

Table 2. Statistics on data collection, phasing, and model refinement

Data collection					
Data set	SeMet (in complex with NAD ⁺)			Native 1 (binary complex)	Native 2 (ternary complex)
X-ray source	PF (BL-18B)			PF (BL-18B)	Cu K α
Temperature	100 K			100 K	298 K
Space group	I4			P3 ₂ 21	I4
Unit cell axes, Å	$a = b = 120.02, c = 140.00$			$a = b = 70.38, c = 148.93$	$a = b = 122.16, c = 141.25$
Wavelength, Å	0.9798	0.9801	0.9500	1.0000	1.5418
Resolution, Å	20.0–2.1	20.0–2.1	20.0–2.1	20.0–1.8	20.0–2.4
Reflections, total / unique	328,553 / 57,609	312,172 / 57,655	288,652 / 57,609	280,336 / 40,259	133,031 / 40,358
Completeness*, %	99.9 (100)	99.9 (100)	99.9 (100)	99.7 (99.7)	99.5 (99.9)
I / σ_I	8.5 (2.6)	9.3 (2.8)	8.7 (2.4)	10.2 (2.2)	18.7 (3.4)
R_{merge}^\dagger	7.3 (26.7)	7.1 (25.9)	7.5 (27.1)	6.3 (34.5)	8.4 (39.8)
Phasing					
Number of Se sites	20 (5 per monomer \times 4 monomers)				
Figure of merit	0.57 / 0.83 (before / after DM)				
Model refinement					
$R_{\text{work}} / R_{\text{free}}^\ddagger$ (%)	20.3 / 23.6			16.4 / 19.9	16.0 / 18.7
rms deviation in bond lengths / angles, Å / °	0.0060 / 1.30			0.0052 / 1.29	0.0067 / 1.36
No. of nonhydrogen atoms / average B-factor, Å ²					
Protein (residues 2–245)	4 \times 1,780 / 20.4			2 \times 1,780 / 16.8	4 \times 1,780 / 36.4
Cofactor (NAD ⁺ or NADH)	4 \times 44 / 19.4			2 \times 44 / 16.0	4 \times 44 / 40.1
Water	385 / 25.9			432 / 31.8	238 / 40.4
Substrate (androsterone)	–			–	4 \times 21 / 52.9

*Values in parentheses refer to the highest resolution shell.

$$^\dagger R_{\text{merge}} = \frac{\sum_h \sum_i |I(h)_i - \langle I(h) \rangle|}{\sum_h \sum_i I(h)_i}$$

$$^\ddagger R = \frac{\sum ||F_{\text{obs}}| - |F_{\text{calc}}||}{\sum |F_{\text{obs}}|}$$