

**Crystal structure of the thioesterase SgcE10 supporting common polyene intermediates  
in 9- and 10-membered enediyne core biosynthesis**

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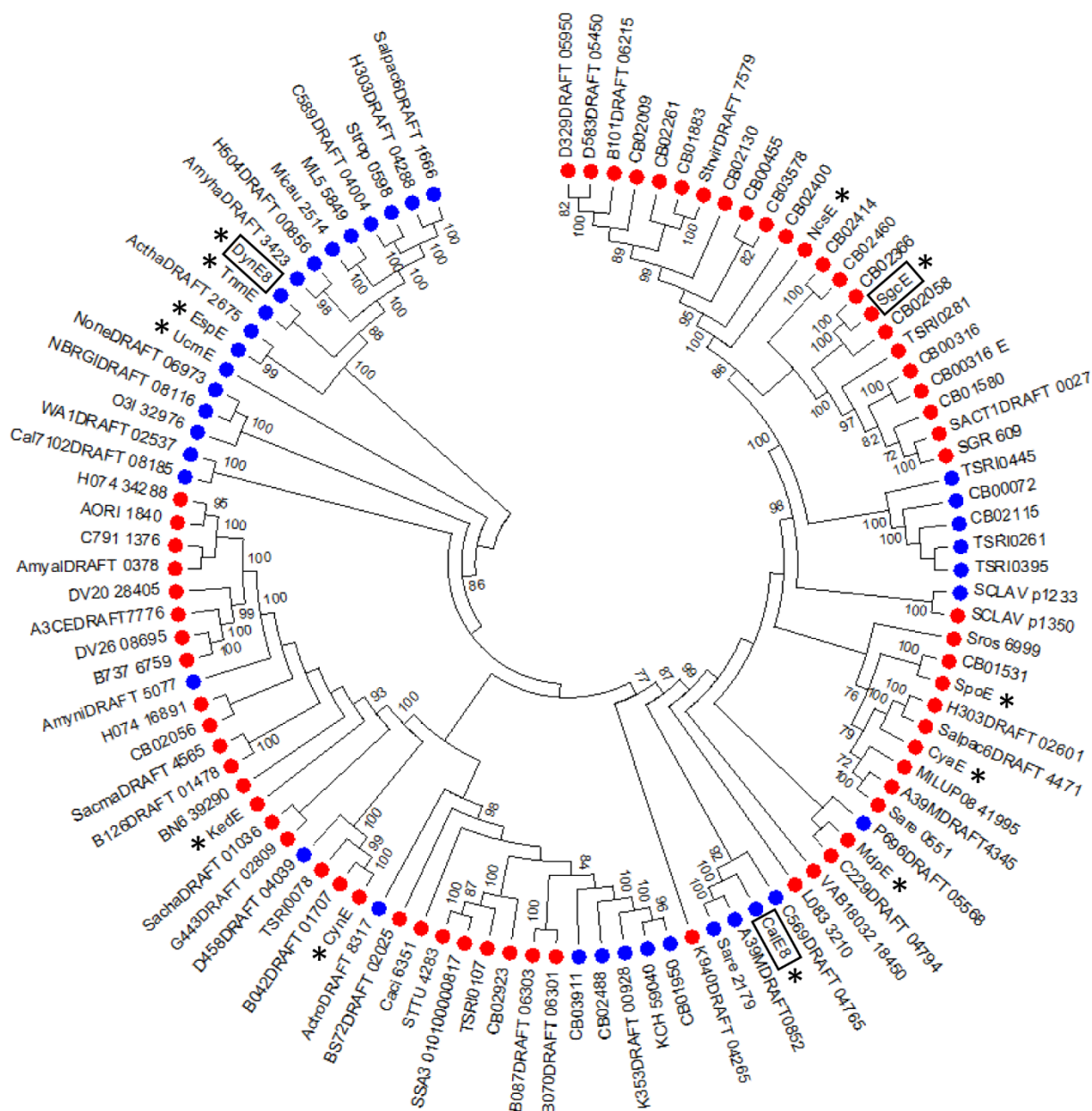
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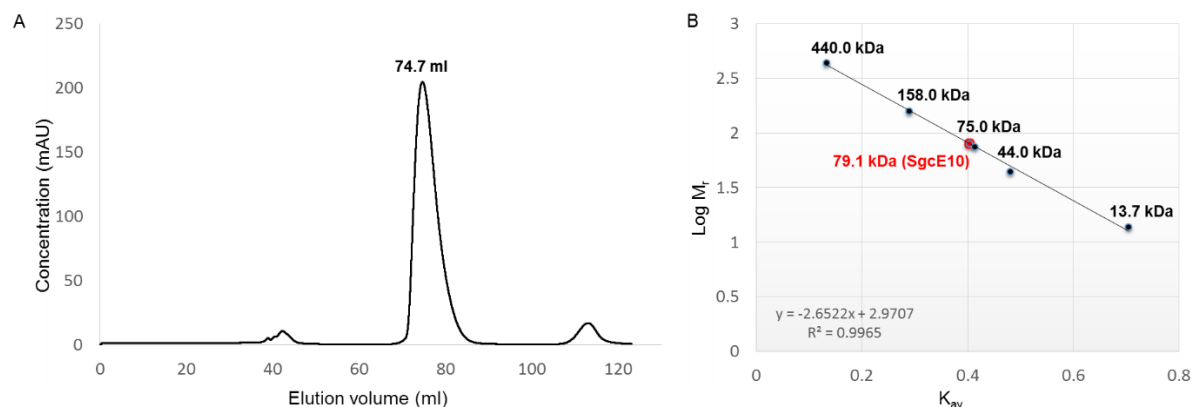
**Supporting Information (SI)**

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|------------------------|-----------|
| <b>Figure S1.....</b>  | <b>S2</b> |
| <b>Figure S2.....</b>  | <b>S3</b> |
| <b>References.....</b> | <b>S3</b> |

**Figure S1.** Phylogenetic tree of the 102 full-length PKSE sequences from confirmed and predicted 9- and 10-membered enediynes biosynthetic machineries. The PKSEs from 9-membered enediyne (red) and 10-membered enediyne (blue) biosynthetic machineries show local, but not global, differentiation. Except for the 12 known enediynes (denoted by asterisks), the core size of each enediyne is predicted.<sup>1</sup> The three TEs, SgcE, DynE8, and CalE8 (denoted by black boxes), are marked with an asterisk. The sequence alignment was made with ClustaW, and the phylogenetic tree was constructed using the Maximum Likelihood method in MEGA 7.0.18.<sup>2</sup>



**Figure S2.** (A) Chromatogram of the analysis of SgcE10 by gel filtration. The protein exhibits a elution volume of 74.2 ml (B) The apparent molecule weight of SgcE10 is estimated to be 79.1kDa, suggesting that the protein (calculated molecular weight of 18.0 kDa) is tetrameric.



## References

1. Rudolf, J. D.; Yan, X.; Shen, B. Genome neighborhood network reveals insights into enediynes biosynthesis and facilitates prediction and prioritization for discovery. *J. Ind. Microbiol. Biotechnol.* **2016**, *43*, 261–276.
2. Kumar, S.; Stecher, G.; Tamura, K. MEGA7: Molecular Evolutionary Genetics Analysis Version 7.0 for Bigger Datasets. *Mol. Biol. Evol.* **2016**, *33*, 1870–1874.