

**S1 Table. Data collection and refinement statistics.**

|                                                  | <b>AcrB</b>   | <b>AcrB-ERY</b> | <b>AAA</b>    | <b>AAA-ERY</b> | <b><math>\Delta</math>loop</b> | <b><math>\Delta</math>loop-ERY</b> |
|--------------------------------------------------|---------------|-----------------|---------------|----------------|--------------------------------|------------------------------------|
| <b>Data collection</b>                           |               |                 |               |                |                                |                                    |
| Space group                                      | P1 21 1       | P1 21 1         | P1 21 1       | P1 21 1        | P1 21 1                        | P1 21 1                            |
| Wavelength (Å)                                   | 1.0000        | 0.97949         | 0.97625       | 0.97949        | 0.97625                        | 0.97625                            |
| Unit cell:                                       |               |                 |               |                |                                |                                    |
| a (Å)                                            | 151.84        | 150.95          | 152.28        | 151.18         | 152.07                         | 150.06                             |
| b (Å)                                            | 156.86        | 155.67          | 157.49        | 156.77         | 157.78                         | 154.58                             |
| c (Å)                                            | 218.58        | 217.01          | 219.16        | 218.17         | 219.39                         | 215.74                             |
| $\alpha$ (°)                                     | 90.0          | 90.0            | 90.0          | 90.0           | 90.0                           | 90.0                               |
| $\beta$ (°)                                      | 92.7          | 92.7            | 92.7          | 93.1           | 93.1                           | 92.4                               |
| $\gamma$ (°)                                     | 90.0          | 90.0            | 90.0          | 90.0           | 90.0                           | 90.0                               |
| Resolution range (Å)                             |               |                 |               |                |                                |                                    |
| Overall (Å)                                      | 127.01-3.29   | 108.52-3.47     | 109.75-3.16   | 108.89-3.60    | 109.55-3.40                    | 125.83-3.59                        |
| Outer shell (Å)                                  | 3.47 – 3.29   | 3.67 – 3.47     | 3.33 – 3.16   | 3.79 – 3.60    | 3.58 – 3.40                    | 3.79 – 3.60                        |
| Completeness (%)                                 | 100.0 (100.0) | 98.7 (96.1)     | 100.0 (100.0) | 100.0 (100.0)  | 100.0 (100.0)                  | 100.0 (100.0)                      |
| Unique reflections                               | 153515        | 127313          | 176847        | 117756         | 142337                         | 114348                             |
| R <sub>p</sub> im (%)                            | 7.2 (38.0)    | 7.1 (29.6)      | 5.7 (35.8)    | 9.2 (39.0)     | 5.6 (40.1)                     | 7.6 (32.5)                         |
| Average redundancy                               | 14.7 (14.0)   | 4.8 (4.1)       | 17.7 (17.9)   | 8.7 (8.9)      | 17.4 (17.1)                    | 6.1 (5.8)                          |
| Average intensity, $\langle I/\sigma(I) \rangle$ | 10.4 (2.1)    | 6.4 (2.0)       | 10.7 (2.2)    | 7.3 (2.5)      | 14.3 (2.4)                     | 5.3 (2.0)                          |
| <b>Refinement</b>                                |               |                 |               |                |                                |                                    |
| Resolution range (Å)                             | 19.95 – 3.29  | 19.97 – 3.47    | 19.98 – 3.16  | 19.96 – 3.60   | 20.00 – 3.40                   | 19.96 – 3.59                       |
| R <sub>work</sub> (%)                            | 26.8          | 25.0            | 27.0          | 23.8           | 27.5                           | 24.6                               |
| R <sub>free</sub> (%)                            | 33.9          | 32.1            | 33.5          | 30.7           | 34.9                           | 31.9                               |
| <b>Number of atoms</b>                           |               |                 |               |                |                                |                                    |
| Protein                                          | 47560         | 47577           | 47523         | 47491          | 47319                          | 47312                              |
| Ligands and metals                               | 213           | 385             | 213           | 385            | 213                            | 385                                |
| <b>B-factor (Å<sup>2</sup>)</b>                  |               |                 |               |                |                                |                                    |
| Protein                                          | 82.4          | 82.6            | 70.9          | 89.0           | 77.9                           | 81.8                               |
| Ligands and metals                               | 79.1          | 85.0            | 59.7          | 83.0           | 55.8                           | 80.7                               |
| <b>Model Geometry Quality</b>                    |               |                 |               |                |                                |                                    |
| RMSD bonds (Å)                                   | 0.013         | 0.012           | 0.013         | 0.012          | 0.013                          | 0.012                              |
| RMSD angles (°)                                  | 1.77          | 1.78            | 1.78          | 1.73           | 1.87                           | 1.78                               |
| <b>Ramachandran analysis</b>                     |               |                 |               |                |                                |                                    |
| Favoured (%)                                     | 91.2          | 91.4            | 89.0          | 91.4           | 90.6                           | 87.9                               |
| Allowed (%)                                      | 6.9           | 6.5             | 9.0           | 6.5            | 6.8                            | 9.1                                |
| Outliers (%)                                     | 1.9           | 2.1             | 2.0           | 2.1            | 2.6                            | 3.0                                |