| ESRF | Experiment title: TB Peptidyl-prolyl cis-trans isomerase A | Experiment number: MX-133 |
|---------------------|--|---------------------------------|
| Beamline: ID14-1 | Date of experiment: From: 31 January 2004 to: 02 February 2004 | Date of report: 30 August 2004 |
| Shifts: | Local contact(s): David Richard HALL | |

Names and affiliations of applicants (* indicates experimentalists):

T. Alwyn Jones, Uppsala University, alwyn@xray.bmc.uu.se

Report:

Peptidyl-prolyl cis-trans isomerases (Ppis) catalyze the inter-conversion of cis and trans peptide bonds and are therefore considered to be important for protein folding. Ppis are found in many diverse organisms such as bacteria, plants, and mammals, sometimes as single domain proteins and sometimes as components in a larger complex. Multiple Ppis within a single organism are common. Their activity can accelerate protein folding both *in vitro* and *in vivo*; in some cases a chaperone function has been demonstrated to be independent of the catalytic action. Ppis are also suggested to take part in other biological functions such as cell surface recognition and heat-shock response.

A single wavelength data set was collected at ID14-1. The structure was solved with molecular replacement, and the data, which expanded to 2.6Å, was used for final refinement. Final R and Rfree were 21.3% and 22.9%, respectively. Paper is accepted for publication in European Journal of Biochemistry.

^{*}Lena Henriksson, Uppsala University, lena@xray.bmc.uu.se

^{*}Annette Roos, Uppsala University, annette@xray.bmc.uu.se