

**Supplementary Table S1.** List of toolkit plasmids.

Plasmid	Type	Description	<i>E. coli</i> marker
pYTK001	entry vector	Part Plasmid Entry Vector	CamR
pYTK002	1	ConLS	CamR
pYTK003	1	ConL1	CamR
pYTK004	1	ConL2	CamR
pYTK005	1	ConL3	CamR
pYTK006	1	ConL4	CamR
pYTK007	1	ConL5	CamR
pYTK008	1	ConLS'	CamR
pYTK009	2	<i>pTDH3</i>	CamR
pYTK010	2	<i>pCCW12</i>	CamR
pYTK011	2	<i>pPGK1</i>	CamR
pYTK012	2	<i>pHHF2</i>	CamR
pYTK013	2	<i>pTEF1</i>	CamR
pYTK014	2	<i>pTEF2</i>	CamR
pYTK015	2	<i>pHHF1</i>	CamR
pYTK016	2	<i>pHTB2</i>	CamR
pYTK017	2	<i>pRPL18B</i>	CamR
pYTK018	2	<i>pALD6</i>	CamR
pYTK019	2	<i>pPAB1</i>	CamR
pYTK020	2	<i>pRET2</i>	CamR
pYTK021	2	<i>pRNR1</i>	CamR
pYTK022	2	<i>pSAC6</i>	CamR
pYTK023	2	<i>pRNR2</i>	CamR
pYTK024	2	<i>pPOP6</i>	CamR
pYTK025	2	<i>pRAD27</i>	CamR
pYTK026	2	<i>pPSP2</i>	CamR
pYTK027	2	<i>pREV1</i>	CamR
pYTK028	2	<i>pMFA1</i>	CamR
pYTK029	2	<i>pMFA2</i>	CamR
pYTK030	2	<i>pGAL1</i>	CamR
pYTK031	2	<i>pCUP1</i>	CamR
pYTK032	3	mTurquoise2	CamR
pYTK033	3	Venus	CamR
pYTK034	3	mRuby2	CamR
pYTK035	3	I-SceI (ORF)	CamR
pYTK036	3	Cas9	CamR
pYTK037	3a	mTurquoise2	CamR
pYTK038	3a	Venus	CamR
pYTK039	3a	mRuby2	CamR
pYTK040	3a	3XFLAG-6XHis	CamR
pYTK041	3a	Ubi-M	CamR
pYTK042	3a	Ubi-Y	CamR
pYTK043	3a	Ubi-R	CamR
pYTK044	3b	mTurquoise2	CamR
pYTK045	3b	Venus	CamR
pYTK046	3b	mRuby2	CamR
pYTK047	234r	GFP dropout	CamR
pYTK048	234	Spacer	CamR

pYTK049	234	I-SceI recognition site	CamR
pYTK050	234	sgRNA Dropout	CamR
pYTK051	4	<i>tENO1</i>	CamR
pYTK052	4	<i>tSSA1</i>	CamR
pYTK053	4	<i>tADH1</i>	CamR
pYTK054	4	<i>tPGK1</i>	CamR
pYTK055	4	<i>tENO2</i>	CamR
pYTK056	4	<i>tTDH1</i>	CamR
pYTK057	4a	mTurquoise2	CamR
pYTK058	4a	Venus	CamR
pYTK059	4a	mRuby2	CamR
pYTK060	4a	3XFLAG-6XHis	CamR
pYTK061	4b	<i>tENO1</i>	CamR
pYTK062	4b	<i>tSSA1</i>	CamR
pYTK063	4b	<i>tADH1</i>	CamR
pYTK064	4b	<i>tPGK1</i>	CamR
pYTK065	4b	<i>tENO2</i>	CamR
pYTK066	4b	<i>tTDH1</i>	CamR
pYTK067	5	ConR1	CamR
pYTK068	5	ConR2	CamR
pYTK069	5	ConR3	CamR
pYTK070	5	ConR4	CamR
pYTK071	5	ConR5	CamR
pYTK072	5	ConRE	CamR
pYTK073	5	ConRE'	CamR
pYTK074	6	<i>URA3</i>	CamR
pYTK075	6	<i>LEU2</i>	CamR
pYTK076	6	<i>HIS3</i>	CamR
pYTK077	6	KanamycinR	CamR
pYTK078	6	NourseothricinR	CamR
pYTK079	6	HygromycinR	CamR
pYTK080	6	ZeocinR	CamR
pYTK081	7	CEN6/ARS4	CamR
pYTK082	7	2micron	CamR
pYTK083	8	AmpR-ColE1	AmpR
pYTK084	8	KanR-ColE1	KanR
pYTK085	8	SpecR-ColE1	SpecR
pYTK086	7	<i>URA3</i> 3' Homology	CamR
pYTK087	7	<i>LEU2</i> 3' Homology	CamR
pYTK088	7	<i>HO</i> 3' Homology	CamR
pYTK089	8a	AmpR-ColE1	AmpR
pYTK090	8a	KanR-ColE1	KanR
pYTK091	8a	SpecR-ColE1	SpecR
pYTK092	8b	<i>URA3</i> 5' Homology	CamR
pYTK093	8b	<i>LEU2</i> 5' Homology	CamR
pYTK094	8b	<i>HO</i> 5' Homology	CamR
pYTK095	678	AmpR-ColE1	AmpR
pYTK096	cassette	Pre-Assembled <i>URA3</i> Integration Vector	KanR