



	Experiment title: BAG - CNRS Gif sur Yvette HPr kinase	Experiment number: LS 1928
Beamline: ID14-H1	Date of experiment: from: 06/04/00 to: 07/04/00	Date of report: 03/09/01
Shifts: 1	Local contact(s):	<i>Received at ESRF:</i>
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Report:

The HPr-kinase is a bacterial Ser/Thr kinase which has no sequence similarities with any other known protein. After entry of sugars in the cell via the PTS system, the glycolysis cycle produces FBP which activates phosphorylation of the small protein HPr on residue Ser-46 by the HPr-kinase. Further interaction of Ser-P-HPr with the transcription regulator CcpA activates the carbon catabolite repression signalisation pathway.

The aim of this study is to understand the catalytic mechanism of the enzyme HPr-kinase. We have solved previously the structure of the enzyme at 2.8 Å resolution.

Here we have collected a 3 Å resolution data set, which has allowed us to solve the structure of HPr-kinase in complex with its substrate HPr. This is the first structure of a protein kinase / protein substrate complex.

Due to a train strike, only partial use of the beam-time could be made on this visit to ESRF.