

Crystal structure analysis of helicase

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Helicases are enzymes which can unwind double-stranded regions of DNA or RNA in an ATP-dependent reaction. Helicase is composed of single polypeptide chains, molecular weight 51kDa.

The obtained crystal was transferred to the solution containing 15% glycerol and immediately frozen in a dry nitrogen gas stream at 100K during data collection. X-ray diffraction data was collected by R-AXIS IV imaging plate diffractometer on beamline BL24XU. The crystal belongs to the orthorhombic crystal system. The diffraction spots were obtained to over 1.8Å resolution and was processed using the program PROCESS. Data is shown in Table. The structure determination is now progress.

Table	
X-ray source	BL24XU
Temperature(K)	100
Wavelength(Å)	0.893
collimator(mm)	0.1
Resolution(Å)	1.8
Detector distance(mm)	300
Oscillation range(°)	1.0
Exposure(min)	15
No. of frames	70
R-merge(%)	5.82
No. of reflections	
observations	114088
Independent	42650
Completeness(%)	83.7