

**An efficient markerless deletion system suitable for the industrial strains of**  
***Streptomyces***

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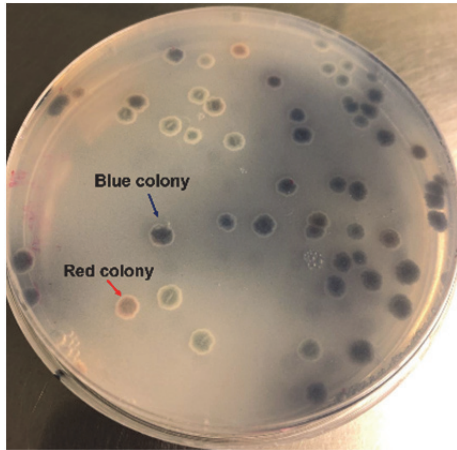
## Supplementary materials

**Table S1 Primers used in this study**

Name	Sequence (5'-3')
<i>SaindC</i> -F	ATGAGCACCAGCACGCCGCC
<i>SaindC</i> -R	CTAGGCGAAGAGGTCCAAGG
<i>SaindC</i> -F-2	GTGCAGGACTGGGGGAGTTATGAGCACCAGCACGCCGCC
<i>SaindC</i> -R-2	aagctTGAATTcCTAGGCGAAGAGGTCCAAGG
kas-F	gagggcgcgaagcttTGTTACATTTCGAACGGTCT
kas-R	CGTGCAGGACTGGGGGAGTT
azo-up-F	gacctcttcgcctaggaattcGCGCCTGTCTGAGCGTAACT
azo-up-R	tttcccagaaggcctgtacgAGTGCCGCCAGACCAACTA
azo-down-F	CTGGCCGGCACTCGTACAGGCCTTCTGGGAAA
azo-down-R	agaccatggggtaccatgatGGCCTTGCGATGGATATCCC
$\Delta$ azo-out-F	CGGAGGTGAGGCGTCAGTGT
$\Delta$ azo-out-R	TCCTCCCACCAGAGCAGGCT
dnr-up-F	taggaattcaagcttggatccAGATCCTGCTCACCCGTGTCT
dnr-up-R	tcategtcatACCATCCGAGTCGTGATTGCT
dnr-down-F	ctcggatggtATGACGATGACCGAGTTCCCCTT
dnr-down-R	agaccatggggtaccatgatCGCTGAGCAAACCCAGTAGCC
$\Delta$ dnr-out-F	CCCTCCCGCTCGTGCCTGT
$\Delta$ dnr-out-R	AGGTTGCCAAGACCCTCCGTTC
sal-up-F	agaccatggggtaccatgatGCTCCCGCTGGAACGGGTAG
sal-up-R	acatggacggcatgctcgacGTTTAAACCCACGAGGACCCGGTCGTCA
sal-down-F	GTCGAGCATGCCGTCCATGT
sal-down-R	ttcaagcttggatccgatatcGGGCTGCGCGGACACCTGAC
$\Delta$ sal-out-F	AGCACCTCGTGGCCCAACTCG
$\Delta$ sal-out-R	CTGCGCGTCAGCCATGCCTT

$\Delta$ 200k-out-F	CGCCGGGTGAACGAGGACAG
$\Delta$ 200k-out-R	ACGTGGTGGAGCAGGGCTAC

Up-F and up-R are primers for constructing the upstream fragment of the target gene, and down-F and down-R for constructing the downstream fragment. Out-F and out-R were used for the verification of the deletion of the target genes



**Figure S1.** The indigoidine production of doxorubicin-producing *S. coeruleorubidus* strain. The red colonies are the wild-type *S. coeruleorubidus* without indigoidine produced, the blue colonies are the mutants producing indigoidine.