

**Table S3: Plasmids used in this study**

Plasmid	Relevant features <sup>a</sup>	Origin	Reference/source
pKD4	kan <sup>R</sup> , Amp <sup>R</sup>	R6K	(1)
pMT13	CM <sup>R</sup> , P <sub>ara</sub> :: <i>nativeRBS_mreC</i>	pBR/colE1	
pMT116	Tet <sup>R</sup> , attHK, P <sub>lac</sub> ::empty	R6K	(2)
pPR66	CM <sup>R</sup> , P <sub>lac</sub> ::empty	pBR/colE1	
pPR99	CM <sup>R</sup> , P <sub>ara</sub> ::empty	R6K	
pHC514	CM <sup>R</sup> , P <sub>lac</sub> :: <i>slmA</i> , attL, attI	R6K	
pHC405	CM <sup>R</sup> , Para:: <i>artificialRBS_sf-gfp</i>	pACYC	
pPR111	CM <sup>R</sup> , P <sub>lac</sub> :: <i>nativeRBS_ipxC</i>	pBR/colE1	This study
pEMF15	CM <sup>R</sup> , P <sub>ara</sub> :: <i>nativeRBS_yejM</i>	R6K	This study
pEMF17	CM <sup>R</sup> , P <sub>lac</sub> :: <i>native_RBS_yejM</i>	pBR/colE1	This study
pEMF33	CM <sup>R</sup> , P <sub>lac</sub> :: <i>artificial_yejM</i>	pBR/colE1	This study
pJLB11	<i>cI857</i> , scel, P <sub>lac</sub> ::empty	pSC101	Derivative of plasmid from de Boer lab (3)
pEMF20	<i>cI857</i> , scel, P <sub>lac</sub> :: <i>nativeRBS_yejM</i>	pSC101	This study
pHCL147	Tet <sup>R</sup> , attHK, P <sub>lac</sub> :: <i>ssDsbA-mScarC</i>	R6K	(4)
pHCL149	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_popZ-H3H4-msfGFP-TM</i> (N-terminal fusion)	pBR/colE1	(4)
pHCL150	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_popZ-msfGFP-H3H4</i> (C-terminal fusion)	pBR/colE1	(4)
pEMF35	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_popZ-H3H4-msfGFP-yejM</i>	pBR/colE1	This study
pEMF36	Tet <sup>R</sup> , attHK, P <sub>lac</sub> :: <i>artificialRBS_lapB-mScarC</i>	R6K	This study
pEMF37	Tet <sup>R</sup> , attHK, P <sub>lac</sub> :: <i>artificialRBS_lapA-mScarC</i>	R6K	This study

pEMF38	Tet <sup>R</sup> , attHK, P <sub>lac</sub> :: <i>artificialRBS_ftsH-mScarC</i>	R6K	This study
pEMF43	CM <sup>R</sup> , P <sub>lac</sub> :: <i>artificialRBS_acpT</i>	pBR/colE1	This study
pEMF53	Tet <sup>R</sup> , attHK, P <sub>lac</sub> :: <i>artificialRBS_lapB</i>	R6K	This study
pEMF54	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_yejM</i>	pBR/colE1	This study
pEMF55	CM <sup>R</sup> , P <sub>ara</sub> :: <i>popZ-FtsH-msfGFP_H3H4-artificialRBS_yejM</i>	pBR/colE1	This study
pEMF57	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_sf-gfp</i>	pBR/colE1	This study
pEMF65	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_popZ-H3H4-msfGFP-yejM<sub>(1-191)</sub></i>	pBR/colE1	(4)
pEMF68	CM <sup>R</sup> , P <sub>ara</sub> :: <i>artificialRBS_yejM<sub>(1-191)</sub></i>	pBR/colE1	This study

<sup>a</sup> P<sub>lac</sub> and P<sub>ara</sub> refer to the lactose and arabinose promoters, respectively. The artificialRBS indicates the RBS of the Φ10 gene from T7 bacteriophage.

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