## Supplementary Table S1: Crystal Structures data collection and refinement statistics

R.m.s.d., Root mean square deviation

| Dataset | ERH-ΔC | ERH-2 ΔC/PID-3<sup>prop</sup> | PID-3<sup>prop</sup> | PID-3<sup>prop</sup>/TOFU-6<sup>prop</sup> |
|---------|--------|-------------------------------|---------------------|-------------------------------------|
|          |        |                               |                     |                                     |
| PDB     | 7O6L   | 7O6N                          | 7OCX                | 7OCZ                               |
| Space group | P 1 2 1     | P 2 1 2 1                   | P6                  | P 2 1 2 1                           |
| Cell dimensions | a, b, c (Å) | 38.27, 54.05, 46.76 | 44.99, 52.95, 125.61 | 43.29, 43.29, 158.18 |
|          |          |                              |                     |                                     |
| α, β, γ (°) | 90.0, 93.4, 90.0 | 90.0, 90.0, 90.0 | 90.0, 90.0, 120.0 | 90.0, 90.0, 90.0 |
| Data Collection |                     |                            |                     |                                     |
| Wavelength (Å) | 0.87 | 0.97 | 1.28 | 1.54 |
| Resolution range | 35.35–1.50 (1.55–1.50) | 48.79–2.17 (2.25–2.17) | 36.48–1.82 (1.89–1.82) | 68.53–1.93 (1.76–1.70) |
| No. of reflections | 224,226 | 210,614 | 256,407 | 348,668 |
| No. of unique reflections | 30,574 | 16,347 | 14,314 | 29,377 |
| R<sub>merge</sub> (%) | 6.2 (160.8) | 12.3 (209.1) | 22.0 (160.2) | 11.3 (169.0) |
| R<sub>pim</sub> (%) | 2.4 (62.9) | 3.6 (59.9) | 5.2 (50.1) | 3.4 (64.5) |
| I / σ(I) | 10.0 (1.1) | 13.2 (1.1) | 38.8 (0.6) | 14.2 (1.7) |
| Completeness (%) | 99.8 (99.5) | 98.9 (90.0) | 95.0 (68.32) | 90.8 (51.6) |
| Multiplicity | 7.3 (7.4) | 12.9 (12.6) | 17.9 (10.5) | 11.9 (7.4) |
| CC<sub>1/2</sub> | 1 (0.56) | 1 (0.84) | 0.99 (0.44) | 0.99 (0.38) |
| Refinement |                     |                            |                     |                                     |
| Resolution range | 31.2–1.50 (1.55–1.50) | 48.79–2.17 (2.25–2.17) | 36.48–1.82 (1.89–1.82) | 41.68–1.70 (1.76–1.70) |
| Reflections used in refinement | 30,535 (3029) | 16,337 (1455) | 14,244 (1031) | 43,052 (3501) |
| R<sub>work</sub> / R<sub>free</sub> (%) | 20.0 / 21.6 | 20.1 / 24.5 | 18.2 / 21.0 | 19.4 / 23.1 |
| Wilson B-factor (Å<sup>2</sup>) | 25.68 | 59.32 | 24.56 | 33.62 |
| Average B-factors (Å<sup>2</sup>) | 23.90 | 76.55 | 31.77 | 46.29 |
| No. of atoms |                     |                            |                     |                                     |
| Proteins | 1433 | 1735 | 1232 | 2579 |
| Ligands | 1 | 3 | 2 | 0 |
| Solvent | 102 | 27 | 106 | 139 |
| Stereochemistry |                     |                            |                     |                                     |
| R.m.s.d. bond lengths (Å) | 0.010 | 0.003 | 0.005 | 0.009 |
| R.m.s.d. bond angles (°) | 1.05 | 0.66 | 0.85 | 1.10 |
| Ramachandran favored (%) | 99.4 | 99.1 | 98.1 | 98.2 |
| Ramachandran outliers (%) | 0 | 0 | 0 | 0 |