

The Crystal Structure of AbsH3: a Putative FAD-dependent Reductase in the Abyssomicin Biosynthesis Pathway.

Jonathan Clinger¹, Xiachang Wang², Wenlong Cai², Yanyan Zhu², Mitchell Miller¹, Chang-Guo Zhan², Steven Van Lanen², Jon Thorson², and George Phillips¹

¹Rice University

²University of Kentucky

May 6, 2020

Abstract

Natural products and natural product-derived compounds have been widely used for pharmaceuticals for many years, and the search for new natural products that may have interesting activity is on going. Abyssomicins are natural product molecules that have antibiotic activity via inhibition of the folate synthesis pathway in microbiota. These compounds also appear to undergo a required [4+2] cycloaddition in their biosynthetic pathway. Here we report the structure of an FAD-dependent reductase, AbsH3, from the biosynthetic gene cluster of novel abyssomicins found in *Streptomyces* sp. LC-6-2.

Hosted file

AbsH3_Structure_Note_v16a.pdf available at <https://authorea.com/users/318010/articles/448008-the-crystal-structure-of-absh3-a-putative-fad-dependent-reductase-in-the-abyssomicin-biosynthesis-pathway>