ESRF	**Experiment title:** Structural studies of a complex between the tubulin and the protein SCG10	**Experiment number**: LS-1655
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Shifts: 6	**Local contact(s)** Richard Kahn	*Received at ESRF:*

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Report

Tubulin is a 100 kDa heterodimer that aligns head-to-tail along the protofilaments in the wall of microtubules. Microtubules are major components of the cytoskeleton in eucaryotic cells where they play various and essential roles in cell division and intercellular traffic.

SCG10 is a neuron-specific protein, membrane associated and concentrated in growth cones. It binds to microtubules and induces their disassembly. We have shown the existence of a stable complex between a soluble fragment of SCG10 and two dimers of tubulin.

Data collection was previously collected at 6 Å resolution on a native crystal on beam line ID14-EH1 (commissionning beam time). Search for heavy atom derivatives has been engaged and data were collected on FIP using crystals soaked with an Ytterbium compound at the wavelength corresponding to the maximum value of f'', λ= 1.38567 Å. Good quality crystals were very difficult to obtain and numerous crystals were tested.The limit of diffraction was 7 Å and data were collected during the allocated beam time (FIP-CRG-30-01-131 26/02 to 27/02 and Bag-LS1655, 27/02 to 29/02/2000). Due to the small size of the crystals (50X50X400 microns) and the large cell parameters, $P2_12_12_1$, a=57.1, b= 357.1, c= 475.8 Å, we collected data with small increments (0.25° per image) and exposure time of 60 s. Only part of the data could be used because of very high mosaicity of the crystals. The best results are: Rsym= 8.8 %, resolution range 30-7 Å, 56% completness. No anomalous signal was observed.