

**Table 3. Data collection and refinement statistics**

	PGRP-IβC	PGRP-IβC–GMPP
Space group	$P2_12_12$	$P2_1$
Unit cell dimensions		
<i>a</i> (Å)	127.4	40.9
<i>b</i> (Å)	56.8	60.9
<i>c</i> (Å)	36.8	97.0
β (°)		96.5
Resolution (Å)	30–2.2	30–2.1
Observations	215,322	272,478
Unique reflections	12369 (704)*	27,838 (1,328)*
Completeness (%)	91.7 (71.5)	97.9 (96.7)
$R_{\text{merge}}$ (%)	8.9 (33.7)	6.4 (27.3)
$R_{\text{cryst}}$ (%)	22.9 (31.6)	21.0 (30.7)
$R_{\text{free}}$ (%)	28.5 (36.4)	24.2 (34.1)
Molecules per asymmetric unit	2	3
Protein residues	328	502
No. of Ni <sup>2+</sup> atoms	5	
No. of water molecules	135	325
Average <i>B</i> factors (Å <sup>2</sup> )		
Protein	23.2	29.6
GMPP		38.4
Waters	31.4	40.1
r.m.s. deviations		
Bonds (Å)	0.019	0.025
Angles (°)	1.97	2.37
Ramachandran plot statistics		
Core (%)	88.0	91.2
Allowed (%)	11.7	8.8
Generous (%)	0.3	0
Disallowed (%)	0	0

$R_{\text{merge}}(I) = (\sum |I(i) - \langle I(h) \rangle| / \sum I(i))$ , where  $I(i)$  is the  $i$ th observation of the intensity of the  $hkl$  measurements of the  $hkl$  reflection.  $R_{\text{cryst}}(F) = \sum_h ||F_{\text{obs}}(h)| - |F_{\text{calc}}(h)|| / \sum_h |F_{\text{obs}}(h)|$  and  $|F_{\text{calc}}(h)|$  are the observed and calculated structure factor amplitudes for the  $hkl$  reflection.  $R_{\text{free}}$  is calculated over reflections in a test set not included in atomic refinement: PGRP-IβC, 654 reflections, 5.0%; PGRP-IβC–GMPP, 670 reflections, 5.1%.

\*Values in parentheses correspond to the highest resolution shell: PGRP-IβC (2.3–2.2 Å); PGRP-IβC–GMPP (2.2–2.1 Å).