

**Experiment title: Dihydroorotase**

BAG - CNRS gif sur Yvette

Experiment**number:**

LS 1798

Beamline:

ID14-1

Date of experiment:

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Shifts:

1

Local contact(s):

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Report:

Dihydroorotate synthase (L-5,6-dihydroorotate amidohydrolase) is a key enzyme of the pyrimidine biosynthesis pathway that catalyses the formation of an amide bond and is related to the zinc proteases. In mammals, the enzyme forms part of a multifunctional complex, the CAD protein. None structure of a dihydrotase enzyme is known. The elucidation of the structure and mechanism of the monofunctional enzyme of E. coli could help to develop specific inhibitors in order to obtain new anticancer or antimalarial drugs. I have recorded a full data set of the native protein at 2.4 resolution. As the enzyme possesses two accessible cysteine residues, the next step is to soak the crystals with mercury derivatives to try to solve the structure by SIRAS.

Data statistics

Native dihydroorotase space group R32; a=b=126.45; c=309.9. The completion is 100 % and the I/sigma is 14 (3.3 in the 2.49-2.4 range).