

Table S1. Plasmids used in this study

Plasmid	Description	Reference
pUC18	Vector for general cloning	(Sambrook et al., 1989)
pET28a(+)	Protein expression vector	Invitrogen
10A3	A cosmid from <i>S. clavuligerus</i> ATCC 27064 genomic library	(Huang et al., 2011)
pYH285	A heterologous expression construct containing entire RK-682 biosynthetic gene cluster	(Sun et al., 2010)
pWHU2733	<i>rkD</i> in-frame deletion construct based on pYH285	This study
pWHU2736	<i>homE</i> in-frame deletion construct based on cosmid 10A3	This study
pWHU2737	<i>bla</i> insertion construct based on pYH285	This study
pWHU2739	Construct for Cas9 expression	This study

References

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- Sambrook J, Fritsch EF, Maniatis T, 1989, *Molecular Cloning: A Laboratory Manual* (Cold Spring Harbor Lab. Press, Plainview, NY), 2nd Ed.
- Sun Y, Hahn F, Demydchuk Y, Chettle J, Tosin M, Osada H, Leadlay PF. 2010. In vitro reconstruction of tetronate RK-682 biosynthesis. *Nature chemical biology* **6**:99-101.