Limonene-1,2-epoxide from Rhodococcus erythropolis DCL 14

J. Zou, T. Bergfors and T. A. Jones

Department of Cell and Molecular Biology, Uppsala University, P.O. Box 596, SE-75124 Uppsala, Sweden

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Epoxides are highly reactive compounds that readily react with a great number of biological compounds including proteins and nucleic acids. Consequently, epoxides are cytotoxic and mutagenic and there is a considerable interest in the biological degradation mechanisms of these compounds. Epoxide hydrolases catalyze the hydrolysis of epoxides forming the corresponding diol. They belong to the α/β -hydrolase fold superfamily with the exception of leukotriene A4 hydrolase and chelesterol-epoxide hydrolase. The limonene EH discovered recently catalyzes the hydrolysis of limonene-1,2-epoxide to limonene-1,2-diol. It belongs to a novel class of EHs. Determining the 3-D structure of limonene EH will help us understand the function and mechanism of this family of enzymes.

References

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