

Experiment Report Form

The double page inside this form is to be filled in by all users or groups of users who have had access to beam time for measurements at the ESRF.

Once completed, the report should be submitted electronically to the User Office using the **Electronic Report Submission Application:**

<http://193.49.43.2:8080/smis/servlet/UserUtils?start>

Reports supporting requests for additional beam time

Reports can now be submitted independently of new proposals – it is necessary simply to indicate the number of the report(s) supporting a new proposal on the proposal form.

The Review Committees reserve the right to reject new proposals from groups who have not reported on the use of beam time allocated previously.

Reports on experiments relating to long term projects

Proposers awarded beam time for a long term project are required to submit an interim report at the end of each year, irrespective of the number of shifts of beam time they have used.

Published papers

All users must give proper credit to ESRF staff members and proper mention to ESRF facilities which were essential for the results described in any ensuing publication. Further, they are obliged to send to the Joint ESRF/ ILL library the complete reference and the abstract of all papers appearing in print, and resulting from the use of the ESRF.

Should you wish to make more general comments on the experiment, please note them on the User Evaluation Form, and send both the Report and the Evaluation Form to the User Office.

Instructions for preparing your Report

- fill in a separate form for each project or series of measurements.
- type your report, in English.
- include the reference number of the proposal to which the report refers.
- make sure that the text, tables and figures fit into the space available.
- if your work is published or is in press, you may prefer to paste in the abstract, and add full reference details. If the abstract is in a language other than English, please include an English translation.



	Experiment title: BAG - LEBS - 2012-1	Experiment number: MX-1429
Beamline: ID14eh1	Date of experiment: 28/11/2012 from: 9h30 to: 8h00	Date of report: 17/12/2012
Shifts:	Local contact(s): Dr Jan KADLEC	<i>Received at ESRF:</i>
Names and affiliations of applicants (* indicates experimentalists): I. Mignot* B. Gigant*		

Report:

Tubulin in complex with a tau fragment and stabilized by a stathmin-like domain.

We have obtained crystals of tubulin in a complex with a 117 residue-long construct of tau and further stabilized with a stathmin-like domain protein engineered to bind one tubulin. From data collected previously, we could find a molecular replacement solution for tubulin and the stathmin-like domain, but no electron density could be assigned to the third partner. Nevertheless, analysis of the crystal content by gel electrophoresis indicates that the tau fragment is present in the crystal. Moreover, the crystal packing cannot be explained with tubulin and the stathmin-like domain only.

As an attempt to locate and trace the tau polypeptide chains, we grew crystals with seleno-methionine versions of tau. As a control, the stathmin-like domain was also produced as a SeMet protein. Such crystals have already been evaluated on the ID23-1 beamline 2 weeks ago. During this session, we tested about 40 crystals and collected several dataset from 9 of them. As for the previous crystals tested, the diffraction was highly anisotropic, and the resolution was limited to about 4 Ang and was highly variable according to the crystal.

We could find some Se signal for 2 crystals (space group $P2_12_12_1$, cell dimensions $a=54.8$, $b=95.6$, $c=282.6$, one complex per asymmetric unit, resolution limit 5.5 Ang for one of them; space group $P1$, cell dimensions $a=53.1$, $b=93.9$, $c=130.2$, $\alpha=85.2$, $\beta=86.7$, $\gamma=89.9$, two complexes per asymmetric unit, resolution 4.2 for the second one). The signals correspond to the SeM of the protein control (the stathmin-like domain). No convincing signal could be attributed to the tau fragment.