.biofab.org	DVA	66023	CIDAR_533	https://benchling.com/s/mUcZUqJo/edit
BCD2_BC	Basic Part - RBS (BiCistronic Design (BCD))	www.biofab.org	DVA	66024	CIDAR_534	https://benchling.com/s/jM8sZdRg/edit
BCD8_BC	Basic Part - RBS (BiCistronic Design (BCD))	www.biofab.org	DVA	66025	CIDAR_535	https://benchling.com/s/8UhD5Vaf/edit
C0012m_CD	Basic Part - CDS (Transcription factor)	parts.igem.org/Part:Bba_C0012	DVA	66026	CIDAR_536	https://benchling.com/s/1RopAYaI/edit
C0040_CD	Basic Part - CDS (Transcription factor)	parts.igem.org/Part:Bba_C0040	DVA	66027	CIDAR_537	https://benchling.com/s/M9uZpTOg/edit
C0062_CD	Basic Part - CDS (Transcription factor)	parts.igem.org/Part:Bba_C0062	DVA	66028	CIDAR_538	https://benchling.com/s/FFyxWiwT/edit
C0080_CD	Basic Part - CDS (Transcription factor)	parts.igem.org/Part:Bba_C0080	DVA	66029	CIDAR_539	https://benchling.com/s/FFyxWiwT/edit
cre_CD	Basic Part - CDS (Recombinase)	Gift from Dr. Josh Gilmore	DVA	66030	CIDAR_540	https://benchling.com/s/CAXPcaMy/edit
E0030_CD	Basic Part - CDS (Fluorescent reporter - YFP)	parts.igem.org/Part:Bba_E0030	DVA	66031	CIDAR_541	https://benchling.com/s/cr12BVOE/edit
E0040m_CD	Basic Part - CDS (Fluorescent reporter - GFP)	parts.igem.org/Part:Bba_E0040	DVA	66032	CIDAR_542	https://benchling.com/s/cj91KrVH/edit
E1010m_CD	Basic Part - CDS (Fluorescent reporter - RFP)	parts.igem.org/Part:Bba_E1010	DVA	66033	CIDAR_543	https://benchling.com/s/1AbCv00F/edit
eBFP2_CD	Basic Part - CDS (Fluorescent reporter - BFP)	Addgene - #14891	DVA	66034	CIDAR_544	https://benchling.com/s/bbkctFdr/edit
B0015_DE	Basic Part - Terminator (Double Terminator)	parts.igem.org/Part:Bba_B0015	DVA	66035	CIDAR_545	https://benchling.com/s/a1cHND33/edit
B0015_DF	Basic Part - Terminator (Double Terminator)	parts.igem.org/Part:Bba_B0015	DVA	66036	CIDAR_546	https://benchling.com/s/f6RaEG2K/edit
B0015_DG	Basic Part - Terminator (Double Terminator)	parts.igem.org/Part:Bba_B0015	DVA	66037	CIDAR_547	https://benchling.com/s/5pFYTkSF/edit
B0015_DH	Basic Part - Terminator (Double Terminator)	parts.igem.org/Part:Bba_B0015	DVA	66038	CIDAR_548	https://benchling.com/s/8st8vLlQ/edit
DVA_AB	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66039	CIDAR_549	https://benchling.com/s/sIHkWK6p/edit
DVA_AE	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66040	CIDAR_550	https://benchling.com/s/JbqtviMA/edit
DVA_AF	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66041	CIDAR_551	https://benchling.com/s/NviiNLIp/edit
DVA_AG	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66042	CIDAR_552	https://benchling.com/s/pPe92CO5/edit
DVA_AH	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66043	CIDAR_553	https://benchling.com/s/iaYDvlV2/edit
DVA_BC	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66044	CIDAR_554	https://benchling.com/s/o7TOrROp/edit
DVA_CD	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66045	CIDAR_555	https://benchling.com/s/xgdB8Znv/edit
DVA_DE	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66046	CIDAR_556	https://benchling.com/s/mtpMynxT/edit
