



	Experiment title: BAG Barcelona – β -tubulin monomer release factor p14	Experiment number: LS-1377/78
Beamline: ID02B	Date of experiment: from: 11.6.1999 to: 14.6.1999	Date of report: 31.8.1999
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Report:

p14 is a molecular chaperone involved in β -tubulin folding which catalyzes the release of tubulin monomers from intermediate complexes. It has been shown to bear similarity with a region of the DnaJ protein. Active p14 protein has been purified from an overproducing *E. coli* strain and has been proven to also release β -tubulin monomers from tubulin dimers.

We have managed to crystallize 88-residue p14 in form of well suited crystals and have measured a complete dataset at ID02B. Crystals diffract to 2.5 Å and belong to a primitive orthorhombic spacegroup. The cell constants are $a = 23.1$ Å, $b = 89.2$ Å, and $c = 97.7$ Å. The R_{merge} of the diffraction data is 0.101 and data are 92.4 % complete for the whole measured range (40.0 – 2.50 Å) and in the last shell (2.54 – 2.50 Å, 89.4 %). The relatively short axis accounts for P222 being the most likely spacegroup.

Production of SeMet-p14 has been successfully undertaken and crystals, presumably isomorphous to the native ones, are being obtained at the moment. In order to solve this structure (attempts to try to solve it by molecular replacement techniques using DnaJ as a searching model have failed), a MAD experiment is proposed.