

## Supplementary Information

### Supplementary Materials and methods

#### Supplementary Table

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#### Refinement step (R-factor / R-free (%))

1-Rigid-body 1 (AChBP)	43.1 (41.1) / 43.2 (48.2)
2-Rigid-body 2 (AChBP + 1 Cbtx)	43.0 (41.0) / 43.1 (48.2)
3-Rigid-body 3 (AChBP + 5 Cbtx)	42.6 (40.6) / 42.1 (48.5)
4-Restrained refinement	33.1(35.2) / 37.8 (47.1)

#### Coordinate shifts <sup>1</sup>( $\Delta T_g$ (Å))

1-Rigid-body 1 (AChBP subunit A / B / C / D / E)	x	0.05 / -0.11 / -0.06 / -0.07 / 0.0
	y	0.02 / 0.05 / 0.05 / -0.26 / 0.09
	z	0.0 / 0.38 / 0.16 / -0.19 / -0.32
2-Rigid-body 2 (Cbtx molecule H)	x	0.1
	y	1.08
	z	0.59
3-Rigid-body 3 (Cbtx molecule F / G / I / J)	x	-0.94 / 0.29 / 0.31 / -0.29
	y	-0.63 / -0.46 / 0.74 / -0.2
	z	0.27 / -0.55 / -0.11 / 1.27

#### Non-crystallographic restraints (Å)

AChBP (subunit A / B / C / D / E), main chains (side chains)	0.02 (0.3) / 0.02 (0.3) / 0.03 (0.31) / 0.02 (0.29) / 0.02 (0.36)
Cbtx (molecule F / G / H / I / J), main chains (side chains)	0.03 (0.38) / 0.02 (0.25) / 0.03 (0.29) / 0.02 (0.31) / 0.02 (0.24)

#### Ramachandran outliers <sup>2</sup> (%)

AChBP (subunit A / B / C / D / E)	4.6 / 5.1 / 4.1 / 7.0 / 4.6
Cbtx (molecule F / G / H / I / J)	9.7 / 9.7 / 6.5 / 9.8 / 9.7

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<sup>1</sup> Shift of center of mass along the x,y,z axis

<sup>2</sup> Kleywegt GJ, Jones TA (1996) Phi/psi-chology: Ramachandran revisited. *Structure* 4: 1395-1400

**Supplementary Figure** Quality of the structure. **(A)** View of the unaveraged electron density maps, contoured at  $1\ \sigma$  (blue) and  $3\ \sigma$  (green), calculated after the first rigid-body refinement step in which a single Cbtx molecule (magenta with yellow disulfide bridges) has been positioned. **(B)** View of the tip of Cbtx loop II, with residues Phe29 and Arg33 in green, in the original model (left) and after rebuilding (right), with the electron density maps contoured at  $1\ \sigma$  (blue) and  $-3\ \sigma$  (red). **(C)** Plots showing real-space fit *versus* residue number for the five AChBP subunits (left, subunits A to E from top to bottom) and the five bound Cbtx molecules (right, molecules F to J from top to bottom).

