



	<b>Experiment title:</b> Structure determination of Human CD81 large extracellular loop	<b>Experiment number:</b> LS-1664
<b>Beamline:</b> ID14-3	<b>Date of experiment:</b> from: 26-04-2000 to: 28-04-2000	<b>Date of report:</b> 01-08-00
<b>Shifts to BAG: 6</b>	<b>Local contact(s):</b> Stephanie Monaco	<i>Received at ESRF:</i>
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**Report:**

*Background:* Hepatitis C virus is a major pathogen causing chronic liver disease. The human CD81, a transmembrane protein receptor belonging to the tetraspanin family, has been identified to binds HCV E2 protein with very high affinity. Study of the human CD81 large extracellular loop(CD81-LEL), a putative binding domain of the receptor for Hepatitis C Virus envelope E2 glycoprotein, will shed light on the HCV-to-CD81 interaction.

*Experiments carried out at the ESRF:* Native diffraction data to 1.6 Å resolution were collected at station ID14-EH from a flash-frozen crystal at 100 K with the following statistics :No. of unique reflections=21577, R<sub>sym</sub>=3.8%(31.4% in the highest resolution shell), completeness=98.0%(93.1%).

*Results:* The human CD81-LEL crystals belong to space group *P*21 with unit-cell parameters  $a = 31.5 \text{ \AA}$ ,  $b = 77.2 \text{ \AA}$ ,  $c = 38.5 \text{ \AA}$ ,  $\beta = 107.4^\circ$  and contain two monomer per asymmetric unit. The structure was subsequently solved by means of multiple isomorphous replacement methods using derivatives solved in house. The tertiary structure is composed of five  $\alpha$ -helices containing two invariant disulfides; a manuscript is under preparation.