



ESRF
experimental
report

Experiment title:

Structures of complexes of neutralizing
antibodies with influenza hemagglutinin

**Experiment
number:**

LS-175

**Beamline(s)
used:**

Beamline 4 - ID 2

**Date and time of
experiment:**

from: 01/02/95

to: 02/02/95

**Local
contact(s):**
B. Rasmussen

Name and affiliation of applicants (please mark
experimentalists with an asterisk):

Date of report
24/2/95

M. Knossow* Laboratoire de Biologie Structurale, CNRS, Gif-sur-Yvette, F
T. Bizebard* Laboratoire de Biologie Structurale. CNRS. Gif-sur-Yvette, F
B. Gigant Laboratoire de Biologie Structuraie. CNRS, Gif-sur-Yvette, F
D. Fleury Laboratoire de Biologie Structurale. CNRS, Gif-sur-Yvette. F
J. B. Charbonnier* Laboratoire de Biologie Structurale, CNRS. Gif-sur-
Yvette. F

received

Experiment report (*If this work has been published. please give reference and
abstract*):

Experiments LS-173 and LS-175 were performed by the same applicants on the same dates: 3 shifts were used overall and 1 shift was used for experiment LS-175 which is reported here.

We aimed at collecting diffraction data of the crystals of two complexes between influenza virus hemagglutinin (strain X31) **and** neutralizing antibodies.

All our diffraction experiments were performed at a temperature of 100K, using the cryostat and the cryogenic nitrogen gas stream available at the ID2 station.

Crystals of the hemagglutinin X31 - HC3 antibody Fab fragment complex were of poor diffracting quality. Several crystals were mounted but resolution was in best cases limited to 6 Å. Consequently, no data collection for this complex was attempted.

On the other hand, crystals of the hemagglutinin X31 - HC110X antibody Fab fragment complex diffracted beyond 3 Å. A dataset to 3 Å resolution was collected from a single crystal at 100 K. The data characteristics after processing with software MOSFLM (version 5.2-A. G. W. Leslie (1 990) in 'Crystallographic computing', Oxford University Press) are as follows:

maximum resolution: 3.0 Å

· completeness: 54 %

· Rsym on intensities: 4.5 % (9.0 % at 3.0 Å resolution).

· average redundancy: 1.6 (46491 observations, 28076 unique reflections).

The actual beamtime (for experiments LS-173 and LS-175) was not sufficient to complete all our projects: consequently, data collection of the HA X31 - Fab HC110X complex must be completed, as detailed in the attached proposal.