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Type II thioesterase ScoT, associated with *Streptomyces coelicolor* A3(2) modular polyketide synthase Cpk, hydrolyzes acyl residues and has a preference for propionate.

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Streszczenie

Type II thioesterases (TE IIs) were shown to maintain the efficiency of polyketide synthases (PKSs) byremoving acyl residues blocking extension modules. However, the substrate specificity and kinetic parametersof these enzymes differ, which may have significant consequences when they are included in engineered hybridsystems for the production of novel compounds. Here we show that thioesterase ScoT associated withpolyketide synthase Cpk fromStreptomyces coelicolorA3(2) is able to hydrolyze acetyl, propionyl, and butyrylresidues, which is consistent with its editing function. This enzyme clearly prefers propionate, in contrast tothe TE IIs tested previously, and this indicates that it may have a role in control of the starter unit. We alsodetermined activities of ScoT mutants and concluded that this enzyme is an/hydrolase with Ser90 andHis224 in its active site

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