DVA_DF	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66047	CIDAR_557	https://benchling.com/s/53Whxb2s/edit

DVA_DG	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66048	CIDAR_558	https://benchling.com/s/bJdQOwZP/edit
DVA_DH	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66049	CIDAR_559	https://benchling.com/s/sGGQDAg6/edit
DVA_EB	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66050	CIDAR_560	https://benchling.com/s/i5JEIhUg/edit
DVA_EF	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66051	CIDAR_561	https://benchling.com/s/OlSBaZCj/edit
DVA_EG	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66052	CIDAR_562	https://benchling.com/s/xGeYtbZx/edit
DVA_EH	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66053	CIDAR_563	https://benchling.com/s/fnTqha2S/edit
DVA_FB	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66054	CIDAR_564	https://benchling.com/s/3CuYwFwU/edit
DVA_GB	Destination Vector (For Basic Parts and Devices Ampicillin)	parts.igem.org/Part:pSB1A2	DVA	66055	CIDAR_565	https://benchling.com/s/UvuVapbV/edit
DVA	Destination Vector (Backbone for new DVs)	--	DVA	66056	CIDAR_566	https://benchling.com/s/6hijqfvT/edit
pJ02B2Gm_AE	Transcriptional Unit (FACS Controls)	--	DVA	66057	CIDAR_567	https://benchling.com/s/mgYDcL4z/edit
pJ02B2Gm_EF	Transcriptional Unit (FACS Controls)	--	DVA	66058	CIDAR_568	https://benchling.com/s/3WQbdlzU/edit
pJ02B2Rm_AE	Transcriptional Unit (FACS Controls)	--	DVA	66059	CIDAR_569	https://benchling.com/s/Kb4AAbox/edit
pJ02B2Rm_EF	Transcriptional Unit (FACS Controls)	--	DVA	66060	CIDAR_570	https://benchling.com/s/FOM8uxtS/edit
pJ02B2Gm:Rm_AF	Device (FACS Controls)	--	DVA	66061	CIDAR_571	https://benchling.com/s/D75ziv6K/edit
pJ02B2Rm:Gm_AF	Device (FACS Controls)	--	DVA	66062	CIDAR_572	https://benchling.com/s/OOkaVw1a/edit
pJ02B2Gm_AE	Transcriptional Unit (FACS Controls)	--	DVK	66063	CIDAR_573	https://benchling.com/s/ShVJxDdF/edit
pJ02B2Gm_EF	Transcriptional Unit (FACS Controls)	--	DVK	66064	CIDAR_574	https://benchling.com/s/uUTmefO7/edit
pJ02B2Rm_AE	Transcriptional Unit (FACS Controls)	--	DVK	66065	CIDAR_575	https://benchling.com/s/syrZcMB4/edit
pJ02B2Rm_EF	Transcriptional Unit (FACS Controls)	--	DVK	66066	CIDAR_576	https://benchling.com/s/nNICVGuk/edit
DVK_AE	Destination Vector (For Transcriptional Units Kanamycin)	parts.igem.org/Part:pSB1K3	DVK	66067	CIDAR_577	https://benchling.com/s/sueyphOw/edit
DVK_AF	Destination Vector (For Transcriptional Units Kanamycin)	parts.igem.org/Part:pSB1K3	DVK	66068	CIDAR_578	https://benchling.com/s/1i0mX41y/edit
DVK_EF	Destination Vector (For Transcriptional Units Kanamycin)	parts.igem.org/Part:pSB1K3	DVK	66069	CIDAR_579	https://benchling.com/s/7FuJO5tD/edit
DVK_FG	Destination Vector (For Transcriptional Units Kanamycin)	parts.igem.org/Part:pSB1K3	DVK	66070	CIDAR_580	https://benchling.com/s/Cz5hQ9wM/edit
DVK_GH	Destination Vector (For Transcriptional Units Kanamycin)	parts.igem.org/Part:pSB1K3	DVK	66071	CIDAR_581	https://benchling.com/s/MFw9pNDU/edit
DVK	Destination Vector (Backbone for new DVs)	--	DVK	66072	CIDAR_582	https://benchling.com/s/olS42cDR/edit