

**Table 1. Data collection and refinement statistics**

	<b>Apo-Dicer</b>	<b>Dicer + Cd<sup>2+</sup></b>
<b>Crystal data</b>		
Space Group	P4 <sub>2</sub> 2 <sub>1</sub> 2	P4 <sub>2</sub> 2 <sub>1</sub> 2
Unit Cell (Å)	a = 66.50, b = 66.50 c = 134.08	a = 70.10, b = 70.10 c = 132.59
<i>z</i> <sup>a</sup>	1	1
<b>X-Ray data collection statistics</b>		
Wavelength (Å)	0.9795	1.11
Resolution (Å)	40 – 1.68	40.0 – 2.80
Total reflections	565,070	58,363
Unique reflections	31,447	7,513
Completeness (last shell) (%) <sup>b</sup>	94.2 (56.55)	90.78 (51.70)
<i>R</i> <sub>merge</sub> (last shell)	6.0 (44.4)	5.7 (36.8)
<i>I</i> / $\sigma$ (last shell)	63.4 (2.3)	28.6 (3.67)
<b>Phasing statistics</b>		
Method	SAD	MR
Figure of Merit	0.51	
<b>Refinement statistics</b>		
<i>R</i> <sub>cryst</sub> , % <sup>c</sup>	18.0	23.27
<i>R</i> <sub>free</sub> , % <sup>c</sup>	21.0	30.42
Mean <i>B</i> -factors, Å <sup>2</sup>	25.11	99.9
rmsd bonds, Å	0.014	0.019
rmsd angles, °	1.41	2.16
Ramachandran plot outliers, %	0.0	4.62

<sup>a</sup> *z* is the number of equivalent structures per asymmetric unit

<sup>b</sup>  $R_{\text{merge}} = \sum |I_{\text{hkl}} - \langle I_{\text{hkl}} \rangle| / \sum I_{\text{hkl}}$ , where  $I_{\text{hkl}}$  is the measured intensity of hkl reflection and  $\langle I_{\text{hkl}} \rangle$  is the mean of all measured intensity of hkl reflection

<sup>c</sup>  $R_{\text{cryst}} = \sum_{\text{hkl}} | |F_{\text{obs}}| - |F_{\text{calc}}| | / \sum_{\text{hkl}} |F_{\text{obs}}|$ , where  $F_{\text{obs}}$  is the observed structure factor amplitude and  $F_{\text{calc}}$  is the structure factor calculated from model.  $R_{\text{free}}$  is computed in the same manner as is  $R_{\text{cryst}}$ , with the test set of reflections (5%).